

# Togo

## Digital Economy Diagnostic Report



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# Acronyms List

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AI	Artificial Intelligence
APIs	Application Program Interface
ARCEP	Autorité de Régulation des Communications Electroniques et des Postes
ART&P	Autorité de Règlementation des secteurs de Postes et Télécommunications
AU	African Union
B2B	Business-to-Business
B2B2C	Business-to-business to consumers
B2C	Business-to-consumer
C2C	Consumer-to-Consumer
C2G	Citizen-to-Government
CCP	County Connectivity Program
CERT	Computer Emergency Response Team
DE4A	Digital Economy for Africa Initiative
DFS	Digital Financial Services
EDMS	Electronic Document Management System
e-ProMIS	Electronic Project Management Information System
FTTH	Fiber To The Home
G2B	Government-to-Business
G2C	Government-to-Citizen
G2G	Government-to-Government
GDP	Gross Domestic Product
GoT	Government of Togo
GNI	Gross National Income
GNIPC	Gross National Income Per Capital
GPRS	General Packet Radio Services
GSM	Global System for Mobile
GSMA	Global System for Mobile Association
HCI	Human Capital Index
HMIS	Health Management Information System
ID	Identification
IMS	Information Management System
IoT	Internet of Things
IP	Intellectual Property
ISP	Internet Service Providers
IXP	Internet Exchange Point
KYC	Know-Your-Customer
LTE	Long-Term Evolution
MDAs	Ministries, Departments and Agents
MNOs	Mobile Network Operators
MoE	Ministry of Education
MENTD	Ministère de l'Economie Numérique et de la Transformation Digitale
MVNOs	Mobile virtual Network Operators
PKI	Public-Key Infrastructure
PPP	Public-private Partnership
SMEs	Small and Medium Enterprises
SOEs	State Owned Enterprises
UNCTAD	United Nations Conference on Trade and Development.
UNDP	United Nations Development Program
VOIP	Voice over Internet Protocol
WBG	World Bank Group
WEF	World Economic Forum

# Executive Summary

**Rapid digital transformation has been re-shaping the global economy, changing fundamental patterns of socioeconomic activities and accelerating further in the wake of the global COVID-19 pandemic.** The recent e-Conomy Africa 2020 Report<sup>1</sup> finds that Africa's Internet economy has the potential to reach \$180 billion by 2025, accounting for 5.2% of the continent's gross domestic product (GDP). By 2050, the projected potential contribution could reach \$712 billion, 8.5% of the continent's GDP. This trend is likely to accelerate further, as digital technologies have come to the forefront in the unprecedented global fight against the COVID-19 pandemic, offering the only opportunity for businesses, governments and individuals to ensure business continuity, prevent service disruptions and cope with social distancing. The mitigation measures, including varying degree of lockdowns, undertaken by almost all countries in the world are presenting society with critical challenges, highlighting the need for a cultural shift to adopt digital technologies in daily life and commerce and exposing the stark digital divide between the connected and unconnected.

**In this context, relying on the Digital Economy for Africa (DE4A)<sup>2</sup> methodology, the report conducts a timely diagnostic of the state of digital economy in Togo.** Based on extensive desk research, fact-finding missions and interviews with a wide array of government entities and other stakeholders, the assessment focuses on five foundational areas of digital economy - digital infrastructure, digital government platforms, digital financial services (DFS), digital entrepreneurship and digital skills. The report aims to highlight opportunities to further develop Togo's digital economy with an emphasis on policies that can help the country bridge its digital divide and strengthen its resilience in the face of crises, such as COVID-19. Practical and actionable recommendations are put forward to inform decision-making, constituting a mix of possible policy reforms and direct support interventions.

**The government of Togo (GoT) is cognizant of the importance of the transformation towards a digital economy.** According to its national development strategy for the period 2018-2022 ("Plan National de Développement")<sup>3</sup>, the GoT aims to make the digital economy a lever to accelerate the development of priority business sectors and modernize government administration. This vision was complemented by a sectoral statement: the policy statement of the digital economy sector for the period 2018-2022<sup>4</sup> which aims for Togo to become a digital service hub and an international center for innovation and expertise. As the government of Togo launches into the development of a new strategy for digital transformation "Togo Digital 2025" the current diagnostic would provide useful information to use as a basis for such strategic document.

**DIGITAL INFRASTRUCTURE – As a foundation for the digital economy, improving broadband service adoption, quality, and affordability has the potential to accelerate Togo's socioeconomic development.** Given the development trends of the broadband market, Togo is on track to doubling broadband penetration by 2021. Internet usage in Togo has picked up rapidly in the past few years, mainly through mobile technologies, with mobile broadband penetration more than doubling from 2016 reaching

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<sup>1</sup> World Bank Group (IFC), Google, e-Conomy Africa 2020, November 2020.

<sup>2</sup> The World Bank Group's (WBG) Digital Economy for Africa (DE4A) initiative was launched in 2018 to support the African Union's Digital Transformation Strategy. The initiative aspires to see every African individual, business and government digitally enabled by 2030 and is underpinned by five core principles: (i) comprehensive, (ii) transformative, (iii) inclusive, (iv) home-grown, and (v) collaborative. The related diagnostic is based on a standardized methodology focused on five foundational building-blocks of a successful and inclusive digital economy: digital infrastructure, digital platforms, digital finance, digital entrepreneurship and digital skills.

<sup>3</sup> <https://www.republiquetogolaise.com/pnd>

<sup>4</sup> <https://numerique.gouv.tg/projet/declaration-de-politique-sectorielle-2018-2022/>



around 44%<sup>5</sup> of the population in 2019. However, and despite the positive progress, this pace of growth is still not up to the government's ambition outlined in its policy statement, i.e. (i) reaching 90% of the population with access to broadband at 10Mbps and more by 2022 and (ii) being ranked among the top ten in Africa for Digital Readiness. There also remains a significant digital gender gap: a 2018 survey found that 74 percent of men had access to a mobile phone compared to 58 percent of women.<sup>6</sup>

**DIGITAL PLATFORMS – Togo has a significant untapped potential in the development and use of public and private digital platforms.** First, there is scope to expand access to and uptake of innovative and user-centric digital public services and infrastructure, as well as to create a more robust trust environment. Implementation of digital ID would help in this regard. Togo is lagging on e-commerce and digital services in the continent, partly due to its small domestic market of approx. 8 million people (among other reasons), and there is significant untapped potential for expansion, which could help fuel future growth and job creation. The uptake and trust in digital services and commerce remains low overall, pointing to potential constraints and opportunities to improve the ecosystem and to capture more value creation domestically and within the region.

**DIGITAL FINANCIAL SERVICES – According to the latest global Findex, financial inclusion in Togo has improved substantially between 2011 and 2017.** Access to transaction accounts reached an average of 45.3% from 10.2% in 2011, revealing continuous efforts from the regulators, the private sector and the governments in providing both conducive legal frameworks and infrastructure for digital financial services, which have been key drivers of financial inclusion. However, the country ranks below the global average for financial inclusion (69%) and barriers remain. In developing economies, the gender gap in financial inclusion is 9 pp on average, but women in Togo have on average even less access to an account at a financial institution than men (15pp); however, the 2017 Findex indicates that mobile money might be helping to close the gender gap. This is the case in countries in the region like Burkina Faso, Cote d'Ivoire, Gabon and Senegal. This gender gap is also reflected in phone ownership, internet access and identification.

**DIGITAL ENTREPRENEURSHIP – Despite the recent appearance of initiatives dedicated to startups in Togo and a context offering some opportunities for digital entrepreneurship, the digital startup ecosystem remains embryonic.** The weak dynamic of startup emergence is partly due to the challenges related to the other digital economy pillars highlighted in this report. But Togolese startups also suffer from specific weaknesses. These are mainly : (i) business training and support, as the unavailability of appropriately skilled talent and well-equipped support structures is a major constraint in the digital ecosystem; (ii) access to markets, with the limited domestic market size and even smaller market of digitally connected and skilled individuals making achieving scale and profitability difficult; (iii) adapted financing, because startups have limited access to pre-seed and seed financing suitable to their business models; and (iv) business climate, where progress has been made in general but startups would require more regulatory reforms.

**DIGITAL SKILLS – Digital skills are yet another important foundation that GoT needs to develop and improve on in order to advance in the digital transformation agenda. Several initiatives have been undertaken by the GoT to improve the digital skills of the Togolese, however there is a need to scale up interventions.** There are many initiatives that are being undertaken for developing digital skills, however most of them remain in a piloting stage or have only a marginal effect. The role of the private

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<sup>5</sup> Source: Regulator ARCEP, Market observatory 2019 (it should be noted that other sources report a similar order of magnitude for mobile broadband, with Telegeography reporting a 41% penetration rate and the GSMA reporting a 36.8% penetration rate; as of September 2020 the mobile broadband penetration rate is estimated by the GSMA at around 46% of the population).

<sup>6</sup> Source: Gallup World Survey.

sector is key in this perspective. Private digital training have yielded good results to date, but their impact also remains limited and will require scalability. The constraints in Togo are the inadequacy between education supply at secondary, TVET, and higher education, and the economic growth perspectives; the lack of resources especially in secondary and TVET sectors; and the low connectivity to internet in public universities, TVETs and Library connectivity.

**This report aims to highlight opportunities to further develop Togo’s digital economy with a special focus on policies that can bridge the digital divide and help Togo achieve the DE4A targets.** This report aims to provide practical and actionable recommendations that inform decision makers on priority areas for development. The below table provides a summary of the diagnostic’s main findings and the recommendations by pillar. It proposes a mix of possible policy reforms and interventions that directly address the identified needs and provide support for harnessing the economic and social benefits digital economies bring.

Table1: Assessment of each pillar's Strength, Weakness, Roadblocks and Opportunities



## Digital Infrastructures

Key strengths	Key weaknesses and roadblocks	Opportunities
<ul style="list-style-type: none"> <li>• Togo on track to doubling broadband by 2021.</li> <li>• Recent introduction of competition at the Internet Service Provider level.</li> <li>• Most recently the government introduced a private strategic partner for TogoCom.</li> <li>• The Government is updating its Digital Strategy (Togo Digital 2025)</li> </ul>	<ul style="list-style-type: none"> <li>• Mobile broadband penetration (3G and 4G) is low compared to top performers, and therefore Togo not on track to reach universal adoption by 2030.</li> <li>• Purchasing power of many Togolese may be low compared to mobile prices.</li> <li>• TogoCom in a dominant position in the provision of wholesale international and national capacity services.</li> </ul>	<ul style="list-style-type: none"> <li>• Putting in place a regulatory framework to identify significant market power and regulate access conditions and prices to essential facilities.</li> <li>• The arrival of the second submarine cable of Moov, which can increase competitiveness of international segment especially if allowed to resell capacity to other ISPs, and for regional traffic (further integrating the regional connectivity market).</li> <li>• The commercialization of the e–government (E-gouv) network that links all ministries in the capital Lomé and will extend to other areas across the country provides an alternative metropolitan network.</li> <li>• The development of the Virtual Landing point (VLP) under the Carrier Hotel/ WARCIP project.</li> </ul>

### Recommendations

- Quick wins (short-term):
  - R1.1. Increase competition in the national backbone segment by leveraging existing capacity available under the eGouv network.
  - R1.2 Allow operators and ISPs to invest in deployment of infrastructure where investments are viable.
- High-priority (short-to-medium-term):
  - R1.3 Regulating conditions of access to international and national bandwidth where needed.
  - R1.4 Lowering cost for investment and creating incentives for infrastructure sharing.
- Long-term:
  - R1.5 Increase infrastructure-based competition in international markets.
  - R1.6 Develop strategy for national coverage leveraging operators' investments but also complementing them in situations of market failure.



## Digital platforms

Key strengths	Key weaknesses and roadblocks	Opportunities
<ul style="list-style-type: none"><li>• Nascent digital public platforms such as digital identification systems and unified social registry;</li><li>• Emergence of small e-commerce companies such as Miaplenou, Assihub and Nicelia.</li></ul>	<ul style="list-style-type: none"><li>• Gaps remain in relation to training, stakeholder sensitization, change management, interoperability, data management, utilization of shared infrastructure, and a general low uptake in digital services and e-commerce;</li><li>• Prohibitive costs of logistics, transport and customs is adversely impacting SMEs and even larger firms engaging in goods-based e-commerce;</li><li>• A well-developed and utilized addressing system is lacking and logistics networks and systems are inefficient.</li></ul>	<ul style="list-style-type: none"><li>• Scope to expand access to and uptake of innovative and user-centric digital public services and infrastructure, as well as create a more robust trust environment;</li><li>• There is also a scope to expand CivicTech, the Citizen-to-Government (C2G) and Government-to-Citizen (G2C) that allow citizens and government to connect and exchange information;</li></ul>

### Recommendations

- Quick wins (short-term):
  - R2.1 Speed up the development of a digital identity and electronic signatures ecosystem.
  - R2.2 Focus on the development of CivicTech solutions
- High-priority (short-to-medium-term):
  - R2.3 Amend the existing legal and regulatory framework for Digital Identity.
- Long-term:
  - R2.4 Accelerate the government digitization programs.



## Digital Financial Services

Key strengths	Key weaknesses and roadblocks	Opportunities
<ul style="list-style-type: none"> <li>• High growth in transaction accounts, spearheaded by mobile money 10.2% to 62% between 2011 and 2019;</li> <li>• Enabling regulatory framework for non-banks;</li> <li>• High Internet penetration;</li> <li>• Access to USSD was liberalized in 2019;</li> <li>• New E-transaction law that recognizes contracts, evidence, invoices or signatures in digital form;</li> </ul>	<ul style="list-style-type: none"> <li>• Women are more excluded from financial services than men: gender gap of 15pp;</li> <li>• Late recourse to DFS in microfinance sector: FNFI;</li> <li>• Weak interest of the Treasury to digitize payments;</li> <li>• lack of financial resources, regulation, innovative partnerships and skills are key reasons for late recourse to DFS;</li> <li>• Weak outreach of DFS due to low number of agents and access points;</li> <li>• Financial education is not taken in charge.</li> <li>• Lack of interoperability despite small mobile money market of 2 players.</li> </ul>	<ul style="list-style-type: none"> <li>• Key public institutions have potential to increase usage of DFS through digitization (CNSS, OTR);</li> <li>• Innovation: appearance of “ECO CCP”, the first mobile money savings account, interoperable with any MNO;</li> <li>• Surge of fintech: Semoa;</li> <li>• The new Personal Data Protection Act will provide incentives for data analytics in credit scoring, which will increase digital lending.</li> </ul>

### Recommendations

- Quick wins (short-term):
  - R3.1 Support the development of Digital Financial Services markets.
- High-priority (short-to-medium-term):
  - R3.2 Improve stakeholder collaboration and dialogue.
- Long-term:
  - R3.3 Improve policies and regulations, at regional and national levels Policy and regulation



## Digital Entrepreneurship

Key strengths	Key weaknesses and roadblocks	Opportunities
<ul style="list-style-type: none"> <li>• Young and growing urban population, which is increasingly digitally connected;</li> <li>• Recent progress to improve the ease of doing business in Togo, especially when it comes to business registration;</li> <li>• Nascent innovation ecosystem, with the emergence of local incubators, co-working spaces, and tech initiatives, which demonstrate a growing interest for digital entrepreneurship;</li> <li>• Image as a potential soft-landing site for foreign entrepreneurs;</li> </ul>	<ul style="list-style-type: none"> <li>• Unavailability of appropriately skilled talent due to the weaknesses of the education system;</li> <li>• Limited capacity &amp; means of nascent incubators &amp; tech initiatives;</li> <li>• Limited domestic market size and even smaller market of digitally literate individuals, making achieving scale and profitability difficult for startups;</li> <li>• Lack of financial education for entrepreneurs and limited access to alternative, adapted sources of early-stage financing, especially pre-seed and seed financing suitable to startups' business models;</li> <li>• Still difficult business environment for startups, especially for paying taxes, enforcing contracts, handling insolvency; Challenges related to the other digital economy pillars: digital infrastructure, finance &amp; skills.</li> </ul>	<ul style="list-style-type: none"> <li>• The Djanta Tech Hub initiative of the Ministry of Digital Economy, should prioritize intensive training programs on business and technical skills, and ensure strengthening and coordination with existing ecosystem players;</li> <li>• The recent organization by the Togolese startup community of consultations (policy hackathon in March 2019 with the presence of the Ministry of Digital Economy) to make concrete propositions of policy and regulatory reforms to the government;</li> <li>• Easier access to public procurement for local entrepreneurs thanks to the Presidential decree, whose conditions need to be further adapted to startups;</li> <li>• The initiative around African Continental Free Trade Area, which if implemented could enable digital firms to scale more easily across West Africa and the continent;</li> <li>• The emergence in other African countries of new instruments of alternative financing for digital startups, from which Togo can draw inspiration to fill the gap of early-stage financing locally.</li> </ul>

### Recommendations

- Quick wins (short-term):
  - R4.1 Pursue the policy and regulatory reforms, working hand in hand with Togo's entrepreneurship community on its proposal of Startup Act.
- High-priority (short-to-medium-term):
  - R4.2 Strengthen business training and startup support, reinforcing the intangibles of the Djanta Tech Hub initiative.
  - R4.3 Fill the gap of pre-seed financing for digital startups but not without financial management trainings.
- Long-term:
  - R4.4 Build the markets for digital entrepreneurs, through easing access to public procurement to local digital entrepreneurs.



## Digital Skills

Key strengths	Key weaknesses and roadblocks	Opportunities
<ul style="list-style-type: none"> <li>• Experimentation of a Digital Work Environment (DWE) in Technical and Scientific High Schools that provided great experience and lessons learned;</li> <li>• Development of ICT training modules in many institutions and anchored to the National High education policy;</li> <li>• Togo Education institutions started to implementation marginally the Distance education.</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequacy between education supply at secondary and high levels and the economic growth perspectives is a major constraint to leverage Togo's key priority sectors through digital skills;</li> <li>• Impacts on the digital skills agenda were high, but most of them stayed in piloting stage or marginal extent;</li> <li>• The lack of resources is constraining government efforts to take significant action on digital skills especially in secondary and TVET sectors.</li> </ul>	<ul style="list-style-type: none"> <li>• Digital skills are clearly identified by Togo's authorities both in the Education sectorial plan (PSE) and National digital strategy, as a lever to maximize the contribution of education to the economic and social development of the country;</li> <li>• Country's high-level Commitment to promotion digital skills at all level of Education;</li> <li>• alignment of Digital Skills with the development strategy and goals;</li> </ul>

### Recommendations

- Quick wins (short-term):
  - R5.1 Facilitating access to digital tools to the education sector through subsidies or tax exemption.
- High-priority (short-to-medium-term):
  - R5.2 Prepare policies and programs based on a comprehensive digital skills framework and articulate the role of the entire education system from basic to high education including TVET.
  - R5.3 Strengthen access to online resources and activate on-line knowledge sharing system through Massive Open Online Course (MOOC) to meet the demand for life-long education and compensate the massification of students.
  - R5.4 Focus on vulnerable groups (rural areas, girls).
- Long-term:
  - R5.5 Improve the attendance rate of scientific series to better boost the development of digital skills in Togo and improve non-cognitive skills required in the education system to further develop the critical thinking essential for easy use and adoption of technology.
  - R5.6 Align training offers with economic needs and articulate them to the national priorities defined while increasing dedicated funding to better involve the Togolese education system in the national dynamics around digital economy.
  - R5.7 Better collaborate with private sector to introduce new model utilizing the infrastructure of high-tech private companies to support the student practices and cultivate excellent technicians.

# 1 Introduction

## 1.1 Country at a Glance: Togo<sup>7</sup>

Togo is bordered by Ghana, Benin, and Burkina Faso, and has a 56-kilometer coastline that runs along the Gulf of Guinea. In 2018, its population stood at 7.8 million and a Gross National Income (GNI) per capita of 670 USD. The main economic activities are mining, agriculture, seaport activities and re-exporting. The most important exports are cement and clinker which go entirely to West African regional markets where demand remains strong, followed by cotton, both processed and marketed by public enterprises. Togo also produces cash crops, mainly coffee and cocoa, and has a considerable agricultural potential.

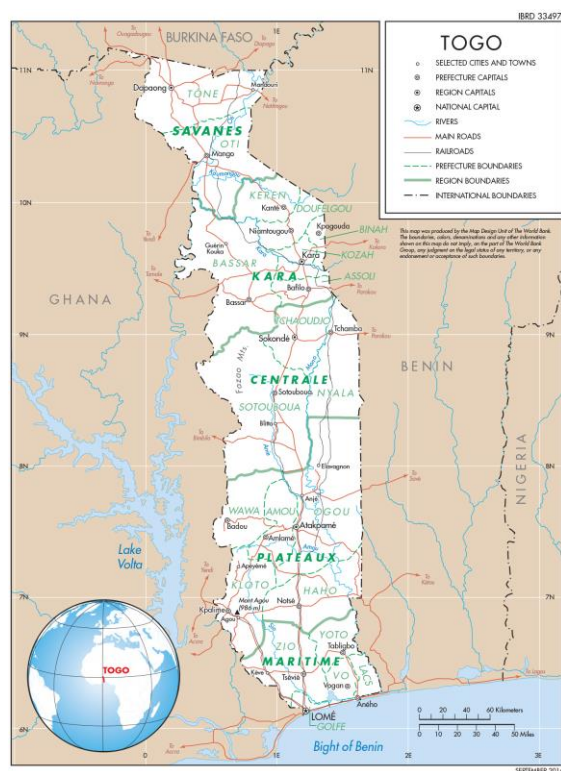
### *Economic Overview*

The COVID-19 pandemic could slow the economic momentum of recent years. Togo's economy performed well in 2019, with an estimated 5.3% growth rate that was driven by an upturn in public investment, expansion in the construction sector, and improved agricultural productivity. The services sector nevertheless remains the main engine of growth thanks to expanding port and airport operations.

However, the crisis triggered by the global coronavirus pandemic is expected to lead to a decline in growth to 1% in 2020. Growth prospects will be severely undermined by the duration and intensity of the COVID-19 crisis. The slowdown in global economic growth, coupled with the prevention measures for containing the virus contagion, could reduce production, domestic consumption, and exports. Revenues could plummet, whereas additional expenditures are essential to a robust health and economic response and the protection of businesses and households hardest hit by the crisis.

### *Development Challenges*

The national poverty rate declined by just over 6 percentage points from 61.7% to 55.1% between 2006 and 2015. Despite this progress, poverty remains widespread, especially in rural areas where 69% of households were living below the poverty line in 2015. Female-headed households experience higher rates of poverty than male-headed households—57.5% against 55%. Vulnerability is higher among women because they have fewer economic opportunities and are underrepresented at high levels of decision making. The key development challenges identified by the government in its five-year National Development Plan (2018–2022) are: (i) developing sectors with strong growth potential, including agribusiness, (ii) strengthening economic infrastructure, (iii) strengthening basic social services in health, water, and power, (iv) promoting financial inclusion, gender equity, and social and environmental protection, (v) and promoting more balanced, participatory, and sustainable development.



<sup>7</sup> World Bank, Togo Overview, November 3, 2020 ([online link](#))



## *Digital Economy*

The government of Togo is cognizant of the importance of digital economy. According to its national development plan 2018-2022 (Plan National de Développement, PND), the country aims to make the digital economy a lever to “accelerate the development of priority business sectors and modernize its administration”.

This vision was translated by the Ministry of Posts, and Digital Economy into a specific sectoral strategy: the policy statement of the digital economy sector for the period 2018-2022 which aims for Togo to become a digital service hub and an international center for innovation and expertise. The policy statement has 4 axes:

- Axis 1: Developing national and international infrastructure;
- Axis 2: Promoting the dissemination of information and communication technology (ICT) in the economy and increasing access for the most vulnerable layers of society;
- Axis 3: Enhancing competition in all market segments;
- Axis 4: Ensuring national digital sovereignty, including cybersecurity and protection of citizens.

The strategy outlines the major challenges for Togo, a strategic vision, and a set of key objectives and priority projects. The main objectives of the policy to be achieved by 2022 are:

- more than 90% of the population and more than 95% of companies to have access to broadband internet (target, more than 10Mbps);
- Togo in the top ten African countries on the main indicators for digital readiness (i.e. Network Readiness Index, ICT Development Index, UN E-Government);
- 50% of public high schools and colleges equipped with networks and ICTs, all fully integrated in the training of pupils and students’ user satisfaction (general public and businesses), as measured by surveys, to be at a level comparable to international standards (satisfaction above 60%);
- the overall turnover of the sector to reach XOF400 billion and contribute at least 10% to GDP;
- an ecosystem to support entrepreneurial activity is in place and operational;
- all structures responsible for cybersecurity, cybercrime and management of personal data are operational.

As the government of Togo launches into the development of a new strategy for digital transformation “Togo Digital 2025” the current diagnostic would provide useful information to use as a basis for such strategic document.

## 1.2 Background on the Digital Economy in Togo

This assessment of Togo’s digital economy development has been initiated as part of the World Bank Group’s (WBG) Digital Economy for Africa initiative (DE4A), launched in 2018 to support the African Union led Digital Transformation Strategy for Africa. The initiative aims to ensure that every individual, business and government in Africa will be digitally enabled by 2030 (Error! Reference source not found.). The related diagnostic framework is based on a standardized methodology focused on five key foundations. The assessment maps the strengths and weaknesses that characterize the national digital economy ecosystem (see Figure 2 and identifies challenges and opportunities for future growth.

Figure 1: High-level Targets of Digital Economy for Africa (DE4A) initiative

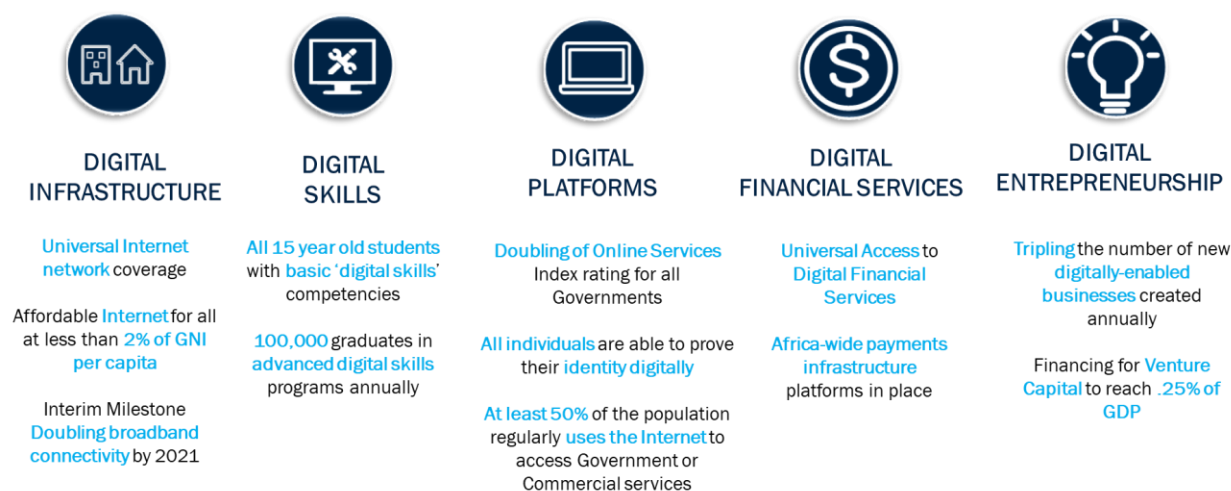
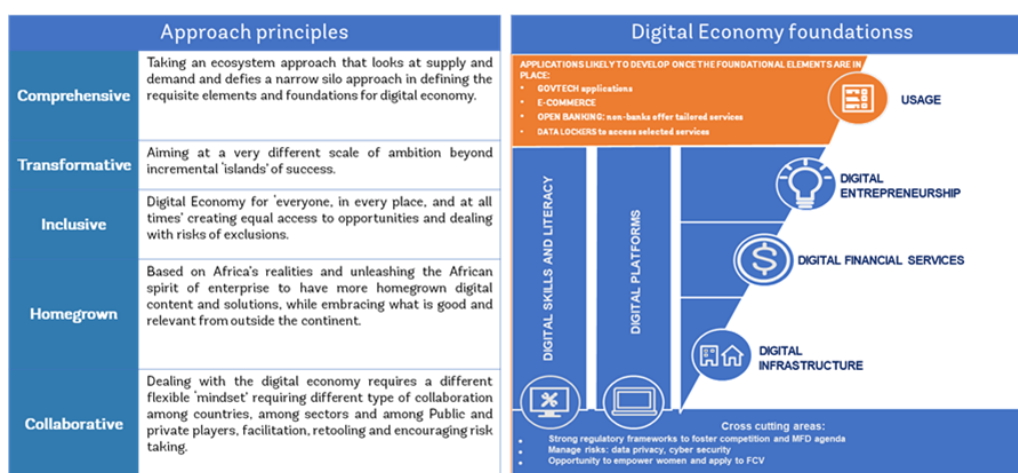


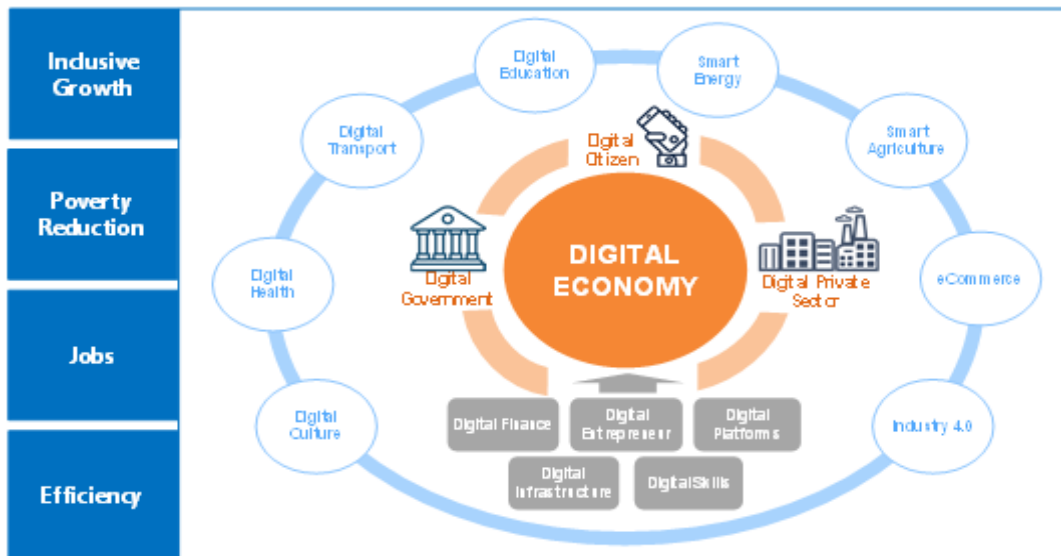
Figure 2: Five key foundations of the digital economy ecosystem



The digital transformation is reshaping our global economy, permeating every sector and aspect of daily life – changing the way we learn, work, trade, socialize, access public and private services and information (Figure 3). In 2016, the global digital economy was worth some \$11.5 trillion – equivalent to 15.5 percent of the world’s overall Gross Domestic Product (GDP). It is expected to reach 25 percent in less than a decade, quickly outpacing the growth of the overall economy. However, countries like Lesotho are still currently capturing only a fraction of this growth and need to strategically invest in the foundational elements of their digital economy to keep pace.

Universal adoption and effective application of digital technology is expected to characterize economies of the future, shaping their ability to succeed in the global marketplace and offer a better quality of life for their citizens. Disruptive technologies are already altering traditional business models and pathways to development, yielding significant efficiency and productivity gains, increased convenience, as well as supporting better access to services for consumers. Well-functioning digital economies thus may offer potential to achieve faster economic growth, offer innovative products and services, as well as create more job opportunities. The disruptive technologies coming onto the market also carry risks that need to be managed and mitigated, for example, job losses in industries affected by structural change and automation. Assessing where strategic investments and interventions need to be made is a critical first step to enabling digital economy growth.

*Figure 3: The digital economy can bring shared prosperity and reduced poverty*



The framework that shapes the assessment looks at five foundational elements of the digital economy:

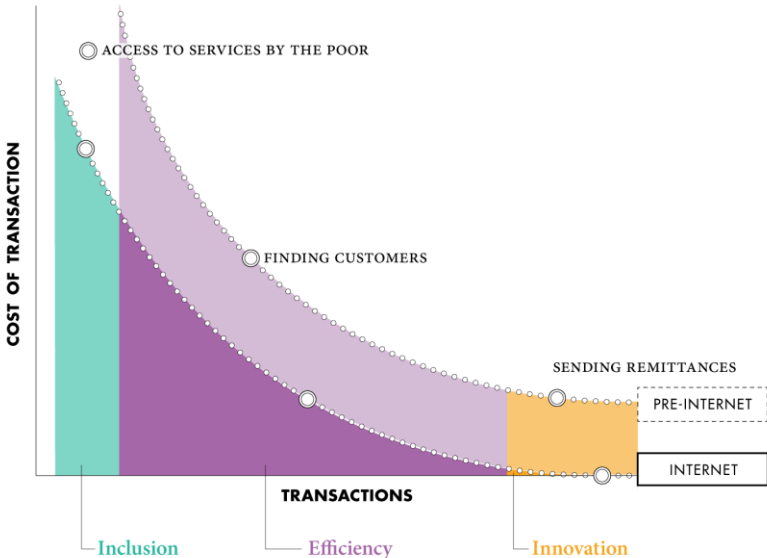
- **Digital Infrastructure:** the availability of affordable and quality internet, which is instrumental to bringing more people and businesses online.
- **Digital Public Platforms:** the presence and use of digital platforms that can support greater digital exchange, transactions and access to public services online.
- **Digital Financial Services:** the ability to pay, save, borrow, and invest through digital means, which is key to financial inclusion and increasing the e-commerce market.
- **Digital Entrepreneurship:** the presence of an ecosystem that supports entrepreneurs, startups and bigger companies to generate new products and services that leverage new technologies and business models, including private platforms, which is critical to widen and deepen digital economic transformation.
- **Digital Skills:** the development of a tech-savvy workforce, with both the basic and advanced digital skills to support increased technology adoption and innovation and enable investments in high value-added services.

# 2 Digital Infrastructure Pillar

## 2.1 Importance of Digital Infrastructure

The potential dividends from a strong digital infrastructure foundation are immense. In broad terms, digital infrastructure consists of the infrastructure for connectivity, such as with high-speed internet (or broadband) networks and services, internet exchange points, data repositories, such as data centers and clouds, and internet of things. The links between broadband infrastructure and long-run rates of economic growth are well documented. The internet promotes inclusion, efficiency and innovation by lowering the cost of transactions, expanding markets and services to excluded communities and making supply chains more efficient. Figure 4 shows how the internet affects development.

Figure 4 : Internet's effect on development<sup>8</sup>



**Boosting broadband adoption, quality and speed has the potential to accelerate Togo's socioeconomic development.** An extensive body of research confirms the impact of increased investment in broadband on economic growth. World Bank research estimates that a 10% increase in broadband penetration in developing countries is associated with a 1.4% increase in Gross Domestic Product (GDP) (Kim, Kelly, and Raja, 2010). The recent e-Economy Africa 2020 Report<sup>9</sup> by the World Bank Group (International Finance Corporation) finds that Africa's Internet economy has the potential to reach \$180 billion by 2025, accounting for 5.2% of the continent's gross domestic product (GDP). By 2050, the projected potential contribution could reach \$712 billion, 8.5% of the continent's GDP. At the firm level, there is also indication that firms which invest more in ICT have higher levels of productivity and are more profitable.<sup>10</sup> For example, the World Development Report (2016) confirms that Vietnamese firms using the internet for e-commerce added an additional 3.6 percent to their rate of productivity growth. Broadband provides a platform for growth and innovation across all sectors. Broadband enables entrepreneurs and businesses to develop and use new applications and services in areas such as e-commerce and financial services. It also enables digital service delivery in sectors critical to

<sup>8</sup> World development report (WDR) 2016: digital dividends  
<sup>9</sup> World Bank Group (IFC), Google, e-Economy Africa 2020, November 2020.  
<sup>10</sup> Christine Zhen-Wei Qiang, George r. Clark, and Naomi Halewood – information and communications for development: global trends and policies (2006)

inclusive growth in Togo, such as agriculture, education and trade. It also allows the public sector to deliver services to citizens and businesses more effectively and more inclusively. Thus, broadband has the potential to transform Togo's economy and help the country leapfrog development stages, provided that effective policies are put in place that encourage its use as an essential input by all sectors of the economy.

## 2.2 Diagnostic Findings: Current State of Digital Infrastructure Pillar

Given the development trends of its broadband market, Togo is on track for reaching the interim goal of doubling broadband by 2021. Internet usage in Togo has picked up rapidly in the past few years, mainly through mobile technologies, with mobile broadband unique penetration<sup>11</sup> more than doubling from 9% in 2016 to around 23%<sup>12</sup> in September 2020. However, and despite this positive progress, this pace of growth is still not up to the government ambition outlined in its policy statement of the digital economy sector 2018-2022, mainly reaching 90% of the population with access to broadband at 10Mbps and more and being ranked among the top ten in Africa for Digital Readiness. This chapter provides an overview of the state of development of the broadband market in Togo, and the main drivers that can be strengthened from the market perspective to help Togo accelerate further and reach its ambitions linked to digital infrastructure.

### 2.2.1 How does Togo compare in Digital Infrastructure and Services?

#### *Broadband Penetration*

High-speed, reliable and robust broadband infrastructure is critical to the growth of the digital economy. In Sub-Saharan Africa – and in Togo in particular - weak legacy fixed networks make mobile networks the technologies the most suitable to improve broadband connectivity. Ongoing investment in 3G and 4G networks underscores the growth and uptake in broadband services. The level of adoption of broadband is among the most important indicators of the level of readiness for the overall digital services, and the usage of data as economic driver. As of September 2020 the mobile broadband penetration in Togo stands at around 48%<sup>13</sup>, and the unique mobile broadband market penetration stands at around 23% (against 20% at the end of 2019). The level of unique mobile broadband market penetration in Togo place it at 28th in Sub-Saharan Africa. Togo is comparable to several countries that have similar penetration of 20%, but it would need to accelerate if it wishes to join the group of top performers such as South Africa, Cabo Verde, and Botswana, among others. (Figure 5).

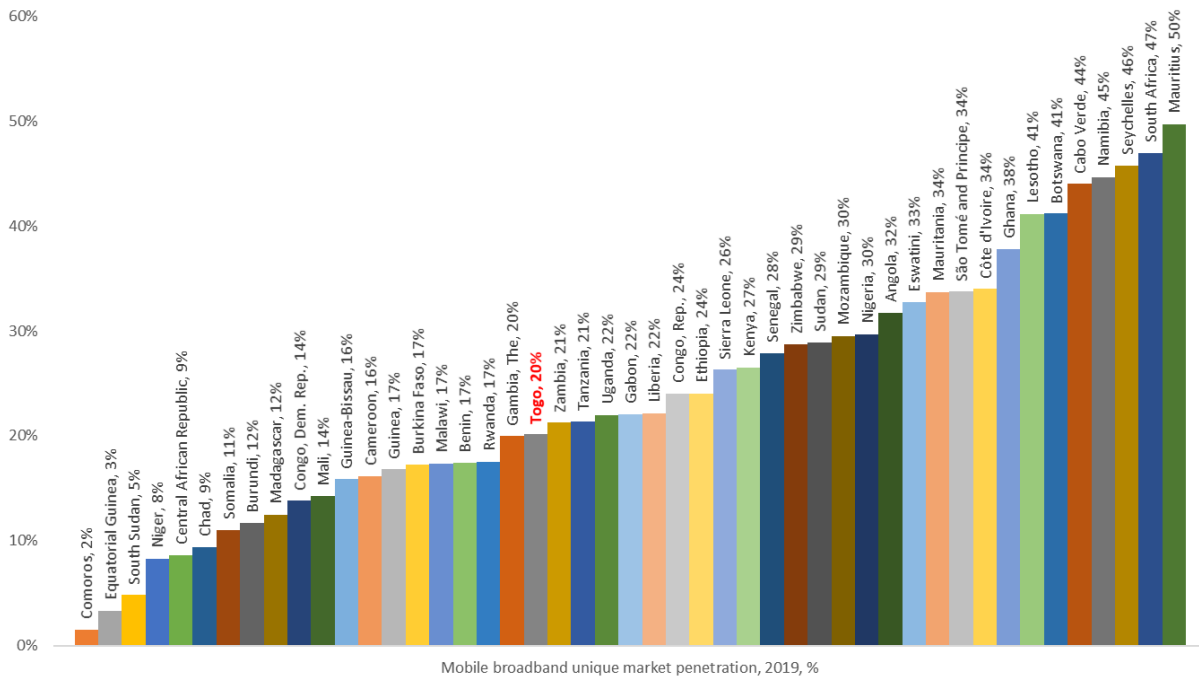
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<sup>11</sup> 2020 Mobile broadband unique penetration is calculated based on GSMA and World Bank population data, it reflects the number of unique users of broadband services.

<sup>12</sup> Source: The GSMA Intelligence, Q3 2020

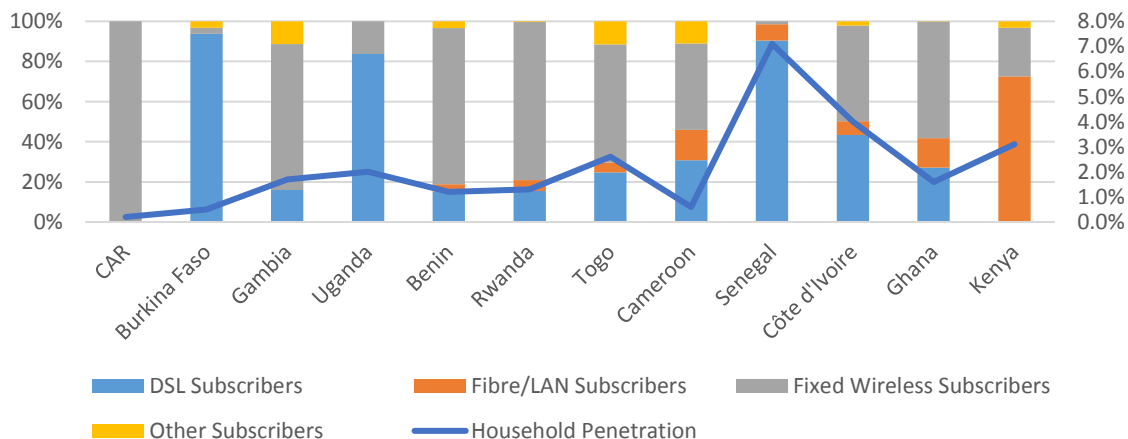
<sup>13</sup> Source: The GSMA Intelligence, Q3 2020

Figure 5: Mobile Broadband Unique Penetration in Sub-Saharan Africa<sup>14</sup>.



The household penetration of fixed broadband in Togo is small, around 2.6% in Jun 2019<sup>15</sup>. Togo is still faring well in comparison with most Countries in Sub-Saharan Africa which also have low penetration of Fixed broadband. However, others such as Cameroon, Senegal, Cote d'Ivoire, Ghana and Kenya have higher number of Fiber connections (Figure 6). Regarding digital divide, preliminary data from Gallup (2018) shows that there are some disparities in Togo in the usage of mobile phone (general usage, regardless of whether it is data or voice) between male and female (74% versus 58%) and rural versus urban (63% versus 78%).

Figure 6: distribution of fixed broadband subscriptions in a selection of Sub-Saharan Countries<sup>16</sup>



<sup>14</sup> Source: GSMA and World Bank data

<sup>15</sup> Source: TeleGeography

<sup>16</sup> Source: TeleGeography

## Network Coverage

Mobile broadband coverage in the country has improved but requires further progress, as 3G covers 94% and 4G only 67% of the population according to the MENTD<sup>17</sup>. Among other factors, the relative low level of mobile broadband coverage can be attributed to the delay in the provision of licenses for the operators to deploy 3G and 4G compared to other countries like Rwanda, Ghana and Senegal. LTE networks in Rwanda and Ghana went live in 2014, in Benin in 2015 and in Senegal in 2016. The extension of mobile broadband coverage is one of the main obligations of the Mobile network operators under their recent licenses. The mobile network operators have upgraded their networks to 3G and their licenses require them to provide 4G coverage to at least 40% of the population by 2022,

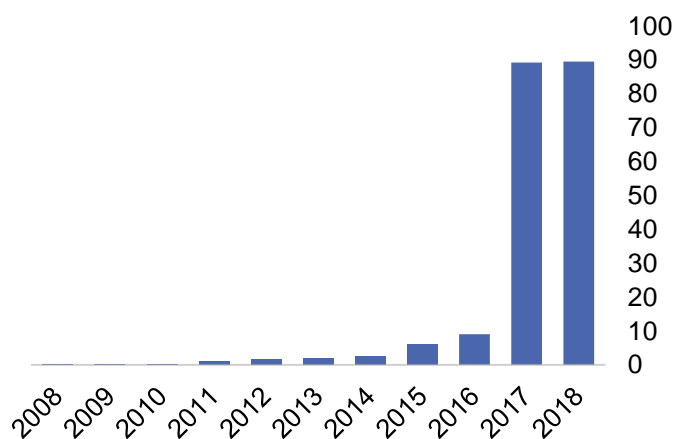
Including coverage obligations in the licenses will help improve the uptake of mobile broadband services yet might not be enough to reach the objective of covering 90% of the population with 10mps and above by 2022 as highlighted in the Digital Economy Policy. The government must put in place a more comprehensive strategy to complement the required coverage obligations with competition, incentives and potentially direct public intervention.

The Togolese government launched in April 2018 a network of public Wi-Fi hotspots provided by TogoCom to cover the country with high quality internet connectivity. In the first phase deployment, MENTD is targeting the capital Lomé, where it will establish ‘broadband spaces’ in public plazas, public institutions and around monument areas. The initial areas included the Carrefour Deckon, the port area, the University of Lomé, Independence Square, and at several hotels, bars and restaurants, where Togolese can surf the internet for XoF 100 (0.17 USD) per hour and XOF500 (0.85 USD) for five hours<sup>18</sup>. As of this date, there are 11 wifi zones in public zones in Lomé and 8 in the interior of the country (see 9.1).

## International Bandwidth usage

Togo international used capacity has increased substantially in 2017 and 2018 (Figure 8<sup>19</sup>), following the licensing and uptake in 3G and 4G service. Used capacity is however still a fraction of the capacity available for the country; as of the end of 2018, Togo uses a total capacity of 89 Gbps, 31.8% of the total available capacity. The bandwidth usage per capita compares well to other Sub-Saharan countries, but it is still below leaders such as Kenya, Ghana and Senegal (Figure 8). The excess capacity reflects the downstream infrastructure constraints, low demand and affordability (more on this below). Following the global trends in data usage, it is expected that demand for international capacity will continue to increase, in line with the growth in mobile broadband and digital services. This capacity is also an opportunity for Togo to serve as the transit datacenter hub for the landlocked countries in the region.

Figure 7: Used International Bandwidth Connected to Togo (GBps), 2008-2018

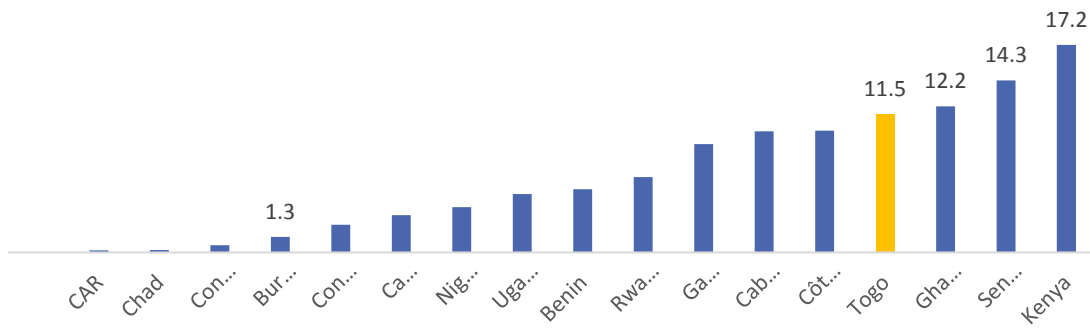


<sup>17</sup> Source: MENTD (the GSMA Intelligence reports a 64% 3G coverage and a 10% 4G coverage which points to a difference in the definitions of coverage).

<sup>18</sup> Togo Telecom website: [http://www.togotelecom.tg/index.php?option=com\\_content&view=article&id=383&Itemid=154](http://www.togotelecom.tg/index.php?option=com_content&view=article&id=383&Itemid=154)

<sup>19</sup> TeleGeography

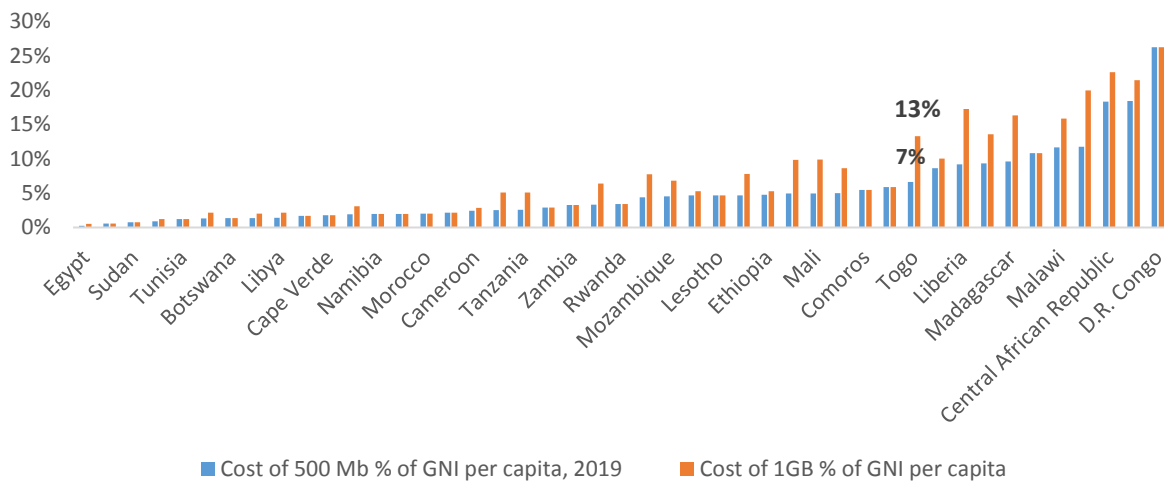
**Figure 8: Total used international bandwidth per pop - Kbps in Sub-Saharan Africa<sup>20</sup>**



**Affordability**

To reach The Sustainable Development Goals set by the global community in September 2015 and to ensure that mobile broadband prices are affordable to most of the population, the UN Broadband Commission along with other international organizations leading the effort to bridge the digital divide, have adopted certain targets for affordability. A commonly used target defines broadband as affordable if an entry-level (500MB) data plan is available at less than 5% of the average monthly income. Overall, the prices for mobile broadband pricing in low- and middle-income countries are decreasing. According to the Alliance for Affordable Internet, in the 100 countries measured between 2018 and 2019, the average cost for 1GB of data usage declined by 11.24%. Given the pace of growth in data consumption in the world and the decrease in prices, this target has been recently reconsidered by the Alliance for Affordable internet, and the UN broadband commission among others, to having 1GB at less than 2% of Gross National Income (GNI). This is sometimes referred to as the “1 to 2” target. Using both metrics and according to the Alliance for Affordable Internet, Togo is above the average in Africa (Figure 9).

**Figure 9: the cost of mobile broadband in Africa according to the Alliance for Affordable Internet<sup>21</sup>**



<sup>20</sup> TeleGeography

<sup>21</sup> Alliance for Affordable Internet - [https://a4ai.org/extra/mobile\\_broadband\\_pricing\\_gnicm-2019Q2](https://a4ai.org/extra/mobile_broadband_pricing_gnicm-2019Q2)



## 2.2.2 Market Structure and Competition

The World Bank's WDR 2016 report: Digital Dividends, provides a useful framework for analyzing the internet broadband supply chain, starting from the first mile (the point where the internet connects a country to international networks) through the middle mile (National backbone and intercity network, including fiber backbone, IXPs) to the last mile (reaching the end user through Local access network). The framework also highlights an invisible mile (the intangible parts of the network such as spectrum, licensing, taxation, competition, cyber security etc.) which could constrain or promote broadband access. Constraints on any of these "miles" could result in costly and disparate networks, as well as poor delivery of services.

### *First mile: International connectivity*

Togo is currently connected to the global internet networks through a single submarine cable - the West African submarine cable (WACS), which TogoCom is part of. WACS is a submarine cable going from South Africa to Portugal and the U.K. and connecting eleven West African countries to the global communications network. The WACS was launched in 2012 and provides Togo with a 5.12 Tbsp. potential capacity. Currently TogoCom is the sole provider of international capacity in the country and had opened maximum available bandwidth of 280Gbps on WACS, with an occupancy rate of 31.8%. The international links have a capacity of four STM-16 (2.5Gbps) connections with India's Tata, one STM-1 (155.52Mbps) with MTN Ghana, and one STM-1, one STM-4 (622Mbps) and one STM-16 with Vodafone Group. ISPs and MOOV can access TogoCom international capacity on a wholesale basis, however these services are not regulated. Therefore, it is important that the regulator puts in place the appropriate regulatory tools to ensure effective, nondiscriminatory and fair access to TogoCom international capacity by other operators. This includes ex-ante regulation on access conditions and prices, such as the publication of reference access offers and the regulation of wholesale prices.

**Figure 10: Submarine Cable Landing in**



The Government has authorized Moov, the second mobile operator, to construct and operate a second international submarine cable landing station in Lomé, to be ready by the 2021 at the earliest<sup>22</sup>. Given the affordability issues described above, promoting facilities-based competition through the entry into operation of a second submarine cable has the potential to lower internet transit prices and consequently retail prices. The impact on the market would be even more prominent if Moov can resell excess capacity to other operators, like TogoCom, on its upcoming international submarine cable. This is therefore an important prospect for the market and encouraging its effective entry into the market can be instrumental.

### **Carrier Hotel<sup>23</sup>**

Under the World Bank funded project West African Regional Communication Infrastructure Development Plan (WARCIP), Togo launched in 2018 the construction of its first data center and Virtual Landing Point (VLP) in Lomé in December 2018 under a PPP scheme. The Togolese authorities see

<sup>22</sup> The arrival of the second cable to Togo and the authorization to deploy fibre in Togo is part of a strategy by Moov to extend their regional backbone network: In 2015, Maroc Telecom completed the deployment of the TransAfrican fibre-optic cable, connecting Morocco to Mauritania, Burkina Faso and Mali. The 5,700km cable enhances the high-speed broadband connectivity of Maroc Telecom's subsidiaries in these countries by connecting them to the region's submarine cable systems.

<sup>23</sup> A Carrier Hotel (also called a colocation center) is a secure physical building where national and international digital communications converge and are interconnected with telecommunications service providers.

the new data center<sup>24</sup>/VLP as a key tool to bolster Togo as a regional hub for data connectivity and repository. Through a planned international bulk capacity purchase contract, the government would in practice enable an alternative source of international capacity, creating a competitive pressure on the market. The building works have effectively started in April 2019 all the works should be finalized by the end of December 2020 (with the acceptance of the work and removal of reservations taking place on or about the summer of 2021) with a projected cost of around XOF 12 billion (around US\$ 22 million). To that end the government has established the SIN (*Société des Infrastructures Numériques*), a State-Owned Enterprise (SOE) to own and manage the infrastructure built under the WARCIP program, including the Carrier Hotel, the international capacity and the Internet Exchange Point (see below).

#### **Internet Exchange Point – IXP**

The IXP is important for local and international players and content providers. Through the IXP, Internet Service Providers (ISPs) and content providers can exchange local traffic between them without going through the expensive and slow international links to exchange traffic. In addition, the IXP can be used to deliver content efficiently – with one connection to the IXP, local content can be delivered to all ISPs attached to the IXP.

The government of Togo established the first country IXP in December 2016, as part of the country's wider WARCIP project. The objective of the WARCIP support was to: (i) facilitate the establishment and management of the IXP, (ii) support its development, and (iii) support the development of local content. The government has initially planned to delegate the operation of the IXP to the TGIX association through a concession agreement with the SIN. The TGIX is an Economic Interest Grouping (GIE) established in 2017 bringing together the operators Togo Telecom, MooV and the ISP Café Informatique. Yet the IXP is still not functional. Experience shows that IXPs work better when they are placed under management of the operators/ISPs themselves (for trust and management issues), but according to the MENTD, there is a lack of interest and collaboration between the mobile operators on operating the IXP. To that end the MENTD is planning to place the IXP under the same management of the Carrier Hotel/Data center.

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<sup>24</sup> A Data Center is a large group of networked computer servers used for the remote storage, processing, and distribution of large amounts of data.

## ***Middle mile: National transmission***

### **Backbone**

TogoCom is the de facto monopoly provider of fiber backbone connectivity to ISPs and other content and data providers. TogoCom's national fiber-optic backbone is a 1,500 km that runs north to south from the capital to Cinkasse. In 2012, Togo Telecom, Vodafone Ghana, and Onatel Burkina Faso completed a fiber-optic link between the three countries, connecting Bolgatanga in Ghana to Cinkassé in northern Togo on the border of Burkina Faso.

Moov has also built a backbone network for its own use covering the north to the south of the country, however this backbone does not extend into inner cities and metropolitan network, which makes Moov and other operators still reliant on TogoCom network for transmission of traffic. Therefore, it is important that the regulator puts in place the appropriate regulatory tools to ensure effective, nondiscriminatory and fair access to this infrastructure by other operators. This includes ex-ante regulation on access conditions and prices, such as the publication of reference access offers and the regulation of wholesale prices.

**Figure 11: TogoCom main backbone network**



### **E-government network**

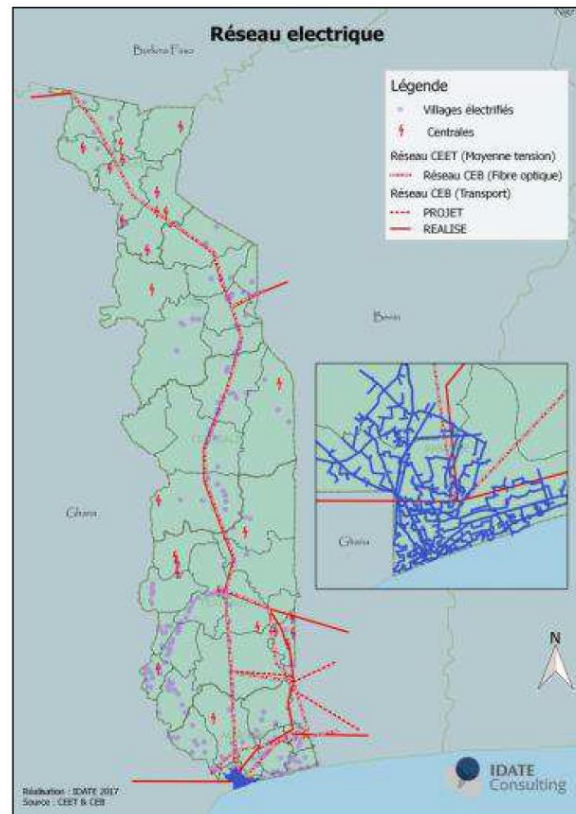
In 2016, the MENTD started the deployment of an e-government network (known as E-Gouv), whose objective is to strengthen administrative efficiency and service delivery to citizens. A 250 km network was built with the aim of interconnecting 543 public sites in Lomé with fiber optics. Each site is connected via a 2 Mbps link, of which 1 Mbps is dedicated to the Internet. The E-Gouv project mobilized 15 billion FCFA (around \$28 million). By 2020, the backbone should connect all the prefectures and sub-prefectures, which is about forty cities. The backbone has now been built and provides internet connectivity to the connected sites, however no e-gov soft applications have been developed between the various institutions. Due to the COVID-19 pandemic, relevant ministries and institutions will be able to use videoconferencing systems funded by UNDP. The government is planning to include the management of the E-Gouv network under the SIN, but the exact mechanisms for management of this infrastructure would need to be defined. Ensuring seamless private sector management of this infrastructure (similar to the Carrier Hotel) would increase sustainability. This network could be leveraged by the government to increase competition and improve affordability in the middle mile broadband value chain through the resale of excess capacity to mobile operators and ISPs. Effectively being able to do this will depend on the specifics of licensing regime for the SIN or the future manager of the infrastructure.

### **Alternative networks**

Deployment of new infrastructure, especially fiber backbone and last mile, can leverage other utilities' network. Today there are several agreements between mobile operators and ISPs to use alternative utilities networks. These include TogoCom and GVA agreement with the electricity network – CEET, to use the electricity towers for last mile delivery of broadband services. Other potential infrastructure networks that can be leveraged to deploy fiber at lower cost are the Togolese Waters, CEB (Compagnie d'Electricité du Bénin), and Togo Rail. Most importantly CEB has a 438 km of transmission network in Togo, including 1,000 km fitted with dark fiber (Figure 12), with links to neighboring countries Benin and Ghana. This network can be leveraged to provide alternative national and international connectivity routes. While limited to date, coordination of deployment of infrastructure by co-operating

with these facilities and exploring models for commercializing excess fiber capacity to telecom operators (as it already happening with CEET) would be beneficial.

**Figure 12: Map of the CEET and the CEB networks, 2017**



### ***Last mile: Access to networks and services***

#### ***Mobile access networks***

TogoCom is the biggest player in the telecommunications market in Togo. It is the state-owned operator that was created in 2017 to consolidate the state's operations in the telecommunications market. TogoCom has operation in mobile, fixed voice and broadband markets. In December 2018 the Togolese council of Ministers launched the process of privatization of TogoCom and to recruit a strategic partner to develop TogoCom networks and services. most recently, the Togolese government announced that the conglomerate Axian, led by the Hiridjee family and the pan-African investment fund Emerging Capital Partners (ECP) become the majority shareholder (51%) of TogoCom. The amount of the transaction remains confidential, but the group is now valued at 210 billion CFA francs (more than 320 million euros). This is a breakthrough expects to bring a new dynamic to the market, and unlock additional investment in the sector, now fueled by a private partner with potential to increase investment in the network. The new operator has plans to significantly expand network access.

The mobile market in Togo is concentrated and shared between two mobile network operators, TogoCom, the state owned incumbent and Moov. Moov has a slightly lower subscriber market share (51.4% for TogoCom versus 48.6% for Moov)<sup>25</sup>; however, in terms of total mobile revenues, TogoCom

<sup>25</sup> Source: ARCEP ([http://www.artp.tg/Download/Tic/Tableau\\_de\\_bord\\_2019T4.pdf](http://www.artp.tg/Download/Tic/Tableau_de_bord_2019T4.pdf))

has a market share of 63 percent (37 percent for Moov)<sup>26</sup>. The market is less competitive than other peers in Sub-Saharan Africa. In terms of number of Mobile Network Operators (MNO), we can cite 4 MNO in Ghana, 3 in Rwanda, 4 in Kenya, 3 in Senegal, and 4 in South Africa. As far back as October 2012, the Ministry of Post and Digital Economy had started the discussion on issuing a mobile virtual network operator. Later, in 2014, the Government has formally announced the process and the plan for introducing a third full blown mobile license. Since then, however, no concrete details have emerged on the potential launch of any MVNOs, or a third mobile license.

In terms of services, both operators provide 3G and 4G services, but coverage and evolution of service provision could be more aggressive. TogoCom introduced 3G services before its rival Moov by 5 years. TogoCom directly negotiated with the regulator and started deployment of HSPA+ technologies (3G) in February 2011, whereas Moov, and after protracted negotiations on its overall license and the 3G concession terms and fees, got the green light to deploy 3G only in January 2016. Both operators received their 4G license in July 2018. But the overall coverage of the network is still not nationwide. The licenses require the operators to provide 4G coverage to at least 40% of the population by 2022 and extended the license term till 2032.

While competition can drive service expansion, other tools available to the government are coverage obligations in the operator's licenses and the development of other models to promote private sector investments in rural areas through appropriate models (e.g. reverse auctions for active or passive service infrastructure elements).

#### **Fixed access networks**

The fixed broadband internet market is small, numbering just 48,385 subscribers at the end of June 2019. There are 4 facilities-based internet service providers in Togo, however the market is dominated by PTO (subsidiary of TogoCom) having almost 90% of the fixed broadband market share. PTO offers internet access mainly through relatively older generation fixed infrastructure (Dialup, ADSL) or fixed wireless (EV-DO, WIMAX, WLL, etc....). the number of fixed broadband subscribers decreased from 66,072 at end-2015, which shows the migration of users to mobile broadband. PTO has recently started the process of deploying ultra-high-speed fiber-optic infrastructure in Lomé in the hope it can compete with the data speeds being offered by mobile broadband platforms. In July 2017 TogoCom launched fiber-to-the-home (FTTH) pilot projects in two neighborhoods of the capital, namely Agoe and Baguida-Avepozo, both of which had come online commercially by the end of 2018.

In an effort by the government to increase competition in the internet market, the government licensed two new operators in 2017: TEOLIS and GVA. TEOLIS TD-LTE network went live in the capital Lomé in February 2018, and GVA launched its the fiber-to-the-building/home (FTTB/H) services in March 2019 in Lomé. However, the newcomer's impact on the fixed internet market is yet to be materialize.

State-owned national PTO TogoCom has a monopoly on the provision of fixed telephony services, although until February 2010 privately owned firm CAFE Informatique and Telecommunication held a license for the provision of IP telephony services (see VoIP Legislation). There is no Local Loop Unbundling in Togo. In May 2011 the regulator, Authority of Posts & Telecommunications Regulation (Autorité de Réglementation des Secteurs de Postes et Télécommunications, ART&P), announced that as part of its 2011-2015 strategy plan, it would consider further liberalization of the market, including the promotion of competition in fixed telephony services through unbundling, however this has not materialized yet.

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<sup>26</sup> Source: ARCEP ([http://www.artp.tg/Download/Tic/Evolution\\_marche\\_Regule\\_2019.pdf](http://www.artp.tg/Download/Tic/Evolution_marche_Regule_2019.pdf))

In order to expand service within cities, one instrument would be to expand the scope of existing licenses and allow other operators and ISPs to deploy their own infrastructure (while creating the appropriate incentives for infrastructure sharing to avoid unnecessary duplication).

## ***Invisible mile: Policies and Regulations***

### **Laws and Decrees**

The Togolese Government and Parliament have been active in updating and modernizing the legal and regulatory framework governing the Digital Infrastructure in Togo, as well as the texts related to the broader digital economy ecosystem. The main telecommunications legislation is the Law on Telecommunications No. 98-005, later amended in 2004 by Law No. 2004-010 and Law No. 2004-011, and the law on Electronic Communications Law No. 2012-018 amended by Law No. 2013-003. These legislation and subsequent decrees, orders and decisions defined the framework for the liberalization of the telecoms market. The Republic of Togo has also been recently active in putting in place several legal frameworks to govern the digital economy ecosystem including: Cybersecurity, Electronic transactions and the Information Society. This is in addition to a host of implementation decrees that provide regulatory and implementations tools to the legal framework.

As per the government's plans to revamp its legal and regulatory structure for the telecoms market, the government reorganized the regulatory bodies to include a new National Spectrum Agency for Radio frequencies (ANSR) and the Telecommunications and Competition Regulatory Body, the ARCEP, that replaces the ART&P.

On cybersecurity: on October 12, 2018 the government of Togo adopted a cybersecurity law "Law n°2018-026". This law sets the ground for the creation of the national cybersecurity agency and the cybersecurity support fund. Togo also reached an agreement with Asseco in 2019, a Polish IT security company, to launch Cyber Defense Africa, a public private partnership with the National Agency of Cybersecurity to establish the Computer Emergency Response Team (CERT) and a Security Operating Center (SOC).

Lists of laws related to digital infrastructure:

- Law n° 2018-026 on Cybersecurity;
- Law n° 2017-007/PR on Electronic Transactions;
- Law n° 2017-006 Guidance for the information society.

Decrees and implementations texts:

- Decree N ° 2019-095 /PR related to the cyber security obligations to the main operators and infrastructure;
- decree n ° 2019-022 /PR determining the functions, organization and functioning of the national cyber insurance agency;
- Decree No. 2016-161/PR, establishing the National Spectrum Agency for Radiofrequencies (Agence Nationale du Spectre pour les Radiofréquences, ANSR);
- Decree No. 2018-62/PR regulating digital and electronic transactions;
- Decree No. 2016-109/PR of 20 October 2016, on the National Frequency Allocation Plan (PNAF);
- Decree No. 2015-91-PR on the roles and organization of the regulator l'ARCEP;
- Decree No. 2014-088-PR on the legal framework for electronic communications;
- Decree No. 2014-112-PR on interconnection and access to the digital infrastructure;
- Decree No. 16 November 2001, laying down detailed rules governing universal service provision of Telecommunications;

- Decree No. 4 July 2001, creating the conditions for authorizing and operating public telecoms
- Networks.

### **Regulation of access to infrastructure**

The decree n° 2014-112-PR on interconnection and access to infrastructure establishes the principle of interconnection, right of access, the handling of access requests, and the services costs and tariffs. The decree stipulates that The Operators must comply with the cost orientation principle for interconnection or network access; these costs include a return on invested capital. The weighted average cost of investment is evaluated by the regulator, considering the returns expected by investors relevant to the specific market segment in which they operate in Togo.

Following this, the three main operators (the mobile and the fixed arms of TogoCom, and Moov) publish on a periodic basis the interconnection and access catalogue. The latest was approved by the ART&P in December 2018. The fixed interconnection and access catalogue detail the services, conditions and prices of a variety of infrastructure access services, including leased lines, colocation, and international capacity. It is not clear however, what mechanisms the ART&P adopt to approve these prices and whether a costing model is used to cap prices and ensure there is no artificial increase in the price of access to infrastructure.

### **Market definition and regulation of significant market power**

The legal framework provides for an overarching framework for regulating anti-competitive behavior and ensuring level playing field competition. However, there are no implementation decrees in place yet to set the framework for the analysis of market power, the designation of significant market power operators and the subsequent obligations to prevent abuse of market position. In fact, the implementing decree provided for in Article 51 (4) of Law No 2012-018 has still not been adopted, and the analysis of the relevant markets and the determination of the significant market power operators depend on the adoption of this text. It is necessary to rapidly conduct a broadband market analysis in order to frame technical and tariff modalities of access to national and international bandwidth. This has also to be accompanied the appropriate power of monitoring, and sanctions by the ARCEP.

### **Licensing**

Law No. 2012-018 provides for three broad categories of regime: the license, the authorization, and the declaration. An individual license is required for the establishment and operation of communications networks electronic services open to the public, the provision of telephone service to the public and the provision of conditions about measures relating to public order, security and public health (Article 5). Specifications are annexed to the license specifying a certain number of conditions (Article 6). Licenses are awarded following a call for tenders (Article 7). They are issued by a decree of the MENTD. The authorization scheme prevails for the establishment and operation of independent networks and for the use of radio frequencies.

### **The roles of different institutions**

The Telecommunications law of 1998 sets the responsibilities of the Minister of Posts and Telecommunications, now Minister of Posts & Digital Economy, and the independent regulatory authority, the Authority of Posts & Telecommunications Regulation (Autorité de Réglementation des Secteurs de Postes et Télécommunications, ART&P). The roles of each entity follow best practice norms, with the Ministry responsible for broader policy issues, and the regulator, which started its activity in 2000, has the duties to ensure competition and stimulate development in the market, and so its functions cover regulations, functions cover regulation, market supervision and spectrum management. The basic powers of ART&P are to:

- determine the overall rules governing the sector and grant numbering resources;

- develop specifications required for licensees and issue authorizations;
- set the general conditions applicable to networks and services not subject to authorization
- determine the characteristics required for terminal equipment;
- fix rate of fees paid by holders of licenses and/or approvals;
- approve interconnection agreements signed between operators;
- Advises the Ministry, including the drafting of competitive tenders and auctions, and the authorizations and licensing to be granted;
- Defines the rules and regulations for spectrum usage and pricing;
- Impose sanctions and dispute resolution.

However, the government has replaced the existing regulator with two new agencies, the Regulatory Authority for Electronic Communications and Posts (Autorité de Régulation des Communications Electroniques et des Postes, ARCEP) established by Decree No. 2015-091. The ARCEP will have similar oversight and regulatory functions as the existing body to the exception of the frequency management which will be now managed by and the National Spectrum Agency for Radiofrequencies (Agence Nationale du Spectre pour les Radiofréquences, ANSR). At the time of writing (January 2019) moves toward the implementation of a new legal and regulatory framework were understood to be nearing completion.

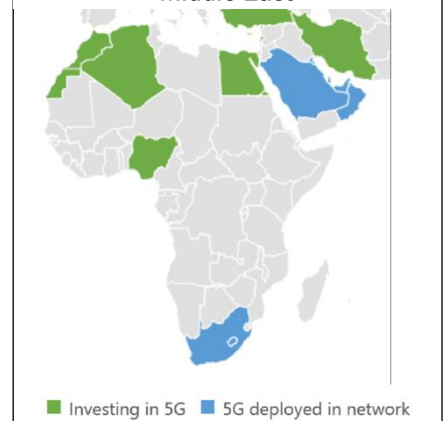
### **Frequency Spectrum**

Effective frequency spectrum allocation is critical to provide high speed mobile broadband, improve mobile quality of service in dense areas, extend mobile coverage, and minimize cross-border interference. Regarding 4G mobile service, Togo was late in assigning appropriate spectrum in 2018 and it is unclear what is the current allocation for mobile 4G spectrum in Togo. To make optimum use of 4G, contiguous spectrum blocks of 2x20MHz would be needed, which is the case in most countries.

The quality of mobile services in dense areas is a function of the density of mobile towers and the amount of spectrum available. In congested areas, operators can either make use of more spectrum in high frequency bands or less spectrum in lower frequency bands (such as the 700 MHz band), or build more towers close together. Thus, the type and amount of frequency made available for operators impact the cost of deployment of high quality and extensive mobile networks. Togo's Parliament has recently approved the switch to digital terrestrial television (DTT) to fast-track a procedure that was initiated a few years ago<sup>27</sup>. This will facilitate the reframing of low frequency bands for the usage in mobile access networks.<sup>28</sup>

As new services such as 5G emerge in many countries around the world with initial trials or commercial deployment, there are important choices to be made about which portions of the spectral range to be dedicated to 5G. South Africa is among the most advanced African countries in the testing and the deployment of 5G networks in Africa. Egypt is second in considering test beds and pilots in this technology. For example, 5G service trials began in June/July 2019 at Cairo International Stadium during the Africa Cup of Nations. Etisalat Misr has signed a contract with Swedish telecommunications company Ericsson for deploying radio equipment that is 5G compatible.

**Figure 13: 5G deployment in and the Middle East**



<sup>27</sup> Source: TeleGeography

<sup>28</sup> Source: <https://www.balancingact-africa.com/news/broadcast-en/46273/togo-passes-law-to-speed-up-dtt-migration>



Additional trials could take place at a larger scale for example in Cairo's New Administrative Capital.

The Government of Togo is reinforcing the regulatory capabilities to control and monitor frequency spectrum. Under the WARCIP project, the government has recently issued a call for tenders for the installation of a station of the frequency control center of the ANSR, the agency responsible for frequency management.

To become one of the most advanced connectivity markets in Africa, Togo need to advance the allocations of frequencies for advanced networks. Allowing flexible use of existing spectrum, the reframing of low frequencies used for tv broadcasting in the 700 MHz, the assignment of additional spectrum for LTE-Advanced and 5G, will help to promote inclusive deployment of mobile broadband services. Currently Togocom has a pilot license for 5G for a period of 5 years from 2020, it is expected that the networks can be live by the first quarter of 2021

## 2.3 Digital Infrastructure Recommendations and Next Steps

The government of Togo has been active in revamping the enabling environment for digital infrastructure, introducing competition and attracting private investment to the sector. For example, most recently the government introduced two new Internet Service providers in the market, issued 4G licenses, partially privatized the incumbent TogoCom and authorized the development of a new submarine cable by Moov. These are expected to have measurable results over the next few years.

There is still however some market concentration to various degrees at the international, middle and last mile segments of the market, which has an impact on service availability and affordability. The market analysis showed that access to Internet and data services may still be limited in some areas and for some people in Togo, directly affected by low network coverage.

Ultimately, increasing network coverage and reducing prices is best achieved through competitive pressure and a more liberalized market. In order to accelerate progress and reach the government goals, implementation of several recommendations could support government's ongoing efforts to enable widespread supply of high-speed internet.

This section highlights the list of actions that are most important for Togo under the current market structure and constraints. This involves adopting policy and regulatory reforms that will stimulate new, competitive private sector investment, by enabling cost-effective and commercially viable market expansion opportunities. The below are high level recommendations on how to address the challenges facing further expansion of the broadband infrastructure in Togo.

### **R1.1. [Quick Win] Increase availability of the national backbone segment by leveraging existing capacity available under the eGov network**

Similarly, to the point made in the previous recommendation, the domestic backbone (transit) market is currently dominated by TogoCom, and that might act as a bottleneck for bringing the capacity from the physical/virtual landing stations to the main cities and transmission hubs. The e-government network could be leveraged to increase competition and improve affordability in the middle mile broadband value chain through the resale of excess capacity to the private sector. In that regard, it is recommended that GoT clarifies the licensing needed and the management model for the management and operation of this infrastructure. Ensuring seamless private sector management of this infrastructure (similarly than for the Carrier Hotel) would increase sustainability.

### **R1.2. [Quick Win] Allow operators and ISPs to invest in deployment of infrastructure**

In parallel to encouraging sharing, (see below) the Government should consider allowing operators to invest in domestic fiber, so that all of the broadband value chain is open to competition and no one essential facility acts as a bottleneck to a more affordable, reliable and universal access to broadband services. One instrument would be to expand the scope of existing licenses and allow other operators and ISPs to deploy their own infrastructure (while creating the appropriate incentives for infrastructure sharing to avoid unnecessary duplication).

### **R1.3. [High Priority] Regulating conditions of access to international and national essential infrastructure on fair, transparent and nondiscriminatory basis.**

This is critical to open the value chain for more competition at the upstream level. These tools include:

- Defining relevant markets: In order to consider whether to regulate prices and conditions of access to international and domestic infrastructure, there is a need to adopt the appropriate decrees to define markets and identify significant market power (SMP) players. This would be particularly important for access to international and domestic transit infrastructure which is solely provided by TogoCom.
- Adopting the best cost model to determine the appropriateness of the prices for access where there is SMP, and further investigates whether the cost of international and national bandwidth is acting as a bottleneck for more data usage and expansions of new ISP networks and services.

### **R1.4. [High Priority] Lower cost for investment and create incentives for infrastructure sharing**

The government should put in place a more comprehensive strategy to complement the required coverage obligations with incentives to permit more cost-effective and commercially viable investments. Non-financial interventions include:

Infrastructure sharing with other utilities: Ensure close collaboration and coordination with basic utilities infrastructure networks such as electricity, water pipelines and transport networks in the rollout of digital infrastructure and leverage excess fiber capacity for commercialization in the telecom sector. The commercialization of the dark fiber of the of the CEB network.

Infrastructure and site sharing among Telecommunication/ICT Operators: Expanding mobile networks and improving the quality of the service require among others the deployment of more mobile towers across the country, and sometimes in areas that are not as profitable as others, and with higher risks for mobile operators. Infrastructure sharing between mobile operators can play a critical role in reducing the cost of deployment, and thus allowing operators to invest in less profitable areas. The regulator can thus put in place a framework of cooperation between the two mobile operators to facilitate and enforce if needs be tower sharing in areas that are less profitable in the interior of Togo or- if relevant, including active elements of the network too. This infrastructure sharing can also extend to the establishment of a Toweco company in less profitable areas to mutualize the infrastructure of various operators and thus reducing both opex and capex.

Develop rights of way regulations: To facilitate the rollout of infrastructure, the regulator and the government needs to put in place regulations on rights of way and easement under objective, transparent and non-discriminatory conditions.

**R1.5. [Long-Term] Increase facilities-based competition in international markets**

The market dominance of a single player in infrastructure ownership could threaten the availability of services at affordable rates, with an impact on competition, the viability of smaller players and their ability to invest in network expansion. There are several ways to ensure service availability and affordability in the market. It could be achieved by providing the incentive for increased sharing of this infrastructure within the existing players (see recommendation above) but also by facilitating the deployment of new alternative infrastructure (such as landing of new submarine cables or development of additional backbone infrastructure). The Government has recently given the green light for Moov to invest in a second landing cable, and the Carrier Hotel/VLP is intended to function as a wholesale operator by purchasing international capacity at the border to sell to other players in the market. Encouraging effective entry into the market of both the Moov cable and allowing Moor to resell excess capacity and establishment of the VLP will be important to ensure effective facility-based competition at the international level.

**R1.6. [Long-Term] Develop strategy for national coverage leveraging operators' investments but also complementing them in situations of market failure.**

Government should put in place a set of strategies for achieving national coverage objectives in an accelerated timeframe. While competition can drive service expansion, other tools available to the government are coverage obligations in the operator's licenses and the development of other models to promote private sector investments in rural areas through appropriate models for instance reverse auctions for active or passive service infrastructure elements.

## 3 Digital Platforms Pillar

### 3.1 Importance of Digital Platform Pillar

#### 3.1.1 Definition of Digital Platforms

Two categories of platforms (digital public platforms and commercial platforms<sup>29</sup>) are particularly vital for the development of Togo's digital economy.

##### *Digital Public Platforms*

Digital public platforms serve as a layer on which multiple public and private sector organizations can build new or better services and solutions. These platforms can be provided either directly by government, or through hybrid models, in partnership with the private sector. To support *seamless, user-friendly, cost-effective, and secure digital interactions*, digital public platforms require digitalized systems and processes, shared and interoperable resources, interfaces for internal and external users, and online trust. The development of digital public platforms can thus be broken down into the following three core workstreams:

1. **Digital identification (ID) systems and trust services.** Trust in a person or entity's identity is a cornerstone of economic and social transactions – this includes those being undertaken online. Beyond the “traditional” forms of identification, the emergence of the digital economy has created a need for verifiable digital identity credentials. Digital ID systems facilitate the secure identification and authentication of a person, entity or device - both in person and/or online - and bind the user of an online transaction with their “real world” or legal identity. Combined with digital certificate services (e.g. public-key infrastructure (PKI)), they are also the basis for e-signatures, which enable knowledge, approval, acceptance, or obligation to be indicated without physical presence. Today most of the Togolese population has unreliable identification documents, which prevents the Togolese state to develop effective security, social and economic policies. The distortion between the multiple means of proving the identity of the citizens and the reliability of the final documents established can impact the constitution of a national development strategy on several levels.
2. **Interoperability layers and shared services.** Interoperability is the ability of different databases, systems, and devices - both within and across organizations - to communicate with and understand each other, including wired connections, application programming interfaces (APIs), web- and cloud services, and more. Interoperability is crucial for implementing shared systems and services, reducing duplicate data collection, and automating business processes. Interoperability frameworks include both the technical/technological aspects allowing different systems to securely exchange information and queries, as well as a set of regulations and institutional arrangements governing access to information among participating entities.
3. **Applications for core government functions.** Web- and mobile-based sites, applications, and software typically provide the interfaces through which these interactions occur. Functions and applications hosted on digital public platforms can serve a variety of users, broadly classified as follows:

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<sup>29</sup> Both public and commercial digital platforms share many common elements. See Annex 1.

- Government-to-Business (G2B) and Government-to-Citizen (G2C) **focus on front-end client-facing service delivery, spanning a variety of sectors** (including education, healthcare, taxation, transportation, property registration and management, social protection and registry, security and safety, business registration, bankruptcy filing, etc.).
- Government-to-Government (G2G) **focuses on back-office systems that enhance and streamline internal operations.** The platforms are essential in managing core public functions and services horizontally and vertically across different levels of Government. Examples of the latter include digital financial management, revenue and tax administration, human resources and procurement management systems.
- Citizen-to-Government (C2G) and Government-to-Citizen (G2C) **allow citizens and government to connect and exchange information, and thus aim to facilitate transparency, democracy and accountability.** The latter is commonly also referred to as “CivicTech”, and typically includes social media platforms such as Facebook and Twitter as well as purpose-built civic centric engagement platforms. Related platforms can also facilitate *data sharing* services that improve transparency, as well as foster research and business innovation through open or reusable public-sector data.

### **Digital Commercial Platforms<sup>30</sup>**

Commercial digital platforms support the creation of a “digital marketplace”, where producers and users are able to create value through digital interaction.<sup>31</sup> Commercial digital platforms facilitate digital matching, searching, exchanging and transacting and provide a place for collecting, sharing and aggregating data, performing analytics, as well as delivering and accessing new and improved services. E-commerce is perhaps one of the most prominent applications of commercial digital platforms. E-commerce platforms help formalize commercial transactions but can also help establish basic standards and quality control on products via peer-to-peer feedback.

**Commercial platforms can in turn be broken down into the following categories (World Bank, 2015):**

- Business-to-Business (B2B): support transactions between businesses (e.g. wholesalers, retailers, distributors, etc.). One of the most common forms of B2B platforms are wholesale e-commerce platforms,<sup>32</sup> offered by players such as Alibaba<sup>33</sup>.
- Business-to-Consumer (B2C): E-commerce platforms are also one of the most prominent forms of digital B2C platforms, where vendors supply their services or products directly to a consumer, via a company website or e-shop;
- Consumer-to-Consumer (C2C) Meanwhile, C2C platforms support commercial transactions between two consumers over the internet.<sup>34</sup>

### **3.1.2 Benefits of Digital Platforms**

**Digital platforms can serve people, businesses, and government agencies in all aspects of life, including healthcare, education, commerce, transportation, and public benefits.**

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<sup>30</sup> Private sector digital platforms can broadly be classified as profit-oriented digital platforms (i.e. commercial digital platforms) and non-profit oriented digital platforms. See breakdown in Annex 2. This report will first and foremost focus on the former.

<sup>31</sup> Related platforms can be understood as digital “multisided marketplaces” (Still et al., 2017).

<sup>32</sup> Where sellers are granted access to a much wider market and buyers can cut costs in their supply chain by being able to compare prices in a transparent way.

<sup>33</sup> Alibaba is considered the leading B2B e-Wholesale Marketplace.

A good example for this would be Jumia Deals. (<https://www.jumia.tg/>)

- For people, digital platforms can provide a seamless service delivery experience that increases user convenience, savings, and agency.
- For government, digital platforms can increase the efficiency and effectiveness of core functions and services; reduce unnecessary duplication of IT systems and registries; combat fraud and corruption by increasing the security and traceability of transactions; and improve civic engagement and accountability.
- For businesses, commercial digital platforms are an efficient mechanism to exchange goods and services and tap into underutilized assets and new markets. Efficient public digital platforms can reduce their cost of doing business, as well as facilitate trade and innovation.

### ***Benefits of Digital Public Platforms***

**When public platforms leverage shared services and follow a “whole-of-government” approach, the digitalization of core government systems has the potential to revolutionize Togolese public agencies’ internal business processes and the G2G, G2C, and G2B services leveraging shared platforms.** This can lead to both operational and economic efficiency, as well as boosting service quality. For example, shared data repositories and interoperability between information systems—e.g., for financial management, accounting, taxation, etc.— can facilitate greater data sharing, limit duplicate data collection, and improve the customer-friendliness of service provided. The “build once, used by many” principle, associated with shared systems and infrastructure, can save the government both time and money by eliminating duplication of investments and processes.

**A robust digital ID platform can expand access to digitized services and transactions within Togo and abroad.** With the ability to reliably prove their legal identity through digital technologies, Togolese can be empowered through easier secure access to basic services (e.g., financial, social protection, healthcare, and education), strengthened capacity to exercise rights (e.g., voting), and new economic opportunities (e.g., formal employment, property rights, and trade in digital products and services).

**For social protection, articles of the Social Security Code of Togo stipulate that employee social security is mandatory for employers.** The extensive identification needs of beneficiaries can be effectively supported by the unique ID number. The Social Security Code includes the following benefits for citizens: Family benefits and maternity, Pensions and Occupational risks (based on the Togo Labor Code). When recognized across borders through regional frameworks, digital identities and e-signatures can also help accelerate trade and market integration by facilitating migration and secure digital cross-border transactions.

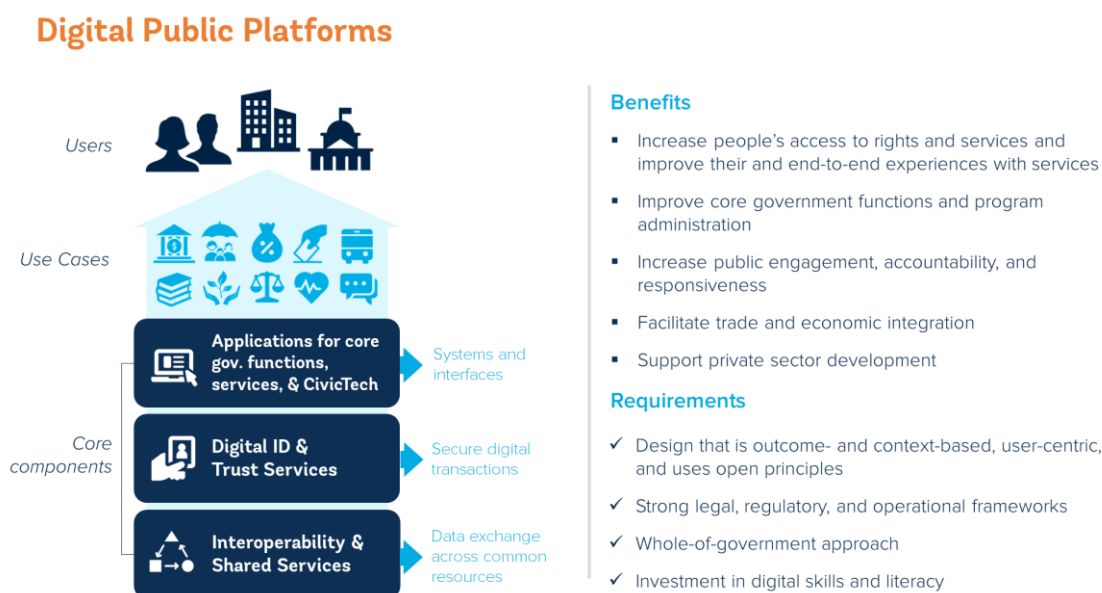
**Digital public platforms can also provide new channels for public engagement, feedback, and information sharing, which increase civic engagement and transparency, shortening the accountability loop.** Using CivicTech, data sharing portals, and digital services that aggregate public feedback and monitor service quality, digital public platforms can improve public participation, accountability and oversight. Digital platforms provide agile channels for governments and citizens to interact, and for citizens to voice concerns, foster collective action and hold the government accountable. CivicTech can thus increase governments’ responsiveness to citizens’ needs, which can help improve quality and coverage, as well as overall confidence and trust in public services, which in turn helps to reinforce a positive social contract.

**Digital platforms and systems can also create greater traceability and accountability, reducing the risk of leakage and corruption.** For example, ID systems, trust services, and data exchange with shared repositories can help reduce leakage and fraud by ensuring that G2C and (G2B) transfers, such as cash payments, wages, and subsidies, reach their intended beneficiaries or suppliers. Digital systems can also introduce level of digital authorization or sign-off, as well as enable digital trails, that increase accountability.

**Private companies and other entities benefit from strong digital public platforms.** Business such as banks, for example, can use digital ID systems and trust services to meet know-your-customer (KYC) requirements. Article 7 of Law No. 2007-016 establishes the "Know Your Customer" procedures for the purpose of combating money laundering in Togo. It requires financial institutions in Togo to ensure KYC's compliance for all financial services. Similarly, businesses are key clients of government in revenue generation through taxation and licensing that are enabled by digital applications and interfaces, core government systems (such as tax and revenue management) and data repositories (e.g., business and property registries). Building a digital public platform that can serve the private sector can therefore help increase the ease of doing business, support regulatory and tax compliance and widen customer bases (e.g., through improved identification). When digital public platforms are built using open technology and standards, they not only foster new public-sector applications, but also provide a foundational layer to catalyze private sector innovation.

The key benefits of public digital platforms are summarized in Figure 14.

**Figure 14: Digital Public Platforms: key benefits and requirements**



### **Benefits of Digital Commercial Platforms**

There is significant untapped potential to expand e-commerce in Togo, which could help fuel future growth. Overall usage and adoption of e-commerce is low across the African continent, but the potential in Togo is deemed to be high, given the rapid uptake of digital products and services – notably mobile devices and services. Rapid adoption of e-commerce around the world has already fueled global GDP growth, harnessing a rich ecosystem of players including telecom operators, online businesses, start-ups, logistics and transport companies, shippers, manufacturers, sellers and the customers.<sup>35</sup> While African e-Commerce is growing rapidly, at an estimated annual rate of 40% in terms of transaction value, it currently accounts for only a fraction of global revenue generated through e-commerce.<sup>36</sup>

**Commercial digital platforms help generate efficiency gains, foster competition and improve market intermediation.** Platforms improve aggregate efficiency by removing costly intermediaries, exploiting economies-of-scale and network effects, matching economic resources more effectively, and fostering

<sup>35</sup> Source: [https://unctad.org/en/PublicationsLibrary/tn\\_unctad\\_ict4d09\\_en.pdf](https://unctad.org/en/PublicationsLibrary/tn_unctad_ict4d09_en.pdf)

<sup>36</sup> UNECA, Economic Commission for Africa

competition. Digital platforms help remove informational asymmetries by providing reliable mechanisms to build two-sided trust, and thus encourage greater variety and quality of goods and services. They also reduce moral hazard problems in the provision of services.<sup>37</sup> The “thickness” attribute of platforms, which allows consumers to have access to several potential trading partners at the same time, spurs market competition and encourages sellers of products or service providers to offer price-quality packages often more competitive than those found in offline markets, which increase access to cheaper goods and services for consumer. <sup>38</sup> Moreover, business models based on digital platforms come with the potential for exponential growth and scale, capitalizing on the network effects of digital products or services and asset-light business models.<sup>39</sup>

**Platforms can both offer new commercial solutions and products, bridging gaps in traditional service access or delivery, but also disrupt existing markets and sectors.** Notably, in Togo, e-money platforms have achieved impressive coverage where the traditional banking models have failed.<sup>40</sup> In many African countries excluding Togo, disruptive ride-hailing apps such as Uber, Taxify/Bolt, Heetch and Little Cab have surpassed traditional taxis.<sup>41</sup> Taxi service providers that used to be protected by fixed caps on licenses are now exposed to competition, which help lower prices for consumers.

**Commercial digital platforms, that aggregate supply and demand,<sup>42</sup> can help create new and inclusive markets.** For small and medium-size enterprises (SMEs) B2C and B2B platforms offer a means of connecting with new customers and markets at a reduced cost. They can also help connect employers to job seekers, easing hiring and job creation and more efficiently pairing talent with market needs.

**Digitizing the market place through greater use of digital platforms can thus help expand opportunities for local Togolese companies to scale in the region and beyond,** as well as increase access to foreign goods and services locally <sup>43</sup>- where barriers to regional data sharing and trade have been eliminated. Notably many e-commerce digital platforms can provide market access to disadvantaged groups, such as small-scale farmers, rural households and women, allowing them to sell their local produce or homemade products more easily.

**The importance of digital platforms is articulated in Togo’s 2018-2022 National Development Plan (Plan National de Développement, PND) which places the project "e-ID Togo" as one of the main channels to strengthen the appropriate institutional and human capacities to meet the development challenges (third axes of the PND). But also, digital platforms are core to the realization of the PND objectives at large include: 1) establishing Togo as a logistics hub of excellence and a first-rate business center in the sub-region, and 2) the development of industrial development in value-added sectors that are significantly export-oriented (agribusiness, manufacturing).**

## 3.2 Diagnostic Findings: Current State of Digital Platforms

### 3.2.1 Public Digital Platforms

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<sup>37</sup> Brynjolfsson 2018.

<sup>38</sup> Guellec and Pauvnoc 2017.

<sup>39</sup> Digital platforms reduce the need for in-house resources such as servers and data centers.

<sup>40</sup> <https://www.ifc.org/wps/wcm/connect/faaca4004a1b4e689092fddd29332b51/Tool%2B4.6e.%2B%2BCGAP%2BProtecting%2BCustomers%27%2BFunds.pdf?MOD=AJPERES>

<sup>41</sup> toddwschneider.com with data from NYC Taxi & Limousine Commission and FiveThirtyEight

<sup>42</sup> <https://stfalcon.com/en/blog/post/best-online-marketplaces>

<sup>43</sup> An online marketplace is a platform that allows multiple buyers and sellers to exchange goods and services directly. A marketplace operator manages the platform. The operator is responsible for attracting players from both sides, ensuring safety, providing information and facilitating transactions. As revenue, the operator takes a percentage from all the sales across the online marketplace platform. SMEs leverage digital platforms as a means to connect to customers and new markets, as well as connecting citizens to information and services



Togo has markedly expanded the use of digital public platforms over the last 10 years, with the introduction of various backend and front-end systems, applications and services. Togo ranks among Africa’s strong performers in the United Nations’ global e-Government Development Index (EDGI) and among the leaders in West Africa. However, it is outperformed by small island states such as Mauritius, Seychelles and Cabo Verde, upper middle-income countries such as South Africa and Namibia, as well as lower middle-income states such as Tunisia, Ghana, Egypt, suggesting significant scope for improvement.

**Table 1: United Nations e-Government Development Index Scores**

	EDGI 2018	Online services	Global ranking
Africa	0.34	0.36	-
Mauritius	0.66	0.72	66
South Africa	0.66	0.83	68
Tunisia	0.62	0.80	80
Seychelles	0.61	0.61	83
Ghana	0.53	0.69	101
Cabo Verde	0.49	0.48	112
Egypt	0.48	0.53	114
Rwanda	0.45	0.72	120
Namibia	0.45	0.45	121
Kenya	0.45	0.62	122
<b>Togo</b>	<b>0.40</b>	<b>0.56</b>	<b>138</b>
Tanzania	0.39	0.56	139
Nigeria	0.38	0.52	143
Ethiopia	0.34	0.63	151

Source: UN

### **Digital ID and trust services**

Togo has a nascent national ID system with a small level of use and coverage of the eligible population. For example, 60% of Togo’s population aged 15 and over do not have a national ID card, according to the 2017 Global ID4D-Index Survey, which is very high compared to some high-performing sub-Saharan African countries such as Kenya where it is 8%.

The government is in the process of developing a National Integrated Identity Management System (NIIMS). The stated intention of the NIIMS is to establish a population registry that would act as the “single source of truth” on the identity of Togo’s citizens, aliens and refugees that would be deduplicated through with biometrics.

To better identify the needs of financially vulnerable households in need of public aid, a unified social registry (RSU) is at its operationalization stage. These tools should help better target vulnerable

households and individuals, across of all Togo's regions, for the various ongoing social projects. The initiative which was developed in partnership with the World Bank was presented in March 2019.<sup>44</sup>

**The legal framework of national identity is defined by the Constitution of the Fourth Togolese Republic and by the Togolese National Code.** Article 70 of the Code gives the Minister of Justice the exclusive power to issue a certificate of Togolese nationality to any person who justifies his/her nationality. Article 71 specifies that the certificate of nationality must indicate the provision according to which the person concerned has the status of Togolese and the documents which made it possible to establish it. The certificate of nationality is authentic until proven otherwise.

**The Directorate General of National Documentation (DGDN) was created by Decree No. 2003 - 268 / PR of 29 October 2003.** It is responsible for issuing National Identity Cards (CNI) in Togo. However, this map has a population coverage limit as only 13% of the Togolese population has an active national identity card. The CNI is governed by the general instruction N ° 43 Bis of January 10, 1962 which stipulates that this card is issued without age limit to any Togolese who requests it. The general instruction of 1962 specifies the legal provisions relating to this document of identity and presents the model of form to be filled by the applicant as well as that of the card delivered. However, these provisions are no longer applied by DGDN due to lack of adaptation with the new digital map issued since 2006. The validity of the CNI is 5 years; it is delivered to the citizen with the documents below:

- A birth certificates
- A nationality certificates
- A certificate of work or certificate of attendance
- A marriage certificate (for ladies)

Given this, the national identity card coexists with the civil status system (birth certificate) and the Togolese nationality certificate as proof of identity and citizenship.

**While the Government's ambition with respect to the NIIMS should be recognized, consideration should be given to reviewing the present approach.** To ensure the success of the NIIMS, Government may consider undertaking a comprehensive consultation process with civil society and experts, enact an enabling data protection legal framework before using the data collected, and be open to reforming the technical and functional design. There are several useful guiding frameworks that can be leveraged, including the ten *Principles on Identification for Sustainable Development*<sup>45</sup> and the emerging *Good Digital ID Principles for Africa*, which are set to underpin a continent-wide approach to digital identity that is being facilitated by the African Union.

Regulations that support a trust environment are detailed below in subsequent sections.

### ***Interoperability layers and shared services***

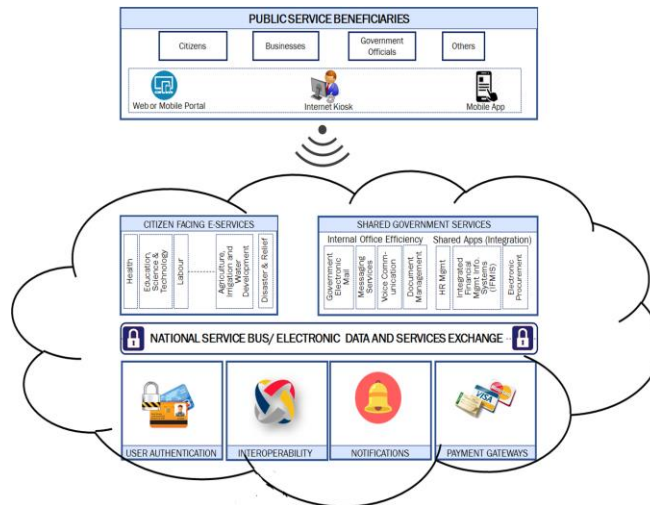
**The Togolese government is currently working to build a fully integrated and centralized “shared digital public services platform”,** based on common digital infrastructure, software, information systems and services that can be re-used by any Ministry, Department or Agency (MDA) wishing to offer a digital service. The platform, akin to the model depicted below (see Figure 15), is also expected to meet its back-end operational needs.

***Figure 15: Example of a “Shared Digital Public Services Platform”***

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<sup>44</sup> Source: <https://www.togofirst.com/en/social/0703-2699-togo-puts-in-place-unified-social-registry-to-better-serve-vulnerable-populations>

<sup>45</sup> The Principles on Identification for Sustainable Development have been endorsed by 25 international, regional, academic and private sector organizations, such as the World Bank Group, the African Development Bank and the United Nations Economic Commission for Africa, among others. They are available at: <https://id4d.worldbank.org/principles>



### **Applications for core government functions, digital service delivery and CivicTech**

The government has also deployed a wide range of citizen-facing<sup>46</sup> digital services platforms. These include:

- **e-Citizen** - An integrated e-Citizen platform,<sup>47</sup> now serves as a single point of information for a wide range of citizen-facing e-services. The e-Citizen portal currently informs citizens on the offline process for dozens of services, ranging from renewal of licenses to applications for business permits and birth certificates. The e-Citizen platform aims to bring services closer to the citizen. The platform is offered via a web-based portal. More services are expected to be added to the platform as digitization of government documents and services continues to progress.
- **ePayment of social contributions** – The National Social Security Fund (CNSS) just expanded e-payment of social security contributions to Ecobank, Oragroup and Union Togolese de Banque (UTB). This is after a pilot stage where this payment mode was enabled on Flooz, Tmoney and Banque Togolese pour le commerce et l’industrie (BTCl).<sup>48</sup> In addition to being able to pay the contributions on the CNSS e-platform, contributors can check payments made and print corresponding receipts. The move translates the fund’s desire to dematerialize all formalities relative to contributions’ collection and related payments.
- Referring to **commercial courts and paying enrolment fees online** - It is now possible to refer to commercial courts via lawyers and bailiffs, as well as pay enrolment fees online via Flooz and Tmoney. This was disclosed by the President of Lomé’s Court of Instance, in an ordinance dated January 31, 2019.<sup>49</sup> “The concerned fees can now be paid online on the platform handling commercial disputes, legally,” the judge said. Launched in 2015, this platform was recently updated and introduced to lawyers and bailiffs. Soon, payment via banking cards will be possible as announced last January by the firm in charge of developing and launching the platform. The new functionalities integrated were to improve Togo’s business climate. In effect, they help better manage registration of commercial conflicts, speed up related procedures and efficiently solve them in commercial courts.

<sup>46</sup> Many of the citizen-facing platforms noted, likewise have dual back-office and citizen-facing functions

<sup>47</sup> <http://service-public.gouv.tg/>

<sup>48</sup> <https://www.togofirst.com/en/economic-governance/2507-3588-togo-national-social-security-fund-expands-e-payment-of-social-contributions-to-ecobank-orabank-and-utb>

<sup>49</sup> Source: <https://www.togofirst.com/en/justice/2702-2634-referring-to-commercial-courts-and-paying-enrolment-fees-is-now-possible-online>

The digitization of several key G2B services, notably the automation of business and property registration, has improved the environment for businesses. Togo’s global ‘doing business’ ranking has improved significantly between 2013-2019.<sup>50</sup> Today, Togo ranks as 137 out of 190 countries, making Togo an attractive investment destination, whereas in 2013 Togo was ranked 156 out of 189 countries.<sup>51</sup>

An overview of Togo’s most visited websites suggests that the introduction of key G2C service platforms has been well-received<sup>52</sup>. The e-Citizen web-based portal currently ranks among the top 50 most accessed by Togolese (see Box 1 below):

While the CivicTech landscape appears to be nascent, Togo still emerges as a top performer in Africa in the E-Participation Index (EPI). Nevertheless, Togo is outperformed by many other African peers (see table 2). The EPI scores the availability of online services that facilitate the provision of G2C information (“e-information sharing”), interaction with stakeholders (“e-consultation”), and engagement in decision-making processes (“e-decision making”).<sup>53</sup>

*Table 2: E-Participation Index (EPI) Scores*

	Ranking	Score
South Africa	39	0.84
Tunisia	53	0.79
Rwanda	59	0.75
Uganda	87	0.62
Tanzania	92	0.61
<b>Togo</b>	<b>107</b>	<b>0.54</b>
Kenya	110	0.53
Senegal	114	0.50
Nigeria	117	0.48
Mozambique	122	0.44
Sierra Leone	129	0.41

50 Source: <https://www.doingbusiness.org/content/dam/doingBusiness/country/t/togo/TGO.pdf>

51 Source: <http://documents.worldbank.org/curated/en/885601468334829413/pdf/NonAsciiFileName0.pdf>

52 Source: Alexa website rankings for Togo

53 Source: <https://publicadministration.un.org/egovkb/en-us/Data/Country-Information/id/172-Togo>

### **Box 1: Togo's most popular apps and websites**

A review of online activity suggests that Togolese primary use search engines, social media platforms and messaging services, news and betting sites, as well as financial and lending applications.

A 2017 study by researchICT Africa revealed that the most used social media apps in Togo are:

- Facebook
- Whatsapp
- Youtube
- Twitter

A 2019 report by Nendo on the state of mobile data listed the 10 most downloaded apps in 2018 as:

- Social media: Whatsapp messenger, Facebook, Facebook messenger, Viusasa
- DFS: Tala, Branch (mobile loans), Okash
- News: Opera news
- Search engine: Opera mini (that uses less data)

The same source lists the following as the 50 most visited websites:

- Search engines: google.com, google.tg, yahoo.com, wikipedia.org
- Social media: youtube.com, facebook.com
- News: RFI.fr, Afrikmag.com,
- E-government services: <http://service-public.gouv.tg/>
- Online shopping: GoAfricaOnline
- Hi-Tech: Commentcamarche.net, www.clubic.com

Many MDAs appears to be leveraging social media to support e-information sharing, through channels such as Facebook, Twitter, and YouTube, but may still only be reaching part of the population. Notably, the Presidency leverages both Facebook and Twitter platforms to disseminate information, as do many ministries, Social media applications rank among those most used in Togo (see Box 1), but uptake is not universal. As of early 2019, there were some 700 000 recorded Facebook users in Togo (equivalent to an 8-percentage share of the population).<sup>54</sup>

**Some purpose-build platforms are present, but their use could be expanded.** Examples include locally developed civic engagement platforms such as *Nenyo City*, designed to source feedback on local service delivery (see Box 2).

### **Box 2: Spotlight on an innovative Togolese civic tech platform: Nenyo City**

Nenyo City is a mobile platform designed to empower citizens and local governments to solve social challenges. The application has a dashboard showing different local public services in categories such as education, health, water, sanitation, road transportation, agriculture, local markets, taxes, electricity, land rights, and birth/death registration. On the user end of the platform, ordinary citizens can use the app to report things like power outages or flooded roads. On the service delivery end, local authorities can track incidents and monitor response times. The data will be used to paint a real time picture of service delivery rates, which will help citizens to understand how the local government is using public monies to serve them.

The citizens of Zio, a prefecture of 300,000 people 30 minutes north of Lome, are now able to easily report problems to local authorities, thanks to this innovative application.

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<sup>54</sup> FB users aged 13+- Figures extracted from the Facebook advertising tool which tell users how many people can be targeted.

## **Open Data**

**Many key public records and datasets have been digitized** including land titles. In Togo, almost all land titles have been digitalized, with only one percent left. The remaining titles are those that date back to German colonization which are yet to be found. This was revealed in the latest report on progress made with structural reforms agreed with IMF, under its extended credit facility (ECF). At the end of 2018, 95% of the titles had been digitalized (43,880 titles out of 46,183).

**A new version of commerce registry and mobile credit database (RCCM) has been released online in 2019.** The database should help the public freely access reliable information relating to their commercial partners' legal and financial situation, but also their prior commitments. As a matter of fact, the RCCM contains data such as firms' balance sheets, details on their management, financial commitments, privileges and legal actions affecting them such as bankruptcy, sales, dissolution...

### **3.2.2 Constraints facing the development of Digital Public Platforms**

**Digital ID in Togo is one of the most promising and advanced public digital platforms in Togo,** it is a work in progress that can benefit from strengthening of the legal and regulatory framework. Some of the constraints for the development of the Digital ID are:

1. Provision for biometric-based identity: The legal provision for the recovery of biometric data and the issuance of a unique identity number for citizens and residents based on biometrics does not exist.
2. Provision for Electronic Verification / Authentication: Existing laws need to be revised to accept electronic biometrics verification / authentication as a legitimate means to gain access to public and private sector services in Togo.
3. Data access, sharing, citizen consent and data confidentiality: data access, data sharing, citizen consent and a privacy framework are required for the implementation of data place of the national identity system. These will be based on the following elements:
  - a. Enable other government agencies to access national identity data and use it to create services while ensuring the privacy of citizen data.
  - b. Enable the use of national identity by the private sector for the provision of services, thereby encouraging citizens to adopt a national identity on a larger scale.
4. Incorporating the use of national identity in laws: Other laws and regulations in Togo do not provide for the use of national identity. As a result, many forms of identity coexist and incentives to obtain a national ID are limited.
5. Link between identity and marital status: Although the birth certificate is a prerequisite for the issuance of the current national identity card, the link between the national identity system and marital status is weak given the coverage of both systems. It will be necessary to have a legal framework to link national identity and civil status records.
6. Use for KYC: Use of National Identity for Know Your Customer ("KYC") should be mandatory to improve the use of CNI in areas such as banking, telecommunications, insurance and other financial services.
7. Use in social programs: Similarly, for social programs, it is necessary to create a legal framework that mandates the use of INC for social benefits.

**Regarding data access and sharing, new regulations need to be established that define:**

- a. The prerequisites that organizations must meet to be allowed access to the Unique Identification Number (UIN) database for verification purposes.
- b. The general principles and conditions governing the authorization of access and sharing of personal data.
- c. Procedures for a government or private entity to electronically access NIU data in a secure manner.

- d. The nature of the data for which an agency will have access in the case of a given request.
- e. Cases of restriction of access to personal data.

### 3.2.3 Private Digital Platforms

**New commercial platforms have sought to increase efficiency in several sectors and helped individual service providers and SMEs to gain access to new customers and markets.** A sample of existing commercial platforms (see Annex 0) suggests that new platforms and applications have disrupted industries such as transport, logistics, food, and hospitality. Logistics platforms have support efficiency gains in the trucking/long haul transport sector by connecting drivers and trucks with cargo, reducing empty return trips and waiting times to secure cargo and border clearance. Other innovative platforms have helped rural smallholder farmers to access new customers. Ride-sharing platforms, such as Uber and Taxify, are performing a similar intermediation services in the transport sector. On-demand services, be it for groceries and cleaning services, are being facilitated through platforms. Many SMEs are also choosing to leverage social media to reach new customers. Finally, digital platforms such as EmploiTogo<sup>55</sup> are helping to aggregate supply and demand, by connecting employers to job seekers, and vice versa.

**In 2018, the UNCTAD Business-to-Consumer E-commerce Index ranked Togo 121 out of the 151 countries surveyed<sup>56</sup> with a share of people using Internet at about 12%, a percentage far below the average in Africa.** However, according to the UNCTAD, 45% of the population over 15 years old have an account with a financial institution or a mobile money account making the west African country one of the countries with higher financial inclusion.

**In 2017, there were estimated to be some 21 million online shoppers across Africa<sup>57</sup>, mainly in South Africa, Nigeria and Kenya.** The UNCTAD estimated that Togo still had to make efforts in the e-commerce sector, asserting that limited online payments and difficult deliveries out of Lomé are the main roadblocks to the development of e-commerce in the country.

**e-Commerce has high growth potential in Togo.** Growing access to mobile devices and broadband, as well as a high mobile money penetration rate are considered key enablers. Internet and data subscriptions have increased by some 12% percent between 2017-2018<sup>58</sup>. This has created a sizable potential consumer base, particularly for mobile-based e-commerce platforms and transactions. Widespread use and familiarity with mobile money is also a significant advantage.

**Most of the leading e-commerce platforms offered in Togo are not home-grown, pointing to scope for boosting local and regional development.** Leading platforms include e-commerce giants such as Alibaba, Amazon, eBay but also smaller B2B2C / C2C platforms such as Jumia Deals.<sup>59</sup> Local players such as Miaplenou, Assihub or Nicelia appear to be growing quickly, albeit from a small base. A market mix that provides opportunity for more specialized local e-commerce platforms paired with availability of global platforms that can serve as a vehicle for SMEs to easily and cheaply build new businesses on top of can be quite impactful, provided that an enough share of profits is retained by the smaller firms utilizing the global platforms.

### 3.2.4 Constraints facing the development of Digital Commercial Platforms

Goods-focused e-commerce companies in Togo have faced significant growth challenges, in part due to last-mile logistics challenges, a culture of face-to-face transactions, and low transaction volumes.

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55 Source: <https://www.emploitogo.info/>

56 Source: [https://unctad.org/en/PublicationsLibrary/tn\\_unctad\\_ict4d12\\_en.pdf](https://unctad.org/en/PublicationsLibrary/tn_unctad_ict4d12_en.pdf)

57 In the European Union some 68 percent are estimated to be using e-commerce, demonstrating the potential for growth.

58 Source: Hootsuite's 2018 report in the global digital state.

59 Jumia Deals is an online classifieds platform, which is used to search for jobs, as well as other products and services.

The proceeding sections explore key factors that hamper the development of commercial platforms in Togo, particularly e-commerce:

### ***Post, logistics and transport***

**A well-developed and utilized addressing system is lacking, which hampers last-mile delivery of goods.** At present, the National Addressing System (NAS) is still being developed. The absence of an effective NAS has left many online businesses unable to establish the locations of their customers. Consultations revealed that the lack of reliability of the e-commerce goods recipients being identifiable, verifiable and available at time of delivery significantly raise costs of logistics.

**Poor logistics networks have been a challenge for both e-commerce firms currently operating in Togo, as well as those who might otherwise be willing to invest.** A concentration of logistics operations to major towns and premium delivery charges for smaller towns and rural areas has limited the consumer base to urban areas. Moreover, few companies ship goods across borders.

**Poor transport infrastructure also affects the timeliness and costs of end-to-end order fulfillment, associated with e-commerce transactions.** Goods-based e-commerce relies on quality transportation infrastructure to ensure the safe and timely delivery of products, some of which are fragile or perishable. Limited to access to quality transportation networks, particularly in rural areas, pushes up the cost of last-mile delivery.

### ***Trade and customs***

**While Togo and its neighbors have taken decisive steps to promote the free movement of goods within the region, there is more to be done.**

**The prohibitive costs of logistics, transport and customs is adversely impacting SMEs engaging in goods-based e-commerce and pushing up the prices for consumers, deterring them from engaging in e-commerce.** While the major international players can afford to absorb these costs and have the capacity to set-up multiple distribution centers, leveraging economies of scale to reduce cost, smaller Togolese firms cannot. Many local SMEs and start-ups are thus denied the opportunity to scale. However, even many larger players are affected by low overall order and delivery volumes, which reduce their ability to capitalize on economies of scale. Scale enables vendors to leverage volume quantities to lower unit costs.<sup>60</sup> Moreover, many e-commerce traders have also noted the shipping costs often ends up being more than the value of the products, reducing the value proposition for customers.

### ***Consumer protection***

**Many Togolese remain hesitant to buy goods and services online, especially from unknown, small vendors.** Consumers have lost money through online transactions. Equally, poor reverse logistics and returns policies discourage customer to make purchases. Consequently, Togolese typically insist on payment post-delivery to determine that products are delivered, as advertised, which adds to the logistics costs and poses a financial challenge for SMEs that complete the order, but also reduces the scope of developing digital financial services (DFS).<sup>61</sup>

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60 Source: "Lions go Digital: The Internet's transformative potential in Africa", McKinsey Global Institute, 2014

61 Lack of trust and familiarity with online payment methods is also a contributory factor for the consumers preferring to pay on delivery.



While online consumer protection legislation is in place, small scale infractions are difficult for government to redress given the high volume and low value. This challenge is compounded in the case of cross border purchases coming mostly from China with AliExpress. The lack of an official redress mechanism can undermine the integrity of the online marketplace.<sup>62</sup> Businesses thus also have a significant role to play in terms of boosting consumer confidence in the safety of online commercial platforms, by integrating service functions that build trust as part their business model, including user and seller ratings, free return policies, etc. Gaps in consumer awareness may also expose digital platforms consumers to greater risk – e.g. risks are associated with the proliferation of digital micro-lending platforms.

Box 4: Cross-cutting barriers of the development of digital platforms in Togo

***Internet access***

**All platforms rely of affordable, accessible and reliable connectivity services and infrastructure.**

Issues relating to access and affordability can dampen demand for the services and products offered via digital platform. The cost of being online to search and compare prices for different products and services may not be affordable to all Togolese. The prevalence of metered connectivity plans adds to the constraints. Access to connectivity has likewise limited the uptake on many public digital government platforms introduced. The state of Togo’s connectivity is discussed at length in the ‘Digital Infrastructure’ paper that forms part of this background paper series.

***Adequate digital skills***

**Gaps in digital skills are also hampering the process of migrating users and customers onto both digital public and commercial platforms. They are also impeding the development of new platforms.** Diffusion of platforms relies both on the advanced digital and e-business skills needed to develop, commercialize and integrate them, but also on basic user skills in terms to encourage adoption and safe usage. The state of Togo’s digital skills is discussed at length in the ‘Digital Skills’ paper that forms part of this background paper series. Stakeholder consultation suggested that public officials and citizens’ have not been adequately supported in the adoption digital public platforms and services. Moreover, many Togolese are likely to have limited knowledge in relation to the opportunities generated by commercial digital platforms and how best leverage them.

***Data protection and privacy***

Many Togolese are used to face-to-face transactions. Boosting consumer trust will be critical to supporting the development of digital platforms. The transition to digital transactions and the application of and awareness about the legal and regulatory framework on data protection and privacy is important for digital platforms in Togo.

***Enabling environment for business and innovation***

**Finally, for the development and application of new platforms to thrive in Togo, Government will need to foster an enabling environment for related businesses and innovators,** including tailored access to finance, adequate IP protection etc. Togo’s innovation ecosystem is discussed at length in the ‘Digital Entrepreneurship’ paper that forms part of this background paper series.

### 3.3 Digital Platforms Recommendations and Next Steps

- R2.1. [Quick Win] Speed up the development of a digital identity and electronic signatures ecosystem – with the aim of rolling-out a system that is aligned with global best practice and recognized regionally.**

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62 See [http://unctad.org/en/Pages/DTL/STI\\_and\\_ICTs/ICT4D-Legislation/eCom-Consumer-Protection-Laws.aspx](http://unctad.org/en/Pages/DTL/STI_and_ICTs/ICT4D-Legislation/eCom-Consumer-Protection-Laws.aspx).

A trusted and inclusive digital ID system accelerate growth in Togo's digital economy by enabling citizens and residents to do trusted transactions online, which will allow more services to be digitalized. Furthermore, if recognized across borders in Africa and beyond, such a digital identity system will boost the competitiveness of Togo in regional and global digital trade. For example, to register businesses or enter contracts in other countries without the need to be physically present. As part of this process Government is encouraged to review its approach to NIIMS. Specific recommendations include:

- First, develop a clear and detailed policy and strategy, which will provide clarity on the purposes and features of the NIIMS. Importantly, this should be informed by comprehensive consultations with the public, civil society and experts;
- Introduce an enabling law, based on said policy and strategy and a data protection law aligned with international best practices (more on this below); Adopt international best practices and norms in the design of the system (e.g. the ten *Principles on Identification for Sustainable Development*) - with a stronger emphasis on use cases, credentials and authentication.
- Adopt international best practices and norms in the design of the system (e.g. the ten *Principles on Identification for Sustainable Development*) - with a stronger emphasis on use cases, credentials and authentication.
- Carry out a comprehensive information and education campaign to raise awareness and to proactively address public concerns in relations to NIIMS implementation.

## **R2.2. [Quick Win] Focus on the development of CivicTech solutions**

This can improve services, user satisfaction and accountability – expanding the public's contribution to e-consultation and e-decision making There is scope to expand the use of CivicTech solutions, particularly in the areas related to the Big Four agenda. Government is encouraged to formulate a more conscious and targeted sub-strategy for CivicTech, which identifies key models (e.g. Maji Voice) that have been successful and scale them, moving beyond mere information sharing via social media.

## **R2.3. [High Priority] Improve the existing legal and regulatory framework for Digital Identity:**

In the short term, develop a decree with the main purpose:

- To create the Authority that will be responsible for setting up and managing the Togolese National Identification System (SNTI)
- To define the prerogatives of this Authority
- In the medium term, draft a comprehensive law covering in a comprehensive and more thorough manner all the aspects related to the establishment of the National Togolese Identification System.

The term Authority is used to designate the entity that will oversee setting up and managing the Togolese National Identification System. The choice of the legal form of this entity and the body to which it would be attached is the responsibility of the Presidency of the Republic.

**R2.4. [Long Term] Accelerate the government digitization programs – (i) enhancing and adding new digital services, (ii) fully digitizing government records and data, (iii) ensuring a whole-of-government approach to digital integration and interoperability, and (iv) consistently applying user-centric design.**

Government is encouraged to address unresolved issues related to data standardization, consolidation of IMSs, and system interoperability etc. This is likely to improve the user experience of key services, which can in turn boost uptake, as well as increase usage of shared services/infrastructure. People should be at the heart of digital economy, yet front- and back-end service delivery platforms and applications are often designed with little input from those they are designed to serve. Greater attention is needed to business process re-engineering to ensure the success of new services, utilizing user-centric design principles to streamline processes that are automated, ensuring that unnecessarily complex processes are not simply replicated online.

## 4 Digital Financial Services Pillar

### 4.1 Importance of Digital Financial Services Pillar

#### *Socioeconomic Rationale for Digital Financial Services*

Digital financial services (DFS) can expand the delivery of basic financial services to the poor through innovative technologies like mobile-phone-enabled solutions, electronic money models and digital payment platforms. Digital channels can drastically drive down costs for customers and service providers, opening the door to remote and underserved populations. DFS includes financial products and services, such as payments, transfers, savings, credit, insurance, securities, financial planning and account statements that are delivered through mobile money, banking and online channels. Technology in financial services, such as mobile money, has become key to developing economies and has key benefits to the digital economy ecosystem.

**Financial inclusion is the pursuit of making financial services accessible at affordable costs to all individuals and businesses, irrespective of net worth and size, respectively.** Financial inclusion strives to address and offer solutions to the constraints that exclude people from participating in the financial sector. According to the G20 high level principles for DFS, 1.7 billion people globally do not have access to formal financial services. With a population of some 1.2 billion people across SSA, estimates from the Global Findex 2017 data indicate some progress has been made since 2011 with adults with a financial institution account increasing to 43% from 34% compared to the global average of 68.5% (2017). FinTech firms are digitizing paper-based transactions and are analyzing data to identify potential demand for financial services such as credit, savings, and insurance. Secure, reliable ICT/telecommunications infrastructure and the skills to use such infrastructure, applications, content and services is core to the success of financial inclusion as well as for the development of other sectors that together form the basis of the digital economy.

**Financial inclusion has been on the Togolese's Government agenda for the past few years.** The GoT, with the creation of a special Department in charge of financial Inclusion and an Inclusive Finance Fund (Fonds National de Finance Inclusive) designed to support access to credit through microfinance networks, is committed to increase the current percent of people with a transaction account (45.3%).

**In Togo, there is tremendous transformative potential driven by DFS.** Financial exclusion affects men and women adults by depriving them of economic opportunities. More than half the population lacks access to a transaction account with women bearing a gender gap of more than 15%. Moreover, the Findex indicates that only 30% of adults have received payments for agricultural products in 2017. The country reliance on agriculture reveals significant potential for transformation of value chains. In Lomé several players on both public and private side have initiated the design of digitally based services that have the possibility to impact the lives of the poor. It is important to note the growing interest of the GoT in this field as the share of payments recipients that have received agri payments into a bank account or into a mobile phone has increased from 7 to 22 percent for banks and 3 to 14 percent for mobile phones, reducing the overall amount of agri cash payments.

**DFS can also impact gross domestic product (GDP) levels of digitalized economies by providing convenient access to a diverse range of financial products and services for individuals and businesses.** Providing access to credit to SMEs through DFS, enhances spending, which in turn boosts GDP growth.

**In Togo, there is strong potential for economic transformation** based on some progress in economic growth, with GDP increasing from 4.4 percent to 4.9 percent and the percentage of households with at least one savings account increased from 6.7 percent to 11.8 percent<sup>63</sup>. Togo has made modest progress in reducing poverty in recent years, but poverty levels remain high. Poverty rates declined from 61.7 percent to 55.1 percent between 2006 and 2015, and economic growth between 2011 and 2015 improved living conditions for most of the population, including those in the bottom 40 percent of the income distribution. During this period, rural areas and secondary cities saw a largely positive trend in consumption growth, the former due in part to growth in agriculture.

**DFS lead to greater economic stability both for customers and for their economies.** Digital finance promises to boost the gross domestic product (GDP) of digitalized economies by providing convenient access to diverse range of financial products and services (and credit facilities) for individuals as well as small, medium and large businesses, which can boost aggregate expenditure thereby improving GDP levels. Digital finance can also lead to greater economic stability and increased financial intermediation, both for customers and for the economy where they and their families reside.

**The Bali Fintech agenda launched in October 2018 by the World Bank and the IMF, proposes a framework on high-level fintech issues that countries should consider in their domestic policy discussions.** Beyond policy matters, innovative infrastructure models are emerging issues that countries are looking at particularly in Sub-Saharan Africa where 57% adults are still excluded from financial services. The Digital Economy for Africa initiative aims to assess the readiness of African countries in reaching cashless economies through 5 cornerstone pillars of which the development of digital financial services as an essential pathway.

## 4.2 Diagnostic Findings: Current State of Digital Financial Services Pillar

### 4.2.1 Availability of Digital Financial Services

**Togo's banking sector is highly concentrated, with the largest bank accounting for 22% of total bank assets, and the largest three accounting for a combined 61%.** The government holds important stakes in 6 banks, representing 67% of total bank assets. In 2011 the Togolese authorities adopted measures to tackle high non-performing loan (NPL) ratios in the banking sector through the securitization of bad debt and restructuring the banking system. The main banks involved in DFS are Banque Atlantique, Ecobank and BSIC Ecobank, who offer internet and mobile banking via a smartphone app, as well as the CashXpress prepaid card. Ecobank has its international headquarters in the capital, Lomé, and is expected to have a strong relationship with the government and a high level of influence over the Togolese banking sector.

**The take up in mobile services completely disrupts access to financial services which reached 45.3 percent in 2017 up from 18.3 percent in 2014<sup>64</sup>.** The development of digital payments has enabled Togolese consumers to pay bills, buy goods and transfer money via mobile phone. For the past three years, the number of mobile payment users in Togo has more than tripled. More than 10 percent of Togolese included in the financial system have both an account with conventional financial institutions and a mobile money account. For those with only a mobile money account, they represent about 12percent of adults. Financial institutions (commercial banks and Micro Finance Institutions (MFIs)) and electronic money institutions (EMs) combined report nearly 6.1 million accounts opened out of a total population of 7.6 million with total revenue by mobile money providers amounting to 290 million euros in 2017<sup>65</sup>. The Internet penetration is also growing exponentially and has increased from 3% in

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<sup>63</sup> Source: Global Findex Database

<sup>64</sup> Source: Global Findex Database

<sup>65</sup> BCEAO

2012 to 47.60% in Q3 2020<sup>66</sup>. At the same time, the competitive dynamic has led to lower connection costs.

**Togo has seen a sharp recent increase (up 100 per cent) in the number of mobile money users over the past 3 years**, however these represent only five per cent of the total number of accounts in the region. It surpasses only Niger (4 percent) and Guinea Bissau (1 percent). The region has approximately 50 million mobile money accounts, 35 percent of which are active<sup>67</sup>. Based on BCEAO's Instruction 08-05-2015 on electronic money and electronic money institutions, 2 mobile operators were licensed to operate with partner banks. These are the Flooz services offered by MOOV and Atlantic Bank as well as T-Money launched by Togocel and BTCL. Of the 7.6 million Togolese, around 2.9 million have adopted mobile money services allowing them to make deposits, withdrawals, airtime purchase, payment, cash storage and money transfer. In terms of usage, phone unit reloads account for more than 42 percent of annual transaction volume and the remainder is divided between person-to-person transfers and cash withdrawals. In terms of distribution, the 13,938 mobile money agents represent less than five percent of agents in the region, placing Togo behind Benin (14 percent), Senegal (22 percent) and Côte d'Ivoire (30 percent) but ahead of Niger (4 percent) and Guinea Bissau (1 percent)<sup>68</sup>. Merchants payments are still very limited, with only 957 service points in the territory of which less than a third are active.

**Card payments have appeared about 15 years ago in Togo, but they are only available for people who are banked.** Only 360,042 people hold a bank card out of about one million people with bank accounts. The Switch platform is operated by GIM-UEMOA, provides card services in an interbank and interoperable network. It allows the issuance, acceptance and acquisition of national, regional and international payment cards, including VISA and MasterCard. Banks share ATMs and POS devices (317 and 446 respectively at the end of 2017). All banks and selected IMF in Togo are connected to the GIM platform, and some IMF. The largest payment acceptors in Togo emanate from the oil, hotel and supermarket sectors.

**Financial access and usage rates are relatively low in Togo.** As noted above, the financial inclusion indicators from the 2017 Global Findex survey demonstrate that just 34% of all Togolese adults (ages 15+) have a financial institution account (only 25 percent of the poorest segment have one), while 22 percent of adults have a mobile money account (16 percent for the poorest segment). The Finscope survey on consumer demand for financial services in 2016 found 40% of Togolese adults excluded from any formal or informal financial services. In more recent data from the BCEAO in 2018, there are ~3.9 million mobile money accounts of which just 35% of them are active (90 days). This would indicate that 29% of the adult population has an active mobile money account. Actual data on activity of financial institution accounts is not available, however, Findex estimates that 25% of accounts in the developing world are dormant.

**Mobile money is still nascent but has potential to drive financial inclusion through innovative use of mobile money accounts and links to bank accounts.** Mobile money was launched by Flooz in 2013 and T-money in 2016. The number of mobile money accounts is high, though usage remains low. There are only first-generation products available in the market including: cash in/out, bill pay, person to person (P2P) domestic transfers, telephone recharge, merchant payments, and some government to person payments (G2P). Though these first-generation products dominate, there are new initiatives to create linkages (push/pull) between bank accounts and mobile money wallets by both MNOs, which can enable customers to have greater access to their bank accounts through digital channels and more distribution points. This may enable current customers to more actively use their accounts, and with targeted product development could attract new customers. There are no

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<sup>66</sup> The GSMA Intelligence, Q3 2020

<sup>67</sup> BCEAO

<sup>68</sup> BCEAO

innovative second-generation products (e.g. digital credit, insurance, PayGo services), though a few Fintechs (e.g. SEMOA, Nanocredit) are starting to appear, which can boost innovation in the sector if enabled.

**Most recently, the Government of Togo and in the context of the response to the COVID-19 pandemic, set up the “NOVISSI” cash transfer scheme.** Novissi supports eligible Togolese citizens in the informal sector whose daily income has been disrupted by the Coronavirus crisis, NOVISSI provides monthly financial aid to the most vulnerable individuals and families throughout the duration of the state of health emergency. Registration and cash transfers are all done electronically through mobile phones. Recent data shows that there are more than 1.3 million Togolese registered to this program including more than 500,000 direct beneficiaries, more than half of which are women.

**Agency banking can provide a channel to reach the unbanked, especially for most of the population living in rural areas, with an affordable distribution network that incorporates digital solutions.** Though regulations are key to enabling banks and MFIs to offer agency banking, the regulations in WAEMU may need revisions to enable financial service providers to expand their own agent networks and offer a full range of products and services. Ecobank is piloting an account that can be accessed via mobile and cash in/out conducted through their own agents. The Poste also has an account (ECO-CCP) accessible through their network of agents though the products are not targeting the traditionally unbanked, but rather salaried, pensioners, and students. According to the BCEAO, there are more than 10,000 active points of distribution in Togo. A key to extending relevant products and service through agents could be a key driver for DFS adoption and use, especially when agents are shared and non-exclusive to enable agent viability. Partnerships between different service providers (banks, MFIs, MNOs, Fintechs) are critical to building out agency banking so that use of digital solutions (mobile devices, tablets, etc.), a robust distribution channel (shared agents), and a full suite of financial products and services are available (savings, credit, insurance as well as payments). MFIs have a trusted presence in Togo and could play a key role in extending DFS. As a driver for financial inclusion, products and services will need to be tailored to different customer segments.

#### **4.2.2 Enabling environment for DFS**

##### *Regulation and Policy*

##### **Access**

**Togo has a favorable regulatory framework for DFS that allows bank and non-bank players to compete side by side and stimulates growth through a risk-based approach, with less stringent requirements for non-bank players.** Banks providing mobile banking and e-wallet services must meet more stringent and extensive regulations to combat money laundering and financing of terrorism. Togo uses the WAEMU regulatory framework for DFS governed by BCEAO (Banque Centrale des Etats de l'Afrique de l'Ouest), the Central Bank for the 8 WAEMU countries that share a single currency and monetary policy.

**In 2016, BCEAO opened the DFS market to MNOs to compete independently from banks by authorizing two types of e-money issuers** via the banking model and the non-bank model. In the banking model, e-money issuance is the responsibility of a credit institution or MFI, and they may or may not partner with an MNO. Banks do not need a separate license for electronic money activities. Non-banks must create an Electronic Money Institution (EMI) as a separate company and apply for an EME license. For example, Orange received an EMI license in 2016 and its e-money business is governed by BCEAO. To offer savings and loans, non-banks must continue to partner with financial institutions.

**With the latest regulation, MNOs with e-money services are moving towards a more autonomous model, reducing their historical reliance on banks.** They acquired EMI licenses to offer basic products and report directly to BCEAO but continue to partner with a financial institution to offer traditional

banking products (e.g., savings, loans). MNOs are regulated by ART&P Togo (Autorité de Réglementation des Secteurs de Postes et Telecommunications).

**In Togo, the national payment system serves the banks effectively while excluding new players** (IMF and EME). The national payment system in Togo is quite well developed and is part of the WAEMU regional payment system. The main infrastructures put in place focus on: The Automated Transfer and Settlement System in WAEMU (STAR-UEMOA), the Interbank Automated Clearing System in WAEMU (SICA-UEMOA), the Regional Interbank Banking Group, the Centralized Payment Incident database to secure the check and the card. These systems essentially serve banked individuals.

### ***Agent Banking***

**Agent banking regulations are moderately favorable.** Via the Instruction n° 008-005-2015 of 21 May 2015, agent banking regulations for banks are cumbersome, requiring high agent deposits and registration by each agent with BCEAO. The regulations are currently under review. Agent banking regulations contrast with mobile money service operations which dominate the market, with relatively large agent networks and minimal regulatory oversight. Agent qualification and management is the responsibility of the mobile money operators but there is minimal regulatory control.

### ***KYC and identification***

**Access to a financial account is moderately favorable.** For financial institutions, regulation requires that new customers provide photo ID and proof of address, which restricts uptake due to lack of identity documents. Togo issues national identity cards for FCFA 5,000 (approx. US\$ 9). It is estimated that approximately 81% of citizens currently have some form of ID document, leaving 1.5M without an officially recognized ID<sup>69</sup>.

**Meanwhile, the 2015 e-money guidelines increased the transaction and monthly thresholds for mobile wallet customers to CFA 200,000 (US\$ 380) before a valid ID is needed.** Customers can in theory transact without a valid ID up to this amount, although these higher limits have not (yet) been implemented by most providers except the Post. However, MNOs should already have some of this data because an ID is needed when purchasing a SIM card. There is currently no Tiered KYC for banking accounts.

### ***Competitive dynamics***

**The MNO-led mobile money services are gaining traction and are leading the adoption of DFS, and further growth can be expected.** However, neither of the major regional MNOs (MTN and Orange) are present in Togo and in their absence, growth is lower than in other markets. Bank-led DFS seem restricted to offering on line access to existing customers at present. Around 21% of adults have used a mobile phone or the internet to access an account (the same number as have mobile wallets) and nearly a third have made or received a digital payment in the last year (Table 1). OTC is present but the level of uptake is unknown.

**Access to USSD codes was liberalized in 2019 by the Regulatory Authority of the Posts and Telecommunications Sector.** The law obligates operators to provide objective, transparent and non-discriminatory access to requests for access to USSD codes from value-added service providers and electronic financial service providers. Although sanctions exist in the event of non-compliance by one of the players with the provisions of the decision on the opening of USSD codes, no measures have been taken to limit the prohibitive access costs of MNOs.

**There are no significant strategic partnerships in DFS, although the potential is enormous.** Products on offer are basic, mainly cash in/ out, P2P transfers including international remittances and bill

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<sup>69</sup> Report from MENTD



payments. The CNSS and the OTR have taken strong steps towards digitization, the Treasury, the Post and the FNFI are still lagging. Among reasons cited for delays in utilizing disruptive technologies to accelerate efficiency in service provision and financial inclusion, the lack of financial resources, regulation, innovative partnerships and skills were cited as key barriers. The mission also noticed that the lack of dialogue and healthy competition are acute among stakeholders meanwhile the opportunity for innovative partnerships could lead to more diversity and outreach of financial services.

**The Togolese microfinance sector has recorded strong growth in recent years and plays a key role in providing financial services to the population.** There are 75 registered MFIs and more than 2 million users. The sector has grown strongly since 2008 and in 2011 provided 16% of all bank loans and held 15% of all deposits. However, digitization has yet to appear in this sector. Wari, an international money transfer provider, is present in Togo providing both domestic and international OTC money transfers. The Fintech sector is extremely limited to the exception of SEMOA a newly installed fintech that specializes in online payments (Box 2).

**Regulation No. 008-05-2015 governs e-money** activities of issuers of electronic money in the member states of the West African Monetary Union. It lays down the conditions for granting approval to electronic money institutions and the authorization to carry out electronic money issuing activities for decentralized financial systems. In addition, it specifies the control and supervision of the activities of issuing institutions.

**The other relevant national regulatory bodies include** (i) the Telecommunications Regulatory Agency (ARCEP), the national telecommunications regulatory body responsible for regulating mobile operators and Togo Poste; (ii) The Ministry of Posts and the Digital Economy in charge of operators agreements; and (iii) the National Center for Financial Information Processing (CENTIF) responsible for AML/CFTL.

**Since July 2017, a national biometric identification project has been initiated.** The ambition is to provide the population with a unique biometric identification number. E-ID Togo consists of a modern biometric system, modeled on the Aadhaar Indian model, which uniquely identifies all individuals, whether citizens or residents in Togo. This project motivates the need to promote legal identity for all in accordance with one of the United Nations Sustainable Development Goals.

**On June 13rd 2017, the Parliament adopted a law on the information society and electronic transactions.** A first in Togo, which has a legal framework that now regulates the digital economy sector in order to revitalize it for more efficiency and more security.

**The Electronic Transactions Act creates a legal framework for the development of e-commerce in the country by building confidence in the field of electronic transactions and services.** It also lays the foundations for the dematerialization of formalities and procedures, particularly in the context of administrative procedures and online payment of taxes and duties. The law now recognizes contracts, evidence, invoices or signatures in digital form.

**The Personal Data Protection Act is in the process of being adopted.** It fills the legal void found at the institutional levels. In addition, it also defines the concept of personal data and establishes the creation of a national authority for the protection of personal data (Personal Data Protection Authority). The text also provides for the establishment of a Computer Emergency Response Team (CERT) and a Security Operating Center (SOC) as well as the creation of the National Agency for Cybersecurity.

**At policy level, the BCEAO** of which the Republic of Togo is a member, adopts a framework via the Council of Ministers of WAEMU in June 2016: Policy and regional strategy for financial inclusion in WAEMU. This strategy outlines the vision and main lines for financial inclusion in WAEMU. For the BCEAO, the goal is to achieve a financial inclusion rate of 75% by 2025 through the following 5 pillars: (1) Promote an effective legal, regulatory and supervisory framework; (2) Consolidate and Strengthening the microfinance sector; (3) Promote innovations that ensure the inclusion of excluded

populations (4) Strengthening financial education and consumer protection in financial services; (5) Establish a financial framework and policies that support inclusion.

#### **4.2.1. Constraints to Digital Financial Services Development**

##### ***Regulatory constraints***

**Several aspects of the current law impede growth of second-generation digital products.** (1) MFIs revenues from non-savings and credit-related services cannot surpass 5% of their total revenues; (2) The current decentralized financial systems law imposes high collateral requirements and impedes growth of SME financing through DFS; and (3) Interest rate caps for banks and MFIs (15% and 24% respectively) apply to digital credit products and are considered too low to encourage the development of digital loans.

**The regulatory framework for agent banking in the MFI industry prevents the extension of services to rural areas.** The possibility for MFIs to issue and manage payment means would allow the microfinance industry to be deeply catalytic in strengthening access to financial services. The authorization for MFIs to recruit agents to participate in the remote banking system would increase the supply financial services offer and consequently usage.

**There is a lack of regulatory framework for fintech entities.** Despite the identified potential. The absence of regulatory framework for Fintechs is acute given the large number of initiatives in Togo and the increasing number of e-money users. Indeed, there is no framework that specify the conditions for exercising fintech activities. A concept notes to the BCEAO showing the risks and various actions to be taken by the central bank is being prepared by the World Bank with funding from FIRST Initiative.

**There is insufficient collaboration between different regulatory authorities.** The absence of collaborative framework between the Ministry of Finance, the Telecom Regulatory Agency and the BCEAO to facilitate cooperative supervision on cross-cutting issues related to digital finance: pricing, fraud prevention, respective authorizations, fiscal framework, SIM activation rules.

**The rise of digital as a means of accelerating financial inclusion is coupled with several cyber-attack risks. One of most significant obstacles to DFS are linked to the cybersecurity risk and consumer protection.** These are essential and strongly correlated with the lack of consumer confidence on online payments, a problem common to the entire sub-region. Indeed, West Africa is the scene of a series of incidents deriving from the diversion of personal data for the purpose of extorting users of digital financial services. Togo has taken a lead on the consumer protection system with the May 2018 decree authorizing the implementation of an automated processing of personal data for the integration of major billers to the electronic platform of share credit information. This decision precedes the adoption by the National Assembly of the law on cyber security and the fight against cybercrime on December 6th, 2018. The adoption of this law by the National Assembly is part of the implementation. Axis 4 of the sectoral digital economy policy in Togo which insists on the need to "guarantee national digital sovereignty including cybersecurity and the protection of citizens".

##### ***Product and market level constraints***

**Cash is still king.** Despite the establishment of the GIM-UEMOA platform, there is still not a massive digitization of payments in Togo today. The implementation of the GIM UEMOA interoperable platform was aiming to increase domestic operations, particularly payments through ATMs and POS. However, statistics show that the value of cash withdrawals is much higher than that of payments, i.e. about FCFA 837 billion (1.4 billion USD) vs FCFA 18 billion (30 mil USD) during 2017, revealing that payments represent only 2% of the total value of operations.

**Informal savings and credit outweigh Digital financial services.** The bulk of subscriptions to savings and credit services in Togo are processed outside of the formal financial system. Informal village

savings and loan associations (tontines) play an important role in rural areas, although the extent of their operations is not well known. These are mainly small groups of individuals, usually women, some of whom are supported by NGOs. They are vectors of small, regular savings and short-term credit for productive activities. Some tontines keep accounts with the DFS.

**The new digital savings account may soon disappear despite potential for inclusiveness.** As part of its drive to digitize payments, the GoT encourages many initiatives. However, all are implemented in silos, which reduces their effectiveness. Synergies should be created very quickly at the risk of significantly reducing the impact of these initiatives on vulnerable populations. The Post has so far failed to attract the microfinance and the banking industries to adhere to ECO CCP, hence the growth of subscriptions to this first ever digital savings account is now going down. Moreover, only basic services (transfers, cash withdrawals) are now possible, meanwhile payment and credit features, which would attract millions, are not operationalized.

**Despite the rather favorable regulatory framework, the GoT uses limited electronic payment instruments for the realization of small-scale expenditures.** In 2017, only 11% of adults received a government payment electronically. The Treasury has embarked on a process of modernizing its internal information system and has been connected to Central Bank payment systems (STAR-UEMOA and SICA-UEMOA). The challenge for the government today is to digitize payments for the unbanked and automate the collection of government payments. It is in this context that the Parliament adopted on June 13<sup>rd</sup> 2017 a law on the information society and electronic transactions. A first in Togo, which has a legal framework that now regulates the digital economy sector in order to revitalize it for more efficiency and more security. According to the Togolese Government, this law, which deals with electronic transactions, aims to trigger the digital transformation in Togo.

**There is no structure dedicated to strengthening financial education in Togo,** which has a young population with a low level of literacy. In fact, 60% of the population is under 25 years old. Overall, the level of literacy is low and 54% of adults have only primary education or no education. With the introduction of digital, financial exclusion remains a risk if people are not literate enough to embrace the new financial services.

#### *Infrastructure level constraints*

**The lack of interoperability between different payment instruments is stifling the volume of payments.** The means of payment (bank cards, mobile) are not interoperable making it impossible to transfer funds between two users belonging to different networks. The objectives of the BCEAO interoperability project are to enable global interoperability of payment methods through the GIM UEMOA regional platform. This transformation of GIM-UEMOA services involves updating the platform (SWITCH), improving regulation and strengthening collaboration between stakeholders. The project is expected to be operational by 2020 and will have to consider national needs in terms of scope, standards and protocols to be used. It is also recommended that it considers GoT's ongoing biometric identification and national platform projects.

**Tele-declaration and telepayment (B2G) are operational in Togo since December 2018,** but there is no link with the credit information system (CIS) managed by the Bureau of Credit Information WAEMU Credit Info Volo. Administrative documents can be downloaded, and payments made online by providing a RIB. All banks should soon be interconnected to the platform of the Togolese Revenue Office (OTR). This digitization could allow, beyond automation, a traceability of corporate income and serve as a basis for the provision of credit by banks.

## 4.3 Digital Financial Services Recommendations and Next Steps

The WBG can be a key partner to leverage further insights on how digital innovations can create private sector business models and partnerships in a range of sectors such as power, transport, water and sanitation, digital infrastructure, manufacturing, agribusiness, education and financial services. The vision for the DFS market in Togo is to be aligned with other digital pillars across the ecosystem to achieve the ambitious vision of the GoT. Drawing on the findings of the DFS market assessment, recommendations include the following:

### R3.1. [Quick Win] Support the development of Digital Financial Services markets.

#### **There is a need to support the Post Office in infrastructure modernization.**

The Post urgently needs a rescue plan to revive “ECO CCP”, and support could take the form of a study on postal financial offerings and a stakeholder’s roundtable on the opportunity to make “ECO CCP” the national retail payment instrument for all Togolese, to the image of “BIM” in Peru and M PESA in Kenya. The “ECO CCP” account can be a tremendous tool to improve access to financial services for the most vulnerable by linking MNO to Government entities and MFIs through the FNFI). This will help increase the number of subscribers. “ECO-CCP” could be a great financial partner for several financial inclusion initiatives set up by the GoT. These include the FNFI and the OTR. Further to this, beneficiaries of AGRIPME should receive their grants on their ECO-CCP accounts which are automatically linked to their electronic money account FLOOZ or T-MONEY. An integration will also have to allow the payment of CIZO off-grid electricity costs.

#### **The Bank could provide a loan or grant to the FNFI to support its digitization plan.**

The progress made by the FNFI has been substantial in providing access to credit, however, it holds great potential in including more individuals in the formal financial system. FNFI loan applicants should be systematically required to open ECO-CCP account, in which the funds would be deposited.

#### **Thought leadership to promote market research and use of data analytics for decision-making is critical in the DFS sector.**

Sharing of market intelligence and use cases is critical for understanding customer needs and provides insights to tailor services and products around the customer. Guided discussion can promote sharing of best practices, guidelines and use-cases.

#### **Facilitation of a training and learning program to support private sector service providers (SPs) in development of effective digital transformation strategies.**

A Digital Transformation Bootcamp, which can be facilitated by IFC could provide a hands-on opportunity for the participating SPs to learn about DFS and explore relevant solutions for the Togolese market, and design strategies to develop the DFS market.

#### **Address the low merchant uptake of DFS by offering incentives during introductory periods.**

Other DFS markets, like Kenya, have shown that merchant acceptance of mobile money payments can become a critical driver of sustained usage of DFS in the market. Merchants in Togo are slow in accepting the mobile money channels. The offering of financial incentives, such as tax discounts on fees merchants must pay, for an introductory period of this payment option, can be highly attractive in driving wider usage at low cost and low risk for merchants.

**Create a shared agent network across DFS providers to increase efficiency and reduce costs.**

Interoperability between DFS across all types of FSPs is highly recommended to drive adoption of DFS and can further benefit from investing in growing an agent network that is inclusive and fully interoperable. A shared agent network has the potential to lower costs of agent networks, ease liquidity constraints of agents, and improve service delivery to customers. In a small and nascent market such as Togo, when rolling out services newly, incentivizing agents to perform can be challenged by the low volume of transactions and lack of service provider support. An aggregated or shared agent network can build a viable agent network that services all service providers.

**Leverage data analytics and encourage DFS providers to diversify product and service offerings, especially to provide new types of digital savings and credit services.**

Information captured and available by MNOs and FSPs can be highly useful in modelling new credit services adaptable to the target customer.

**Encourage data analytics skill development.**

DFS increasingly relies on having a skilled workforce, particularly in the area of data science and, as in many markets, Togo has insufficient trained business intelligence and data science specialists. Performance reporting and traditional business intelligence are enabled by descriptive and diagnostic data analytics, while further information optimization can be achieved using predictive and prescriptive data analytics. There is an opportunity for businesses to increase their in-house data analytics capacity, to train in data analytics in the short-term through online and offline trainings and certifications, to build capacity of youth and adult workforce, and use industry initiatives such as competitions and hackathons to build and attract talent.

**Pilot test the use of alternate data digital credit products, using AI for credit risk assessment, particularly of informal businesses and unbanked individuals by leveraging payment transaction data to build customer profiles.**

For example, technical assistance on how to innovate such product offerings may be delivered to the sector via FNFI, or a DFS working group.

**Encourage digital and financial solutions for the agriculture sector:**

Digitizing agriculture value chains and using transaction data to build farmer financial profiles can incentivize providers to create and deliver credit and insurance products, which is currently viewed as a risky sector. Initial evaluation of the existing Agri-PME project would provide valuable lessons for the market by revealing actual use of the mobile wallets and how farmers are using them beyond receiving subsidies, and whether farmers are paying directly to agriculture suppliers or cashing out their subsidies to then pay in cash. Research on behavior of farmers as well as the agriculture suppliers would provide critical insights to incentivize product development. Expert technical assistance could be engaged to analyze value chains in Togo (e.g. cotton, coffee, cocoa) and support service providers (e.g. MNOs, FNFI, FUCEC, the Poste) with digital interventions. Strategies to digitize agricultural procurement and input payments with suppliers, farmers and other value chains actors could be a first important step to developing robust farmer financial profiles that would enable creation of specific agriculture financial products

**Encourage digital and financial solutions for MSMEs:**

Crucial for MSMEs will be accessible, affordable and appropriate solutions that will allow MSMEs to grow and sustain their business operations. The growing adoption of digital payments also requires digital means to process and account for payments, stock taking, and customer service delivery. MSMEs in Togo stand to benefit from increased focus on MSME-oriented solutions.

**Promote digitization of Government payments.**

Many governments have embarked on a policy to digitize both government to people (G2P) and people to government (P2G) payments as a means of improving efficiencies, transparency, governance, and financial inclusion. To do so, wide collaboration is required between government entities including the treasury, ministries (e.g. MoF), agencies (e.g. CNSS), and private sector service providers. In addition, a 2002 BCEAO regulation promotes the use of banking and non-cash payment methods for civil servant salaries of greater than or equal to 100,000 FCFA (USD 160). This regulation could be updated to both reduce the threshold for lower values (e.g. 80 USD) and to expand the payment methods to include the use of mobile money wallets for lower amounts. Such initiatives can drive adoption of transactional accounts but would also require consumer awareness/education campaigns for them to be able to adopt and use their new accounts, as well as technical support to the payment service providers in order to ensure a robust agent distribution network and/or merchant acceptance exists.

**R3.2. [High Priority] Improve stakeholder collaboration and dialogue.**

**Improve stakeholder collaboration by creating a working group on DFS.**

In Togo, there is a lack of coordinated approaches in the payment space. Given the rise of various initiatives in digital financial services and payment in general, it is recommended that the MENTD and the DPFI create a national working group on DFS. The absence of dialogue and cooperation among stakeholders leads to missed opportunities to i) respond to market needs and to ii) share good practices and experiences. The lack of cooperation is particularly acute between the central bank and the telecom regulator. The BCEAO has the clear mandate to regulate payment channels and the financial sector, however, the mandate of other regulators for the telecommunication sector (ARTP) will require close cooperation and alignment. Dedicated coordination can overcome challenges where traditional silos can hinder development of DFS products and services. The leadership of relevant stakeholders will be required to allow for this process to happen in the interest of identifying overlaps and gaps.

**In the interest of a stable, inclusive and prosperous digital economy in Togo, close alignment and cooperation between the ecosystem stakeholders is needed to introduce new regulation and guidelines, and to change existing ones.**

For example, relevant sector-wide issues could include: inputs to the NFIS on extending DFS into rural areas, facilitation of access to USSD codes for service providers, ensuring a level playing field among service providers (public versus private), interoperability, managing dormant accounts, shared agent networks, etc.

**Strengthen ecosystem cooperation through a collaborative network for the DFS ecosystem among government, regulators and private sector.**

Build a collaborative network across the ecosystem in which participants can develop common approaches to business, regulatory and technical challenges. There is potential to collaborative working group to clarify regulatory constraints, foster business partnerships,

promote a level playing field, and support a common vision to creating a robust DFS ecosystem. Invested stakeholders from regulators (BCEAO, ARTP), relevant government agencies (e.g. CNSS), private sector service providers (MNOs, financial service providers, Fintechs) can meet on a regularly scheduled basis to work on a specific agenda to advance DFS. The government can partner with the World Bank Group to implement their leadership ambitions while taking the role of a neutral party to facilitate. Ways such collaboration can be valuable:

### **R3.3. [Long Term] Improve policies and regulations, at regional and national levels Policy and regulation**

#### **Reforms are needed both at regional and national level.**

The Bank should provide complementary support in improving the regulatory and policy framework for DFS. The diagnostic finds that support is needed in several areas including: fintech entities, NBFIs, agency banking and interoperability. The Bank is preparing a regional DPF to support BCEAO and member countries in improving financial inclusion. This operation includes a new legal framework for agents, Fintechs, NBFIs, credit bureaus, consumer protection agencies, and competitive laws on USSD, and support for AML/CFT. Hence recommendations to be implemented by the BCEAO are not presented here, although impactful for DFS development in Togo.

#### **Implement the Togo-specific National Financial Inclusion Strategy adapted from the regional BCEAO strategy.**

The formulation of strategic priorities for the country is a critical step towards leading the promotion of financial inclusion, and more specifically DFS. The DPFI (Direction de la Promotion de la Finance Inclusive) has committed to design and adopt a national financial inclusion strategy however it has yet to complete and implement it. The GoT would gain in reinforcing its national financial inclusion strategic framework through policy and strategy. Support could take the form of a technical assistance for the DPFI to finalize, adopt and implement its strategy. The NFIS should include formulated goals and targets, as well as an action-oriented and realistic roadmap towards achieving them. It's critical that it include consumer education and protection components, as well as how consumer data is to be treated and shared with consumers in a credit information system.

#### **Adopt a digital payment interoperability regulation.**

Develop and issue regulation mandating interoperability and adoption of open standards to enable existing closed-loop systems to become open-loop systems, or to be able to become interoperable with the open loop systems. Given the existence of payment initiatives in closed loops (Floov, T-money, Poste ECO CCP), interoperability would expand the ecosystem and promote adoption of mobile money by consumers. Togo could implement the regional interoperability project led by BCEAO and GIM UEMOA. This involvement could be materialized by the adoption of a regulation for the interoperability of platforms that could later evolve into a regional regulation. This measure would encourage a better organization of interoperability in Togo and would in the long-term lead to an increase in the volume of transactions (as has been proven in markets such as Tanzania).

**Consumer education: there's a need to develop either a stand-alone National Financial Capability Strategy (NFCS) or a dedicated financial capability section as part of a broader NFIS that promotes financial and digital literacy among consumers.**

In addition to a robust consumer protection policy, increasing efforts to enable the consumer to make informed use of DFS, based on accessibility, affordability and appropriateness criteria will be critical to further advance DFS. Expanding access to valuable DFS solutions and products among the unbanked and low-income segment will need to go together with greater financial and digital literacy training, including awareness-raising campaigns explaining the benefits and risks of new DFS products, such as instant digital nano-loans. Accessible and affordable DFS and wider digital economy benefits can only be realized when the end-user moves along the customer journey from awareness to regular usage. Basic awareness campaigns are still needed in the Togo market to convey basic concepts of DFS first, followed by increased understanding of the type of products available in the market, how to use them and the risks and benefits associated. An empowered consumer will be able to recognize the benefits of DFS, generate trust towards DFS, and build confidence in how to use them.

Incentives



## 5 Digital Entrepreneurship Pillar

### 5.1 Importance of Digital Entrepreneurship Pillar

**The digital transformation provides Togolese entrepreneurs with significant economic and social opportunities.** There is an undeniable association between entrepreneurship and a country's income level<sup>70</sup>. Digital entrepreneurs in particular enable the creation of jobs, facilitate access to basic goods and services, foster innovation in financial services (ex. mobile money), renewable energy (ex. pay as you go, mobile payment of solar energy), education (ex. dissemination of teaching content, e-learning), agroindustry (ex. streamlined supply chains), and health (ex. mobile health, remote diagnosis). The innovative solutions proposed by startups make it possible to respond to specific problems leveraging the digital technology, and in a way that is adapted to the local context.

**In this context, Togo's National Development Plan (PND), in its first Axis, emphasizes the importance of establishing an ecosystem to support private actors and entrepreneurs,** as part of a digital economy policy enabling Togo to develop competitive and accessible digital services for the greatest number of citizens. To achieve this aim, the Plan also envisions the dissemination and integration of digital technology in all sectors of the national economy, and the improvement of the quality and diversification of digital services. The Strategy for the digital economy in Togo 2018-2022, meanwhile, pursues the same goal of putting in place and operationalizing an ecosystem for the support and financing of digital private actors and digital entrepreneurs.

#### *Box 3: Case study on Kenya's success with digital entrepreneurship*

Over the past 10 years Kenya has made a stunning innovation journey and become a leader in digital innovations in Africa. It started with the well-known successful commercialization of mobile money in the country through M-PESA by Safaricom in 2007, which has led to increased understanding of the potential for innovation to deal with local problems. Many youths have then sought to duplicate this success story to launch their own digital products and platforms. To leverage and support this entrepreneurial drive, entrepreneurs created iHub in 2010, one of the first of the new generation of incubators in Africa. This led many other private innovation hubs and startup support structures to set up, which managed to attract the funding of corporations and aid agencies. Traditional institutions also followed suit, with for example the University of Nairobi and Strathmore University now having track records of early successes in incubation programs that have led to the commercialization of their research outputs. This momentum has also attracted global multinational corporations to Kenya, such as IBM, Intel, Microsoft and Google who have set up offices and research facilities in the country, which will continue to drive innovation. According to Bloomberg reports, Nairobi's tech scene is now worth as much as \$1 billion (i.e. FCFA 600 billion) and Kenya's iGDP (digital activities' contribution to the economy as a fraction of total GDP) accounts for 2.3%.

Although the innovation witnessed in Kenya has initially largely taken place outside official government's policy and was more the product of civil society and private initiatives, the government has responded to the opportunity through Kenya's Vision 2030.

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<sup>70</sup>Global Innovation Index, 2018

This Vision has generated new entrepreneurship and innovation policies (e.g. enactment into law and implementation of a National Credit Guarantee Scheme to support the access of SMEs to credit), has encouraged startups, incubation and acceleration programs (e.g. support to NaiLab), has increased funding for R&D (e.g. which led to rapid expansion of research portfolios at various universities), and has started developing flagship entrepreneurship infrastructure projects (e.g. Konza City Technology Park). The digital sector also benefited from the government's launch of the Kenya Open Data initiative and the willingness of the Ministry of Information, Communications and Technology (MOICT) to support and work closely with the developer community, which has helped various innovation hubs such as NaiLab to take off, from which flowed innovations beneficial to a cross-section of economic sectors. The MOICT also adopted public-private partnerships as a strategy to ensure knowledge transfer and modernize Kenya's industrial sector, which has attracted multinational companies, such as IBM, to set up research labs in Kenya to exploit big data and develop new applications that would run the next generation of government. In the same vein, more recently, the Ministry of Industry, Trade and Cooperatives (MoITC) launched the \$50 million (i.e. FCFA 30 billion) Kenya Industry and Entrepreneurship Project (KIEP) with the support of the World Bank, to strengthen the innovation and entrepreneurship ecosystem (i.e. supporting incubators, accelerators, and related hubs and addressing the entrepreneurship and technical skills gap), as well as to increase productivity and innovation at the firm-level (i.e. building linkages between traditional industries & startups and supporting managerial & technical skills, technology upgrading).

Kenya is just beginning its innovation journey and many challenges lie ahead, but other emerging economies can still learn something from its experience. This includes the benefits of using deliberate policy interventions to amplify private and civil society initiatives; of leadership in government with an appetite for risk taking; of the construction of collaborations and partnerships with the private sector including multinational corporations; of increasing funding research; and of the development of incubation centers across universities and civil society to foster innovation. Relative to other African countries, some of Kenya's macro strengths which also positively influence innovative capacity lie in its high quality and low cost mobile internet connection (twice as fast as the global average), one of the best environments for doing business in Africa (including being the top protector of minority investor rights globally), large expenditure on education, attraction of (foreign) investment funds, increasing R&D spending, and intensity of local competition.

*Source: World Bank analysis*

## 5.2 Diagnostic Findings: Current State of Digital Entrepreneurship Pillar

**The Togolese context offers some opportunities for digital entrepreneurship.** This context is characterized by a young (60% of the population is under 25 years old<sup>71</sup>) and growing urban population (+3.76% per annum<sup>72</sup>). Also positive are the increasing use of technologies (mobile adoption rate of 47.60%<sup>73</sup> and smartphone adoption rate of 40.90%<sup>74</sup>, with a double-digit annual growth), and a nascent innovation ecosystem (fab labs, incubators, co-working spaces, etc.)

**However, the startups' ecosystem in Togo lags when benchmarked to other emerging economies.** No venture capital funding has been mobilized by Togolese startups in 2018<sup>75</sup>, in comparison with \$22

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<sup>71</sup> World Factbook, CIA, 2018

<sup>72</sup> Open Data, World Bank, 2017

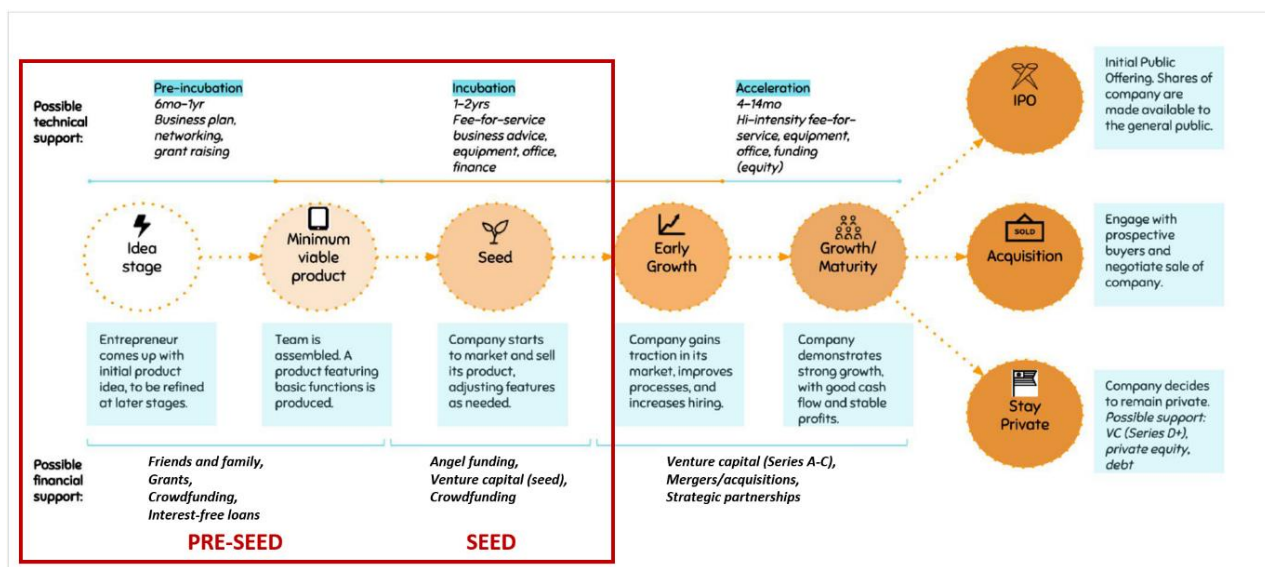
<sup>73</sup> Source: The GSMA Intelligence, Q3 2020

<sup>74</sup> GSMA Intelligence, Q3 2020

<sup>75</sup> Annual report on VC funding in Africa, Partech Ventures, 2018

million in Senegal (although the GDP of the latter is about five times bigger than Togo's). And while Togo is not included in the Global Entrepreneurship Index (GEI)<sup>76</sup>, it is comparable to similarly sized markets such as Burundi ranked 135<sup>th</sup> (out of 137 countries ranked), Guinea ranked 130<sup>th</sup>, and Rwanda which is more highly ranked at 91. The weak dynamic of startup emergence is partly due to the challenges related to the other digital economy pillars highlighted earlier in the report. The limited broadband penetration across the country and high costs of Internet and Internet-enabled devices (see Chapter 1 on digital infrastructure), the low uptake of digital technology and platforms beyond mobile banking and mobile money transactions which have improved but not reached full scale (see Chapter 3 on digital platforms and Chapter 4 on digital financial services), and insufficient availability of digital skills at all skill levels (see Chapter 6 on digital skills), constrain local market opportunities and hamper the growth of digital entrepreneurship in Togo. But Togolese startups also suffer from specific weaknesses in the business training and support, access to markets, adapted financing, and business climate. Some public programs in favor of entrepreneurship exist, which is reflected in multiple mechanisms for promoting, financing and supporting entrepreneurs. However, the results are still insufficient in view of the scale of the challenges to be solved, and the actors point out the limited effectiveness of entrepreneurial interventions and mechanisms, especially in the digital field.

**Figure 16: Different technical & financial supports needed by startups for each stage of development<sup>77</sup>**



### 5.2.1 Business training and support

**In Togo, the unavailability of appropriately skilled talent is a major constraint in the digital ecosystem, as discussed in Chapter 6.** It is a constraint for startups to hire performing employees, with 21 percent of Togolese employers listing inadequate workforce skills as a major constraint<sup>78</sup>. And it is also a constraint for the startup founders themselves to have the capacity to grow their venture with success, while in the digital economy the quality of the management team is identified as the most important factor for financiers when deciding in which companies to invest, and also the single most unique characteristic identified across African startups making commercial progress<sup>79</sup>. In particular, in Togo the level of practical business skills and entrepreneurial literacy is still relatively low, which is confirmed by the rank of Togo as 108<sup>th</sup> (out of 129 economies ranked) in the category “Human Capital” of the Global Innovation Index, with a score of 36.9 in Education and 9.6 in Tertiary Education, far behind countries with the same level of development such as Benin which ranks 92<sup>th</sup> in this same

<sup>76</sup> Global Entrepreneurship Index, GEDI & GEN 2018

<sup>77</sup> Source: World Bank analysis

<sup>78</sup> Enterprise Survey in Togo, World Bank, 2016

<sup>79</sup> Venture Finance in Africa, VC4A 2017

category. Most Togolese education institutions put the emphasis on theory and lecture courses, and critically lack in hands-on project work and exposure to recognized executives and entrepreneurs. Therefore, most Togolese startup founders lack the basic business skills that are expected from anyone who wants to start and run a business, except if they have had work experience in the private sector where they could receive on-the-job training. Many do not know how to identify market needs and develop a product that responds to an actual need, how to structure their operations, what type and amount of financing they need and how to best use it, among others. More precisely, even though Togolese entrepreneurs tend to know they need skills and support, they do not know which precisely, and most of them focus on securing financing in the first place, neglecting the importance of developing a good business idea and of the importance of business skills to execute it. For instance, when the incubator Innov'Up was launched in 2016, their services initially created a lot of interest, with a few dozen applications, but this dwindled down to 15 when entrepreneurs found out that it didn't lead to securing financing and that they had to pay XOF 25,000/month (USD 42/month) for the services.

**In this context, the initial growth phases of a startup require business development and management support, especially in a country lacking a business culture.** First of all, they require training and mentoring activities that support idea and prototype stage entrepreneurs or startups in their crucial initial steps, such as identifying market needs and corresponding relevant products/services. Also, when commercializing their products/services there is usually strong pressure on the business, and if startups aren't supported, they might be overtaken by events and thus make costly mistakes (ex. confusion between the company's assets and that of the entrepreneur, family recruitments, etc.) unless the internal management procedures are optimized (accounting, financial management, governance) and an operational support is provided (commercial, production, marketing). In view of these challenges, providing quality support, that improves business performance in some tangible way, is vital for the development of startups in Togo.

**Around 10 startup support structures (i.e. fab labs, co-working spaces or incubators) have been set up in Togo in the last few years, offering spaces and/or support to entrepreneurs, with strong emphasis on membership to a community of innovators and techies.** By facilitating the strengthening of entrepreneurs' technical and managerial capacities, these structures should theoretically enable them to significantly increase their chances of success and create viable and job-creating companies<sup>80</sup>. Beyond the support they provide to entrepreneurs, these structures represent forums for networking and promoting a positive culture around digital entrepreneurship, which is emerging slowly in Togo, but is still very far from being mainstream. The sensitization activities that Togolese hubs organize, such as talks by successful role models, help a lot in that sense, in a country where innovation culture and entrepreneurial mindset are very nascent.

**Yet, in Togo, the relevance and impact of these often-nascent structures is still mixed.** As is the case for many other African countries, they are often isolated (sometimes on purpose for fear of competition), don't have access to enough experienced mentors, lack the appropriate means to develop, and have no M&E systems to report on results of their activities. Even when taken together, these structures still have difficulty to provide access to all the skills, tools and contacts needed for the growth of entrepreneurial projects, especially digital startups, for which very few structures propose dedicated services. In addition, they have not yet found enough financing and sustainable business models to ensure their viability, which limits their capacity to attract and retain skilled staff, and especially staff with actual entrepreneurial experience (research has shown that support structures run by people with no entrepreneurial experience can in fact negatively affect the community<sup>81</sup>). Faced with these challenges, a promising signal is that several Togolese hubs are part of Pan-African

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<sup>80</sup> World Development Report: Digital Dividends, World Bank, 2016

<sup>81</sup> Fostering Productive Entrepreneurship Communities, Endeavor 2018

networks aimed at strengthening them, such as Afric’Innov or AfriLabs, which deliver training and deploy dedicated tools for African incubators.

Faced with this situation, the Ministry of Digital Economy is developing the Djanta Tech Hub, which aims to be a center of excellence and reference for the training and support of technological entrepreneurs. This is a positive step with a relevant vision, but there has been until now a disconnect between this project and the existing entrepreneurship ecosystem in Togo. The community feels that

**Box 4: Case study on GrowthAfrica, a high-performing entrepreneurship support structure**

GrowthAfrica is an acceleration program with offices in Kenya, Uganda, Ethiopia, Zambia, Malawi and Ghana, which provides ambitious entrepreneurs with access to knowledge, exposure, strategic guidance, managerial and practical tools, networking, peer-to-peer learning and facilitates a connection to investors. The goal is to provide entrepreneurs with tools to see their businesses from a more holistic perspective in order to think more strategically and make better business decisions and getting them investment ready.

The program as it is today has gone through a number of transitions based on feedback from participating companies and investors to ensure greater and more meaningful impact. The program targets enterprises which are already in the market and which are making revenue but need the support to do better and scale their business. It is structured as a 6-month program, focused on startups from a range of sectors, all with a tech enabled focus (either hardware or software technology), with support continuing after program ending to get funding and further growth. Support is provided through peer-to-peer learning and by different program stakeholders: sages are external “area experts”, catalysts are in-house coaches, facilitators are trainers, mentors are experienced entrepreneurs or investors who assist the ventures during the length of the program.

Selection is very rigorous, with five rounds of screening, involving partner investors (involved in GrowthAfrica’s advisory board) who refer their potential investees and who participate in the finale selection round.

The GrowthAfrica program costs on average \$35,000 (i.e. FCFA 20 million) per participating venture, and is funded by the Argidius foundation as well as by revenue coming in through different service activities such as sub-letting office space, running entrepreneurship programs for third-parties, taking 1% of the ventures revenue (for up to 36 months after the program), 2% of venture equity, 3% of the investment raised.

The organizational approach of GrowthAfrica can be considered an **entrepreneur type model**, in the sense that program management sees the program as a business (revenue making first), are eager to continuously improve their service and have three experienced entrepreneurs running the program.

Since its launch, Growth Africa has accelerated over 200 startups, among which eventually about 40% of the ventures were able to raise venture capital funding.

*Source: World Bank analysis*

the Hub is being developed without consulting them and considering their needs, views, and visions. Also, they doubt that the project will eventually be financed, finalized and thus have an impact on them. Worse, they also fear that a State-financed hub might monopolize funding and create a concurrence in between actors that will destabilize the fragile, nascent ecosystem.

In terms of gender gap, according to the World Bank research, Togo is one of 115 economies surveyed where women cannot run a business in the same way as men<sup>82</sup>. Togolese women can legally open businesses and sign contracts the same way as men, but they can be discriminated against in terms of access to credit. While women's participation in the labor force is on par with their male counterparts, the team did not encounter any established women-led digital firms. The Togolese education experts also stated low numbers of women matriculating in ICT-related studies. Therefore, the quality and type of sensitization and support these startups receive will be critical, linked to recent global efforts to further customize support to women entrepreneurs (for example through initiatives funded by the World Bank Women's Finance facility) and to promote gender-lens investing.

### 5.2.2 Access to markets

**Globally, the number one reason startups fail is that there is no market for their offering<sup>83</sup>.** In Togo, this is an especially acute problem because of several structural constraints. The overall population is small, and the size of the addressable market is even smaller, in terms of volume and/or value. The size of the middle, consuming class, which would be the primary market of any digital startup, remains restricted, estimated at less than 25% of the Togolese population (taking the broadest definition, i.e. the share of the population living with more than \$2 per day), signaling limited purchasing power on the consumer side<sup>84</sup>. In addition, as highlighted earlier when covering the other digital economy pillars, the share of the digitally connected, although growing, is still quite limited in Togo. The lack of availability of affordable and quality Internet for the masses – the backbone of enabling the digital economy – makes it difficult to bring more people and businesses online. And enabling factors such as digital payment, digital identity, and open APIs, still need to be operationalized on the large scale. Moreover, like in any nascent ecosystem, demand for digital innovations is low due to limited digital skills and literacy among most end-consumers, so the pace of technology adoption is slow and would require significant sensitization to quicken, which would request significant investments in advertising and marketing, while startup financing is in short supply (cf. infra).

**Also, an inability to market seems to be a common failure in the Togolese tech scene, especially among founders who like to code but who fail to respond to market needs.** Many Togolese startups indeed fail to take into consideration the importance of user needs and interface and aren't incentivized by startup competitions which tend to rather push for impressive solutions, staring digital content, well often un-marketable. Therefore, the digital use cases in Togo as of today are still mostly limited to mainstream social media, except a few exceptions of emerging innovative applications such as Gozem to book taxis which has experienced an increasing traction, but which was however developed abroad.

**In this context, Togolese startups only have two options to be able to succeed: expand beyond borders to reach critical size, or else target the B2B (business to business) and B2G (business to government) markets.** However, according to a survey conducted among ecosystem stakeholders, despite the huge potential of expansion throughout the WAEMU thanks to the single currency, common language and common regulations, Togo's newly created companies have a very low rate of internationalization of activity – rare examples of expansion include Kia Energy. In addition, there is currently very limited contact between traditional companies and public administrations and these nascent digital startups in Togo, a missed opportunity for both sides. One of the only examples of interaction between a large company and startups in Togo is the innovation competition that Ecobank has organized in the field of fintech, but it had a Pan-African scope and involved only one Togolese startup (MojiPay) among the finalists. However, this kind of program are variable and/or cancelled from one year to the next. Another example concerns an individual startup, Dashmake, which was able to sell to large Togolese

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<sup>82</sup> Women, Business and the Law, World Bank, 2019

<sup>83</sup> CB Insights, 2018

<sup>84</sup> African Economic Outlook, African Development Bank, 2016

companies that are now using its solution. Regarding B2G, although the adoption of a Presidential decree in 2018 to reserve 20% of public markets/procurement to young and female entrepreneurs was very positive, the conditions and the actual markets offered prove to be inappropriate for digital entrepreneurs. Therefore, the public contracts awarded to entrepreneurs in the digital field have been until now mainly limited to areas not requiring expertise and with low value added, such as sales of computer equipment.

### **5.2.3 Access to adapted financing**

#### **24% of Togolese entrepreneurs consider access to finance as the main factor limiting their growth<sup>85</sup>.**

The traditional financial institutions are often not equipped to meet digital entrepreneurs' short and long-term investment needs. The microfinance sector has standardized procedures: high interest rates, short-term maturities, loans that rarely exceed a million XOF (USD 1,600), which do not fully meet the needs of innovative startups and do not allow them to make long-term investments. And due to the perceived high risks and high transaction costs with respect to the financing of startups, commercial banks impose very strict conditions on the latter: physical and cash collateral higher than the credit amount, substantial equity funds, high interest rates, tight credit conditions.

**To develop and market their ideas and prototypes, the Togolese entrepreneurs must first rely on limited resources** such as personal savings or their meager savings (in a country where the average GDP per capita is only XOF 360,000 i.e. USD 605<sup>86</sup>), financing from their friends and family members (while they themselves are often financially limited and do not always understand the choice of becoming entrepreneur), or from rare competitions/prizes (which sometimes don't deliver on their promises of rewards). Hence, because a digital entrepreneur takes at least 12 to 24 months to break-even, without dedicated financing for its earlier stages, he/she is forced to have a full-time job and work on his/her startup on the side, which significantly slows him/her down and hampers growth.

**In this context, the Togolese Government did put in place financing solutions for small entrepreneurs,** for example through the FAIEJ, ANPGF, FNFI, but they are actually more positioned as intermediaries between banks and entrepreneurs (for example by providing guarantees), and do not try to target the few entrepreneurs active in the digital sector (the few ICT entrepreneurs it supports have traditional activities such as the sale of computer equipment and not developing digital services). For example, FAIEJ's conditions are inadequate to digital entrepreneurs: the selection process is handled by civil servants far from the field of innovation, the general process and disbursement of the funding in particular are too slow, the repayment term is too short, the amounts offered are too small (maximum XOF 2.5 million i.e. USD 4,000 for individuals) and not dedicated to prototyping, the startup does not use the funding freely available (it can't cover salary while one of the biggest need of tech startups is to hire developers, data scientists, sales representatives, etc.), and the startups not yet registered are ineligible (while it is not recommended for an entrepreneur at idea and prototyping stage to formally register yet).

**Then, when digital entrepreneurs will need funding to go from initial commercialization to generating traction and revenues, i.e. at the seed phase, they will face even greater difficulties to find capital in Togo.** Although in Togo very few digital entrepreneurs have reached that phase yet, it will certainly pose significant challenges to those which manage to do so in a few years from now. They will be confronted with the so-called "Valley of Death", the time lapse between initiation phase<sup>87</sup> and viability to attract

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<sup>85</sup> Enterprise Survey in Togo, World Bank, 2016

<sup>86</sup> Open Data, World Bank, 2017

<sup>87</sup> The initiation phase represents the period when of the entrepreneur's own resources, borrowed from relatives and/or earned in competitions, are usually exhausted until startup is increasingly maturing to attract market investment.

investment and financing available on the market. This funding shortage on the market typically starts at the seed stage (\$20k) and ends at the Series A stage<sup>88</sup> (\$1 million).

In that context, only alternative financing mechanisms could be a good fit to fill the financing gap of early-stage entrepreneurs, such as interest-free loans, crowdfunding platforms, business angel investors, and seed investment funds, but in Togo they have been until now non-existent, and their emergence would require dedicated technical assistance and specific measures. Initiatives such as the support of the Ministry of Post and Digital Economy to the creation of the investment fund 'BLOC' (Bamboo Leapfrogging on Cryptocurrency) are positive in that sense but need to be implemented.

#### 5.2.4 Business climate

**The progress made by the Government of Togo in recent years in terms of business climate reform positively impacts the startups of the digital sector.** Togo has moved up 19 places in the 2019 Doing Business Classification<sup>89</sup> compared to 2018. It is currently ranked among the top ten reformers in the world. The reforms that have most significantly impacted startups include a reduction in costs for starting a business, a shorter time required to register a property and obtain a building permit, easier processes to connect to electricity and pay taxes, and less delay for contract execution. Although Togo has registered significant improvement, it is still at the lower range of the ranking in the ease of doing business, at the 137<sup>th</sup> place out of 190 ranked countries. Data from the *Lomé Policy Hackathon* held in March 2019 confirms this ranking as entrepreneurs perceive the regulatory framework as weak.

**Togo would require more regulatory measures for startups.** The special characteristics of startups compared to other businesses include the need for a significant amount of seed funding (innovation, R&D, etc.), a relatively long development period required to reach break-even point (at least 1-4 years), a need to protect intellectual property, and likeliness to file for insolvency/bankruptcy. Most of the economies deemed to provide environments conducive to the development of startups, such as Israel (1991), the United States (2011), France (2013), or more recently India (2016) and Tunisia (2018), thus adopted policies and regulations relating specifically to these challenges faced by startups.

**To increase the digital sector's potential, the government has a pivotal role in creating such enabling regulatory framework.** At the behest of the Togolese entrepreneurship community, the Ministry of Post and Digital Economy sent two technical advisors to *Lomé Policy Hackathon* in March 2019. The objective of this bottom-up event, organized by the local entrepreneurship stakeholders (incubators, entrepreneurs, etc.), was to use creativity/innovation methodologies to diagnose and make propositions of measures to improve the business environment for startups, by involving both the entrepreneurship community and public officials. Although at that occasion the advisors of the Ministry committed to taking stock of the conclusions of the policy hackathon, since then the Ministry hasn't followed through nor answered the requests for feedback and follow-up meetings from the entrepreneurship community, which would have enabled to pursue the co-creation of an appropriate framework. In comparison, in Senegal and Mali, the same process has been ongoing, with Policy Hackathons and co-creation follow-up meetings organized between the local entrepreneurship communities and public officials, which have given birth to *Startup Acts*, holistic laws covering fiscal and other regulatory measures, which have recently been accepted in the respective Council of Ministers and are now passing through the legislative process with the Parliaments.

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<sup>88</sup> Series A is the name given to the first substantial financing of a company raised through capital-risk, after shares issued to founders of the company, to employers, friends, the family business angels, typically about 1 to 10 million dollars.

<sup>89</sup> Doing Business in Togo, World Bank, 2019



## 5.3 Digital Entrepreneurship Recommendations and Next Steps

### R4.1. [Quick Win] Pursue the policy and regulatory reforms

**In the medium to long-term, the Government of Togo has an essential role in maintaining the great pace of reform of its business climate, which will positively impact digital startups.** The continuing digitalization of administrative procedures, mentioned earlier in the report under the Digital Platforms pillar, should be beneficial to startups which currently still waste a lot of time in traditional administrative circuits, like, for example, to access the Trade and Personal Property Credit Register, or obtain administrative documents such as police clearance or certificates of conformity<sup>90</sup>.

**In the short-term, responding to the efforts initiated by Togo's entrepreneurship community with its proposal of a Startup Act would send a strong and positive message.** The adoption of a participatory approach involving actors of the entrepreneurship ecosystem in the joint formulation of policies is strongly recommended. Indeed, participatory and deliberative policy making processes can lead to more sustainable development outcomes than traditional government-centered policy approaches<sup>91</sup>, for three main reasons:

- It enables policy makers to better understand the needs and incorporate knowledge and preferences of beneficiaries into their decision-making.
- It strengthens social capital by building local capacity for self-reliance and collective action, and enhancing cooperation, coordination and flow of information.
- It ensures ownership and implementation supervision, by enabling citizens – in this case entrepreneurs – to hold states and markets accountable.

This is the approach initiated by the entrepreneurship community during the *Lomé Policy Hackathon*, which has led to a draft Startup Act, but now follow-up meetings need to be organized between the Ministry of Digital Economy and representatives the entrepreneurship community, to continue the work. The draft Startup Act covers topics related to the other digital

#### ***Box 5 : Italy's Startup Act***

The Government of Italy enacted a Startup Act in 2012, offering an ample menu of incentives for registered startups, as summarized below.

##### **Cut to Red Tape**

Startups are waived most incorporation costs, stamp duties, and annual registration costs; in addition, they can do so online. Startups self-certify their belonging to the Registry and are subject only to ex-post checks of compliance. Italy's Ministry of Economic Development quantifies yearly red-tape savings to the tune of €525 for the first year of operation and €435 for successive years.

##### **Tailored Labor Laws**

Contrary to national legislation, registered startups can hire employees with fixed-term contracts for a maximum of four years instead of three. Moreover, they are not subject to limitations on how many fixed-term to open-ended contracts they can employ. In a nutshell, startups are subject to a labor regime that closely mirrors an "employment at will" model.

<sup>90</sup> Source: Doing Business, World Bank, 2018

<sup>91</sup>Source: Autio, E., & Levie, J. 2014. "‘Hard facts’ or soft insights? Fact-based and participative approaches to entrepreneurship ecosystems policy analysis and management". ZEW Conference on National Systems of Entrepreneurship, Zentrum für Europäische Wirtschaftsforschung, Mannheim, November 20-21.

economy pillars highlighted earlier in the report (cost and quality of the internet connection, lack of digital awareness and skills, etc.), but also related to the digital entrepreneurship pillar. These include the need for some degree of tax incentives for startups or for their investors, for easier intellectual property protection, for a one-stop-shop providing key information to entrepreneurs, and for refined insolvency and bankruptcy laws. More interactions between the Government of Togo and the entrepreneurship community will be needed to refine these proposals. Complementarily, insights should be drawn from international experiences and assessments of similar legislations and policies; in this sense, it is advised to tap into the World Bank's body of research on High-Growth Firms<sup>92</sup> and on Innovation<sup>93</sup>, but also into the AFD and i4Policy's benchmarking study on Small Business Acts and Startup Acts in Africa<sup>94</sup>.

### **Front End Tax Incentives**

Individual investors in registered startups benefit from a deduction on the personal income tax equal to 30% of the amount invested for a maximum of €1 million. Corporate investors benefit from a deduction on taxable income equal to 30% of the invested amount for a maximum of €1.8 million. Data from Italy's Revenue Agency shows that individuals and corporates have directly and indirectly invested a total of €51mn in 2014 compared to €28mn in 2013, with the larger increase coming from individual investors. This cost the government ~€10.0mn in fiscal deductions or detractions in 2014.

### **Special Bankruptcy Procedures**

Not only registered startups access faster and cheaper bankruptcy procedure (dubbed "fail fast measures") but are also able to postpone recapitalization in case fresh capital is called to repay yearly losses, extending the life of startups beyond what normally allowed to traditional corporates.

### **Debt Guarantee**

Registered startups can benefit from government guarantees on bank debt. In practice, Italian startups can negotiate loans up to €2.5 million with a private bank and are able to receive a government guarantee for 80% of the principal. This significantly lowers their interest rate payable on the principal. At the same time, it increases the bank's willingness to extend the loan given that the government bears most of the credit risk while enjoying all the profits. Out of the total gross loans guaranteed, 60% are outstanding and performing, while others have been repaid or never activated. It is important to remember that startups are usually characterized by many failures (most of them), so the central government is assuming significant credit risk.

*Source: DeStefano, T., Manaresi, F., Menon, C., Santoleri, P., and G. Soggia. 2018. "The evaluation of the Italian Start-up Act". OECD Science, Technology and Industry Policy Papers, No. 54, September 2018. Paris: OECD Publishing.*

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<sup>92</sup> Source: Grover, A., Medvedev, D., Olafsen, E. 2019. "High-Growth Firms: Facts, Fiction, and Policy Options for Emerging Economies". Washington, DC: World Bank.

<sup>93</sup> Source: Cirera, X., Frías, J., Hill, J., Li, Y. 2020. "A Practitioner's Guide to Innovation Policy. Instruments to Build Firm Capabilities and Accelerate Technological Catch-Up in Developing Countries". Washington, DC: World Bank.

<sup>94</sup> Source: Duchatelet, S., Rodrigues, E., Stever, J., Yawson, F. 2020. Taking stock of Small Business Acts and Startup Acts in Africa. Paris: AFD & i4Policy.

#### R4.2. [High Priority] Strengthen business training and startup support

**In the medium to long-term, structural reforms in the education system to increase business acumen are essential.** Education and training programs should be more managerial and tech oriented, and more practical educational elements in public and private schooling should be introduced, along with more internships and shadow programs with industry players. At the same time, it would also be beneficial to put some focus on soft skills and technical skills demanded by industry in relevant programs.

**In the short-term, the Djanta Tech Hub being developed by the Ministry of Post and Digital Economy is a positive step to improving the training and support of technological entrepreneurs in Togo.** It should prioritize supporting the activities that are most crucial to the taking-off of the Togolese startup ecosystem. Also, a strong coordination and collaborative public-private process around the Hub will be a key success factor; this includes facilitating an action plan with local actors such as universities, entrepreneurship support structures, investors, and private companies (including multinationals who could catalyze the local ecosystem potentially in priority sectors for the Ministry).

##### *Box 6: International best practices in governments' ecosystem building initiatives*

Countries such as Israel, Singapore, and Finland have catalyzed successful startup ecosystems through government-led assistance of startup programs. Applicable lessons learned from these countries, leaders in bringing startups to the forefront of economic growth, recognize the role of government policy and programs in this process and include:

- An "intangible" innovation infrastructure is more important than a "tangible" infrastructure. Many countries have focused on building technology parks/hubs to attract and encourage private sector innovation. However, they are only fully effective when the local innovation system is developed enough to support them, with limited benefits if local firms do not have the required absorption capacity or if they do not have access to the required human capital. In addition, technology parks/hubs with a "top-down" approach based on a vision that defines measures and themes in advance, and too accelerated, may end up being underused, failing to attract companies, despite significant private and public investment.
- Focus on building up existing startup programs rather than creating new ones, especially if not led by the private sector / civil society and see startup programs as service providers for entrepreneurship programs and policies. Leveraging existing structures eliminates the need to set up new, more costly public agencies or initiatives that are often poorly adept to meet the needs of innovative entrepreneurs. This also avoids dependence on international consultants who are expensive and often lack local context. In the long-term, it gives visibility and professionalizes these structures.

- Promoting and supporting the best human capital and leadership within select startup programs. More specifically, encouraging and incentivizing the teams with entrepreneurial experience, or else helping them in the provision of mentoring services by external experienced mentors, is critical, because people who have previously built companies bring market networks as well as their knowledge about financing and business challenges to their support<sup>1</sup>.
- Covering operational costs and management training costs of selected startup programs to strengthen operations and overall value added to the sector. Many such programs struggle to achieve sustainable business models and would therefore need multi-year milestone-based funding that includes strategic technical assistance, based on rigorous improvement plans.
- Requiring counterpart funding on the side of the startup programs, to avoid any “dead weight” effect.

*Source: World Bank analysis*

First and foremost, the Djanta Tech Hub should support intensive training programs for Togolese high-potential youth, which provide the business and technical skills required to launch successful technology companies. Energy Generation, which was created in Togo in 2016, follows this approach, but is limited to entrepreneurs in the energy sector, and doesn't take more than 50% of its applicants from Togo. To bring crucial training to a larger fraction of the Togolese youth, one or several other such programs, should be established. To do so, the Government shouldn't develop a curriculum from scratch, but rather attract international best practices of entrepreneurship training infrastructure to establish operations in Togo. These include the Pan-African training program Meltwater Entrepreneurial School of Technology (MEST), which has provided 1-year intensive software and business development training to rigorously selected 400+ African entrepreneurs for the past 10 years, who have then gained admittance to top accelerator programs and investment funds such as Y-Combinator, 500 Startups and TechStars. Another example is the Founder Institute, a four-month entrepreneur training and startup launch program that was founded in California and replicated in 40 countries, and which has led to the creation of over 3,500 companies raising over \$800M funding. These programs, led by teachers and mentors with extensive entrepreneurial experience, typically balance between (i) catching up on fundamentals such as core programming languages, developing algorithms, finance accounting & unit economics, lean startup methodology, so as to ensure students master industry-proven methodologies for developing startups, and (ii) extensive hands-on project work to gain experience building, validating and growing or failing companies from the start several times throughout the program. Students who graduate from such programs are then ready to have their business idea incubated with hands-on support to grow and scale their businesses, as well as access to resources and a regional & global network.

*Box 7: Meltwater Entrepreneurial School of Technology*



MEST was launched by The Meltwater Foundation, the not-for-profit arm of Meltwater, in 2008. The MEST Training Program is a 12-month, full time, fully sponsored program in which the cohort – known as Entrepreneurs-in-Training (EITs) – complete a graduate-level course in software development, business and communications, with a focus on practical implementation. It is taught by a staff of global experts and practitioners from Europe and the US.

The MEST program provides rigorous entrepreneurial training and extensive hands-on project work, designed to ensure EITs master industry-proven methodologies for developing startups. This coursework is supplemented by sector speaks and a series of guest lectures, bringing in the experiences and insights of internationally recognized executives and successful entrepreneurs.

The course culminates in an investor pitch and the chance to receive seed funding and enter the MEST incubator, with a goal of scaling across African markets. In addition to the Accra headquarters, MEST opened incubators in Lagos, Nairobi, Cape Town and Abidjan. To date, MEST has invested in over 50 startups across industries from Software as a Service (SaaS) and consumer internet, to e-commerce, digital media, agritech, fintech and healthcare IT.

The MEST methodology is widely viewed as providing rigorous digital skills training and digital entrepreneurship support.

*Sources: MEST Website*

The Djanta Tech Hub should also strengthen existing entrepreneurship support structures such as incubators, which have recently surfaced in Togo. These structures perform a mission of general interest by complementing the public services that are not necessarily mandated or cannot always meet the expectations of entrepreneurs. In that sense, it is coherent to host in the Djanta Tech Hub the existing ecosystem players showing potential and results, and providing them with support to develop their strategy, build their programming and develop their teams, based on improvement plans. The Hub can at least bring an important support in combining resources and mutualizing the costs of existing support structures, to enable them to provide a more targeted and quality support to startups. This is timely since these nascent structures are facing serious difficulties to concentrate all the resources needed to ensure their efficiency, namely a competent multidisciplinary team, equipped and attractive working premises (including high speed internet connection), as well as a network of committed partners. The Djanta Tech Hub already hosts Energy Generation in its premises, and should, in order to ensure adoption of the Hub by the entrepreneurship community, also propose to host the other existing structures, in exchange to which they would commit to specific KPIs in terms of quality of startup support. The current context is quite favorable, since the Togolese ecosystem players, after being too often isolated in their respective activities, have recently improved their coordination to come up with the Lomé Policy Hackathon process. The Ministry should build on these nascent efforts to ensure the buy-in of the startup community and best adapt its plans for the Hub.

**To do so, it would be strategic to leverage the upcoming online entrepreneurship platform** being developed by several Togolese public administrations in charge of entrepreneurship, including the FAIEJ and CNEJ, under financing from OIF (Organization Internationale de la Francophonie). This platform seeks to promote inter-organizational collaboration,

transparency, and innovation, thus, increasing efficiency and effectiveness throughout the entrepreneurship ecosystem. It intends to provide access to information (e.g. who does what in the ecosystem, opportunities available, upcoming events), a network of partners and mentors, training and tools. It will gather and connect, online and through in person meetups, entrepreneurs and their surrounding ecosystem, including ANPE, FAIEJ, AGET, CNP, incubators, Chambers of commerce, and international donors, which have expressed their willingness to engage on the platform. These services would be very complementary with what the Djanta Tec Hub envisions, and this coordination, if successful, should greatly help Djanta Tech Hub in its community building efforts. In the meantime, the consultation and feasibility study carried out by the consultants for the development of this platform is an interesting source of information, including an exhaustive mapping of entrepreneurship ecosystem players, as well as an in-depth survey of 90 entrepreneurs and 50 entrepreneurship ecosystem players on the needs of Togolese entrepreneurs to grow and what solutions should be developed.

**In the medium-term, the Djanta Tech Hub can position itself as a soft-landing site and attract West African and international entrepreneurs.** Some of them already know that Togo's fiscal regime is favorable, but they don't know how to proceed concretely to establish in Togo and benefit from it, so the Djanta Tech Hub could help them in their first steps. Specifically, a one-stop-shop gathering all the public administrations useful to the development of a startup (tax, intellectual property, etc.) could be established, following the model of the Station F in Paris which gathers 30 French public administrations. Once the training programs envisioned for the Hub are in place, the foreign founders will also be attracted to local tech talents. These foreign entrepreneurs will be collocated with local entrepreneurs and will create a very beneficial peer-to-peer mentoring, like what happened with the programs Start-up Chile or Start-up Korea, which were proven to be a significant boost to these ecosystems<sup>95</sup>.

**More generally, it is highly recommended to adopt a startup approach for this project,** i.e. to move forward in an agile way and to design the project in several stages, in order to be able to start quickly, adapt the project to the market needs, and keep the flexibility to readapt the project in case of difficulties encountered. It will indeed be important to explore and experiment in order to design the best possible Hub, which must also evolve over time to always adapt to the needs of the target. What will be proposed does not yet exist and it must be built according to the beneficiaries, their needs and existing potential. To innovate, it is necessary to give free rein to the imagination of the project teams and partners, and to do so, create favorable conditions of expression for collaborators and partners in the project. This approach also enables to propose a project that can be adapted according to the financial resources mobilized, in order not to keep an overly ambitious and expensive project in a drawer for a long time.

**On the gender gap, efforts to include more women in digital entrepreneurship** can include leadership workshops, confidence building initiatives, and trainings geared at shifting mindsets towards entrepreneurial career paths. The government can collaborate with female entrepreneurship initiatives such as She Leads Africa (online content and Pan-African events on women entrepreneurship), She Code Africa (encouraging the uptake of STEM/coding classes by girls), or She Trades (connecting one million women entrepreneurs to market by 2020) by the International Trade Centre (ITC). Stakeholder consultations to further understand the gender gap and how to address it may be beneficial.

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<sup>95</sup> Source: Building emerging ecosystems: Lessons learned from Startup Chile, MIT, 2018

In the same vein, government and private sector initiatives need to be strengthened to address the limited digital skills in Togo, which are an impediment to digital startups much like other digital economy pillars. Recommendations suggested in Chapter 6 should be followed. Providing support to rapid technology skills providers or bootcamp providers should be considered. These providers typically liaise with the private sector to identify specific skills needs, and in response provide rapid tech skills courses to adults, mature students and out-of-school youth. The content of their training covers both technical and soft skills, as well as practical experience. They have the particularity of linking their students with job prospects and could help provide a pipeline of skilled workers for startups.

#### **R4.3. [High Priority] Fill the gap of pre-seed financing for digital startups**

The development of a new category of financial instruments is necessary to address the shortage of capital faced by early-stage entrepreneurs in the initial stages of their venture.

In the short-term, given that the Togolese digital startup ecosystem is still in its very early stages, the focus must be the provision of pre-seed financing to help entrepreneurs prototype, test the viability of their business ideas, finance the commercialization of their innovations and help establish their companies. This can take the form of soft loans, i.e. non-collateral and interest-free loans of between XOF 5 million to 15 million (USD 8,000 to 25,000), that can be repaid in the event of success or transferred to a grant in the event the startup fails. Learnings should be drawn from the lack of adoption of previous government pre-seed financing initiatives, notably through the FAIEJ, which were encumbered by heavy and lengthy administrative procedures, judged not transparent by the entrepreneurs, and have resulted in

limited reimbursements. The selection, disbursement and monitoring process should follow the international experience in startup pre-seed financing programs.

#### ***Box 8 : Morocco's Innov'Invest Fund***

The Innov'Invest Fund is a public initiative launched in 2017 with the aim of bridging the pre-seed, seed and early-stage financing gap of Moroccan startups, including through grants and soft loans. Significant efforts were also made by the Government of Morocco to ensure that the funding processes—application, dispersal, and audit—should be rigorous and transparent, but also simple and quick, for the beneficiaries.

In particular, the Government of Morocco decided that the funding would be most efficient if beneficiary startups would be selected not by civil servants, but rather by entrepreneurship support structures, investors, and other private stakeholders, who are more knowledgeable about entrepreneurship and have experience in various industries.

The application process should be an ongoing process, through competitive calls for proposals. Application and follow-up interaction should be automated online. Selection criteria should be focused on the growth potential of the business ideas, and not necessarily request startups to be formally registered yet. The review process should be quick and transparent. Unsuccessful applicants should receive feedback on why their application was not successful and whether, in the view of the assessor, it can be improved.

To ensure the best use of the funds, successful applicants should sign an agreement regarding the criteria for terms of the funding and use of funds. The money should be disbursed quickly but in stages based on the achievement of milestones, with a strong follow-up provided by entrepreneurship support structures. As for the reimbursement of the soft loans, the repayment term needs to be long enough, with a grace period, for the startups to get some market traction and revenues before reimbursing.

*Source: <http://www.ccg.ma/innovation/>*

**Crowdfunding can also bridge pre-funding gaps for Togolese startups at early-stage.** This type of participatory financing puts the decision to fund new ventures, for tickets amounting up to a few million XOF (a few thousand of USD), in the hands of the communities and customers who would benefit the most. In Togo, the CNEJ is supposed to organize in 2019 a sensitization and training on crowdfunding, where Togolese entrepreneurs who have succeeded in raising money through this method will present their experience. However, there is not yet a Togolese crowdfunding platform, the emergence of such platforms being hampered<sup>96</sup> by the non-existence of a legal and regulatory framework in Togo, which limits the sector to non-financial return-based models, i.e. donation & reward-based crowdfunding, while debt and equity-based models account for most of the market activity in more established markets. Engaged, open, proactive regulators have demonstrably stimulated crowdfunding market development as in Malaysia, New Zealand and the UK – something that could be replicated in Togo.

**Making sure such pre-seed financing options are available would bring fresh air and call for vocations, motivating more young people to launch digital startups, but for this financing to be fruitful, a lot of nonfinancial assistance would also be needed.** This is especially true in Togo, where experiments with pre-seed financing mechanisms, such as the small interest-free loan fund set up by the incubator Cube, have proved quite difficult given the lack of skills and

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<sup>96</sup> Source: Bilan et recommandations pour le développement du financement participatif en Afrique de l'Ouest, COFINA & Kisskiss bankbank, 2017



experience of young Togolese as regards financial and budget management. The key success factor for the funding to be useful is therefore to condition it to strong financial/budget management training taken by benefiting entrepreneurs, which could be managed by the world-class training programs mentioned above.

**In the medium to long-term, once Togolese digital startups reach later stages of development, they will need follow-on financing to go from initial commercialization to generating traction and revenues, for which solutions should be best developed at the multi-country / regional level.** The recommended solution to be offered for startups in need for seed financing and which face the “Valley of Death” is equity investment from business angels and seed investment funds, taking minority shares of XOF 6 million to XOF 150 million (USD 10,000 to 250,000) in the startups. But given the small size of the Togolese market – as well as other WAEMU markets, these solutions will not develop organically in Togo, but instead would require dedicated public intervention to emerge at the regional level, either across several countries sharing borders (e.g. Togo and Benin) or across the WAEMU or ECOWAS. Facilitating the long-lasting emergence of business angels’ clubs would require technical assistance comprising awareness-raising and training programs, for example, through exchanges with peers of other regions sharing the same context, but also dedicated guarantee mechanisms and tax incentives. As regards seed investment funds, the provision of public concessional investment or guarantees to them, for example through a regional fund of funds providing concessional capital, has been recognized as the keystone of economies that have been able to foster the emergence of a significant number of successful startups<sup>97</sup>, such in the case of Israel and its Yozma Fund or France and its Public Investment Bank (BPI), in the sense that the public sector thereby does not substitute for private capital but rather crowds it in. In that sense, the approach taken by the Ministry of Digital Economy to bear the costs of the first losses of the 'BLOC' (Bamboo Leapfrogging On Cryptocurrency) is positive and would be best scaled up with a regional intervention.

#### **R4.4. [Long Term] Build the markets for digital entrepreneurs**

**Public sector purchasing power represents one of the most significant supports governments can yield to local digital private sectors.** Hence the Government of Togo and the established private sector have an important role to play in catalyzing early firm growth, by being early customers of entrepreneurs providing useful digital services.

**In the short-term, the Government should target more digital entrepreneurs through the Presidential Decree reserving 20% of public markets/procurement to young and female entrepreneurs.** This is a very positive measure, but to really benefit digital entrepreneurs, more flexible conditions of access would be necessary, particularly as regards the level of experience and financing available. If necessary, Togolese startups could be requested to partner with international/larger firms as a first step, to reassure the purchasing companies and upskill the startups to become ready to compete by themselves in the future, by making a condition on transferring of knowledge. Also, more procurements pertaining to providing digital services, and not only products, should be published by public administrations, targeting local startups and not only international/larger firms.

**In the medium to long-term, a program to pair public administrations and established firms with digital startups could be set up by the Ministry of Digital Economy, for example through the Djanta Tech Hub, leading to (a) increased technology absorption and innovation capacity within**

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<sup>97</sup> Source: Singer S., Senor D., 2009

public administrations and traditional firms; (b) new products, processes, services and ventures at lower costs (lower than by hiring an international firm); and (c) a better understanding of local

### **Box 9 : Finnish Funding Agency for Innovation – Tekes**

In Finland, the Funding Agency for Innovation, Tekes, has funded and facilitated a number of initiatives to foster collaborations between corporates and startups, as well as public administrations and startups. These have spanned a number of sectors including smart energy, health, and mobility services.

For instance, Tekes has sponsored “Smart Procurement”, a program to accelerate innovations through public procurement. The objective was to improve market access for products and services developed by SMEs in particular, and also to improve the productivity and effectiveness of public services.

Tekes and the Confederation of Finnish Industries also released a joint report to serve as a guide on how to implement corporate-startup collaborations. This report, while built off the experience of 6 large Finnish companies, offers insight into aligning corporate and startup objectives and removing barriers to collaboration.

Modeled after Finland’s example, the Norwegian government is now seeking to implement similar initiatives in the wake of declining oil prices and petroleum reserves, a resource which previously fueled the country’s economic growth.

*Source: The Confederation of Finnish Industries and Tekes. 2014. Different: The experiences of Finnish large companies with startups. Joint Report, Helsinki: The Confederation of Finnish Industries and Tekes.*

needs by the startups. The matching could involve forming partnerships with public administrations (for example by opening public data in open source that digital entrepreneurs could leverage to improve public services) and local corporates across priority industries (especially logistics, financial services and agribusiness, as prioritized by the PND). They could then conduct a series of calls for startups to take part in open innovation / public procurement for innovation processes, ultimately expected to lead to either contracting or support programs combined with internal product/service development programs. Similar mechanisms are operating in leading ecosystems in the United States and Europe (for example, London, New York, and Paris) as well as emerging economies such as China, Mexico, Thailand, South Africa and especially Rwanda. To best test and design this program, in the short term a pilot could be launched by the Ministry, by identifying interested public administrations and corporates, and by hiring one or several local startup support structures as the implementer (if necessary, in consortium with a foreign structure bringing international expertise). Concretely, this would take the same form as the entrepreneurship competition “AppsTogo” organized in 2016, but rather than being open to all kinds of solutions, it would request the participants to work on specific identified challenges within public administrations and companies. For example, a pilot could be launched with the Autonomous Port of Lomé, which is the leading port in West Africa but which needs to digitize its port services in order to keep its position; because it interacts with a lot of services in the public and private sector, its digitization can help extend the digitization of the rest of the Togolese economy.

**Regarding the B2C market, the priority in the short-term is to pursue the efforts in building the enabling environment for digital economy** as mentioned in the other pillars of the report. Increasing digital skills and access to the internet and digital devices can raise demand for digital products and services in Togo.

However, given the imperative for most digital firms to scale quickly, in the medium to long-term, it will be most of all important to accelerate digital market integration efforts within West Africa and across the continent, providing seamless opportunities, exposure and relevant advisory services, for expansion and a regional market size equivalent to the domestic base enjoyed by entrepreneurs in the major continental and global digital hubs.

## 6 Digital Skills Pillar

### 6.1 Importance of Digital Skills Pillar

The digital skills section was inspired by the exchanges carried out as part of the May 2019 mission, the questionnaire administered to Togo as part of the 5<sup>th</sup> PASET forum on Digital Skills in Kigali as well as the exploitation of all the documents provided by the Togolese authorities and key studies over the last five years.

#### **Importance of digital skills for developing the digital economy of Togo**

Togo's economy requires both a digitally competent workforce as well as digitally literate citizens who are in a position reap the benefits from digital society. A digitally competent workforce can help strengthen the foundational pillars: the installation of the *digital infrastructure* that is most relevant for Togo, the growth of *digital entrepreneurship* (for example, incubators and e-commerce, that shapes digital industries, and the development and use of *digital platforms* and *financial services* (for example, e-signatures and digital payments). Moreover, a digitally competent workforce, comprising a large majority with basic digital skills and a critical mass of skilled personnel and advanced specialists, can help to extend the application of digital tools and processes in a wide variety of sectors, such as the informal service sector, and sector of agriculture, energy, transportation, health and education, to name a few (Sajitha & Koji, 2019)<sup>98</sup>. Besides, it has been shown that 65% of current elementary school students will work in the jobs that do not exist now (WEF, 2016). According to the World Economic Forum on Future of Jobs in 2018 <sup>99</sup>, 54% of all employees will require significant upskilling by 2022. New jobs will demand a combination of three different kinds of skills, namely, fundamental skills, social skills and digital skills. Most importantly, a new study published by IFC in 2019 <sup>100</sup> has shown that there will be 230 million “digital jobs” in Sub-Saharan Africa by 2030. This will translate to nearly 650 million training opportunities by 2030, including required retraining. The drivers of demand for digital skills vary across sectors and in the formal and informal economy. Digital technology allows farmers to get better information, including from the government, which can improve agricultural productivity that is crucial for Togo's growth perspectives.

**In their Education sectorial plan (PSE), the Togolese authorities aim at making digital a lever to maximize the contribution of education to the economic and social development of the country.** In the priority action plan of the PSE, Togo clearly intends to promote access to information and communication technologies in the training system in general through, inter alia, (i) the introduction of computer training at all levels, (ii) customs exemption of IT tools for schools to reduce access costs, (iii) capacity building of stakeholders, (iv) establishment of interconnection networks of higher education institutions; and (vi) support for the production of digital content. This is in articulation with the orientation in terms of Higher education<sup>101</sup> perspectives and youth employment<sup>102</sup> orientations.

**Furthermore, Togo's national digital strategy places digital skills among the priorities for economic and social development.** The Ministry of Posts and Digital Economy has developed a sectoral strategy,

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<sup>98</sup> Source: From the “Draft Digital Skills: Framework and Programs”. The draft is Prepared by Sajitha Bashir with inputs from Koji Miyamoto and using consultant reports indicated in the references. An earlier draft of this paper was submitted to the African Union for its Digital Transformation Strategy for Africa - Annex on Digital Skills.

<sup>99</sup> Source: World Economic Forum Accelerating Workforce Reskilling for the 4th Industrial Revolution

<sup>100</sup> Source: Digital Skills in Sub-Saharan Africa : Spotlight on Ghana (https://www.ifc.org/wps/wcm/connect/38390d15-e30e-4d6e-b0d2-bb09f6146efa/Digital+Skills\_Fact+Sheet\_5-7-19.pdf?MOD=AJPERES); IFC 2019.

<sup>101</sup> Source: Loi 2017-005 Du 19/06/2017 d'orientation de l'enseignement supérieur et de la recherche

<sup>102</sup> Source: Décret N° 2016-088/PR Du 02/08/2016 relatif à la coalition nationale pour l'emploi des jeunes (CNEJ)

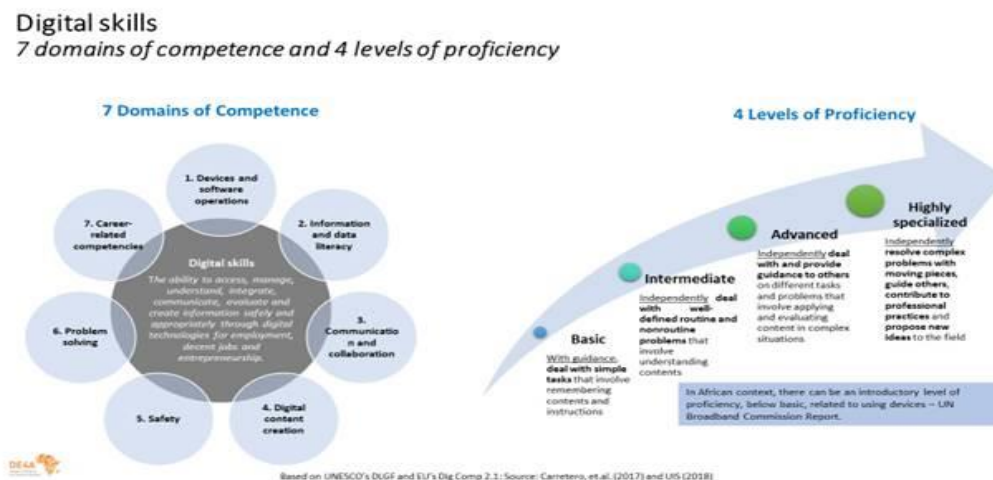
translated through two reference documents, including: (i) the policy statement of the digital economy sector for the period 2018-2022<sup>103</sup> and (ii) the national digital planning strategy for 2022. The national digital strategy is articulated around a set of four strategic axes. Axis 2 specifically targets the education and training sector. This axis aims to promote the diffusion of ICT in the economy and the increase of uses for the most vulnerable layers and to fully integrate ICT in education and optimize their use in the State services. The socioeconomic rationale behind is to build a continuum of Digital skills from the Basic to high education system passing by TVET and apprenticeship in order to prepare Togo's workforce and future leaders to live and work well in an era of rapid technological change. These documents serve as reference for both public authorities and all stakeholders.

## 6.2 Diagnostic Findings: Current State of Digital Skills Pillar

### 6.2.1 Defining Digital Skills

This report applies a framework of digital skills which includes foundational, intermediate, advanced and highly specialized digital skills. The domains of digital skills competences and proficiency levels (detailed in Figure 17) are based on the widely used DigComp 2.1 Digital Skills Framework, developed by the European Union, including its adaptation by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as part of the Digital Literacy Global Framework (DLGF). This framework breaks down digital skills into four broader proficiency levels that form a continuum, based on both the complexity and autonomy needed to complete the task as well as key competency domains.

Figure 17: Digital Skills Competences and proficiency levels and associated Level of education



### 6.2.2 Level and quality of education in Togo

Efforts undertaken by the Government of Togo in the education sector over the past decade have resulted in substantial progress. The Gross enrollment rate in primary education remained stable (122.4% in 2017 with a student population of 1.55 million)<sup>104</sup>. Combined enrollments in secondary education and Technical and Vocational Education and Training (TVET) increased significantly, rising from 551,800 in 2010 to 753,300 in 2017. For higher education, enrollment is close to 100,000

<sup>103</sup> The Digital Economy Sector Policy Statement, adopted on 3 October 2017, is a national reference document for the development of the ICT sector and the induced effects of ICT on all other sectors of the economy.

<sup>104</sup> The data presented in this section come from the Diagnostic Report of the National Education System (RESEN), 2018 in its preliminary version presented on 19 and 20 February 2019 in Lomé

students<sup>105</sup>. These efforts have been made possible by a series of flagship reforms supported by the increase in the budget allocated to education which increases to 19% in 2017.

**Despite this progress, the quality of the education is still worrying with a persistence of low learning levels and significant disparities.** Most of the children in Togo are not completing primary with enough competency in mathematics and reading as defined by PASEC<sup>106</sup>. Only a quarter of children (25%) are completing primary with enough proficiency in mathematics and reading as defined by PASEC. With regards to the Human capital development, the HCI alerts on the low human capital in Togo. The cohort of children born today in Togo will only achieve 41% of its productivity potential if key health and education outcomes remain the same. Gender gaps, especially in the upper secondary and high education is also a serious constraint to strengthen education in poor and rural areas. Girls from poor families have a 51% probability of going to college and only 17% complete it. This probability is only 8% in access to high school and 4% for completion of high school, which implies that there are almost no poor girls in higher education. In addition, only 3% of girls from the poorest 40 percent of the population complete primary with enough competency in both the PASEC mathematics and reading.

**Over the last 5 years, the Government of Togo has undertaken several initiatives to promote digital skills and anticipate the needs of the future.**

### **6.2.3 Digital skills in the High Education sector**

At the higher education and research level, although the digital skills strategy is not very clearly specified, several initiatives are in progress or have been carried out in this respect.

**Optical Fiber Wi-Fi Campus project.** To raise the universities of Togo to the highest international standards, the government has implemented the «Wi-Fi Campus» project, which aims to ensure privileged access to high-speed Internet for students, professors, doctors and staff of university campuses or hospitals. It has also made it possible to interconnect all public universities in Togo with fiber optic cables. Today, Wi-Fi Campus is accessible to 70,000 students, professors and administrative staff as well as 2,000 doctors and medical staff. The 5 university and public hospital sites of Togo are interconnected. Overall, 121 buildings are connected to fiber optic (FTTH). Currently, the user bit rate is 2Mbps and will be upgraded to 4 Mbps later (Ministry of Posts and Digital Economy, 2018)<sup>107</sup>.

**ICT training modules design and implementation of new modules.** A joint work between the Ministry of Posts and Digital Economy and the Ministry of Higher Education is underway for the design of ICT training modules adapted especially to the needs of the private sector. They aim to take stock of the situation, identify ICT training needs and offer specialized training modules to increase the availability of digital skills. More generally, the Government perspective is to Redesign curricula conjointly with the Ministries of National Education and Higher Education. Certain trades were considered as priority because they are responding to the priorities of companies and administrations established in Togo or correspond to unpopular or next generation jobs. Today, four key modules were identified, covering the following areas: Cybersecurity Expert; Technical and commercial Expert in ICT; Multimedia-Internet Expert and Data Center Expert.

**Over the last 5 years new courses were introduced in higher education to strengthen its modernity and its alignment with the policy around digital technology.** These courses include cybersecurity, artificial intelligence, computer security expert, e-commerce project manager, systems administrator, project manager, software engineer, data scientist. The following institutions of higher education and vocational training (public and private) are the most advanced in this direction: University of Lomé

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<sup>105</sup> In 2010, the total number of students was 62,034. They increased to 97,923 in 2017 (an average annual growth of 6.1%).

<sup>106</sup> The PASEC recent results were used to assess the quality of learning in Togo and benchmark it with participating countries.

<sup>107</sup> TOGO: DIGITAL ECONOMY IN ACTION. November 2018.

(UL)<sup>108</sup>, University of Kara (UK), Catholic University of West Africa-United University of Togo (UCAO-UUT), African Institute of Informatics-Representation of Togo (IAI-TOGO), and Polytechnic Institute (DEFITECH), Higher School of Management, Computer Science and Science (ESGIS)<sup>109</sup>.

**The development of distance education is an important strategic focus of the sub-sector.** In fact, the government aims to increase the coverage rate from 1,256 students per 100,000 inhabitants in 2018 to 1,500 students per 100,000 inhabitants by 2030. Consequently, the total number of students with access to higher education will increase from 97,923 in 2018 to 15,4242 in 2030 (RESEN, 2018). In this regard, it is expected that from 2022, 2% of students enrolled in public higher education follow a distance learning (or 3,085 students to 2030). Some partners had already begun to initiate actions in this direction. The *Agence Universitaire de la Francophonie* (AUF) actively worked with several higher education institutions in the past to provide access to computer facilities with high speed Internet connectivity. Television has also been used to train teachers in pedagogy<sup>110</sup>. Nevertheless, efforts are still needed to push this important agenda forward in order to better support the extension of access to quality High education.

**Moreover, the Ministry of Higher Education has promoted several new measures in the digital education space.** Among other things, the progressive implementation of digital resources dedicated to teaching and learning, the implementation of a digital platform for exchange and interaction, the digitization of processes and procedures, the development of the computing center as a lever for improving the increased use of ICTs, etc. The Ministry already aims to set up the Virtual University and promote artificial intelligence. Two reference studies have been carried out to this end on digital skills (Ministry in charge of digital technology) and the harmonization of training offers in key sectors including digital technology. Additionally, with the harmonization of offers made by the Directorate of Higher Education (DES), computer sciences modules are mandatory. The DES also advises, inspects and evaluates institutions while ensuring that the program is being conducted properly and that regulations are being respected.

**Furthermore, the Togolese Government has received funding of US \$ 18 million for three Centers of Excellence in the fields of science and technology.** Part of this funding is dedicated to institutional support. Discussions were held to see how centers can support the development of digital skills in Togo. Centers of excellence could play a catalytic role in both higher education and other lower levels. The Bank Education and Institutional Strengthening Project 2 (PERI 2) provided electronic tablets all School Inspectorates to record data on-the-go, which in turn was expected to reduce transaction costs for the inspectors and enable them to conduct more school visits.

#### **6.2.4 Digital skills in the Secondary and TVET sectors**

A few major initiatives characterize the dynamics of digital skills in Togo. The most important ones are mentioned below.

**Digital Work Environment (DWE) in Technical and Scientific High Schools Project.** Initiated by the Head of State in October 2014 through the Ministry in charge of digital<sup>111</sup>, the "DWE in Technical and Scientific High Schools" aims to spread the use of Information Technology and Communication (ICT) in schools in TOGO. It falls under the Sector Plan for Education (PSE 2010-2020) and in sectoral policy statement of the Ministry of Post and Digital Economy<sup>112</sup>. The Digital Work Environment (DWE) consists of setting up a digital exchange platform in high schools. This platform includes computer rooms, an online service portal and a single point of access where the teacher, student and all school staff can

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<sup>108</sup> The "Centre de Calcul" within the University of Lomé is playing a key role in the inclusion of ICT in training and the development of digital skills systemwide.

<sup>109</sup> Source: Information from the PASET questionnaire. Not all institutions have run all courses  
<sup>110</sup> Source: [https://www.infodev.org/infodev-files/resource/InfodevDocuments\\_433.pdf](https://www.infodev.org/infodev-files/resource/InfodevDocuments_433.pdf)

<sup>111</sup> Source: Ministry of Posts and Digital Economy: TOGO: DIGITAL ECONOMY IN ACTION. November 2018

<sup>112</sup> Source: Report on the deployment and implementation of the ENT project in the 10 high schools. September 2017.

find information as well as educational resources (manuals and materials, etc.). The DWE is also intended for parents of pupils who have access to information about their children and their institutions, as well as means of communication with the actors of the education system. In September 2017, the Ministry of Telecom, in collaboration with the TVET sector, conducted an assessment of the DWE project. The results have shown that the DWE's contribution to changing practices concerns: (i) modernization of the management of school life, (ii) using the DWE to better train students, (iii) professionalization of the training of students in technical high schools and the use of simulation software to facilitate the understanding of concepts. Today, 10 secondary schools (public and private) are piloting the project for a total of 8400 students and 820 teachers<sup>113</sup>. The Government intends to Extend the project to 900 secondary schools, 6 teacher training colleges (ENI) and an *École Normale Supérieure* (ENS).

**Several teachers have been trained in the best practices of integrating ICT into pedagogy through MOOC CERTICE (*ICT skills certification in schools*).** This training system is based on a reference system developed by UNESCO<sup>114</sup>. The DWE also offers unique, personalized access to different user profiles: students, teachers, administrative staff, inspector, parents and students.

**West African Regional Communication Infrastructure Program (WARCIP).** In the same perspective, the West African Regional Communication Infrastructure Program (WARCIP) project has also played an important role in the development of digital skills in Togo. It has contributed to improving the quality of ICT training and the availability of skills for the ICT trades. The WARCIP project enabled the Ministry of Post and Digital Economy to make the inventory of Togolese ICT training supply which allowed the identification of trainings needs in key related sectors. It also conducted the Inventory of Skills Needs. The identified courses were designed and detailed to meet the needs of a modern economy: modular architectures adapted to lifelong learning, focus on business linkages, innovative pedagogical devices and giving priority to practical activities.

**Alignment of professional and technical training offers with the national digital strategy.** Alongside above mentioned initiatives, the Ministry of Post and Digital Economy initiated the development of specialized training modules in the field of ICT in line with the skills requirements for existing businesses and new professions and the development of a global strategy for the implementation of these training modules in connection with the national policy on initial and professional training in cloud computing, artificial intelligence, cybersecurity, etc.

#### **6.2.5 Digital skills in the Informal Sector**

**There is nearly no structured strategy undertaken over the last ten years to support digital skills in the informal sector.** The rapid job market change should alert Togolese authorities about the diligence and pragmatism that require the implementation of digital skills in the informal sector. The effective demand for digital skills from the informal sector, especially in agriculture and services where most people are employed in Togo, is likely to be constrained. This reflects high levels of income volatility, precariousness of employment, and high opportunity costs that reduce participation in training or skills upgrading. This may constrain the spread of digital technologies in these sectors. Whereas, in 2015, the informal sector employs over 87% of individuals aged 15-64 and only 13% in the modern sector including 8% in the private and 5% in the public. The informal sector seems to be a model for young people looking for the first job that cannot fit into the modern sector: about 93% of young people aged 15 to 29 are employed in this sector against 82% on average in the 30-34 age group. It should also

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<sup>113</sup> Source: LETP d'Aného-Glidji (mars 2015), LETP of Sokodé (mars 2015), LS of Kara (août 2016), LS of Lomé (octobre 2016), LETP of Lomé - Adidogomé (avril 2017), LETP d'Attégou (avril 2017), LETP d'Atakpamé (avril 2017), LETP of Kanté (avril 2017), LETP of Mango (avril 2017), CT Hermann Gmeiner of Kara (avril 2017)

<sup>114</sup> Source: This reference framework has been divided into 6 areas, which are: Knowledge of ICT policies in education, Basic knowledge of curriculum and evaluation, integrating technologies into pedagogy, Basic tools in ICT, Organization and administration of the standard classroom and Digital literacy for professional teacher training (see ETN Report 2017).



be noted that in Togo, the informal sector employs more rural people in urban areas. Yet, it is precisely in these labor-intensive sectors where relatively simple technologies such as mobile phones can help to improve productivity in, for example, agriculture through better information on weather and prices, as well regular technical advice on operations. Small service providers—food sellers, tailors, and so on—can expand markets using social media.

To sum up, many initiatives have been undertaken by the government of Togo over the last 5 years at different education levels in order to promote digital skills and anticipate the needs of the future. Apart from the DWE project, no substantial assessment has been done so far to better support scaling up or evidence-based decision making. However, some preliminary analysis conducted in the *Togo digital economy in action report* included assessment of WIFI campus optical fiber, WIFI in universities and ICT training modules projects. Results are prominent and the government highlighted there the need to scale up such initiatives.

### **6.2.6 Key constraints for the development of Digital Skills in Togo**

**The inadequacy between education supply at secondary and high levels and the economic growth perspectives is a major constraint to leverage Togo’s key priority sectors through digital skills.** In Togo, while the Government aims at Digitalizing services dedicated to key sectors and building Infrastructures for a digital economy and digital services, the education sector seems not to be fully ready to accompany it. The National Development Plan in its strategic axis 1 and 2115 aims at Setting up an excellence logistics hub and a world-class business center in the sub-region and developing an agricultural processing, manufacturing and extractive industries. To this end, the Government plan to digitalize services dedicated to key sectors and to build Infrastructures for a digital economy and digital services. However, the education supply is relatively not aligned to that goal. The distribution of tertiary enrollment by major field of study indicates that the sectors related to agriculture, forestry, fisheries and veterinary sciences represent only 1% of students even though the Togolese population is essentially agricultural. On the other hand, while 56% of the jobs are in the agricultural or related sector in Togo, only 0.6% of TVET enrollment in 2018 is in agricultural training. And in higher education, only 2% of students are in sectors related to agriculture<sup>115</sup>.

**The low connectivity to internet in public institutions mainly in the basic education system , TVETs and Library connectivity impedes the capacity of the education sector to accelerate progress on digital skills.** Connecting African universities to affordable, high speed broadband internet is essential for attaining the goals of the Digital Economy for Africa Moonshot, which aims to ensure that all African individuals, businesses and governments are digitally enabled by 2030 (Sajitha, 2019)<sup>117</sup>. Compared with some West and Central African countries, Togo ranks below both in term of number of institutions connected and range of Range of bandwidth provided (Table 3: Status of bandwidths provided by NRENS across West & Central Africa ). If we consider the possible increase in data traffic and development of new applications over the next few years, Togo is far below the minimum bandwidth that should be available to all university campuses (500 Mbps -1 Gbps). Initiatives have been taken to provide solutions to this through the installation of wireless kiosks on public university campuses with support for the national network of education and research (TogoRER) aimed at the

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<sup>115</sup> The PND covers the period 2018-2022 and comprise three strategic axes:(i) set up an excellence logistics hub and a world-class business center, develop an agricultural processing, manufacturing and extractive industries, (ii) Developing agricultural processing, manufacturing and extractive industries and (iii) Consolidate social development and strengthen mechanisms for inclusion.

<sup>116</sup> In 2015, 56% of the active labor force in Togo came from the primary sector, almost all of them in agriculture. The industrial sector is very underdeveloped with only 13% of jobs while services employ 31% of the employed population.

<sup>117</sup> Draft Paper: “Connecting Africa’s Universities to Affordable High-Speed Broadband Internet: What Will it Take?” Paper prepared by Sajitha Bashir, Adviser, Education Global Practice. With inputs from Network Startup Resource Centre (NSRC), University of Oregon; KENET; UbuntuNet Alliance; WACREN and ASREN.

interconnection of universities and institutions public and private higher education<sup>118</sup>. The goal is to give them access to broadband Internet at a lower cost and many other services. A recent study suggests that access to fast Internet leads African firms in the World Bank Enterprise Surveys (WBES) sample to employ about 14-17 percent of additional workers per firm. The results indicate also that firms are more than twice as likely to provide on-the-job training to their employees when fast Internet becomes available.<sup>119</sup>

**Table 3: Status of bandwidths provided by NRENS across West & Central Africa** <sup>120</sup>

Regional NRENS	Country	NREN name	Number of Universities connected	% of universities connected	Range of bandwidth provided
WACREN (Western & Central Africa)	Côte d'Ivoire	RITER	5	-	100 Mbps
	Gabon	GabonREN	3	-	-
	Ghana	GARNET	25	28%	45 Mbps (Minimum)
	Niger	NigerREN	4	-	1 – 15 Mbps
	Nigeria	NgREN	27	100% (Almost)	155 Mbps basic in STM 1 increments
	Senegal	snRER	5	-	-
	Togo	SLREN	3	-	2 – 15 Mbps

**The lack of resources is constraining government efforts to take significant action on digital skills especially in secondary and TVET sectors.** In Togo, the technical and vocational education and training (TVET) schools, colleges and universities have played an important role in workforce development for decades. These schools provide training in a wide variety of occupational fields, and adults of all ages can gain job-ready skills. However, given the continuously changing needs of employers and the wider digital economy, TVET schools can have trouble placing graduates. The budget allocated to the TVET sector makes up slightly over 5% of the total allocation to the education sector. Regarding the upper secondary education, the allocation has significantly decreased between 2011 and 2017 (RESEN, 2018).

### 6.3 Digital Skills Recommendations and Next Steps

The initiatives undertaken by the Government of Togo in recent years at all levels of the education system provide clear perspectives on the development of digital skills. However, this will be supported by adequate measures and appropriate and sustainable policies. Some recommendations are provided in order to prepare Togo's education system to seize all the opportunities that will be offered by the digital economy.

<sup>118</sup> The main goals are to (i) Connect all public universities and university hospitals of the country to high-speed Internet and interconnecting the two public universities, (ii) Provide 200 hours per month of access to free Internet for students, teachers, doctors, administrative staff, etc and (iii) Establish a fund for the digital transformation of universities

<sup>119</sup> Online Appendix: The arrival of fast internet and employment in Africa. Author used data from the World Bank Enterprise Surveys (WBES) to explore how the arrival of the submarine Internet cables changed the behavior and performance of firms in Ghana, Kenya, Mauritania, Nigeria, Senegal, and Tanzania.

by Jonas Hjort and Jonas Poulsen

<sup>120</sup> Sources: Author from the Paper Draft Paper: "Connecting Africa's Universities to Affordable High-Speed Broadband Internet: What Will it Take? (Sajitha, 2019). The initial sources cited in the document is Foley (2016). The table was readjusted to present only situation from West and Central African Countries listed in the main document. The main table is in Annex 9.1

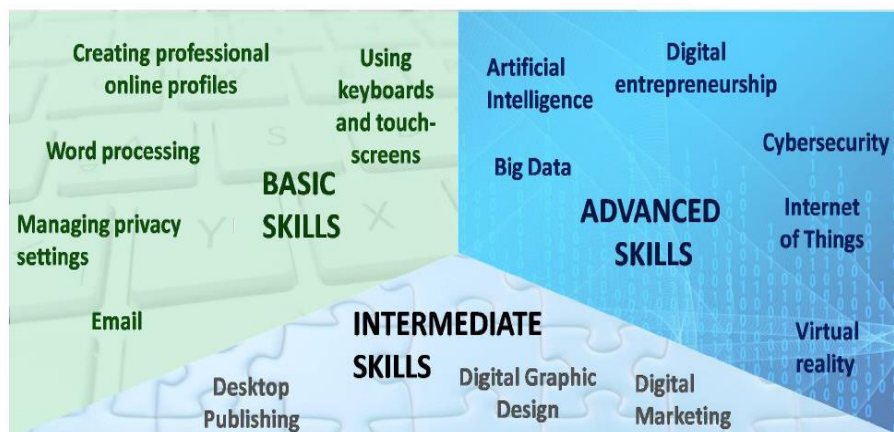
**R5.1. [Quick Win] Facilitating access to digital tools to the education sector through subsidies or tax exemption.**

Obstacles that could delay or constrain an easy adoption and implementation of digital technologies would be, among other things: access to digital tools, lack of mastery of technological tools. It will overcome through training and facilitating access to digital tools by subsidies or tax exemption.

**R5.2. [High Priority] Prepare policies and programs based on a comprehensive digital skills framework and articulate the role of the entire education system from basic to high education including TVET.**

Digital skills are much more than the individual capacity to use digital devices and do coding, and encompass a “combination of behaviors, expertise, know-how, work habits, character traits, dispositions and critical understandings. Digital skills include a range of 7 competency domains, each of which embeds 4 proficiency levels (basic, intermediate, advanced and highly specialized). Digital skills must be integrated throughout the education system, including basic schooling which can deliver basic and intermediate digital skills. The upper-secondary and tertiary educational institutions can also deliver advanced and highly specialized digital skills. The goal is to align curricular and extra-curricular activities so that the system can support the preparation of digitally competent workers and digitally literate citizens among Togo’s current workforce and future leaders. This will also help Togo’s citizens to gain access to important services related to e-health, e-government, digital finance, agro-tech, smart transportation, and enjoy the many benefits of participating in the global knowledge society. Furthermore, the importance of digital skills has been recognized, often as a new literacy alongside reading, writing, and math <sup>121</sup>.

*Figure 18: Continuum of digital skills<sup>122</sup>*



<sup>121</sup> Source: Digital Skills in Sub-Saharan Africa : Spotlight on Ghana ([https://www.ifc.org/wps/wcm/connect/38390d15-e30e-4d6e-b0d2-bb09f6146efa/Digital+Skills\\_Fact+Sheet\\_5-7-19.pdf?MOD=AJPERES](https://www.ifc.org/wps/wcm/connect/38390d15-e30e-4d6e-b0d2-bb09f6146efa/Digital+Skills_Fact+Sheet_5-7-19.pdf?MOD=AJPERES)); IFC 2019.

<sup>122</sup> Source: ITU digital skills toolkit (2018)

**R5.3. [High Priority] Strengthen access to online resources and activate on-line knowledge sharing system through Massive Open Online Course (MOOC) to meet the demand for life-long education and compensate the massification of students.**

The government aims to increase the coverage rate from 1,256 students per 100,000 inhabitants in 2018 to 1,500 students per 100,000 by 2030. As a result, the total number of students with access to higher education would increase from 97,923 in 2018 to 154,242 in 2030 (Framework note on the PES Togo). Thus, the development of distance education constitutes an important strategic axis of the sub-sector. Therefore, it is expected that from 2022, 2% of the enrollment in public higher education will follow a distance education (i.e. 3085 students by 2030). However, most of the observed training takes a classic form: full-day attendance classes. The supply of continuing education is poor. Very few institutions offer distance learning (still difficult because of lack of internet connection). The distance learning offer was already suggested by the new RESEN and even well positioned in the PES. It could certainly facilitate the acquisition of a digital culture at the university and the birth of an offer of distance academic training that is far from being a utopia. Senegal with the Virtual University of Senegal (UVS) now supports nearly 10,000 undergraduate students in various academic disciplines and with results better than those obtained by some universities with a plethora of students.

**R5.4. [High Priority] Focus on vulnerable groups (rural areas, girls).**

In Togo, boys and those who come from high socio-economic background have much better educational outcomes. Poverty is one of the main obstacles to schooling, especially among girls who often lags boys in the average years of schooling. The highest -income families have on average six years additional educational attainment, and girls from the poorest income families have on average only 3 years of schooling for girls. Furthermore, 49 percent of adult women were illiterate compared to 23 percent for men. While 39 percent of women do not have access to the media, this is the case for only 24 percent for men. The main obstacles to girls' education include early marriages, traditional roles in contributing to household chores, socio-cultural burdens, and family poverty. Digital skills can help to bridge the gap between poor and rich and rural and urban areas.

**R5.5. [Long-Term] Improve the attendance rate of scientific series to better boost the development of digital skills in Togo and improve non-cognitive skills required in the education system to further develop the critical thinking essential for easy use and adoption of technology.**

Notwithstanding efforts made to strengthen education system, the low enrollment in mathematics and science streams combined with poor quality of learning are jeopardizing Togo's perspectives to efficiently catch up the Digital skills gaps. On the one hand, the scientific fields are very weakly developed at the secondary level thus affecting the higher education where only 7% of the students are in the scientific series. Students are more oriented towards commerce, administration and law, which account for more than one-third of the tertiary workforce (40%). The other most attractive fields are arts and literature (20%) and social sciences, journalism and information (17%). These three major fields of study alone account for over three-quarters of the number of students in higher education. Also, a large proportion of students (73%) are in sectors that are less promising in the labor market (in terms of the number of individuals trained). The University of Lomé offers a total of 55 courses of License,

of which only ten are qualified professionals. The University of Kara, meanwhile, offers 34 courses of License of which only one is qualified professional. The use of digital media is rare despite the different training received. On the other hand, the digital revolution and new ways of organizing work also require non-cognitive skills of the 21st century (critical thinking, problem solving, communication, collaboration, negotiations, etc.). Universities and TVET institutions do not adequately address the development of these skills.

**R5.6. [Long-Term] Align training offers with economic needs and articulate them to the national priorities defined while increasing dedicated funding to better involve the Togolese education system in the national dynamics around digital economy.**

A sustainable and relevant program should be responsive to industry and to other employment needs (see Figure 19 below) While the majority of industry needs in US and Asia are in secondary and tertiary sectors, African industry needs and especially Togo's is in primary sector. Hence, the needs to structure an engineering program responsive to labor needs is crucial. Basic digital skills should be provided to all high school students in Togo, and current students in undergraduate and TVET programs, irrespective of their discipline. The content of many of these courses is readily available, but an important work is needed to adapt these to local contexts and to use local content. According to the Ministry of Higher Education, digital technologies that could be adopted in the short term by the education system would include the use of online educational resources (OER), online courses open to all (CLOT), free software. This will prepare Togo to better reflect the skills that will be in demand in the future. In addition, ensuring that all citizens, especially young people, have basic digital skills is crucial for the extension of e-government services and for the inclusion of Togo in the new economy. Globalization, rapid technological change and population shifts are transforming the way we live and work. Education systems around the world are under pressure to equip people with the necessary skills to increase overall productivity, while ensuring social inclusion and adaptability to more complex and dynamic economies. At the same time, disruptive technologies are offering new opportunities for the delivery of education and new insights emerging from multiples disciplines encompassing the science of learning are expanding our understanding on how children, youth and adults learn.

Figure 19: Industry needs and type of employment activities by continent<sup>123</sup>

	Primary Sector	Secondary Sector	Tertiary Sector
Africa	65%	10%	25%
Asia	30%	30%	40%
USA	5%	20%	75%

Industry Sector	Type of Employment Activities
Primary	Raw materials: agriculture, forestry, mining, other low skilled labor activities;
Secondary	Manufacturing: automobiles, consumer products (e.g., electronics), industrial products, apparel;
Tertiary	Services: banking, insurance, transportation, retail, hospitality, healthcare, tourism, information technology.

- ❖ Majority of industry needs in US and Asia are in secondary and tertiary sectors;
- ❖ Need in technical areas, services, soft interpersonal skills, computing skills, team work, and leadership;
- ❖ Labor market requires fairly skilled work force;
- ❖ Majority of Africans in primary sector of economy.

**R5.7. [Long-Term] Better collaborate with private sector to introduce new model utilizing the infrastructure of high-tech private companies to support the student practices and cultivate excellent technicians.**

It is essential to involve technology companies in defining the digital training content and in tutoring/mentoring future graduates. Private sector must play a role in addressing the challenge in digital skills. The top priority areas from the discussion with key partners might be, inter-alia: Cybersecurity Expert; Technical and commercial Expert in ICT; Multimedia-Internet Expert and Data Center Expert, Systems administrator and Software engineer. This will need, among others, talented researchers in the promising areas to lead the innovation growth of the core industries. Furthermore, Togo can also train Talented researchers in the promising areas to lead the innovation growth of the core industries.

<sup>123</sup> Data Source: US Bureau of Labor statistics; Brookings Institution, and International Labor Organization

## 7 Conclusion: A Way Forward

The development of the digital economy represents an opportunity to transform the prospects for Togolese citizens, businesses and government as highlighted by the Government National Development Plan and the policy statement on digital economy. The government of Togo is cognizant of the importance of digital economy and aspires to become a digital service hub and an international center for innovation and expertise. According to the Government national development plan 2018-2022 (Plan National de Development, PND), the country aims to make the digital economy a lever to “accelerate the development of priority business sectors and modernize its administration”. This vision was translated into a specific sectoral strategy: the policy statement of the digital economy sector for the period 2018-2022. As the government of Togo launches into the development of a new strategy for digital transformation “Togo Digital 2025” the current diagnostic would provide useful information to use as a basis for such strategic document.

**Despite significant progress, there remains opportunities to allow Togo to keep pace with the regional and global trend and leapfrog if possible.** Achieving the ambitions of the Government of Togo will require addressing the investment needs for infrastructure in rural and underserved areas, support to entrepreneur, development of the government platforms and the fostering of digital skills. But also, the government must carry out the policy reforms set out in this paper – some of which may take significant political will to overcome old ways of thinking. Specifically, this diagnostic highlights the need for the Government to scale up efforts in the public digital platforms, digital skills and digital entrepreneurship.

**This paper has set out a series of recommendations for each of the 5 pillars that the Government can embark on and the World Bank Group stands ready as a committed partner to support Togo’s journey toward digital transformation and in designing and implementing the required actions.**

Below is a summary of the recommendations for each pillar:

### **1- Digital infrastructure**

- **Quick wins (short-term):**
  - R1.1. Increase competition in the national backbone segment by leveraging existing capacity available under the eGouv network.
  - R1.2 Allow operators and ISPs to invest in deployment of infrastructure where investments are viable.
- **High-priority (short-to-medium-term):**
  - R1.3 Regulating conditions of access to international and national bandwidth where needed.
  - R1.4 Lowering cost for investment and creating incentives for infrastructure sharing.
- **Long-term:**
  - R1.5 Increase infrastructure-based competition in international markets.
  - R1.6 Develop strategy for national coverage leveraging operators’ investments but also complementing them in situations of market failure.

## 2- *Digital Platforms*

- **Quick wins (short-term):**
  - R2.1 Speed up the development of a digital identity and electronic signatures ecosystem.
  - R2.2 Focus on the development of CivicTech solutions
- **High-priority (short-to-medium-term):**
  - R2.3 Amend the existing legal and regulatory framework for Digital Identity.
- **Long-term:**
  - R2.4 Accelerate the government digitization programs.

## 3- *Digital Financial Services*

- **Quick wins (short-term):**
  - R3.1 Support the development of Digital Financial Services markets.
- **High-priority (short-to-medium-term):**
  - R3.2 Improve stakeholder collaboration and dialogue.
- **Long-term:**
  - R3.3 Improve policies and regulations, at regional and national levels Policy and regulation

## 4- *Digital Entrepreneurship recommendation*

- **Quick wins (short-term):**
  - R4.1 Pursue the policy and regulatory reforms, working hand in hand with Togo's entrepreneurship community on its proposal of Startup Act.
- **High-priority (short-to-medium-term):**
  - R4.2 Strengthen business training and startup support, reinforcing the intangibles of the Djanta Tech Hub initiative.
  - R4.3 Fill the gap of pre-seed financing for digital startups but not without financial management trainings.
- **Long-term:**
  - R4.4 Build the markets for digital entrepreneurs, through easing access to public procurement to local digital entrepreneurs.



## 5- Digital Skills

- **Quick wins (short-term):**

- R5.1 Facilitating access to digital tools to the education sector through subsidies or tax exemption.

- **High-priority (short-to-medium-term):**

- R5.2 Prepare policies and programs based on a comprehensive digital skills framework and articulate the role of the entire education system from basic to high education including TVET.

- R5.3 Strengthen access to online resources and activate on-line knowledge sharing system through Massive Open Online Course (MOOC) to meet the demand for life-long education and compensate the massification of students.

- R5.4 Focus on vulnerable groups (rural areas, girls).

- **Long-term:**

- R5.5 Improve the attendance rate of scientific series to better boost the development of digital skills in Togo and improve non-cognitive skills required in the education system to further develop the critical thinking essential for easy use and adoption of technology.

- R5.6 Align training offers with economic needs and articulate them to the national priorities defined while increasing dedicated funding to better involve the Togolese education system in the national dynamics around digital economy.

- R5.7 Better collaborate with private sector to introduce new model utilizing the infrastructure of high-tech private companies to support the student practices and cultivate excellent technicians.

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## 9 Annexes

### 9.1 Indicators and Indexes

Table 4: List of public Wifi Zones in Togo

#### CYBER ZONES COUVERTES PAR LE WIFI PUBLIC DE TOGO TELECOM

#	SECTEUR	ZONES	SITES	TYPES DE ZONES
1	LOMÉ	AGBALÉPÉDO	BAR FÉKANDINE	PLACE PRIVÉE
2	LOMÉ	AGOÈ	BAR JETON PAS 2	PLACE PRIVÉE
3	LOMÉ	ADÉWUI	BAR 3K	PLACE PRIVÉE
4	LOMÉ	ADIDOADIN	MIAMI 228	PLACE PRIVÉE
5	LOMÉ	CASSABLANCA	BAR RYVERONNE	PLACE PRIVÉE
6	LOMÉ	NYÉKONAKPOE	BAR G20	PLACE PRIVÉE
7	LOMÉ	BE-KPÉHÉNOU	BAR MAESTRO	PLACE PRIVÉE
8	LOMÉ	TOGO 2000	TATA PARK	PLACE PRIVÉE
9	LOMÉ	TOTSI	TOTAL TOTSI	PLACE PRIVÉE
10	LOMÉ	SITO AÉROPORT	NOUVELLE AÉROGARE (A.I.G.E.)	PLACE PUBLIQUE
11	LOMÉ	ADIDOGOMÉ	MADIBA	PLACE PUBLIQUE
12	LOMÉ	DECKON	CARREFOUR DÉCKON & BOULEVARD	PLACE PUBLIQUE
13	LOMÉ	GRAND MARCHÉ	LIBRAIRIE BON PASTEUR	PLACE PUBLIQUE
14	LOMÉ	GRAND MARCHÉ	IMMEUBLE EPAM	PLACE PUBLIQUE
15	LOMÉ	ASSIVITO	CARREFOUR ASSIVITO	PLACE PUBLIQUE
16	LOMÉ	PORT	CARREFOUR ROND POINT DU PORT	PLACE PUBLIQUE
17	LOMÉ	LIMOUSINE	CARREFOUR LIMOUSINE	PLACE PUBLIQUE
18	LOMÉ	ABLOGAMÉ	PEACE BEACH	PLACE PUBLIQUE
19	LOMÉ	KODJOVIAKOPÉ	COURS DES GRANDS	PLACE PUBLIQUE
20	LOMÉ	BAGUIDA	PLACE DU MONUMENT	PLACE PUBLIQUE
21	INTÉRIEUR	CINKASSÉ	CINKASSÉ	PLACE PRIVÉE
22	INTÉRIEUR	ANÉHO	MAIRIE D'ANÉHO & PLACE OASIS	PLACE PUBLIQUE
23	INTÉRIEUR	TSÉVIÉ	MARIE DE TSÉVIÉ	PLACE PUBLIQUE
24	INTÉRIEUR	ATAKPAMÉ	PLACE MIDUDU	PLACE PUBLIQUE
25	INTÉRIEUR	KPALIMÉ	PLACE & CARREFOUR GBADJADJI	PLACE PUBLIQUE
26	INTÉRIEUR	TCHAMBA	CENTRE DES SPECTACLES & DES LOISIRS DES JEUNES	PLACE PUBLIQUE
27	INTÉRIEUR	SOKODÉ	PRÉFECTURE DE TCHAOUJJO	PLACE PUBLIQUE
28	INTÉRIEUR	KARA	PALAIS DES CONGRÈS DE KARA	PLACE PUBLIQUE
29	INTÉRIEUR	DAPAONG	PRÉFECTURE DE DAPAONG	PLACE PUBLIQUE

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**Table 5: Mobile broadband unique market penetration, 2019, %**

Country Name	Mobile broadband unique market penetration, 2019, %
Comoros	2%
Equatorial Guinea	3%
South Sudan	5%
Niger	8%
Central African Republic	9%
Chad	9%
Somalia	11%
Burundi	12%
Madagascar	12%
Congo, Dem. Rep.	14%
Mali	14%
Guinea-Bissau	16%
Cameroon	16%
Guinea	17%
Burkina Faso	17%
Malawi	17%
Benin	17%
Rwanda	17%
Gambia, The	20%
Togo	20%
Zambia	21%
Tanzania	21%
Uganda	22%
Gabon	22%
Liberia	22%
Congo, Rep.	24%
Ethiopia	24%
Sierra Leone	26%
Kenya	27%
Senegal	28%
Zimbabwe	29%

Sudan	29%
Mozambique	30%
Nigeria	30%
Angola	32%
Eswatini	33%
Mauritania	34%
São Tomé and Príncipe	34%
Côte d'Ivoire	34%
Ghana	38%
Lesotho	41%
Botswana	41%
Cabo Verde	44%
Namibia	45%
Seychelles	46%
South Africa	47%
Mauritius	50%

Source: calculations based on GSMA and WDI data

**Table 6: Cost of data % of GNI per capita, 2019**

Country Name	Cost of 500 Mb % of GNI per capita, 2019	Cost of 1GB % of GNI per capita
Egypt	0%	1%
Mauritius	1%	1%
Sudan	1%	1%
Gabon	1%	1%
Tunisia	1%	1%
South Africa	1%	2%
Botswana	1%	1%
Ghana	1%	2%
Libya	1%	2%
Nigeria	2%	2%
Cape Verde	2%	2%
Kenya	2%	3%
Namibia	2%	2%

Algeria	2%	2%
Morocco	2%	2%
Angola	2%	2%
Cameroon	2%	3%
Cote d'Ivoire	3%	5%
Tanzania	3%	5%
Senegal	3%	3%
Zambia	3%	3%
Congo Brazzaville	3%	6%
Rwanda	3%	3%
Uganda	4%	8%
Mozambique	5%	7%
Guinea	5%	5%
Lesotho	5%	5%
Burkina Faso	5%	8%
Ethiopia	5%	5%
Sierra Leone	5%	10%
Mali	5%	10%
Gambia	5%	9%
Comoros	5%	5%
Benin	6%	6%
Togo	7%	13%
Zimbabwe	9%	10%
Liberia	9%	17%
Burundi	9%	14%
Madagascar	10%	16%
Niger	11%	11%
Malawi	12%	16%
Guinea-Bissau	12%	20%
Central African Republic	18%	23%
Chad	18%	21%
D.R. Congo	26%	26%

Source: Alliance for Affordable Internet

**Table 7: Total used international bandwidth per pop - Kbps, 2019**

Country Name	Total used international bandwidth per pop - Kbps
CAR	0.2
Chad	0.2
Congo, DR	0.6
Burkina Faso	1.3
Congo, Rep.	2.3
Cameroon	3.1
Nigeria	3.8
Uganda	4.9
Benin	5.2
Rwanda	6.3
Gambia	9.0
Cabo Verde	10.1
Côte d'Ivoire	10.1
Togo	11.5
Ghana	12.2
Senegal	14.3
Kenya	17.2

Source: TeleGeography

**Table 8: % of population covered by 3G networks, 2019**

Country Name	% of population covered by 3G networks
Benin	67%
Burkina Faso	65%
Cabo Verde	-
Cameroon	75%
CAR	40%
Chad	49%
Congo, DR	62%
Congo, Rep.	65%
Côte d'Ivoire	72%

Gambia	58%
Ghana	85%
Kenya	88%
Nigeria	81%
Rwanda	95%
Senegal	94%
Togo	65%
Uganda	86%

Source: GSMA intelligence

**Table 9: % of population covered by 4G networks, 2019**

Country Name	% of population covered by 4G networks
Benin	45%
Burkina Faso	7%
Cabo Verde	#N/A
Cameroon	75%
CAR	7%
Chad	30%
Congo, DR	12%
Congo, Rep.	36%
Côte d'Ivoire	67%
Gambia	26%
Ghana	73%
Kenya	65%
Nigeria	51%
Rwanda	99%
Senegal	70%
Togo	10%
Uganda	61%

Source: GSMA intelligence



**Table 10: Mobile market concentration index (HHI index), 2019**

Country Name	Mobile market concentration index (HHI index)
Congo, DR	2,684
Nigeria	2,841
CAR	3,014
Côte d'Ivoire	3,394
Ghana	3,416
Cameroon	3,443
Gambia	3,646
Burkina Faso	3,655
Senegal	3,901
Uganda	3,906
Congo, Rep.	4,677
Kenya	4,735
Rwanda	4,981
Benin	5,032
Togo	5,087
Chad	5,265
Cabo Verde	6,016

Source: GSMA intelligence

**Table 11: % of population that is rural**

Country Name	% of population that is rural
Benin	56%
Burkina Faso	69%
Cabo Verde	34%
Cameroon	45%
CAR	60%
Chad	77%
Congo, DR	57%
Congo, Rep.	34%
Côte d'Ivoire	45%

Gambia	40%
Ghana	45%
Kenya	74%
Nigeria	51%
Rwanda	70%
Senegal	56%
Togo	60%
Uganda	84%

Source: World Development Indicators

Table 12: Fixed broadband subscribers in Togo

Country Name, Jun 2019	DSL Subscribers	Fibre/LAN Subscribers	Fixed Wireless Subscribers	Other Subscriber s	Household Penetration
CAR	0	0	2,000	0	0.2%
Burkina Faso	15,000	0	500	500	0.5%
Gambia	730	0	3,350	520	1.7%
Uganda	155,000	0	30,000	0	2.0%
Benin	3,985	950	20,425	890	1.2%
Rwanda	5,700	2,000	29,000	100	1.3%
Togo	11,975	2,400	28,450	5,560	2.6%
Cameroon	13,450	6,600	18,750	4,800	0.6%
Senegal	131,300	11,700	2,200	0	7.1%
Côte d'Ivoire	84,862	13,672	93,295	4,140	4.0%
Ghana	36,970	20,000	79,000	130	1.6%
Kenya	1,230	209,320	70,000	9,500	3.10%

Source: TeleGeography

**Table 13: Status of bandwidths provided by NRENS across Africa<sup>124</sup>**

Regional NRENS	Country	NREN name	Number of Universities connected	% of universities connected	Range of bandwidth provided
UbuntuNet Alliance (Eastern & Southern Africa)	Burundi	BERNET	13	-	38 Mbps
	Ethiopia <sup>a</sup>	EthERNET	36	-	100 Mbps
	Kenya	KENET	57	88%	-
	Madagascar	iRENALA	6	-	-
	Malawi	MAREN	3	-	-
	Mozambique	MoRENNet	11	100%	34 – 155 Mbps
	Sudan	SudREN	35	100%	2 – 50 Mbps
	Tanzania	TERNET	7	-	8 – 15 Mbps
	Uganda	RENU	16	40%	5 – 200 Mbps
	Zambia	ZAMREN	7	60%	7.5 – 230 Mbps
WACREN (Western & Central Africa)	Côte d'Ivoire	RITER	5	-	100 Mbps
	Gabon	GabonREN	3	-	-
	Ghana	GARNET	25	28%	45 Mbps (Minimum)
	Niger	NigerREN	4	-	1 – 15 Mbps
	Nigeria	NgREN	27	100% (Almost)	155 Mbps basic in STM 1 increments
	Senegal	snRER	5	-	-
	Togo	SLREN	3	-	2 – 15 Mbps
ASREN (Middle East & North Africa)	Algeria	CERIST	63	-	10 – 100 Mbps
	Egypt	EUN	18	-	-

<sup>a</sup>. More recent data from the draft ICT Strategic Plan for Higher Education in Ethiopia 2018 indicates that bandwidth ranges from 45 to 800 Mbps in Ethiopian universities.

Source: Foley (2016).

<sup>124</sup> Bandwidth measures the rate at which data can be delivered to and from the Internet. It is measured in bits (unit of digital information) that can be transferred in a second. A 1 Kilobit per second (Kbps) connection can deliver a maximum of 1000 bits per second; 1 Megabit per second (Mbps) connection can deliver 1000 Kb in a second and 1 Gigabit per second (Gbps) can deliver 1000 Mb per second.

**Table 14: Number of students in non-university higher education in Togo in 2013-2014 according to gender and specialties**

Spécialités	Garçons	Filles	Total
Gestion/compta	2555	2188	4743
Commerce	786	656	1442
Secrétariat	128	953	1081
Banque	438	350	788
Marketing	187	227	414
Communication	450	675	1125
Droit	64	74	138
Génie	1455	47	1502
Informatique	712	131	843
Métiers du Port	313	144	457
Autres	769	426	1195
Ensemble	7857	5871	13728
	57,2%	42,8%	100,0%

Sources : la définition de politiques nouvelles pour l'enseignement post basique et le développement des compétences au togo : situation de l'enseignement supérieur et de l'enseignement technique et de la formation professionnelle

**Table 15: Number of universities in Lomé and Kraké by field of study**

Domaines	2007-2008		2011-2012		2015-2016	
	Effectifs	%	Effectifs	%	Effectifs	%
Science de l'Education et de la Formation	351	1,1	579	1,2	389	0,8
Science de l'Homme et de la Société	4028	43,5	10987	40,6	18390	37,0
Sciences des Lettres, Langues et Arts	9795		8286			
Sciences Economiques et de Gestions	8756	27,5	11411	24,0	12532	25,2
Sciences Juridiques Politiques et de l'Adm.	3063	9,6	6585	13,9	7185	14,4
Sciences de la santé	3702	11,6	2483	5,2	1659	3,3
Sciences et Technologies	1858	5,8	6192	13,1	7383	14,8

Sciences Agronomiques	258	0,8	958	2,0	2253	4,5
Ensemble	31811	100,0	47481	100,0	49791	100,0

Source: DAAS, Université de Lomé

**Table 16: Number of jobs in 2015 by Business Line**

Branche d'activité	Nombre d'emplois 2015		Ecart 2015-2011	
	Effectif	%	Total	Privé Moderne
Agriculture, sylviculture, Pêche	1277555	48,5	-32472	40176
Activités extractives	12950	0,5	9074	1439
Activités de fabrication	220660	8,4	-23033	47182
Production d'électricité, de gaz, vapeur, climatisation	3688	0,1	2094	1289
Distribution d'eau, d'assainissement, gestion des déchets	5930	0,2	430	1195
Construction	51320	2,0	-425	10753
Commerce, réparation de véhicule et auto-moto	341811	13,0	-51993	49340
Transport et entreposage en état	64743	2,5	-16050	-8372
Hébergement et restauration	34434	1,3	21193	2692
Information et communication	5356	0,2	-1384	-324
Activités financières et assurances en état	7929	0,3	2495	679
Activités immobilières	2925	0,1	951	822
Activités professionnelles, scientifiques et techniques	18016	0,7	4713	1427
Activités des services administratif et appui en état	72050	2,7	-7429	-6192
Services Personnels	68520	2,6	1467	394
Activités pour la santé humaine	23921	0,9	5148	2273
Activités d'enquête et de sécurité	22394	0,9	12801	5426
Autres branches	56100	2,1	-5587	-8953
Non Déclaré	346632	13,2	174301	-1367
Total	2636935	100,0	96296	139880
Branche d'activité en 3 grands groupes				
Agriculture	1277555	48,5	-32472	40176

Industrie	294549	11,2	-11859	61858
Services	718199	27,2	-33675	39213
Non classé	346632	13,2	174301	-1367
Total	2636935	100,0	96296	139880

**Table 17: Summary of Digital Competences**

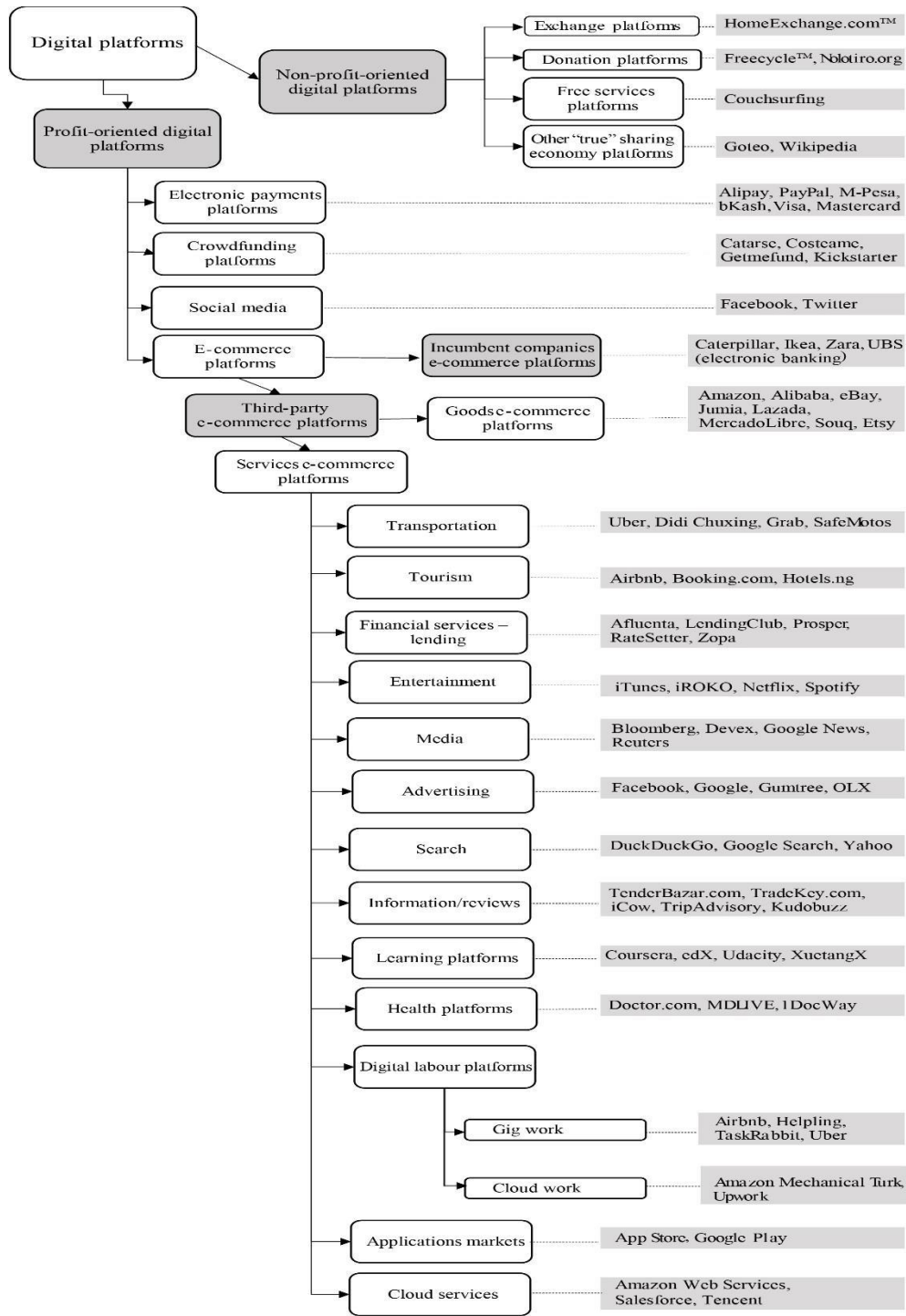
Competence Areas	Competences	Proficiency Levels
1. Devices and software operation a	Identify and use hardware and software tools and technologies.	<i>Foundation</i> (Levels 1 and 2) - Can deal with simple tasks that involve remembering content and instructions but also requires some guidance to execute.
	2 competences involving physical and software operations of digital devices.	
2. Information and data literacy	Search for, judge the relevance (including its source) and organize digital content.	● ● ● ● ● ● ● ● ● ●
	3 competences involving browsing, evaluating, and managing digital content.	
3. Communication and collaboration	Interact and engage in citizenship through digital technologies while adhering to netiquette and managing one's digital identity.	<i>Intermediate</i> (Levels 3 and 4) - Can independently deal with well-defined, routine and nonroutine problems that involve understanding content.
	6 competences involving communicating, collaborating, and engaging in citizenship through digital technologies as well as netiquette and digital identity management.	
4. Digital content creation	Create new or modify existing digital content while correctly applying copyright and licenses as well as programming.	● ● ● ● ● ● ● ● ● ●
	4 competences involving developing and integrating digital content as well as understanding copyrights, licenses, and programming.	
5. Safety	Ensure security measures while safeguarding against risks threatening devices, privacy, health, and the environment.	<i>Advanced</i> (Levels 5 and 6) - Can deal with and provide guidance to others on different tasks and problems that involve applying and evaluating content in complex situations
	4 competences involving protecting devices, personal data, privacy, and health as well as the environment.	
6. Problem-solving	Solve problems in digital environments and use digital tools to innovate and keep abreast of the digital evolution.	● ● ● ● ● ● ● ● ● ●
	5 competences involving resolving digital issues, creatively using digital technologies, bridging personal gaps in digital skills as well as computational thinking.	
7. Career-related competences*	Use specific career-related digital technologies and content to have access to opportunities in the digital economy.	<i>Highly specialized</i> (Levels 6 and 7) - Can resolve complex problems with few or several moving pieces, guide others, contribute to professional
	2 competences involving operating specialized digital technologies as well as working with digital content for specific career-related fields.	

## 9.2 Common elements of digital platforms

### *Box 10: Common elements of digital platforms*

- **Service delivery:** Organizations may opt to use digital channels (such as online portals, mobile phones, social media) to offer client-facing services. By offering services digitally, organizations may improve cost and efficiency of such delivery, and offer ease and convenience to clients.
- **Shared systems:** To be efficient as a corporate enterprise, an organization may need to set up shared systems for use across the enterprise, that support both back- and front-end delivery of service or operations. Shared systems help remove duplication of resources, and redundancy of cost and effort, across disparate parts of the organization.
- **Data infrastructure and management:** With more data becoming digital, organizations need to use digital facilities to source, store, and share information with all constituents. For example, re-usable public-sector data or open data is not only a tool to keep government accountable, but also a resource for startups and firms to offer innovative products and services using open data.
- **Interoperability and interconnectivity:** To achieve interoperability and interconnectivity across an enterprise's systems, organizations require a connectivity bus, web services, application programming interfaces (APIs), and use of standards-based equipment and services. These become more important for connecting fragmented systems or legacy systems across enterprise, particularly for government platforms, in a cost-effective manner.
- **Change management and reforms:** Digital transformation require significant changes in the way a government or firm operates, depending on the nature of the platform. The exercise involves examining processes used and data exchanged within an enterprise, and with key clients or partners. Digital data (such as those used in registries or transactions) can offer strategic use and require robust safeguards for security and privacy. Developing platforms requires taking stock of key digital assets, and developing incentives, agents, and drivers for bringing about change with the use of platforms.
- **Back-office systems:** Organizations use digital facilities to manage and operate back-office functions for day-to-day operations. These systems cover all aspects of an organization's functioning, in its role as a corporate enterprise, including financial accounting, payroll, human resource management, general administration, and procurement.

Figure 20: Electronic commerce in the digital platforms landscape



Source: UNCTAD (2018)



### 9.3 Comparative summary of different e-commerce Value Chains

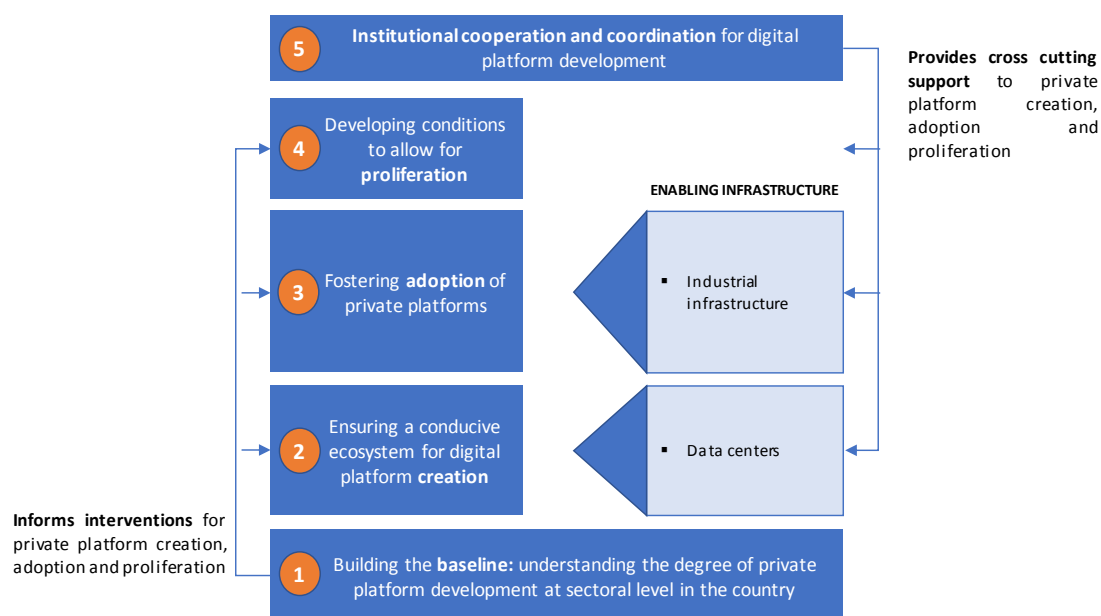
Table 18: Comparative summary of different e-Commerce Value Chains

		Actors	Transportation (to Customer)	Warehousing Operation
<b>B2C Marketplace</b>	<b>Retail</b>	Website Owner Vendor Customer	Vendor (managed through Website owner ecosystem if they have in-house logistics operation)	Vendor – Depends on scale Website Owner – No
<b>B2C e-Tailer</b>		e-Tailer Customer	e-Tailer (via own logistics arm or logistics partner)	e-Tailer – Yes
<b>B2C eShop</b>		eShop Customer	eShop (via logistics partner)	eShop – Yes
<b>C2C Marketplace</b>	<b>Online</b>	Website Owner Vendor Customer	Vendor (managed through Website owner ecosystem if they have in-house logistics operation)	Vendor – Depends on scale Website Owner – No
<b>B2B Marketplace</b>	<b>e-Wholesaler</b>	Website Owner Vendor Customer	Vendor (managed through Website owner ecosystem if they have in-house logistics operation or logistics preferred partner)	Vendor – Yes Website Owner - No

In both the eShop and Online Retailer models, the vendor and the Platform/Website Owner are the same entity, because they are selling directly to the consumer. In the B2C Retail Marketplace, B2B e-Wholesaler and C2C Online Marketplace models, the Website is simply a facilitator of trade between consumers and vendors. World Bank (2015)

Tab

### 9.4 Overall supporting framework for commercial platforms



## 10 Glossary

**Accelerator:** An acceleration program provides companies with the right tools to grow: mentoring, access to networks and investors and other forms of support to achieve financial sustainability. Companies that participate in an acceleration program are usually beyond the start-up phase and have entered the phase of scaling-up but need advice and other resources to accelerate their growth. Accelerators generally offer a short and intense program and have the following characteristics:

- ✓ Brief duration: short and intense programs (typically between three and six months)
- ✓ Cohort-based: selection and formation of a group of companies to facilitate peer learning
- ✓ Open application: the process is open to all companies, while also competitive
- ✓ Facilitates access to funding: provides participating companies with direct access to financing or direct contact with potential investors

**API:** An acronym for Applications Programming Interface. An API is a programming interface that allows you to connect to an application in order to exchange data. An API is opened and proposed by the program owner.

**Apps:** Software application developed for a digital device. The term is often associated with the applications that run on mobile phones.

**Artificial Intelligence:** the study of how to produce machines that have some of the qualities that the human mind has, such as the ability to understand language, recognize pictures, solve problems, and learn.

**Big data:** very large sets of data that are produced by people using the internet, and that can only be stored, understood, and used with the help of special tools and methods.

**Business angel / Angel investor:** Refers to an individual who is investing financially in a startup. Most of the time, the angel investor is among the first investors and is directly interested in the project in which he invests. They provide the entrepreneur with their skills, experience, business network and time. The angel investor is also an associate-entrepreneur.

**Cloud computing:** A paradigm for enabling network access to a scalable and elastic pool of shareable physical or virtual resources with on-demand self-service provisioning and administration.

**Coding:** Writing instructions for a computer program.

**Co-working:** Style of work that involves a shared workspace and a network of workers encouraging exchange and openness.

**Crowdfunding:** Funding of projects (of enterprises, NGOs, etc.) by an interested but non-professional public – the “crowd” – generally using interactive media as a channel of funding. There are 4 types of crowdfunding: by donation (business or social venture), by loan (with or without interest refund to the investor), by capital (with a return on investment expected by the investor) and by presale (in which the user receives a product or service in return for his contribution).

**DigComp:** a tool to improve citizens’ digital competence, help policymakers formulate policies that support digital competence building, and plan education and training initiatives to improve the digital competence of specific target groups. DigComp also provides a common language on how to identify and describe the key areas of digital competence and thus offers a common reference at European level.

**Due diligence:** Set of checks and balances that an investor makes before a transaction. It is a concept that allows a future buyer to get an idea of the precise situation of a company before deciding on an investment.

**Entrepreneurial ecosystem:** Operational combination of a set of factors that enables businesses to realize their strong growth potential. There are six main factors that define this environment: markets, human capital, accessibility and diversity of funding, regulation, culture and support systems.

**Fab Lab or Makerspace:** Structure open to the public that provide machine tools and tools with numerical control that are usually reserved for professionals for the purpose of rapid prototyping or small-scale production. These third places allow people with the same mindset to share their ideas, tools and skills.

**Fundraising:** Operational term by which an enterprise or group of investors finds new financial resources. This fundraising results in capital growth for an enterprise and often comes from various investors, such as angel investors, institutional investors or individuals if the company is listed on the stock exchange.

**Hackathon:** Combining the terms "hacking" and "marathon," a hackathon is an event where developers get together to do collaborative computer programming on a specific topic in order to create mobile applications or software. Traditionally, it takes place in a 48-hour format and at the end of the event, each team makes a short presentation on their project.

**Incubator:** As support structures for business creation projects, incubators can provide support in terms of accommodation, advice, networking and funding or support for fundraising during the early stages of a business' life. Unlike a business nursery, an incubator caters for very young companies or companies still being created, offering them a set of adapted services. Incubators can differentiate themselves by the services they offer, whether they are free or not, or by the type of projects they target.

**Information and Communication Technology (ICT):** a school subject in which students learn to use computers and other electronic equipment to store and send information.

**Internet of Things (IoT):** A global infrastructure for the information society, enabling advanced services by interconnecting (physical and virtual) things based on existing and evolving interoperable information and communication technologies<sup>62</sup>.

**Massive Open Online Course (MOOC) :** a course of study that is made available over the internet and that can be followed by a large number of people:

**Minimum Viable Product (MVP):** Basic version of a new product or service, which will be improved based on feedback from the first set of users/customers. PoC will give rise to more sophisticated versions later if the first step is validated.

**Open innovation / Corporate-startup collaboration:** Process of accelerating innovation through collaboration with different actors involved in the ideation or innovation process (customers, suppliers, partners, etc.). Open innovation can create opportunities, establish new markets and increase sales, as well as boost the impact on stakeholders (in terms of cost reduction, access to a larger customer base, filling technological gaps, etc.)

**Private equity:** Acquisition of equity interests in usually unlisted companies. This operation is carried out by purchasing either existing securities from former shareholders or newly issued securities during a capital increase. Private equity can be used to finance young companies (venture capital), the development of growth firms (growth capital) and transmit or acquire companies (leveraged buyouts).

**Skill:** information and communication technology: a school subject in which students learn to use computers and other electronic equipment to store and send information

**Soft loan / Interest-free loan:** Loans with a social vocation, without guarantee or surety and at a zero percent rate, generally granted to the founders or managers of companies (and not to the company itself) in order to finance their businesses. They are often granted under the condition of fulfilling a certain number of social criteria (e.g. employment or development potential). Each borrower will have to certify on their honor their ability to repay the loan.



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