



Harnessing digital innovations under the COVID-19 pandemic: A case of Uganda's ICT sector

Background

Since it was first reported in December 2019 in Wuhan City, Hubei Province in the People's Republic of China, the 2019 Novel Coronavirus Disease (COVID-19) has caused over 7.6 million infections and over 420,000 deaths globally by 12th June 2020. On 11th March 2020 the World Health Organisation (WHO) declared the disease a global pandemic.

In response, Government of Uganda (GoU) under the Public Health Act, 1935 responded to the pandemic with several measures including but not limited to closure of schools and training institutions, control of all public gatherings including churches and mosques, public transport, borders and later on declared a lockdown except for essential services, and encouraged Ugandans to stay at home.

The Ministry of Public Service (MoPS) under Circular Letter 6 of 2020 guided all Ministries, Departments, Agencies, and Local Governments (MDA/LGs) to maintain critical staff for continuity of services, while the larger majority were to remotely Work from Home (WFH) using telecommunication infrastructure. In handling official information remotely, the Oath of Secrecy and Access to Information Act were to be upheld.

The Ministry of ICT and National Guidance (MoICT&NG) together with the National Information Technology Authority (NITA-U), and Uganda Communications Commission (UCC) issued Standard Operating Procedures (SOPs) on use of Information Communications Technologies (ICTs) during the COVID-19 period.

This policy brief examines the effects of the COVID-19 pandemic to the ICT sector and provides policy options.

Key Messages

- The shift from conventional to ICT enabled platforms is a step in the right direction.
- E-transformation is deepening the digital divide between the haves and have not's.
- The digital solutions that had stagnated (Electronic government infrastructure, and telemedicine) have been rejuvenated for increased efficiency.
- MDA/LGs lack ICT infrastructure to deliver e-services.
- GoU should re-calibrate the working environment in the delivery of public services to support Working from home.

Introduction

The third National Development Plan (NDP III) identifies Information and Communications Technology (ICTs) as a driver for growth and social economic transformation.

As part of Uganda's digital strategy, the NITA-U deployed the National Data Transmission Backbone and Electronic Government Infrastructure (NBI/EGI) as the primary vehicle for all Government data, internet and voice services with effect from FY 2013/14. However, the EGI component that supports video conferencing is hardly utilised partly due to mind set and resistance to change. To ensure social distancing and WFH, such technologies are mission critical.

The end point of the NBI is to ensure all Government services are online. By

December 2019, 480 MDAs/LGs were connected to the NBI, 284 locations were provided with free wireless internet (MyUg) in Kampala and Wakiso districts, and over 60 government services were online. For example; the One Stop Center for investors under the Uganda Investment Authority, Voters Register under the Electoral Commission, E-Visa, E-Tax, E-Single Window under the Ministry of Internal Affairs, Wealth Declaration under the Inspectorate of Government, Programme Budgeting System (PBS), and Integrated Financial Management System (IFMS) under the Ministry of Finance, Planning and Economic Development (MFPEDE), among others. About 95% of the country is covered by radio and digital terrestrial television.



NBI transmission site in Nebbi District

Opportunities and Impact on ICTs

ICTs have come to play a significant role in the fight against COVID-19 and **supporting the continuation of operations** in various sectors. For example, radio, television (TV) and internet are supporting the dissemination and communication of information. The telecommunication companies and Internet Service Providers (ISPs) are supporting the COVID-19 Task Force with SMS, caller tunes to sensitize subscribers, connectivity to WFH and facilitating the COVID-19 Emergency Call Centre. Telecoms and courier companies are supporting the electronic transactions (E-

Commerce), delivery, and electronic learning (**e-learning**) through radio, TV and over Internet.

In order to leverage digital innovation and to enable government maintain its core functions, the MoICT&NG in conjunction with the NITA-U, with support from the United Nations Development Programme (UNDP) **provided 10,000 licenses for a collaborative tool (Zoom¹)** and an assortment of ICT gadgets (laptops and HD cameras) to enable virtual government business continuity in MDA/LGs. This initiative is expected to cause a paradigm shift in the way government delivers public services in a convenient, efficient, and cost effective and customer oriented way during and after the pandemic.

The Ministry of Health (MoH) and that of ICT in partnership with the Clinton Foundation **developed a WhatsApp business application program interface (API)** to allow Ugandans get answers, advisory services, Frequently Asked Questions (FAQs), busting myths about COVID-19 and send urgent messages on a 24/7 basis over a dedicated telephone number +256323200660.

Strides have been made in terms of **ICT innovations** through development of applications to support emerging areas and business continuity. For example, Defining Technology a Ugandan firm developed a contact tracing app which alerts users and MoH in case someone has been in contact with a COVID-19 positive person using Geographic Positioning System (GPS) and Bluetooth capabilities in a smart phone. By May 2020, over 5,000 users had signed up on the app.

The country has witnessed a change in deliberation, sensitisation and dissemination of information (**e-Participation**) on critical issues formerly presented in conference halls to television and online platforms using Zoom, Webex, Facebook, television and other applications which has reportedly cut costs by

¹Zoom is a world class platform for virtual audio-visual conferencing, meeting recordings, and live chats.



over 60% (transport refund, meals, venue costs) yet increased the audience and participation within and outside the country. The e-participation has also enhanced rapid decision making by authorities based on real-time data and analytics.

During the lockdown, **digital transformation** became a matter of survival. ICT enabled services have been preferred by both public and private entities as witnessed by the several Business Continuity Plans (BCP) issued by MDA/LGs. In terms of financial systems, IT enabled payment platforms (internet banking, mobile banking, and mobile money) have been promoted and used.

It should be observed however that majority of employees lack the supporting environment to WFH including high speed internet, laptops/computers/tablets, skills and other IT accessories for efficient and effective provision of services.

The COVID-19 pandemic has seen an **unprecedented adaptation of digital systems** in business processes, Government systems remain more bureaucratic and procedural compared to the robust private sector organisations. For example, the United Nations Capital Development Fund (UNCDF) reported a 40% increase in the use of digital solutions in procurement/supply delivery channels by Ugandan organisations in March and April 2020, however, this was not the case with public sector agencies where such changes require legal and regulatory backing.

A case in point is the delays experienced in delivery of relief food to Kampala and Wakiso areas partly due to sticking to the prescribed procedures, limited use of digital systems in inventory management and lack of proper Enterprise Resource Planning (ERP²) systems.

Increased cybercrimes, distortion of facts (“*infodemics* or fake news”) and deliberate

misinformation, phone fraud, myths and conspiracies targeting prominent people and organizations especially on social and online platforms.

Drop in export volumes: According to the Uganda Business Impact Survey (2020), about 70% of Ugandan companies in information transmission, software and information technology services expected a drop in their export volumes due to COVID-19.

Challenges

- Widened digital divide (access, affordability, availability of digital devices and internet penetration as well as skills) hampers wider application of ICT enabled solutions.
- Low investment in ICT infrastructure and equipment at MDA/LG level.
- Cyber security and data privacy remains a challenge especially with financial systems and WFH.
- Lack of robust data systems/aggregators that capture and support generation of relevant content seamlessly.
- Inability to use the already paid for data over the NBI by public officials working from home increases the costs of doing business.

Conclusion

The COVID-19 pandemic has brought digital strategy to the fore of business continuity in most organisations including the public sector, but leaders still lack clarity on what digital strategy means as many executives are not fully fluent and committed to the strategy.

The shift from conventional to ICT enabled platforms is a step in the right direction however, it is steadily deepening the digital divide between the haves and have not's especially in the rural and underserved communities, women and youths.

²ERP is the integrated management of main business processes, often in real time and mediated by software and technology



The NITA-U, UCC and MoICT&NG should provide the less privileged (rural, women, youths, and persons with disabilities) with the opportunity to live and participate meaningfully in the connected life (new normal) by not only extending infrastructure but also fast internet and ICT literacy classes.

The digital solutions that had stagnated (EGI and telemedicine) have been rejuvenated and new ones developed for increased efficiency and staff productivity under the COVID-19 dispensation of social distancing, self-isolation, and work from home. It has become clear that ICT infrastructure is not a cost parse but investment to deliver services and therefore strengthening policy and technical capabilities of institutions is key to achieve targets and impacts.

Recommendations

- The GoU should re-calibrate the working environment in the delivery of public services. MDAs must enable their teams to use resources at their disposal during and after the crisis, and build and deploy systems to evaluate the efficiency of WFH modality for quick assessment of gains. Government should prefer procurement of laptops to desktop computers for official work given their agility.
- The NITA-U should fast track implementation of the Regional Communication Infrastructure Programme to bridge the infrastructure gap (last mile connectivity) in MDA/LGs.
- The NITA-U as an ISP should devise mechanisms for public officers working from home to use the already paid for data under the NBI.
- The ICT sector should work towards having most, if not all the government services electronically delivered to among others limit human contact. This will not only control the spread of the virus but also

improve Government transparency and accountability.

- The sector should enhance ICT security systems, and sensitise masses on information verification such as using fact checking organisations to dispel lies, myths and conspiracies.
- Invest in data aggregation and ERPs for efficiency and credible generation of statistics for executive decisions.
- Government should invest more in innovative digital technologies like artificial intelligence, robotics and ICT human capital to deliver the digital solutions.

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