



Building Africa's Frontline Readiness: Fostering Growth and Inclusion in the African HealthTech Sector

Policy Brief

Media Partner:  **techcabal**

About Us

The ALT Network is a pan-African, inclusive community at the intersection of technology and legal services in Africa.

Our mission is to provide a one-stop shop for information, advice and collaboration to bridge the legal and regulatory gaps required to support the growth of digital and tech innovation across the continent and to contribute to the growth of the African legal sector. We produce our own and commissioned research and policy reports on a range of issues relating to the development of the African digital economy and the regulatory and legal framework required to underpin it effectively.

Our community includes tech companies, regulators, legal services providers, policymakers and investors. Our members are lawyers, law firms and civil society organisations with expertise and knowledge of issues arising at the intersection of law and the tech sector in Africa.

Find out more about us and how we can work together.



www.alt-network.com

mail@alt-network.com

Twitter: [@ALT_LegalTech](https://twitter.com/ALT_LegalTech)

LinkedIn: <https://tinyurl.com/y6nmmorc>

Introduction

The outbreak of the novel coronavirus COVID-19 has tested healthcare systems around the world, exposing vulnerabilities, challenging policies, and altering the future course of healthcare provision on the continent. The deployment of technological solutions and services in the healthcare sector has long been on the rise, but the sustainability and effectiveness of these healthtech solutions has often been limited by local legislative, regulatory, institutional, and operating conditions.

The African Law & Tech Network set out to explore existing challenges and opportunities impacting healthtech services and solutions within the African context by bringing together individuals from across the spectrum of healthtech and digital health to identify shared systemic challenges unique to Africa, and discuss what is necessary to overcome these barriers to growth.

Participants included representatives from the healthcare sector, digital health start-ups, academia, donor-sponsored programmes, policy development, investment, and the legal profession. This policy brief aims to contextualize the role of technology in Africa's healthcare systems and highlight what is required to support greater access and facilitate innovation.

The Current HealthTech Environment in Africa

The adoption of healthtech and digital health services has been mixed and fragmented across the continent. Prior to the outbreak of COVID-19, Africa's public health strategies were focusing on finding solutions to malaria, HIV, and other wide-spread communicable diseases. Commercial healthtech has predominantly contributed to service provision systems, such as digitizing medical records, diagnostics, developing testing kits, and general medical technologies. Therefore, innovation within the healthtech space has been led by start-ups or larger, often international, enterprises and investment has come from multilateral funding institutions, such as the International Financial Corporation's (IFC) [TechEmerge Programme](#). However, there are some countries, such as Ethiopia and Rwanda, whose public health sectors have sought to actively drive innovation and advancements in healthcare and to harness technology to facilitate many initiatives. Overall, there has been little government-led investment and expenditure on healthcare systems, let alone innovation in this sector.

Now the pandemic has accelerated interest and development of digital health services, such as telemedicine, contact tracing, patient records, and access to information, as well as increasing access to personal protective equipment (PPE) and mental health services for healthcare providers. Many established healthtech enterprises and start-ups have pivoted their solutions and services to meet current demands. Public health systems are slowly becoming more open to adopting these alternative solutions to catch-up and meet the new challenges of COVID-19. Start-ups active in this sector have already raised a record-breaking USD \$90 million in 2020, predominantly due to the response to COVID-19.

For decades, public health, infrastructure, and planning specialists have consistently advocated for government investment into patient medical record-keeping and information systems. The reality is that in most areas, patients rarely have a medical record, which causes difficulties in monitoring conditions, providing accurate diagnoses, and increased costs. **Dr. Wuleta Lemma**, CEO of Lalibela Networks and Director of Center for Digital Health and AI at Wollo University, Ethiopia, insists that the main problem is not a lack of technical knowledge or IT systems, but the human resources to

support the technical solutions. Therefore, in order to establish an integrated digital health system, human resources, physical or digital record-keeping, and the requisite infrastructure to support these factors must all be present and appropriate to local needs. Dr. Lemma emphasises that all people should not only have the right to a health record but that those records and their personal data is protected.

The underlying structure of five-year health sector plans guiding most countries lack the flexibility to adapt to current events, engage in new healthtech innovations, or keep pace with technological developments. In fact, many African healthcare systems are in a position where they struggle to meet immediate demands and cannot afford to deviate from the 'known' to pursue new solutions that could potentially assist them. Those countries that are making provision for innovation and technology within these plans often lack the leadership and budgetary allocation to incentivize engagement or progress in these areas. It is into this space that healthtech start-ups and donor-funded projects have entered.

Public health specialist **Yara Cumbi** from Mozambique notes that ultimately private investment and decentralization must play a role in enabling innovation for some countries. Currently all decisions regarding healthcare systems must run through a central body, such as a country's ministry of health. Cumbi advocates for state systems decentralizing some of the decision-making authority to empower healthcare providers to engage with innovation, new technologies, and systems that improve operations at the community level.

Public health specialists have called for greater multidisciplinary participation in tackling long-term problems and innovation accelerators in academic institutions are stepping up to meet this need. **Dr. Roy Mayega**, Deputy-Chief of Party for the [Resilient Africa Network](#) at Makerere University's School of Public Health, advocates for greater multidisciplinary approaches to university innovation accelerators or entrepreneurial institutes. He explains that because most of these university programmes are developed adjacent to, or in collaboration with, science, technology, and mathematics departments, many individuals that are not in these disciplines are excluded from the innovation loop. However, those other disciplines bring a deeper understanding and knowledge of prevailing social conditions which determine the success of innovative or technological solutions. For example, understanding the local customs and environmental conditions understood by a social anthropologist or social worker is vital for the development of a sustainable local healthcare system and any innovation therein. Failure to understand local conditions and

Case Study: *Resilient Africa Network (RAN)*

Started in 2012, RAN is an educational lab actively tackling barriers to innovation at universities. Taking entrepreneurship and innovation out of the extracurricular category and into the mainstream curriculum, RAN consults communities on their most pressing needs and re-frames these problems into innovation challenges for students to solve.

Those offering viable solutions are selected to enter into the incubation and accelerator programme supported by advisors and rewarded with seed grants. Now operating four labs and engaging with 20 universities, RAN's approach focuses on having diverse teams of students compiled from across multiple disciplines to yield the most comprehensive and holistic solutions.

Prompted by the increased demand for ventilators for COVID-19 treatment, students have developed a new low-cost ventilator manufactured with 95% local production. Previously, students had also developed a new low-cost cooling and airflow system to be used in Ebola treatment centres. These "low-fi" systems have since gone into large scale production to be used in local and mobile clinics.

infrastructure is second only to investment and funding issues in unsuccessful public health ventures.

What are Africa's health challenges?

Africa currently represents 25% of the global disease burden, with **communicable diseases**, increasingly adding to this burden. The deadliest of which include HIV, malaria, tuberculosis, cholera, dysentery, and haemorrhagic fevers like Ebola and Yellow Fever. Prior to the outbreak of COVID-19, Africa already represented 18-20% of the world's infectious disease burden.

Additionally, the steady rise in chronic or **non-communicable diseases** (NCDs) places long-term strain on already struggling healthcare systems, including the sharp rise in diabetes, cancer, and heart and lung diseases. [A recent report](#) found *"NCDs in sub-Saharan Africa are posing an increasing challenge for health systems, which have to-date largely focused on tackling infectious diseases and maternal, neonatal, and child deaths. To effectively address these changing needs, countries in sub-Saharan Africa require detailed epidemiological data on NCDs."* The WHO estimates that [NCDs will rise by 27%](#) over the next 10 years in the region. That compares with a global rise of 17% over that period. By 2030, deaths from NCDs in Africa "are projected to exceed deaths due to communicable, maternal, perinatal and nutritional diseases combined."

According to [Khama Rogo](#), head of the World Bank Group's Health in Africa Initiative, insufficient prevention and screening leads to poor or late diagnoses, which in turn leads to increase in costs of treatment. The inability to work because of these NCDs is also directly tied to poverty and broader economic challenges. Therefore, the [WHO warns](#) that, "To lessen the impact of NCDs on individuals and society, a comprehensive approach is needed requiring all sectors, including health, finance, transport, education, agriculture, planning and others."

While these statistics should be drawing increased investment by global pharmaceutical and medical and diagnostic equipment corporations, instead the continent as a whole only makes up 2-3% of the global pharmaceutical market, and 3% of the medical device and diagnostic equipment marketplace. According to **Robert Karanja**, Co-founder of Villgro Kenya, potential investors are not willing to invest in the research and development necessary to solve Africa's health problems because the market profile is unlikely to generate the premium profits that can be generated in more developed economies. Karanja asserts that this is a broken market system, and there is a desperate need to create a demand for health technologies and increase health finance, such as ring-fenced savings and loans and micro-insurance products. This will also move consumers away from the unsustainable out-of-pocket payment for services and products.

What are the challenges?

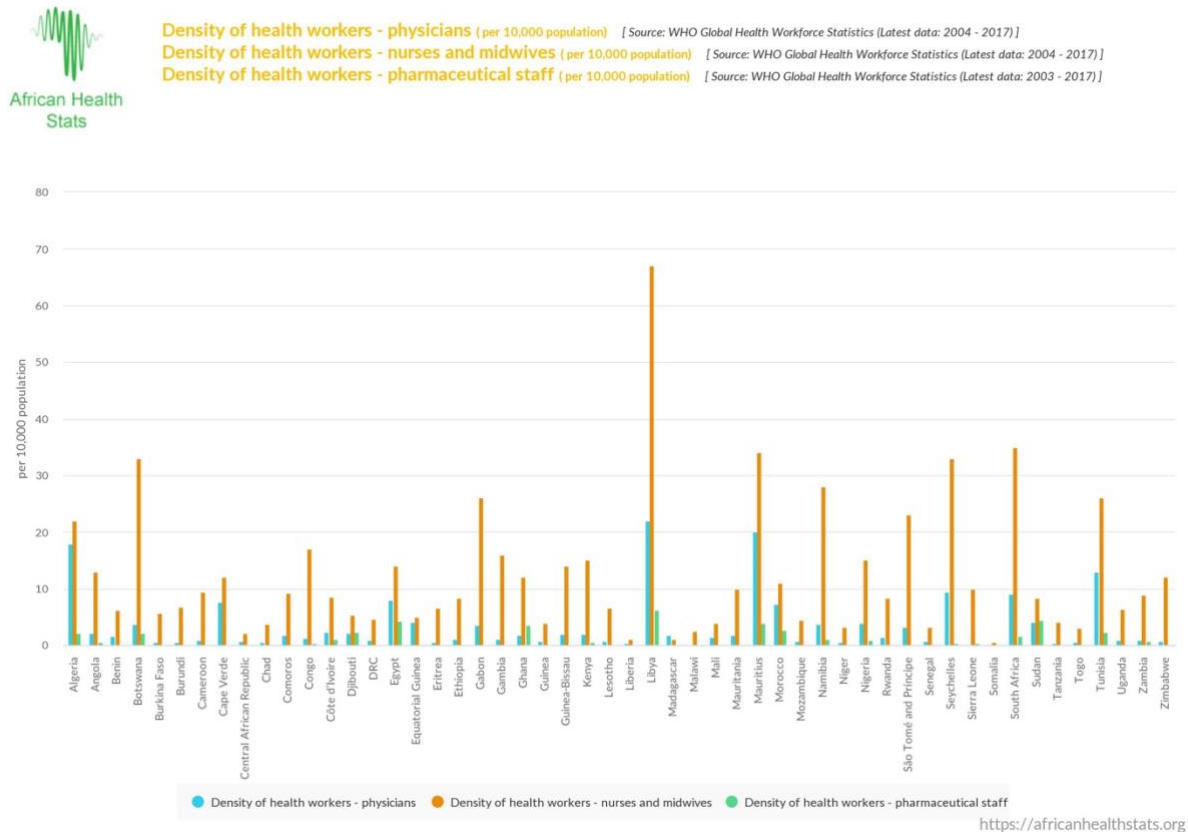
Access to Healthcare [Medical care, medicines, devices]

In most African countries, poverty is not the only barrier to accessing healthcare – physical access is a significant issue. The reality is that [fewer than 50% of Africans have access](#) to modern healthcare facilities. This lack of access extends to access to physicians, nurses and midwives, and pharmacists (See Table 1 below). The lack of infrastructure isolates many communities from accessing healthcare or medication at a time where both communicative and non-communicative diseases are on the rise.

More and more individuals are contracting long-term illnesses without a corresponding increase in access to care.

Governments have done shockingly little to fill this gap, and the result has been a sharp uptick in start-ups offering innovative solutions for isolated communities.

Table 1

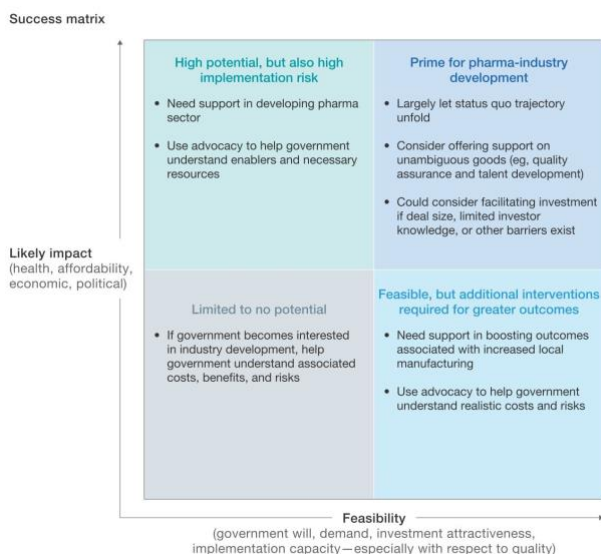


Perhaps most famous is [Zipline](#), the drone-operated blood and medicine delivery service in Rwanda and now also Ghana. The service replaces a 4 or 5-hour delivery drive on bad roads with a 45-minute drone flight. However, such programmes require significant investment to provide comprehensive and sustainable service to areas. **Melissa Rusanganwa**, Regulation and Aviation System Integration Lead at Zipline, said that the company’s success was only possible because of the country’s ICT-focused economy and regulatory environment.

Reliable access to safe medication is another chronic issue. One initiative to harmonise the continent’s approach to medicines has been the [African Medicines Regulatory Harmonization \(AMRH\)](#) projects, which aims to “improve regulatory capacity, establish and improve regulatory standards and requirements and facilitate access to safe and good quality medicines for African people”. The collective effort is commendable in working to ensure the availability of safe, good quality and reasonably priced medicines in a market flooded with counterfeit and black-market pharmaceuticals. However, it does not do much to address the lack of manufacturers and providers on the continent.

There is a significant need for small, affordable, and locally produced medicines and medical devices. Currently, between [70-90% of pharmaceutical drugs](#) dispensed on the continent are imported. A 2019 McKinsey report investigating [African investment in pharmaceutical production](#) found that undertaking an initiative to address this would require “government will, demand, investment

Successful efforts to develop local drug manufacturing will depend on both impact and feasibility.



McKinsey&Company

across the region. However, for many of the smaller economies in the region, challenges still remain to the establishment of a full-coverage network infrastructure due to the high costs of establishing the necessary physical infrastructure.

Diversity and Inclusion

One of the systemic challenges for healthcare sectors around the world is the lack of diversity and inclusion in provision and access. With the Americas and Europe dominating much of the pharmaceuticals and medical device market, these solutions and innovations are developed to meet the needs of small proportion of the world’s population. Clinical trials are predominantly populated by white males of European descent, reflecting the clinicians themselves and the management and ownership of the multinational pharmaceutical companies. This is particularly alarming when taking into account the fact that Africa makes up [25% of the global disease burden](#) and the lack of reflection of Africans in the clinical trials and datasets underpinning medical advances. **Maxine Mackintosh**, co-founder of *OneHealthTech*, works on developing greater inclusion in healthtech, from investment to building datasets. She highlights the fact that there are currently huge holes in how the totality of the global population is represented in DNA datasets, for example, the lack of diversity in global genetics research means new discoveries and treatments represent the needs of a predominantly European dataset.

What are the opportunities?

Digitisation

The need to decentralize healthcare provision and access across countries presents enormous opportunities for innovation in the market. Information and communications technologies are well placed to address some of those gaps. Telehealth services has been increasing steadily in some African countries and the COVID-19 pandemic has seen a rapid rise of digital health services to include SMS/text and mobile health apps.

attractiveness, and implementation capacity, especially with respect to quality.” The report determined that ultimately the success of investment would be country/context-dependent as each jurisdiction presented its own opportunities and challenges. Additionally, the findings tied the potential improvements for public health to declining poverty and increased economic activity, indicating that such an initiative would, if successful, have the ability to transform the country.

Infrastructure

In order to engage in the healthtech marketplace, both users and service providers must have access to the internet. The pace of internet penetration is increasing very slowly

The Nigerian platform [Wellvis](#) is one such service offering a complete digital health experience. The platform provides healthcare information, along with professionally moderated healthcare advice. Users receive epidemiological information and are directed to the appropriate agencies for their concerns. Telemedicine scheduling and lab appointments are also hosted on *Wellvis*. At the outbreak of COVID-19, *Wellvis* extended its services for government use to help track symptoms and the disease's spread.

[RedBird](#) is another enterprise enabling decentralized care through community pharmacies. With low doctor to population ratios and a growing population with chronic diseases, *RedBird* is working to improve the patient experience within the NCD care market. By pairing rapid diagnostic testing with mobile services within local pharmacies, patients receive better tracking and monitoring of their health conditions. The pharmacy uploads the data to the *RedBird* app, patients receive results through SMS text, and physicians can view and assess the overall condition and dispense prescriptions without an in-person clinic or hospital visit. **Andrew Quao**, CEO of *Redbird* says that their services have expanded with the COVID pandemic to include symptom checking and tracking exposure with their services operating in over 280 pharmacies in Ghana. This has successfully decreased the stress on healthcare sites such as clinics and hospitals while providing a trusted, more local alternative for patients, which is particularly valuable during outbreaks.

[Lalibela Networks](#), an Ethiopian start-up that recently won a place in the Ma Foundation's Africa Business Heroes, is driven by a single aspiration – no medical record is misplaced or lost in any clinic or hospital in Africa. Digitisation of health records can enable everyone to have access to their own records and for them to be protected and stored.

3D printing

The integration of 3D printing into the healthcare field has taken off globally. Recent successes in using this technology in [Senegal](#) to print low-cost ventilators have inspired the world. The fast and cost-effective solution could be an important step in fixing the device shortage in some countries through trade of locally produced equipment and revolutionize care. 3D printing technology can produce anything from scalpels and other surgical tools, to prosthetics, to drone parts. Increased, localised access to these items would have a direct impact on healthcare. Government support for such innovation and to address infrastructural challenges to intra-African trade will be critical to success.

Smart Dispensing

In 2019, Neo Hutiri won the [Africa Prize for Engineering Innovation](#) for his [Pelebox Smart Locker](#), a digital dispenser installed in hospitals and stocked with routine medicines by healthcare workers. Inspired by his weekly three-and-a-half hour-wait for his turn at the hospital pharmacy in Johannesburg, Hutiri's *Pelebox* dispenses medicines within just 36 seconds. Patients are sent a one-time personal identification number (PIN) sent to their phones to access their medicine locker, which are temperature-controlled and can serve between 70 and 300 patients. The locker system helps patients and their carers avoid lengthy queues at the pharmacy while freeing hospital staff and resources in order to be deployed elsewhere. Since then, other similar medication dispensing solutions have been developed, all of which seek to decentralise the provision of medications from busy and often-inaccessible hospital facilities.

Obstacles to realisation

Regulation

One of the top obstacles facing those active in the innovation and technology in healthcare across the continent is the inadequate regulatory environments in which stakeholders are forced to operate. Existing regulations are either far too limiting or too vague to provide any guidance to start-ups. As a result, the absence of an enabling legislative and regulatory framework forces start-ups to either operate in grey areas or remain severely limited in their operations. In other cases, countries are simply “copy and pasting” legislation from other countries, like Singapore, which are not necessarily fit for context.

Daniel Batty, the Tech Law Advisor at South African technology law advisory [EndCode](#), hails the regulatory environment in Rwanda as one of the best for healthtech and other tech start-ups. Rwanda’s dedication to establishing an ICT-based economy has resulted in direct partnerships between government ministries and start-ups, as well as high levels of stakeholder engagement. Institutions and regulators are willing to evolve to support advancement and innovation. This is currently demonstrated by [Rwanda’s Emergency Response Project for COVID-19](#) which focuses on digital-led solutions and utilizes analytical tools. The programme has received approval and funding from the World Bank, demonstrating to others that this approach is viable and the way forward.

Usually, collaboration between start-ups and government is difficult and fraught with bureaucracy, according to Wale Adeosun. Adeosun’s company, *Wellvis*, attempted to contact the Nigerian government to offer their platform to help disseminate information and track symptoms related to COVID-19. However, even after establishing a partnership, *Wellvis* decided it would be easier to pass part of the platform over to the Nigerian Center for Disease Control (NCDC) rather than struggling through the bureaucratic limitations of working on it jointly.

Data Protection & Privacy concerns

“We need to be balancing the current human health crisis with our fundamental human rights,” according to **Ridwan Oloyode**, the Privacy and Data Protection lead at [TechHive Advisory](#), Nigeria. Mr. Oloyode believes there is a need for increased awareness and mindfulness about the interconnected nature of data protection with human rights more widely. Data protection and privacy are tied to individuals’ rights of freedom of association, freedom of expression, and freedom of movement. Some countries have established “state of emergency” measures, including the suspension of certain rights, in order to get a better handle on the spread of the coronavirus and to undertake contact tracing. However, only seven African countries have data protection and privacy laws in place. Fewer have the relevant institutions in place to enforce those laws. Many governments and organizations collecting health data are not following secure protocols on management and storage of that data. Anonymization is neither fool-proof nor sufficient, and failures in this area have severe ramifications for individuals, particularly as the nature of an online data breach is not confined within a nation’s borders.

Uncertainty in local market regulations can often be a top deterrent for external funding, both for market entrants and start-up investors.

Intellectual Property Protection

Kenneth Muhangi, partner at AMANI IP in East Africa, points out the need for clear IP policies and laws to protect inventors and start-ups. For many start-ups, the lack of knowledge of basic legal and regulatory provisions and requirements can cost them dear further down the road. Understanding of copyright, patents and other elements of intellectual property regimes is critical for the success of new products and services being launched in the market.

Lack of Investment

Africa, as a whole, does not attract the same substantial investment by medical, healthcare, and pharmaceutical giants as seen in other jurisdictions. Ultimately, the low profit margins offered by individual consumers are not sufficient for market entry and large-scale investment. As a result, there remains limited provision of and access to medical devices, supplies, and medicines.

However, the lack of investment is not only on the part of private enterprise. Governments have habitually neglected investing in healthcare. But [according to Dr. Ola Brown](#), Founder of *Flying Doctors Healthcare Investment Group*, “COVID-19 has forced African governments to see how public health and economic growth are linked...As their view of healthcare as an investment, not a cost, continues to evolve, it creates a more enabling environment for healthcare start-ups and their investors across Africa.” The United Nation’s *Economic Commission for Africa* estimates that Africa’s healthcare financing gap is currently [USD \\$66 billion](#) wide. In the best-case scenario for fighting COVID-19, Africa’s health care systems will need to collectively [increase their spending by USD \\$44 billion](#), which would imply an increase of 32%.

Data from [The Base](#) found that African start-ups in the healthcare sector face significant investment challenges. In 2019, African start-ups made 427 deals raising an estimated USD \$1.34 bn. Of this, there were [only 49 deals raising only 5% of that total sum](#) (USD \$74.96 mn). In 2018, this number was even lower, with companies offering digital health solutions making up only 2% of the USD \$725.6 mn raised. However, in the new COVID-19 healthcare-focused environment, 2020 has already seen African e-health start-ups raising as much as USD \$90 mn in funding, according to a recent report from [Disrupt Africa](#).

Dr. Lemma believes that when donor-funded projects are replaced by government-funded programmes, the digital health environment will grow substantially, become much more sustainable, and ultimately attract more foreign investment. The Resilient Africa Network (RAN) offers an example of success where advocacy and lobbying the Ugandan government on the value of government investment in what it considered ‘high-risk’ ventures could actually lead to transformative contributions to the national development plan. Dr. Mayega also advocates the ‘sandbox’ approach in healthtech which would allow for limited licences to innovators, supervision and support for commercialisation and routes to market and private investment.

Sustainability

Foreign investment by global enterprises and funding institutions plays a significant role in many African markets bringing much needed capital and expertise. The flood of donor funding into the African tech sectors offers opportunities for many actors, local and international. However, these donor-sponsored projects often take the form of non-African enterprises looking for low-regulatory environments in which to demonstrate proof-of-concept to then scale and develop elsewhere. When they run out of funding and leave the market, a broken system or gap in service is left behind, creating a new demand for a solution. The result is a patchwork of solutions that are not fit for purpose. Consumers are left in the lurch and sometimes without access to vital services. Even the most successful programmes can run out of funding and fail to secure alternative financing. **Cynthia**

Antwi-Dodoo, a Senior Technology for Development Consultant at *RealFin* in Ghana, points out the fact that even if government and private sector can successfully collaborate to deliver a technology solution/product, there is the problem of who is supposed to continue to support it, and how it will be supported financially.

Donor-funded projects may bring solutions to fruition, but sustainability without successful commercialisation, or government assistance is impossible. Local people and communities must be integrated into these programmes to ensure they are compatible with the local needs and have the requisite human resources to continue operations. Equally important is the investment in training and upskilling of local employees by these programmes.

Insurance

This is a critical issue for the growth of African healthtech and broader healthcare systems. It required looking at the entire ecosystem, from user, to innovators, to hospitals, clinics, healthcare providers and pharmacies. Prevention is better than cure. Robert Karanja warns that national public health insurance covers about 20% of the population in most countries. In Kenya, there is only about 4% market penetration of private insurance into marketplace – this will likely drop because of economic consequences of the response to COVID-19. Better understanding of the users and their capability and potentially collaboration across tech sectors – such as with fintechs on savings – can facilitate the means to save small amounts on accessible and affordable platforms.

Call to arms – what needs to be done and by whom?

As outlined above, collaboration and innovative thinking will be required to deliver successful and tech-friendly healthcare outcomes across Africa. Robert Karanja proffers what he calls a “triple helix” approach. The first strand acts as a backbone, which is government actively setting an innovative and technology-driven healthcare agenda. From this, academia works to produce new knowledge and train future professional to design and create the new services and products. Third, the private sector, that must take that knowledge and work to problem- solve and create scalable solutions to enter the market and generate both impact and revenue. Karanja also notes that, “The health sector is the one area where we can not only deal with the biological causative of disease but can also attack the root problem of disease which is poverty.”

Such a holistic and multidisciplinary approach would not only improve the continent’s health but facilitate the creation of networks and value-chains across the continent.

Governments

- New agendas must be set which start with the increase of total percentage of government spending on healthcare. Currently, most African [governments spend less than 10% of their GDP](#) on healthcare, and [less than 15% of their total expenditure](#) on healthcare.
- There needs to be a co-ordinated push by African nations to increase investment in the healthcare market on the continent, making it more attractive for global pharmaceuticals as well as local enterprises and start-ups.
- Means for ensuring diversity when setting the agenda built in at the highest level in order to have translatable success at all levels and in all stakeholder agendas

Regulators

- Regulators must be open to working with other regulators both in-country, regionally and cross-continent to ensure coverage when innovative partnerships, products, and services are produced.
- Regulatory institutions must establish collaborative relationships with tech innovators and other operators within the sector in order to create an enabling, innovation-friendly environment.
- The 'Regulatory Sandbox' approach should be encouraged. These regulatory testing tools create a safe space for innovation to be displayed and tested, and regulators can assess its impact on the environment and the public without innovators being punished for breaking regulations.

Industry

- Collaboration across the sector to propose guidelines, codes of conduct, or standards has the potential to carry a great deal of influence and generate reform.
- Increased co-operation not only within a nation's industry, but also with others active elsewhere on the continent.
- Daniel Batty, a tech law advisor at *EndCode*, suggests that the easiest process to improve upon regulation and legislation is for industry to come together and formulate guidelines or codes of conduct, and then seek their approval by government. That way future legislation does not have to begin from scratch and a dialogue is opened between the public and private stakeholders.

Start-ups and Specialists

- Within communities, public health specialists should be pushing for increased engagement with technology and new systems to deliver healthcare services.
- Collaboration and sharing of open-source solutions in order to speed up development process.

Academia

- A concerted effort must be made by universities, training, and education institutions to develop new curricula that fuses technology and innovation into medical and healthcare studies.
- More multi-disciplinary innovation units such as the Resilient Africa Network (Makerere University, Uganda) and Centre for Digital Health and AI (Wollo University, Ethiopia) working across African universities taking a pan-African approach to ensure the quick sharing of results, reducing replication and creating networks and paths for advocacy, investment and market access.

Contributors

We would like to thank our healthtech advisory group for contributing to the discussions and proposals outlined here.

Dr. Wale Adeosun, *CEO, Wellvis (Nigeria)*

Cynthia Antwi-Dodoo, *Senior Technology for Development Consultant, RealFin West Africa (Ghana)*

Daniel Batty, *Tech Law Adviser, EndCode (South Africa)*

Yara Cumbi, *Public Health Specialist (Mozambique)*

Robert Karanja, *Co-founder & COO, Villgro (Kenya)*

Dr. Wuleta Lemma, *CEO, Lalibela Networks PLC; Honorary Associate Professor & Director, Center for Digital Health and AI, Wollo University (Ethiopia)*

Maxine Mackintosh, *Co-founder, One HealthTech (United Kingdom)*

Dr. Roy Mayega, *Deputy-Chief of Party, Resilient Africa Network; School of Public Health, Makerere University (Uganda)*

Kenneth Muhangi, *Partner, Amani IP Network & KTA Advocates (Uganda)*

Ridwan Oloyede, *Privacy and Data Protection Lead, Tech Hive Advisory (Nigeria)*

Andrew Quao, *Co-founder, Redbird Healthtech (Ghana)*

Melissa Rusanganwa, *Regulation and Aviation System Integration Lead, Zipline (Rwanda)*

Recordings of our two webinars are [available on our website](#).

Additional Resources:

- WEBSITE: "[African Health Stats](#)" by the African Union's Department of Social Affairs
- REPORT: "[High Tech Health: Exploring the E-health Startup Ecosystem Report 2020](#)" by Disrupt Africa
- REPORT: "[The Global Startup Ecosystem Report GSER 2020 The New Normal for the Global Startup Economy and the Impact of COVID-19](#)" by Startup Genome
- REPORT: "[COVID-19 in Africa: Protecting Lives and Economies](#)" by the United Nations Economic Commission for Africa.
-

Many thanks to our Media Partner for this series on healthtech in Africa:

