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Impactful global business in Ghana

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About Us

GP Business Consulting is a Ghana-based management consultancy company that offers specialized services tailored to the business needs of our clients in the West African region.

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Introduction

Information and Communication Technology (ICT) and its applications have grown in leaps and bounds since the 1980s. With the emergence of ICT, governments the world over have sought to harness it for enhancing service delivery to their citizens. Known globally as e-government, it is also used by the government information for dissemination and the facilitation of citizen participation in the governance process. Ghana has not been an exception. In 2003, Ghana adopted e-government through the roll-out of the Ghana ICT for Accelerated Development (ICT4AD) Policy geared at the development of government and governance structures using ICTs. The policy documents show how ICTs can be integrated into various economy for segments of the development of the country.

The policy is targeted at positioning the country to utilize and benefit from ICTs and is hinged on 14 pillars:

- Accelerated Human Resource
 Development
- Promoting ICTs in Education The Deployment and Exploitation of ICTs in Education
- Facilitating Government Administration and Service Delivery – Promoting Electronic Government and Governance
- Facilitating the Development of the Private Sector
- Developing an Export-Oriented ICT Products and Services Industry
- Modernization of Agriculture and the Development of an Agro-Business Industry
- Developing a Globally Competitive Value-Added Services Sector - A Regional Business Service and ICT Hub
- Deployment and spread of ICTs in the Community
- Promotion of National Health
- Rapid ICT and Enabling Physical



- Infrastructure Development
- Legal, Regulatory, and Institutional Framework Provisions
- R&D, Scientific and Industrial Research Capacity Development
- Promoting Foreign and Local Direct Investment Drive in ICTs
- Facilitating National Security and Law and Order.

Implementation of the ICT4AD policy is ongoing through the application of various ICT-induced programs and projects to formalize the economy. Key to implementation of the policy is the National Information Technology Agency, the ICT policy implementing arm of the Ministry of Communications and Digitalization responsible for implementing Ghana's IT policies. In addition to the ICT4AD policy, the government also launched its e-government strategy in 2005 and the Ghana Electronic

Government (GeGov) project in 2008 to improve the service delivery of the Ghana Revenue Authority and the Registrar General's Department.



NITA is responsible for implementing Ghana's IT Policies



Ghana e-government project launched by Dr. Mahamadu Bawumia, Vice President of the Republic of Ghana





Key Aspects of Ghana's Digitization Drive

are aspects Ghana's many to digitalization from the drive. **Apart** government's agenda towards digitization, digital infrastructure, citizens' buy-in, internet penetration and its usage, financial inclusion, digital financial services and payments and foreign direct investment are pivotal in developing a digital economy.

ICT4AD and Government's Digital Agenda

The current government since it assumed office in its first term in 2017 has embarked on a digitization agenda, a key driver of the Ghana Beyond Aid agenda and underpinned by the ICT4AD. In 2019, the government, organized the Ghana Digital Roadmap Conference to review the ICT4AD policy document in line with digital opportunities and generate ideas to develop a digital strategy and an implementation plan to establish Ghana as the leader in ICT

innovation in Sub-Sahara Africa by 2023. This new strategy is set to enhance and add to the increased digitization of public services while capitalizing on the rising use of digital technologies by businesses and consumers. The Government views digitalization as key to transforming health, education, financing, social services, and agriculture.

As part of Ghana's effort in driving the digital agenda, the Ministry of Communications, in 2021, was assigned an additional portfolio by President Nana Addo Dankwa Akufo-Addo. The Ministry was renamed the of Communications Ministry and Digitalization to reflect its additional portfolio. Beginning with the launch of online passport renewals in December 2016, a paperless port system in September 2017, a property addressing system digital October 2017, and a mobile number interoperability system in May 2018, the



government has also created digital platforms for a range of its entities, including the Lands Commission, the Ministry of Tourism, and the Courts system. The introduction of the Ghana Card in 2017, an electronic chip-based national identification.

Ghana.Gov Platform



The Government of Ghana's Official Web Portal

The launch of the Ghana. Gov platform, which is a single digital payment and services portal meant to provide a single point of access to all services of Ministries, Departments, and Agencies, is a major leap towards Ghana's digitalization agenda. The portal seeks to:

- Process all payments and transfers (both electronic and cash) against predefined service flows of each MDA and MMDA.
- Manage post-payment workflow, customer notification, feedback, and service ratings.

Thereby, enabling the government of Ghana to fulfill its goal of creating a cash-lite economy. This portal enables Ghanaians to apply and pay for many services online including:

- Birth, Death, and Marriage certificates
- Business registrations and permits
- Passports, Ghana Card, and other national IDs
- Drivers' licenses, road-worthy certificates, and vehicle registration
- Income, personal and corporate taxes

Apart from the Ghana. Gov platform and the digital services it offers Ghanaians, the government has also introduced several initiatives which is helping in the digital transformation of the Ghanaian economy. These initiatives include:

The National Digital Property Addressing System



Get Address

Save Location

The GhanaPost GPS Digital Property Addressing System

Also known as GhanaPost GPS, it is a global addressing system launched in October 2017 by President Akufo Addo to provide effective means of addressing every location and property to facilitate the implementation of key government policies. The essence of the project is to have a digital database of all properties to assist the government in revenue generation as well as planning for improved service delivery.

The Paperless Port Operations

In 2003, the Customs Division of the Ghana Revenue Authority partnered with the Ghana Community Network Limited (GCNET), an esolutions provider to the government, which developed and deployed the Ghana Customs Management System (GCMS) to provide the Ghana Customs, Excise, and Preventive Service with a fully integrated computerized



system for the processing and management of Customs declarations and related activities. GCNET was meant to reduce the clearance of goods at the port from six days to an average of three days.



The Paperless Port System in Ghana

In 2017, the paperless port system was implemented at Ghana's main ports by the GRA together with GCNET and West Blue Consulting, following a pilot. The paperless port system has many features used by various stakeholders. These are Customs, Clearing agents/importers, and authorities. With the paperless clearing system, all parties involved in the evaluation process, classification of imports, insurance of permits, settlement of cash, and all other activities pertaining to the clearing process will be online thereby ensuring an integrated system devoid of excessive paperwork.

Mobile Money Interoperability (MMI)

IMMI is the service that allows direct and seamless transfer of funds from one mobile money wallet to another mobile money wallet across networks. It allows the transfer of funds from the wallet into a bank account and e-zwich cards; and, from the wallet and e-zwich cards to a bank account.

MMI Functionalities

 Wallet-to-wallet transactions: Allows mobile money users to move funds to

- other mobile money platforms.
- Bank account-to-wallet: Allows mobile money users to debit or pull funds from their bank accounts and credit their wallets or other wallets.
- Wallet-to-bank account: Allows mobile money users to transfer funds directly from their wallets to any bank account.
- Wallet-to-e-zwich card: This allows mobile money users to transfer funds directly from their wallets to any e-zwich card.
- The Automated Border Control System (e-Gate) is part of the Integrated e-Immigration System.



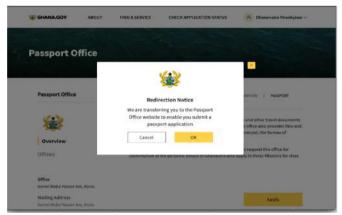
MMI makes it possible to share money across all networks

Ghana Online Passport Application Service

The Ministry of Foreign Affairs and Regional Integration (MFA), in December 2016, launched an online passport application service for Ghanaians to ease the mode of application while ensuring maximum security for applicants. The service was inherent in the e-Government strategy targeted at ensuring the use of information technology to provide citizens with efficient passport



services through a secure, fast, and convenient means.



Ghana's Online Passport Application Portal

Over the years, there had been challenges surrounding the application for passports. It was normal to see long queues at the Passport Office in Accra, some of which started as early as 3 am. This was also coupled with the existence of middlemen, also known locally as "Goro" boys, who charged exorbitant fees for "premium" services. The adoption of the online passport service by the MFA was aimed at addressing the difficulties that bedeviled passport acquisition in Ghana.

Currently, there are passport application centers in Kumasi, Tamale, Koforidua, Tema, Ho, Takoradi, Sunyani as well as other premium application centers in Accra and Kumasi. New passport application centers are scheduled to be inaugurated in Cape Coast and Wa, along with a new premium center in Tamale. The MOFA had also extended Biometric passport services have been extended to Ghana's diplomatic missions abroad: about twenty-two (22) missions are now able to issue biometric passports to Ghanaians in the Diaspora.

An applicant would have to visit passport.mfa.gov.gh or passports.mfa.gov.gh after which he or she would be required to

create an account with a valid and active mobile number as well as email address (optional) as a new user or log in as an existing user.

Universal QR Code



Users make payments by scanning a unique QR code and making a direct payments

In November 2020, Ghana became the first African country to implement a universal quick response code (QR Code) payment system. The universal QR Code payment system allows a customer to make payment for goods and services to a merchant from a mobile wallet or a bank account directly from a mobile phone. GhQR allows merchants to receive payments instantly into their preferred accounts via a static or dynamic QR Code.

Integrated E-Immigration System (E-Gates)

The aim of the e-Immigration system is the provision of an end-to-end integration of border control operations, permits and Visa Management System, business processes including document and record management, web-enabled system. The system essentially allows travelers to use their passports to automatically enter and exit the country. Egates uses facial recognition technology to verify the user's identity against the data stored in the chip in their biometric passport.





Biometric e-gates at Kotoka International Alrport

This new system would be replacing the PISCES System, which only does identification. The whole E-Gates project covers the Headquarters of the Ghana Immigration Service and subsidiary offices, Kotoka International Airport, Tema and Takoradi Ports, and Disaster recovery. It also covers the Paga border to the north, the Aflao border to the East, and the Elubo border to the West.

E-Justice



The e-Justice project, a paperless court system that will enhance justice delivery

On 20th March 2019, President Nana Akufo-Addo launched a US\$97-million electronic justice (e-justice) system to run a paperless court system for the country. The system provides an electronic platform that automates case filing, fee assessment, online payments, and execution of court decisions, among other functions. The platform was launched with the expectation to reduce the costs associated with the

manual execution of tasks and save time – especially concerning court case timetables and calendar management for judges. Users can access the web-based platform by registering through the Judicial Service website with notification of any payments sent directly to a user's mobile phone.

E-Procurement (GHANEPS)



Ghana E-Procurement System automates all public procurement processes in Ghana

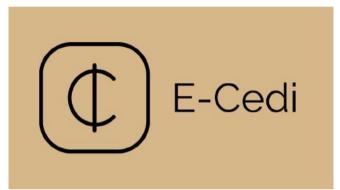
GHANEPS (Ghana Electronic Procurement System), the first in West Africa, was launched by Vice President Dr. Mahamudu Bawumia on April 29, 2019. GHANEPS is designed to address corruption procurement procedures by minimizing face-to-face interaction increasing productivity for both Procurement Officers and Service Providers as all manual procurement processes and procedures are automated. It is a web-based, collaborative system, developed per the requirement of public procurement laws, to facilitate public procurement processes in Ghana. It offers a secure, interactive, dynamic environment for carrying out procurement of all categories, complexity, or value.

GHANEPS supports processes of procuring Goods, Works, Consultancy, Non-Consultancy, and Disposal of assets. The system supports various public procurement



procedures including user registration, tender notification, tender preparation and submission. online tender evaluation. contract awarding, creation and management of catalog, creation, and management of framework agreements and auctions and payments. The project is in its second phase and aims to onboard all government entities to the system by October 2023. The entire public procurement in Ghana is therefore expected to be fully digitalized by October 2023.

E-Cedi



Ghana to pilot Digital Currency E-cedi

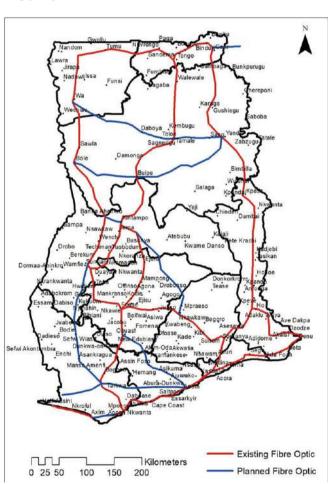
The Bank of Ghana (BoG) has partnered with Giesecke+Devrient (G+D) to pilot a generalpurpose Central Bank Digital Currency (CBDC), e-Cedi in Ghana. G+D is providing the technology and developing the solution adapted to Ghana's requirements, which will be tested in a trial phase with banks, payment services. The digital Cedi, or 'e-Cedi' is intended to complement and serve as a digital alternative to physical cash, thus driving the Ghanaian cash lite agenda through the promotion of diverse digital payments, while ensuring a secure and robust payment infrastructure in Ghana. Also, the plan is intended to facilitate payments without a bank account, contract, or smartphone. By so doing, it will boost the

use of digital services and financial inclusion amongst all demographic groups.

Digital Infrastructure

Fundamentally, for any digital economy to exist and function efficiently, there is a need for digital infrastructure. In the case of Ghana, governments over the years have invested heavily into the country's digital infrastructure to facilitate the smooth take-off of the digitization drive.

Eastern Corridor Fiber Optic Backbone Network



Proposed Integrated Fiber Optic Backbone Networks

775km of Rural Fiber Network from Accra to Bawku which connects six regions in the country; namely: Greater Accra, Volta, Oti, Northern, Northeast, and Upper East regions. It provides the internet and voice call needs



of millions of Ghanaians and thousands of businesses along that route. In 2021, the government proposed the extension of the national backbone infrastructure to all districts as part of an initiative for a nationwide e-government infrastructure. This would also include a national data center and a data center for disaster recovery.

Metro Fiber Network



Ghana aims to provide high-quality broadband at lower costs through shared infrastructure such as metro fiber

Spanning a radius of 300km within Accra and Tema, with the capacity to offer Wi-Fi and other ICT services to millions of Ghanaians and businesses within the enclave was also deployed.

LTE/4G network



4G is a successor of the 3G and provides ultra-broadband internet access for internet users

With over 119 base stations across the length and breadth of Ghana, to provide internet services and network backbone support to all Government agencies.

National Data Center



Head Office of the Ghana National Data Center located in

A Tier-3 600-Rackspace Data Center with a 45 Rackspace back-up on the campus of KNUST, Kumasi ensures data storage (documents, videos, audios, biometric, etc.), web hosting, and serving the cyber security needs of the country. It also protects and preserves the sanctity of the data of every Ghanaian.

Rural Telephony and Digital Inclusion Project



Rural Telephony and Digital Inclusion Project Launched in 2020

The project is aimed at providing voice and data services to more than 3.4 million people in underserved and unserved communities by commissioning 2,016 Rural Star sites developed by Huawei, in a bid to extend national mobile coverage and greatly accelerate local economic development. It is expected to save the government up to 70% of the cost of traditional cell sites.

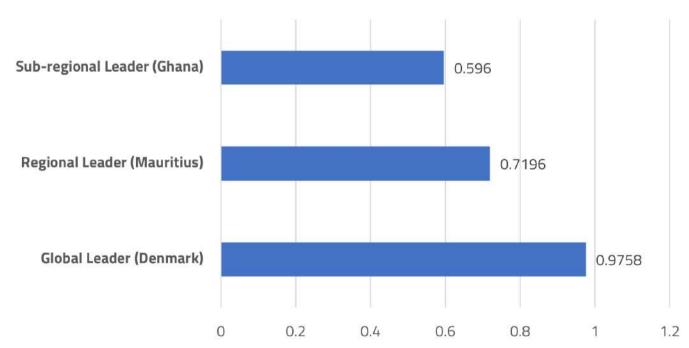


Citizens' Buy-In and Participation

The buy-in of citizens in the digitization drive is important in determining its success and justifying investments thereof. In the case of Ghana, the buy-in has largely been positive. This is exemplified by the growth of Mobile Number Interoperability transactions which, according to the Ghana Interbank Payment & Settlement Systems (GhIPSS), recorded a total of 43.9 million transactions in 2020, representing a 367% increase from the 9 million transactions processed in 2019. Similarly, GhanaPost GPS, which initially recorded low patronage in the first three months after launch in October 2017 with 350,000 downloads on Google Play Store, saw an increase in downloads to 1 million by August 2018. According to Ghana Post, the digital addressing system also recorded 10,000 items being delivered to various

locations. The significance of this is that people trust the Ghana Post for delivery services through its digital address system. Moreover, it beholds on the government of Ghana to continue to invest in digitizing its services to ensure ease in accessibility and efficiency of such services. Currently, Ghana ranks 5th in Africa in the E-Government Development Index (EGDI Values). EGDI is used to measure the willingness and capacity national administrations to information and communication technologies to deliver public services. The fact that Ghana ranks 1st in West Africa and 5th in Africa despite its 101st global position is quite indicative of the strides that have been made in the digitization of government services in Ghana.

Figure 1. E-Government Development Index 2020



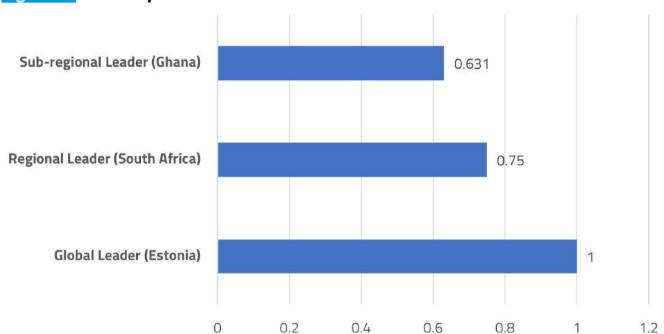
Source: World Bank



At the core of every democracy is good governance and this is characterized by responsiveness, transparency, accountability, and most importantly participation of the citizenry. In many countries the world over, ICT is leveraged to deepen the interaction between government and the citizenry as a means of improving and consolidating good governance.

Known as e-participation, the use of ICT to improve government-citizen interaction centers on activities and structures through which ICT strengthens relationships amongst citizens, governments, and public organizations. Currently, Ghana ranks 82nd out of 193 countries in the United Nation's e-participation index.

Figure 2. E-Participation Index 2020



Source: World Bank

Internet Penetration and Usage

Access to digital tools, internet penetration, and usage play a crucial role in ensuring the sustainability and continued patronage of digitization initiatives. According to the National Communications Authority (NCA), as of April 2021, Ghana, with an estimated population of 30.8 million, had data subscriptions totaling 22,903,755. The internet penetration rate for the period stood 73.03%. Furthermore, according at Hootsuite, about 99% of internet users aged 16 to 64 own a mobile phone. Ghana also

had 15.7 million internet users in January 2021 compared to 14.76 million users for the same month in 2020. This figure represents about 50% of the total population. It also represents an annual change of 6.4% in internet users. With regards to internet speeds, the average download speed of mobile internet connections was 13.89 Mbps. Ghana has internet connectivity of 52%, according to the Global System for Mobile Communications (GSMA) Mobile Connectivity Index, the best in West Africa.





Financial Inclusion

Ghana's digital economy has been growing steadily over the past few years, thanks to the growth in and access to digital financial services such as mobile money and mobile number interoperability.

An important part of creating a digital economy is financial inclusion, which is determined by the ownership of a bank account.

A 2019 World Bank report estimates that about 57% of Ghanaians have Bank accounts. In recognition of the importance of financial inclusion to the growth of Ghana's digital economy and to deepen financial inclusion and accelerate the shift to digital payments, the Ministry of Finance led the development of three policy initiatives. The policies are as follows:

- A National Financial Inclusion and Development Strategy (NFIDS);
- A Digital Financial Services (DFS); and
- The Cash-Lite Roadmap.

National Financial Inclusion and Development Strategy (2018 -2023)

To reduce economic vulnerability and income inequality, the government introduced a broad financial policy. The Ministry of Finance, in collaboration with financial sector regulators and other key stakeholders, developed a National Financial Inclusion and Development Strategy (NFIDS) to address the fundamental barriers preventing the underserved population from accessing financial products and services that would enable them to generate income, build assets, manage financial risks, and become economically empowered. A key aspect of the NFIDS is that it prioritizes the additional expansion of digital financial services (such as mobile money) and by strengthening select providers (such as nonbank financial institutions, NBFIs).



With the NFIDS, the BoG has said that it aims to increase the number of Ghanaians with a bank account to 85% of the adult population by 2023.

Digital Financial Services Policy (2020 - 2023)

The DFS policy complements the NFIDS and was built in partnership with the Consultative Group to Assist the Poor (CGAP). The DFS policy stands on existing technological gains to create a digital ecosystem that contributes social development, economy, and thriving private sector.

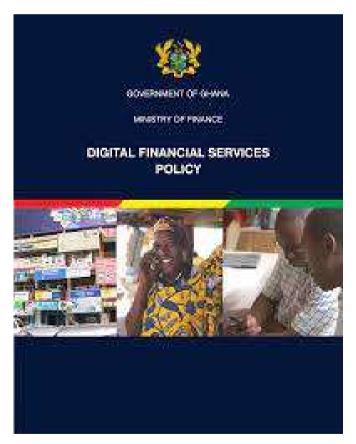
The DFS policy particularly aims to improve governance of the digital financial services ecosystem through an enabling regulatory framework and active capacity-building of regulatory authorities to supervise the space.

The Cash-Lite Roadmap

The roadmap was designed in collaboration with the Better Than Cash Alliance and is aimed at building a comprehensive digital payments ecosystem that includes improved access to financial services, enabling regulation and oversight, and promoting consumer protection.



The cover page of the National Financial Inclusion and Development Strategy



The cover page of the Digital Financial Services Policy





Digital Financial Services and Payments

The advent of mobile banking in Ghana is tied to the penetration of mobile phone technology. As of 2019, Ghana had the highest unique subscriber penetration (55.0%) in West Africa and was second to South Africa (67.2%) in sub-Saharan Africa. Unique subscriber penetration refers to a single individual that has subscribed to a mobile service and that person can hold multiple sim cards. Ghana's high percentages pivotal to the delivery of digital mobile

financial services to many people. Especially for the unbanked and underserved, mobile banking has been a key tool in enabling financial inclusion. Mobile phone technology has also increased the role of non-financial institutions in the provision of banking services. As of April 2021, the BoG provided a list of companies that have been given the approval to operate as electronic money issuers and payment service providers.

Table 1. List of Approved E-Money Issuers and Payment Service Providers

Institution	License Type
Airtel Mobile Commerce (Ghana) Limited	Dedicated Electronic Money Issuer
GCB G-Money	Dedicated Electronic Money Issuer
Yup Ghana Limited	Dedicated Electronic Money Issuer
Vodafone Mobile Financial Services Limited	Dedicated Electronic Money Issuer
Zeepay Ghana Limited	Dedicated Electronic Money Issuer
AppsNmobile Solutions Limited	Payment Service Provider Enhanced



Institution	License Type
Bsystems Limited	Payment Service Provider Enhanced
Cellulant Ghana Limited	Payment Service Provider Enhanced
Dreamoval Limited	Payment Service Provider Enhanced
Emergent Payments Ghana Limited	Payment Service Provider Enhanced
Etranzact Limited	Payment Service Provider Enhanced
ExpressPay Ghana Limited	Payment Service Provider Enhanced
Fast Pace Transfer Limited	Payment Service Provider Enhanced
Global Accelerex Ghana Ltd	Payment Service Provider Enhanced
Halges Financial Technologies Limited	Payment Service Provider Enhanced
Hubtel Limited	Payment Service Provider Enhanced
IT Consortium Limited	Payment Service Provider Enhanced
MFS Ghana Limited	Payment Service Provider Enhanced
Moolre Limited	Payment Service Provider Enhanced
Nfortics Ghana Limited	Payment Service Provider Enhanced
Nsano Limited	Payment Service Provider Enhanced
PaySwitch Ghana Limited	Payment Service Provider Enhanced
Transsnet Payments Ghana Limited	Payment Service Provider Enhanced
Techfin Innovations Ltd	Payment Service Provider Medium

Source: Bank of Ghana

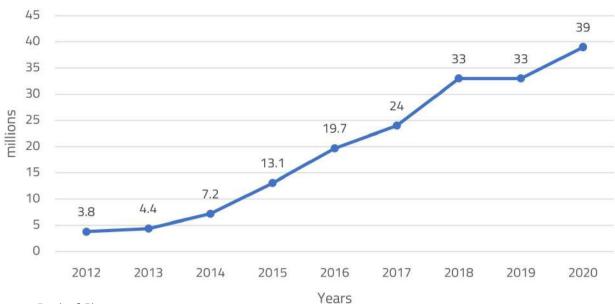
Conspicuously missing from the above list is MTN Mobile Money, which, as of December 2017, had the largest share of deposits, accounting for more than 90% of mobile money accounts held at commercial banks. MTN is also the pioneer of the mobile money payment system in Ghana, beginning its operations of the payment platform in 2009. Inevitably, the telecommunications giant will be added to the list of approved payment service providers.

Mobile payments usage in Ghana has seen tremendous growth since its inception. According to Boston Consulting Group (BCG) research, Ghana has the second largest mobile payments usage rate in the world,

after China. The study also found that transactions via mobile wallets and phones were equivalent to 82% of GDP in Ghana. Over the past five years, the World Bank has recognized Ghana as the leading mobile money market in Africa. As of 2020, registered mobile money accounts stood at 39 million compared to 3.8 million in 2012 (Figure 3). The number of active mobile money accounts in 2020 was 17.1 million compared to 345,434 in 2012 (Figure 4). The number of registered mobile money agents was 424,000 in 2020 compared to 8,660 in 2012. The number of active mobile money agents in 2020 was 328,000 compared to 5,900 in 2012 (Figure 5).



Figure 3. Registered Mobile Money Accounts

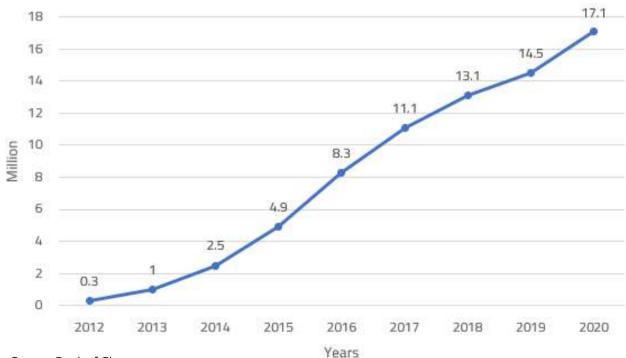


Source: Bank of Ghana

The rapid increase in registered mobile money accounts in between after 2015 was due a change in regulatory approach by the BoG. This involved a switch from a model that mandated a group of banks to partner

with a group of Mobile Network Operators (MNO)s with the requirement to share agents, to a model that allowed MNOs to operate autonomously through subsidiaries regulated and supervised by BoG.

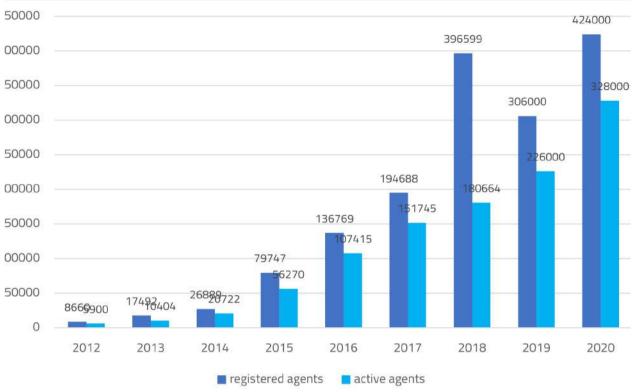
Figure 4. Active Mobile Money Accounts



Source: Bank of Ghana







Source: Bank of Ghana

Interoperability of payment systems is central to government's cash-lite agenda and in this light, Ghana continues to make steady growth in the use of electronic products and services. This is thanks to efforts by GhIPSS to facilitate interoperability across payment instruments. Incorporated in 2007. **GhIPSS** permits customers undertake transactions across mobile money and between mobile money providers providers and banks. It began with the National Switch & Biometric Smart Card Payment System (e-zwich) in 2008, which facilitated interoperability at bank branch and retail levels. In 2012, a feature which introduced interoperability at bank branch

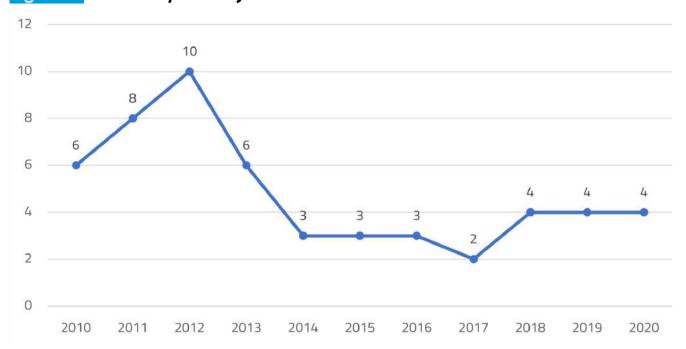
levels was launched. The latest feature, introduced in 2018, allowed interoperability between mobile money operators.

Foreign Direct Investments in Ghana's Digitization Drive

A key policy objective of the ICT4AD is the transformation of Ghana into an attractive destination for ICT-related foreign direct investment. Since 2003, there have been a total of 24 projects created by foreign direct investments into Ghana's ICT and Internet Infrastructure. In total, about 2,026 jobs have been created. A total of 3,157.90 has been invested in the ICT sector as well.



Figure 6. Number of FDI Projects in ICT in Ghana



Source: The Financial Times





Positive Impacts of Ghana's Digitization Drive

In 2018, the Ghana Revenue Authority (GRA) reported growth in import revenue of 3.9% because of its new paperless port clearing system. According to the Customs Division of Ghana Revenue Authority, revenue rose from GHC 12.7 in 2017 to GHC 13.2 billion in 2018. As of June 2021, the revenue generated by Ghana's ports because of the introduction of ICUMS was GHC 18.1 billion. It is not only a benefit in monetary value but also in time spent clearing goods from the port. What used to take hours to clear now takes just a couple of hours. Globally, digitization in port services is seen as the way to go with the International Chamber of Commerce projecting that trade across G7 countries could increase by a staggering 43% on the 2019 values by 2026. According to the Chamber, with full digitization, trade could climb to USD 9 trillion within the same period. The Ghana Ports and Harbors Authority (GPHA) has also

recorded a 24% increase in container traffic at Ghana's seaport. With the Paperless Port System, shipping lines are now able to do their bookings without having to move to the port. Also, freight forwarders on behalf of importers can find their invoices on the system and even make payment all from their own offices.

Furthermore. tax collection is the cornerstone of revenue mobilization of any economy. For Ghana's largely informal economy, tax collection has always been a challenge due in part to low levels of literacy, especially about tax laws. To make compliance easy for taxpayers, the GRA launched its Integrated Tax Application Preparation Systems (iTaPS) in April 2019. Also, the GRA has noted the importance of utilizing the government's digital platforms to enhance its revenue mobilization. The GRA, at the end of the third quarter, September 2021, collected tax revenue of



GHC 39.90 billion, out of the total annual target of GHC 57 billion. The Authority expects to reach its target with the help of ICUMS, online filing and payments, data warehousing, and the Ghana Card and TIN merger. Effective April 1, 2021, the GRA began replacing the Taxpayer Identification number with the Ghana Card Personal Identification Number for tax identification purposes. The Authority hopes that the replacement would also help widen the tax net from 3 to 16 million. The GRA began the rollout of a cashless system in July 2021 to promote the government's effort to operate a cashless economy. The new cashless system required clients to sign up to the ghana.gov platform and file their tax returns. platform allows clients to make payments via visa or credit cards, mobile money, QR code scan, bank deposits to pay all forms of taxes including Value-Added Taxes (VAT), withholding taxes, personal income tax, company taxes, and customs duties. The digitization of individual and corporate tax payments would lower transaction costs for both the government and taxpayers. An additional benefit would be the reduction of occurrences of fraud and corruption, thereby increasing government transparency, and improving the overall efficiency of a country's tax system.

Reduction in corruption, which was an important aspect of the digitization drive is also yielding some results as evidenced by the improvement in Ghana's Corruption Perception Index to 78 out of 180 countries in 2018 from 81 in 2017. The elimination of human interaction in certain interactions is and would be key to tackling corruption head-on. According to the Vice President, Dr.

Bawumia, the launch of the Ghana.Gov account will "save the government 3 billion Ghana Cedis annually" since it will prevent theft and embezzlement. The elimination of crowds at the Passport Application Centres (PACs) with the introduction of the online passport application platform has also led to the cessation of corrupt practices occasioned by the activities of Goro boys.

The digital addressing system introduced has enabled police to have access to addresses and deal effectively with crimes. With similar access, the Ghana Fire Service and the Ghana Health Service can respond to emergencies faster. An added benefit decentralization of government services. For a country whose informal economy employs about 80% of the labor force, mapping out the sector would be of great benefit to the government as it seeks to widen the tax net. Already, the informal sector is the least contributor to tax revenue with a 1% contribution as recorded by the GRA. The World Bank posits that tax revenues from sole proprietors, who make are predominant in the informal sector, could amount to 12.6% of GDP.

Ghana is on its way to becoming a more financially inclusive society. The high penetration of mobile money and increased digital payments in the country are proof of this projection. In the case of mobile money, total transactions stood at 377 million in August 2021 compared to 267 million in August 2020. Also, the value of mobile money transactions hit GHC 81.1 billion in August 2021, a significant leap from GHC 56 billion in August 2020. Mobile Money Interoperability (MMI) also recorded a transaction value of GHC 1.2 billion in August



2021, up from GHC 685 million in August 2020. Total MMI transactions also rose to 12.4 million in August 2021 from 4.6 million in August 2020. Internet banking recorded a total value of GHC 4.8 billion in August 2021 compared to GHC 1.9 billion in August 2020. The total transaction volume for internet banking was 759,000 in August 2021 from 624,000 in August 2020. The GhIPSS platform recorded a growth of over 146.1% in the volume of transactions as of August 2021. Between January and September 2021, a total of 125.8 million transactions were processed, compared to 51.1 million transactions over the same period in 2020. The GhIPSS Instant Pay (GIP) platform (including GhQR), which guarantees that interbank payments or transfers are received promptly, also published the highest growth

in volume of transactions. It rose to 407.66%

from about 4.3 million to close to 22 million

transactions between January and

September 2021 compared to the same The digitization period last year. services also contributes government positively to the ease of doing business in the country. As Ghana continually touts itself as a business-friendly nation to the outside world, it is only right that the government takes the right steps to justify this assertion. The institution of paperless systems at various government agencies such as the ports, RGD, and passport office has been done in a bid to not only improve efficiency but also improve Ghana's ranking in ease of doing business globally. In 2018, the RGD recorded an impressive growth of over 100% in online transactions, recording 26,438 transactions as against 12,400 transactions in 2017. This only means that more people prefer to register their businesses online than walk into the RGD. In 2020 Ghana ranked 118th for doing business globally; 17th in Africa; and 3rd in West Africa.





Challenges to Ghana's Digitization Drive

Fraud activities associated with mobile money continue to negatively affect the safety of transactions and erode trust in the ability of Telecommunications companies to effectively deal with them. According to the Cybercrime Unit of the Ghana Police Service, there were over 300 reported cases of mobile money fraud in 2019. MTN, on whose platform most of these fraud incidents are perpetrated, has taken the step to reduce the activities of fraudsters through the introduction of IDs for withdrawals. The Ministry of Communication, through the NIA, has also begun a sim reregistration activity to reregister all sim cards with the Ghana Card. This will help reduce, significantly, the activities of fraudsters. On the flip side, it will alienate many mobile money subscribers who are not registered for the Ghana card, particularly those in rural areas. As of October 2021, only 17 million Ghanaians have been registered by the NIA. Out of this

number, 12 million have been issued Ghana Cards.

Furthermore, infrastructure remains significant challenge to the growth of ICT and the digitalization drive in Ghana. Despite some progress made in the installation of some infrastructure, there is still a long way to go in ensuring that digital inclusion is improved to enable the full utilization of digital services by all within the borders of Ghana. **Improvements** in digital infrastructure predominantly benefit high earners in urban areas or companies based along with the fiber optic infrastructure. Even in the capital, Accra, coverage is still fragmented, and, especially for start-ups, it's far too expensive. Although there is highspeed Internet, it is expensive. It costs between \$15 to \$100,000 a year to have somewhere between 50 and 100 Mbps stable high-speed fiber Internet. Very few companies can afford it. Internet access,



which, is pivotal to digitization in Ghana, is also hindered by the lack of separation between Internet Service Providers (ISPs) and mobile service providers. Unlike in other countries where ISPs are separate and independent companies from the major mobile operators, in Ghana the two largest mobile operators are the same ones providing broadband internet access to most Ghanaians.

Although Ghana ranks as the country with the cheapest internet data in West Africa and the 4th cheapest in Africa, according to a report by cable.co.uk, data cost is still high at an average price of US\$ 0.66 per 1 gigabyte. Telecommunication companies have attributed this high cost to the 5% Communication Service Tax (CST).

Another challenge to the government's digitization drive is the high cost of call tariffs, which is largely attributed to the myriad of taxes imposed on the telecommunications sector. Apart from Corporate Income Tax (CIT) and the already

existing 17.5% consumer tax on airtime – comprising of 12.5% VAT, 2.5% National Health Levy and 2.5% GETFund Levy, all paid by the consumer, telcos are also burdened with a mandatory 1% of total revenue into an electronic fund set up by the government.

In addition to this is, Government hinted at plans to increase taxes on mobile money cash-out transactions. The new 10% withholding tax will be collected by telecoms companies from mobile-money agents. The cost of this will be borne by the final consumer. The increased tax burden is likely to drive away users and undermine financial inclusion critical to the digitization efforts by the government.

A final challenge is the high cost of spectrum prices. Spectrum prices in developing countries such as Ghana, are, on average, "more than three times higher than in developed countries." Due to the high cost of spectrum telcos, inevitably, transfer the charges to final subscribers in the form of data costs.





Conclusion

Ghana's digitization drive has been widely lauded as being key to the economic transformation of Ghana, especially through the efficiency of public service delivery. In the past, many have had cause to lament about the slow and corruption-ridden nature of service delivery by public institutions. In addition to this was the fact that public services were largely centered in a few urban areas to the detriment of those living in rural However, in recent years, areas. government and other services have begun the journey to be digitalized, the service delivery of key government institutions such as the Passports office and the GPHA have seen tremendous improvements.

The absence of face-to-face interactions in the delivery of these services has also reduced, significantly, incidents of corruption. With digitization, financial inclusion also seems to be on the horizon for many citizens who hitherto would be left out from enjoying its many benefits.

Despite the numerous benefits, the challenges associated with the government's digitization agenda cannot be overlooked especially concerning cyber fraud, limited infrastructure, and high data costs. How the government deals with these challenges will be huge determinants for the success of the digitization drive.





Recommendations

Although digitization is important to fasttracking economic development and financial inclusion, it mustn't exclude those on the periphery. The threat to disconnect citizens who are not able to reregister their sim cards using the Ghana Card is a case in point. With about 5 million Ghanaians yet to receive their Ghana cards, the re-registration exercise scheduled to end on 31st March may alienate those in rural areas with no access district offices of the National to Identification Authority (NIA).

The Ghana card registration is still ongoing and there is no database yet unlike the Passport and Voter ID card which have databases and are widely accepted by financial institutions. Most banks are yet to be onboarded onto the NIA system. At the beginning of the registration for the Ghana card, many banks refused to receive the card as verification for transactions. Their reason was that they were unable to onboard the

card to their verification platforms. Since then, the NIA has given the banks up to the end of 2021 to do the onboarding and said the banks would start accepting the NIA cards from January 2022. The problem with this directive is that it is likely to cut out many Ghanaians from accessing banking and other services. This group of people would be left of the drive towards financial inclusion if the NIA decides to rigidly enforce Regulation 7 of the National Identity Register Regulations (L.I. 2111) 2012, which mandates the use of the Ghana card for banking transactions. Preferably, the NIA should allow banks and other institutions to continue accepting the other cards whilst gradually phasing them out as more people receive the Ghana card. That way they don't cut a lot of people off and risk sabotaging citizens' buy-in. Government must also take steps to improve the country's digital infrastructure which will also be key in



addressing digital and financial inclusion. As the government seeks to transform the economy through digitization, it must do so with a robust digital infrastructure that is truly national. The government needs to invest in broadband infrastructure especially, and not leave it to mobile operators who charge high prices only a tiny segment of the afford. Ghanaian populace can significant investment would drive digital inclusion and it is only when this is done, that financial inclusion can also be achieved. In turn, this would also lead to the widening of the tax net, crucial to the mobilization of revenue for development.

Though Ghana has ratified the Budapest Convention on Cybercrime, she needs to do more in working together with treaty members to harmonize laws necessary to

remove Ghana from the potential or actual group of criminal safe havens and facilitate global evidence-gathering efforts. Ghana also needs to work closely with regional and international actors in capacity building to allow Ghana to strengthen its cyber security capabilities. Moreover, law enforcement and military officials require intensive training to them to identify cybercrime, understand how to collect the relevant evidence and data from computers and service providers, and properly evaluate them promptly. Even though Ghana presently provides limited training in this area to the officer corps, these workshops are basic and need to be intensive if the threat posed by cyber terrorism is seen to be taken seriously.



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