

# Tech at the service of the fight against epidemics in West Africa

## Follow-up of data & selected initiatives

*As a preamble to this additional note, it should be recalled that the epidemic is still developing on the African continent: data - always difficult to collect reliably in developing countries - are therefore still very incomplete and the monitoring of the Covid-19 epidemic lacks overall hindsight, analysis and consolidated results. The confidential nature of health data reinforces these difficulties, and some respondents told us that they could not communicate the data collected, even when anonymized. We have therefore chosen to review a few targeted initiatives that we believe illustrate trends in their respective sectors.*

### **1. Good results and several fund-raising events: the E-Health solutions are in great demand in the fight against Covid-19**

A solution emblematic of the initiatives developed in the fight against Covid in HealthTech is Brenco's FaHs self-diagnostic application. In less than 3 months of use, it has been downloaded nearly 40,000 times, for 12,000 case reports, including 500 cases likely to be Covid-19 positive. As a sign of the dynamism of this particular segment, FaHs is in competition for a solution contest called AfricaVsVirus, for which no less than 750 solutions have competed: the startup is one of the 100 finalists selected for the last round (in progress). Finally, like many applications developed for Coronavirus monitoring, the solution is seeking to be sustainable for other uses, and modules are being developed on FaHs to address issues related to mother-child health.

The Kenyan startup Flare is also a good example of success for all digital paramedical solutions, and in particular for the logistical tools used to make the management of the epidemic more fluid. As a reminder, the young start-up has developed a technology that enables the real-time mapping of the positioning of the country's ambulances. It claims a network of **500 ambulances and tens of thousands of subscribers in Kenya, and decided to offer digital training sessions on Covid and protective equipment to more than 600 nurses during the crisis**. This is an important initiative when we know that healthcare workers in the country went on strike due to lack of adequate training to treat Covid-positive patients. Even before the arrival of the first recorded cases, the startup had organized a week of intensive training for some 40 organizations, training more than 230 health workers.



Figure 1: Covid-19 Patient Management Protocol Training Flare Application for Medical Staff Training

But it is especially the use of its real-time ambulance mapping application for Covid response that is interesting for our study. Here are the details of its **presence on the whole Kenyan territory at the height of the crisis, i.e. nearly 50 ambulance services mobilised in the city of Nairobi alone:**

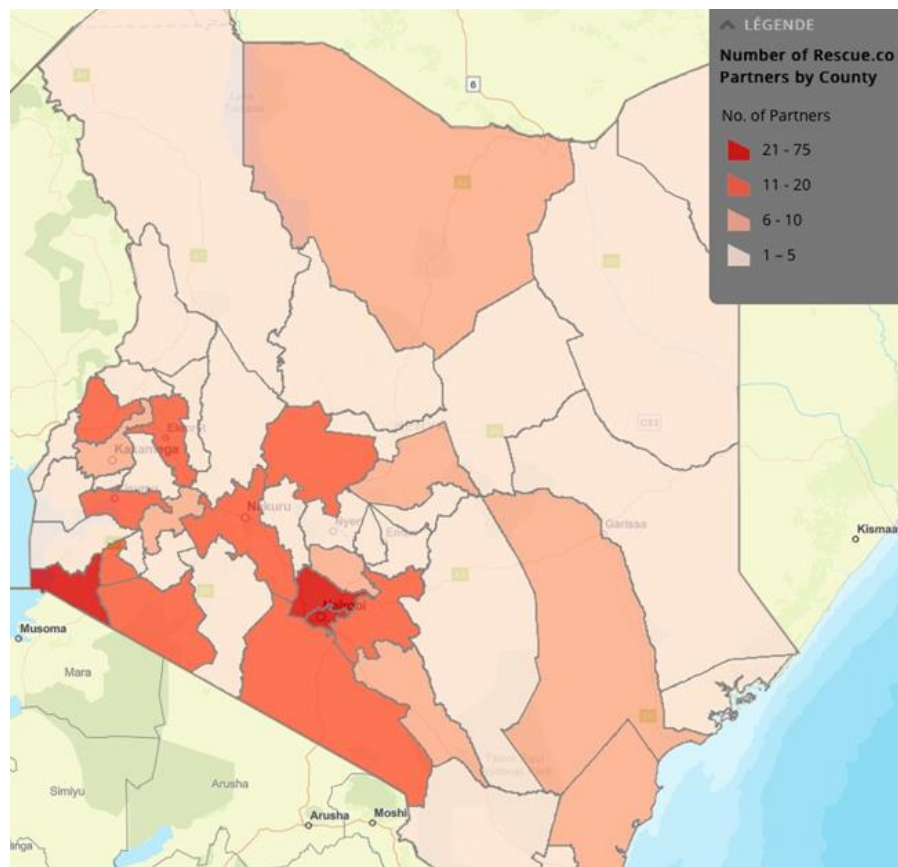


Figure 2 : Mapping the presence of Flare and its partner ambulances across Kenya. Credits: Flare

Their work of mapping medical equipment in the country has also made it possible to accurately document the availability of intensive care beds (ICU beds) throughout the crisis, with 639 ICU beds and 497 ventilators listed in 86 hospitals across the country, 74% of the equipment being owned by private hospitals and 26% by public hospitals:

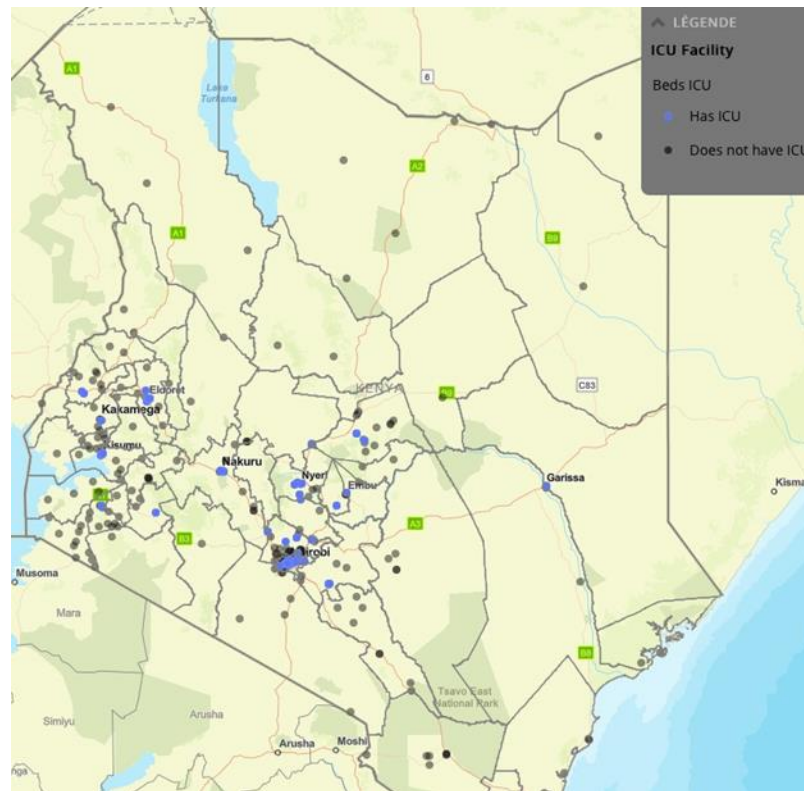


Figure 3 : Mapping of intensive care beds in Kenya. Credits: Flare

As a sign of the company's success and seriousness, it was selected at the beginning of the epidemic to be part of Google's prestigious startup accelerator, which targets companies that meet UN sustainable development goals. **The Coronavirus crisis was thus the opportunity to consecrate the work of several HealthTech companies, which saw their model validated by significant fundraising:** the Nigerian companies Helium Health (which digitizes medical records and offers telemedicine solutions) and 54Genes raised \$10 million and \$15 million respectively in the midst of the crisis, even though the trend is to freeze investments. 54Genes had deployed its Mobile Laboratory across the country at the start of the epidemic in Nigeria, offering much faster testing opportunities to remote populations, saving the time it takes to transport tests to capital cities.

Another solution presented in the report, the Burkinabe self-diagnosis application Diagnose-Me, invented at the end of January 2019 during the Chinese Hackathon "Hack for Wuhan", was a great success and received the support of Société Générale, UNDP (\$10,000 won during the Burkinabe Innov Challenge COVID-19 hackathon) and the French Presidential Council for Africa (CPA). The same case is true for Ghana's mPharma, which has made it possible to connect the 400 pharmacies in its network with their customers in a digital way during the containment, as presented in the report, and which raised \$17 million at the end of May.

## 2. EduTech and digital training - a success story with a long life ahead of it

An illustrative example of the growing success of EdTech's solutions as a response to the confines and social distancing imposed by the pandemic is the African Management Institute (AMI), which has launched **online training courses to help entrepreneurs facing economic difficulties linked to the health crisis** (training in scenario planning, cash flow forecasting, risk assessment, etc.). In less than two weeks, their "Business Survival Bootcamps", with free access (around 40 sessions held to date), have registered more than 3,500 participants from 47 different countries (mostly in Africa, but also in Latin America and Asia). **In light of this success, AMI has decided to digitise all of its traditional courses** and launched a 6-month programme specially dedicated to Covid entitled "Survive to Thrive". Learning methods that will continue well beyond the confines of the classroom.

## 3. FinTech and Social and Solidarity Economy solutions: social innovations that meet deep needs

More figures are available on the digital finance sector, which is by nature more data-rich and more regulated. For example, to take the case of Mobile Money in Kenya, **the use of mobile payment solutions soared during the crisis and particularly during the period of containment**, due to the drastic reduction in fees charged by operators such as M-PESA, which was detailed in the report.

According to figures provided by the Central Bank of Kenya, an increase in both the volume and value of transactions was observed in the most popular transfer tranches (101 to 500 shillings and 501 to 1000 shillings). Furthermore, it is noted that the increase in thresholds (possibility of transferring more than KSh7,000) has led to a **significant volume of new transactions in these segments, thus reducing physical contact and hand-to-hand exchange of banknotes**.

Number of Transactions					Value of Transactions, Ksh.'Million				
	Pre-Measures, Daily Average No. of	Daily Average No. of Transactions (16.03 – 19.04.2020)	Daily Average No. of Transactions (20.04 – 10.05.2020)	Change		Pre-Measures, Daily Average Value of Transactions	Daily Average Value of Transactions (16.03 – 19.04.2020)	Daily Average Value of Transactions (20.04 – 10.05.2020)	Change
	A	B	C	C - A		A	B	C	C - A
1 - 49	476,574	407,637	422,193	-54,381	1 - 49	10.02	8.58	9.19	-0.83
50 - 100	1,486,858	1,058,463	1,057,807	-429,051	50 - 100	130.41	86.86	84.86	-45.55
101 - 500	1,226,440	1,832,588	2,083,781	857,341	101 - 500	385.85	55.23	621.42	235.57
501 - 1000	712,998	1,245,553	1,405,383	692,385	501 - 1000	532.50	1,084.94	1,229.95	697.45
1001 - 10000	1,228,053	745,628	727,354	-500,699	1001 - 10000	3,629.46	2,494.68	2,454.11	-1,175.35
10001-35000	115,680	96,117	97,840	-17,840	10001-30000	1,927.81	1,703.37	1,734.87	-192.94
35001-70000	27,205	16,518	16,635	-10,570	30001-70000	1,275.43	820.15	819.55	-455.88
70001-150000	-	4,199	5,457	5,457	70001-150000	-	428.53	564.48	564.48
<b>TOTAL</b>	<b>5,273,809</b>	<b>5,406,703.23</b>	<b>5,816,449.81</b>	<b>542,641</b>	<b>Total</b>	<b>7,891.48</b>	<b>6,682.33</b>	<b>7,518.44</b>	<b>-373.04</b>

Figure 4 : Evolution of mobile money transactions in Kenya during the Covid-19 crisis. Data Central Bank of Kenya, May 2020

Another key initiative developed during the pandemic and based on mobile wallet applications is money transfer programmes for workers in the informal sector. Hailed by 2019 Nobel Prize winners in economics Abhijit Banerjee and Esther Duflo, the Novissi programme was launched in Togo in early April and ran until 12 June, when curfews were lifted in the country's main cities.



Figure 5 : The Novissi programme in figures. Source: Government of Togo

Four payment sessions were thus organized, with a maximum of 567,002 beneficiaries and a minimum of 456,420, for amounts of around CFAF 2 to 3 billion per tranche. In total, the Togolese government disbursed more than CFAF 11 billion, or \$19.5 million. **The profile of beneficiaries is as follows: 65% women, a majority of resellers (40.29%), 16.28% dressmakers and 12.44% housewives. Those enrolled in the programme and the beneficiaries represent respectively 17.4 per cent and 7.1 per cent of the Togolese population.** As a reminder, these monthly transfers amounted to €15 for men and €20 for women, in a country where the minimum wage is €53: a real safety net, which could not have materialized without the use of Mobile Money, since although Togo has the highest bank penetration rate in the WAEMU area, it does not amount to more than 26.8%.

#### 4. Failures and difficulties seem to be mainly due to the lack of coordination between authorities and digital stakeholders.

The lack of retrospect and sufficient data does not yet allow for an analysis of the failures encountered by digital initiatives in the fight against Covid. However, a first observation can be made about the **multiplication of self-diagnosis applications in certain countries, which has led to competition between initiatives and a lack of awareness of the initiatives among the general public**, a level of awareness that determines the number of downloads of the application and therefore its success. This is the case in Morocco, where there are about ten applications with similar properties (Marocovid, Sehatuk-bot, the MASclR self-diagnosis kit, the official application promoted by the Wiqaytna authorities, etc.), in Kenya (Afya Rekod's COVID-19 app, the FabLab Winam system, the SmartHealth sorting tool, etc.) and in Cameroon (OuiCare, WeCareUp, etc.).

**Another major difficulty encountered in this sector relates to the sensitivity of medical and personal data.** To take up the case of FaHS, the solution could not first be uploaded on Google store because of the government policy in Algeria. Secondly, the company did not wish to manage the confidential medical data collected by the application alone because of the sensitivity of the data, a principle that had nevertheless been requested by the authorities. In other cases, such as in Rwanda for example, the government was able to manage these data and the application (Covid-19 Rwanda) only provided logistical support (we were not able to collect these data for analysis since the K-Lab behind the solution does not have them). Finally, although the FaHS solution has been made available free of charge to the ministries of health of Niger, DRC and Palestine, Brenco has not received any feedback on its use by these services to date.

Some cases of fraud have also been recorded, and the Moroccan Moussanada programme seems to have functioned less well than its Togolese equivalent Novissi : Although the "household subsistence aid" operation was able to serve nearly 250,000 beneficiaries in just two days, for an amount of around 250

million dirhams, an identification problem was quickly noted by the Ministry of the Interior, with a low rate of reliability of the beneficiaries' SIM card numbers: this led to overcrowding at the counters for identity verification and slowed down the development of the programme. As a reminder, the Novissi programme, for its part, had set up a call centre where each beneficiary was interviewed anonymously during a telephone conversation.

**A strong recommendation from this study file is therefore to ensure sustained collaboration between health authorities and technical ecosystems, to avoid energy wastage and promote the widest use of the most relevant tools.**