African Civic Tech and COVID-19
Five Emerging Trends

October 2020

Background

Africa has a growing civic tech community that focuses on issues such as accountability and transparency, data journalism, citizen participation, and public services monitoring. Since the outbreak of COVID-19, various technologies have been deployed by citizens, NGOs, start-ups, private companies, universities and governments to aid the fight against COVID-19.

This brief presents the findings of interviews conducted with civic tech innovations from Kenya, Nigeria, South Africa and Uganda on the use of civic tech in Africa during COVID-19. The findings indicate that the civic tech community has created several innovations. These include informational dashboards for epidemiological information such as disease spread maps and infection statistics, innovations to fight fake news, tools and guidelines for businesses, communities, education institutions and newsrooms. The brief also explores how civic technologists have adapted and repurposed existing resources to confront the COVID-19 pandemic.

The Trends

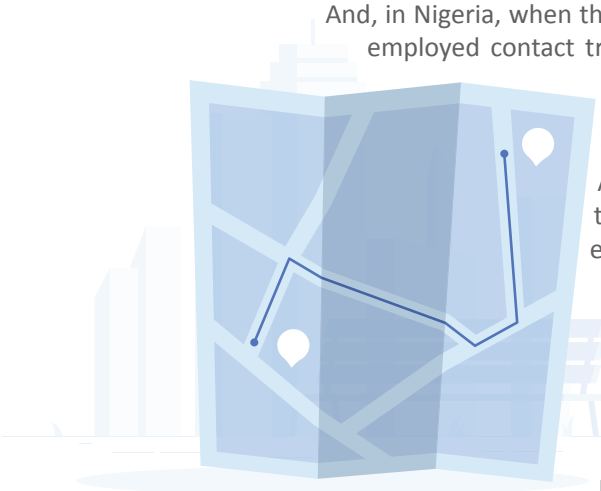
1. Contact **Tracing Tech**

According to the World Health Organization (WHO), one of the ways COVID-19 spreads from person-to-person is through droplet and contact transmission, people can become infected by touching a contaminated surface and then touching your eyes, nose or mouth before washing your hands. This means that contact tracing is a key aspect in monitoring and controlling the spread of the disease. In April 2020, the Africa Centre for Disease Control and Prevention (CDC) issued Guidance on Contact Tracing for COVID-19, to guide African countries in their contact tracing efforts. The guidelines include recommendations for contact tracing that respects citizens' rights and dignity.

Across the continent, several organisations, governments and companies are reported to have employed digital contact tracing measures. Although the extent of this trend is unknown, common practices include contact tracing apps, CCTV surveillance, and cell phone location data tracking.

In South Africa, the government in partnership with the University of Cape Town developed a smartphone app to track individuals who may be unaware that they have been in contact with infected people. The app, known as COVI-ID, uses location data and infection statuses, stored on individuals' phones using a technology called self-sovereign identity – not on a centralised government or private-sector database. This will supposedly provide the user with full authority and control over who gets access to the data, for what purposes and for how long.

In June, there was news that three Kenyan researchers had developed a COVID-19 tracing system called 'KoviTrace' which would provide access to the persons that a patient had come into contact with over the course of 14 days, based on geo-location. According to reports the app, which can be installed on Android and IOS phones or accessed through USSD for users without smartphones, was developed by biochemist Donatus Njoroge, IT expert Gideon Kamau, and medical doctor Jesse Gitaki. In an interview, Njoroge stated that the app is in the final stages of being rolled out by the Kenyan government.



And, in Nigeria, when the outbreak began in January 2020, the National Orientation Agency reportedly employed contact tracing tactics by training contact tracers who track "passengers of interest" - individuals who had recently returned to the country from abroad - to prevent the spread of COVID-19 in Nigeria. Following the lockdown the Nigeria Centre for Disease Control began using available mobile phone data for contact tracing. Another Nigerian firm - Cadnetwork Enterprise - developed its own contact tracing app called Rapid Trace which uses bluetooth and GPS technology to establish contact between persons.

While these contact tracing apps and efforts could indeed aid the countries in their fight against COVID-19, they present some concerns over data privacy and surveillance. Tracking via mobile technology means personal information such as an individual's location and movements, and their COVID-19 status could be disclosed without consent and oversight mechanisms for protection and accountability.

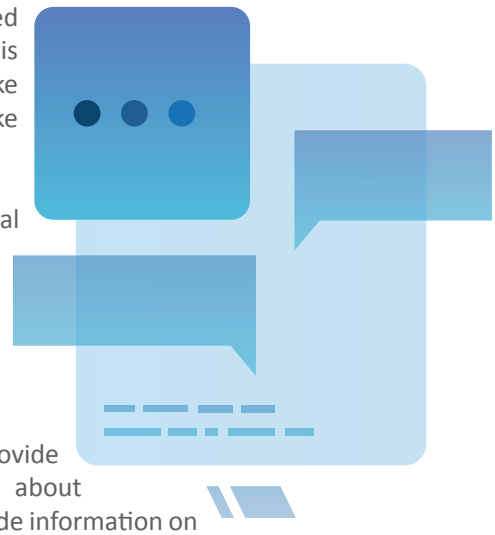
2. Instant **Messaging**

Instant messaging platforms are widely used in Africa. Indeed, WhatsApp is one of the most popular messaging platforms in Africa. According to We Are Social 2020 digital reports,up to 94% of Nigeria's 85.49 million internet users used WhatsApp at least monthly. In Kenya, monthly WhatsApp usage among its 22.86 million internet users was reported is reportedly 96%. . And in South Africa, an estimated 89% of 36.54 million internet users used WhatApp monthly. WhatsApp's use in Africa ranges from connecting with family and friends, to news sourcing, file sharing, and community organising. Many civic tech initiatives across the continent have recognised these trends and leveraged the platform to reach users, especially during COVID-19.

South Africa's Govchat's CEO, Eldrid Jordaan, says sometimes civic tech innovations/apps must function on an existing platform already being used by citizens. "Meet the users where they are because citizens do not want to download new apps and when they do, they do not use it or it will require too much data," said Jordaan in an interview.

Govchat is the official citizen engagement platform in South Africa. The initiative has deployed COVID-19 related functionalities to support pre-COVID-19 service offerings. The new features allow citizens to use GovChat on WhatsApp for COVID-19 screening, test facility searches, and status reports. Further, it allows citizens to apply for COVID relief grants from the South African Social Security Agency (SASSA). Citizens can also rate and report issues relating to service delivery challenges to their councillors, make requests and give back to the community through volunteering, food donations and clothing - all this via WhatsApp.

Grassroot, also South African, is testing new ways to train and connect community organisers on WhatsApp. In 2019, Grassroot developed a first-of-its-kind training course entirely on WhatsApp, aimed at improving the leadership capacity of community organisers and building more structured groups. Grassroot figured that in order to continue teaching community and civic leadership while complying with national COVID-19 standard operating procedures, WhatsApp was the most accessible online platform for low-income communities.



"We tried bots and all sorts of other tech-first ideas. Then we realised —training works best in groups, but [it] is hard online, and WhatsApp is great at groups, but only when well structured. So why not try to make online training work through structured WhatsApp groups?" said Luke Jordan, the founder of Grassroot, in an update in Mobilisation Lab.

Separately, during the pandemic, Grassroot partnered with International Budget Partnership South Africa on a project called "Asivikelane". It collects data on water, clean toilets, waste collection, soap and sanitisers and masks in informal settlements via Whatsapp. The data is then shared with municipalities to help identify residents' needs in high population density areas.

In Uganda, the Ministry of Health launched a WhatsApp chatbot to provide citizens with accurate, trustworthy and up-to-date information about Coronavirus. Through the WhatsApp chatbot, the ministry is able to provide information on topics such as COVID-19 prevention and symptoms, the latest number of cases in Uganda, advice on staying at home, travel advisory and myth-busting. According to reports, the chatbot will also enable the Ministry of Health to send urgent messages to all Ugandans who will opt-in for the service. WhatsApp users can access the free information service by adding the number +256 323 200 660 to their phone contacts and typing any word e.g. "Hi" to get started.

3. Digital **Governance (eGov)**

Away from deploying platforms for citizens to engage with the government on COVID-19 issues, governments in Africa have also embraced technology in their operations. According to Al Kags, co-founder of Open Institute in Kenya, many government services have turned digital, including the Kenyan judiciary, which has launched an e-judicial system that allows for remote case hearing.

In Uganda, the government is perhaps listening to the results from SEMA's research about digitising some of its services especially during COVID-19, according to SEMA's operations manager, Joanitah Nsasiirwe. For example, the Kampala Capital City Authority (KCCA) has introduced a 24 hour toll free line for COVID-19 emergencies as part of a public campaign urging people to report suspected COVID-19 cases. Meanwhile the official Ugandan COVID-19 website, COVID-19 Response Info Hub offers citizens the most updated data, information and resources.

Meanwhile in South Africa, the government, in addition to using GovChat for the COVID relief grants, also built an online resource and news website, sacoronovirus, to communicate and provide citizens with information related to COVID-19. This includes COVID-19 lockdown rules and departmental protocols, resources such as mental health tool kits, academic articles and disaster guidelines. It also includes press releases and notices by government officials. Some of these services are also available on a WhatsApp chat line.

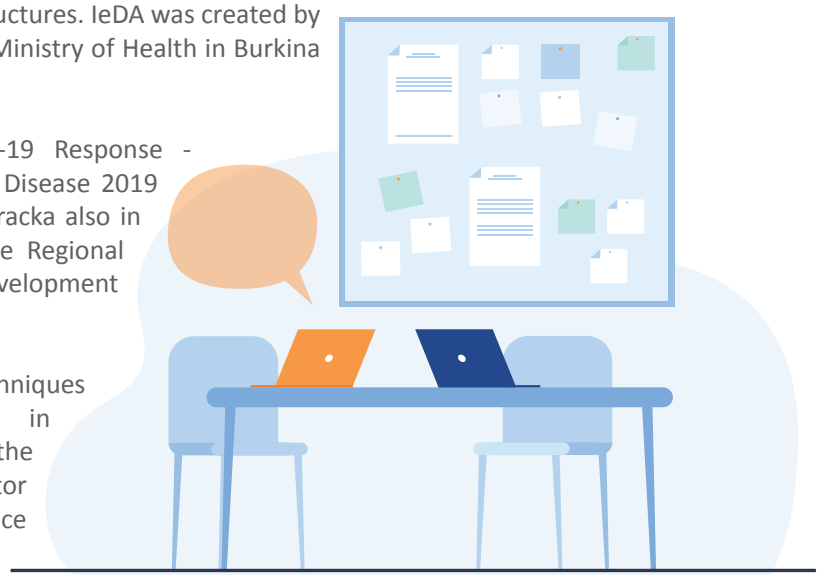
4. Information Dashboards **and Predictions**

There has been an eruption of coronavirus dashboards across the world. The dashboards are created by various entities, including private companies, NGOs, civic tech initiatives, government departments, and citizens. Dashboards are platforms which share information on public health events and emergencies. Civic tech initiatives across the continent have built dashboards within their existing platforms, with available information ranging from COVID-19 data on number of infections, deaths, and recoveries; predictions and vulnerable COVID-19 hotspots; health and lifestyle information; and how to access essential services such as food and clothes relief.

Some dashboards focus on mapping or predicting the spread of COVID-19 in certain areas, for example the provincial breakdown of Corona Virus in South Africa. This data is being used to provide predictions for the spread and impact of the coronavirus in the country. The platform was developed by Wits University, together with National Research Foundation (NRF), iThemba LABS, and Data Convergence. The initiative also includes a COVID-19 Africa Overview which provides comparative analysis with other countries such as Nigeria, South Africa, Zimbabwe, and Namibia. The team also developed a COVID-19 Global Risk Index and Predictions webpage to show their global predictions based on data from the Johns Hopkins University..

Also in South Africa, the Gauteng City-Region Observatory is using data collected from the provinces' wards two years earlier to map and analyse the localised risk factors that might contribute to the spread of COVID-19, and might amplify its health and socio-economic impact in Gauteng communities.

In West Africa, Burkinabe digital health solution IeDA has added features to its offerings to predict potential cases of COVID-19 in children and adults. According to this report, IeDA is currently developing analytical tools that use artificial intelligence to predict new outbreaks of COVID-19 and monitor its spread in real time. IeDA will share its predictions with the Ministry of Health in Burkina Faso to enable them to monitor the medical situation of millions of people and the functioning of health care structures. IeDA was created by Swiss organisation Terre des hommes and the Ministry of Health in Burkina Faso.



Other notable dashboards include COVID-19 Response - Monitoring Coronavirus in Africa, Coronavirus Disease 2019 (COVID-19) in Nigeria, BudgIT's COVID FUND Tracka also in Nigeria, Action for Transparency in Kenya, the Regional Centre for Mapping of Resources for Development (RCMRD) in Eastern and Southern Africa.

The use of data mining and spatial analysis techniques in the various dashboards to aid countries in analyzing the spread of the virus indicates that the civic tech community, along with the private sector and the government, appreciate the importance of access to information in a pandemic.

5. Debunking COVID-19 **Misinformation**

While dashboards are keeping citizens updated on Coronavirus news, some organisations are taking it a step further to ensure that citizens receive the accurate information and stop the spread of the disinfodemic, which is the spread of unverified, untrue information about the disease. Pollicy is using a web-based game which was developed prior to the pandemic to fight fake news on COVID-19. The game, called "Choose Your Own Fake News allows characters to explore different scenarios that portray how misinformation can have real-life consequences.

Players can play the game through three virtual characters, Flora, a student who lives in Uganda, Jo, a shopkeeper in Kenya, and Aida, a retired grandmother in her 60s. Through these characters players navigate the world of disinformation and misinformation through the choices they make. In the game they can scrutinise news and information about job opportunities, vaccines and upcoming elections to make the right choices.
The Women of Uganda Network (WOUGNET) which aims to empower women through the use of ICT has been using a platform called M-Omulimisa to send messages to rural communities to reduce misinformation. The network has also published commentaries on misinformation and disinformation and Internet access. Although M-Omulimisa was created for the Ugandan farming community, since the outbreak of COVID-19 it has served the purpose of creating awareness against misinformation.

Also in Uganda, Uganda Communications Commission, in partnership with UgCERT (Computer Emergency Response Team) launched a fact checking initiative to facilitate broadcasters and the public in verifying the authenticity of and reporting any fake messages, communications, posts received via the different social media platforms in a bid to curb fake news in Uganda. The UgCERT team fact-checks suspicious information and pushes for sources of false claims to correct the record. The public can request for the UgCERT team to fact-check a piece of information via WhatsApp or email. After the UgCERT fact checks the claim it publishes it on the website.

In Kenya, the African civic tech organisation Code for Africa is working with several Kenyan media partners including the Star and Sky FM in Kisumu on a fact-checking project to curb the spread of false and misleading information about the pandemic.

Another non-profit organisation, Africa Check, has been working tirelessly to discredit purveyors of fake news which has been spreading across the continent since the pandemic broke out. All of Africa Check's fact checking records on coronavirus can be found in this live guide.

Back in 2019, Media Monitoring Africa, together with the South African Department of Communications and Digital Technologies, created a platform called Real411 to facilitate the online submission and tracking of complaints relating to misinformation encountered on social media platforms during elections. Real411 now allows citizens to report disinformation and misinformation about COVID-19.

In Nigeria, an initiative called Know COVID-19 Nigeria aims to provide Nigerian citizens with factual information about Coronavirus in Africa. The initiative gathers data on cases, perceptions, emotions and other relevant variables on the Coronavirus and shares the information through relatable graphics with pictorial designs that attract attention rather than long texts. The initiative leverages social media platforms like Twitter, Facebook, WhatsApp and Instagram to share information and according to reports, Know COVID-19 has so far directly reached and engaged over two million Nigerians.

Other African countries which have set up digital platforms to fight against fake news related to COVID-19 include Benin and South Sudan.

While many organisations are working to fight fake news and ensure that citizens receive accurate information, some governments have instead passed laws and regulations with severe implications for freedom of expression. The global civil society alliance CIVICUS has released a report on some of these restrictions. In the report,

CIVICUS documented several restrictions including unjustified restrictions on access to information and censorship; detentions of activists for disseminating critical information; crackdowns on human rights defenders and media outlets; violations of the right to privacy and overly broad emergency powers. African cases of these new restrictive regulations include the South Africa government which announced new regulations criminalising statements intended to deceive any person about COVID-19 or the government's response to it. In the Democratic Republic of Congo, a journalist Tholi Totali Glody covering the lockdown was reportedly pursued by police officers and thrown off a motorcycle taxi in Likasi, Haut-Katanga province, resulting in injuries that included a broken leg. In Kenya, police enforcement of curfew has used excessive force including caning and teargas.

Reflections

The trends above show that the civic tech community in Africa is willing to do their part in society and that innovation is not always a shiny new app or product; rather, sometimes it is existing tools and methodologies which can be repurposed for emerging needs. While these tools have been instrumental in shaping the fight against COVID-19, user sensitisation towards increased adoption during and in the aftermath of the pandemic remains crucial.

Al Kags from the Open Institute believes these trends and tools are not temporary solutions but rather they are proof of concept of what a digital Africa could look like. “These are a proof of concept, some of these systems and technologies are here to stay and we can scale some of these up even after COVID-19. COVID-19 has been good to civic tech in this instance because it has accelerated the proof of concept in civic tech for service delivery.”

He adds that to increase the usage of civic tech on the continent, civic innovators must focus on the drivers of usage, for example the availability of mobile devices, internet access and affordability. Furthermore, they should pay close attention to digital literacy skills, build user confidence in use of the platforms, seek feedback from users and add features/functionalities.

Neema Iyer, founder of Pollicy, calls for more initiatives to seize opportunities and disrupt the ecosystem, while addressing new challenges such as misinformation, mental health and gender-based violence online. “This is a ripe time for innovations in remote work, citizen-government interactions, digital citizenship, eHealth. It would also be nice to see more breakthroughs on the fact-checking of information, plus more incorporation of local languages. We released a small game on disinformation which was planned prior to COVID-19. I think games are another uncharted territory. The pandemic has also had a detrimental effect of social factors such as mental health, violence against women. These are other areas ripe for innovation and disruption.”

CIPESA

About CIPESA

CIPESA was established in 2004 under the Catalysing Access to Information and Communications Technologies in Africa (CATIA) initiative, which was mainly funded by the UK’s Department for International Development (DfID). CIPESA is a leading centre for research and the analysis of information aimed to enable policy makers in East and Southern Africa understand ICT policy issues and for various stakeholders to use ICT to improve governance and livelihoods.

programmes@cipesa.org @cipesaug @cipesaug www.cipesa.org