

TECH FOR GOOD INITIATIVES IN NIGERIA

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What is Tech for Good?

Tech for Good are initiatives or enterprises championed by individuals, groups of individuals, or organisations which rely on technology to achieve their primary goal of providing beneficial impacts to society and the world.

In Nigeria, technology has become one of our foremost game-changers. Every work process is fast becoming intertwined with technology, triggering a quantum leap for our national development. From the benefits derived from agricultural mechanisation, the ease of buying and selling brought about by the e-commerce firms, the increase in financial inclusion and efficiency of financial transactions brought about by online banking platforms, innovations in visual and remote learning, automation of production and manufacturing processes, to the construction of smart houses, the list seems endless.

Nigerians have taken a cue from different industries in more developed countries. They are using technology to create positive social impacts on society that address some of Africa's daunting challenges.

No wonder Nigeria boasts of the most significant number of startups in Africa.

Why Tech for Good Initiatives?

Tech for Good initiatives reflect the best of collaborative human thinking, in line with the United Nation's Sustainable Development Goals (SDGs) and bring together diverse players that work to achieve development goals through digital transformation and innovative solutions.

Tech for Good promotes and accelerates the global transition to a more sustainable and responsible society, using technology as the lever in the pursuit of that goal.

Can Tech be Good or Bad?

Tech, short for technology, is neither good nor bad, nor is it neutral. It is, therefore, important for entrepreneurs and social activists to be intentional about its use in tackling the world's most pressing social and environmental challenges. Technology can be used to address significant societal and environmental issues, enabling better products and services that

help meet people's needs while also protecting our planet. The growing global movement for Tech for Good aims to increase the consciousness of entrepreneurs, civil society, corporates, funders, policymakers, and consumers on sustainability and has led to the establishment of a body of professionals promoting sustainability self-governance in Nigeria, the Telecommunication and Technology Sustainability Working Group (TTSWG).

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Drivers of Tech for Good in Nigeria

Non-profit organisations have majorly driven Tech for Good initiatives in many developed economies. However, of the over 46,000 registered nonprofit organisations in Nigeria, more than 90% have no technological imprint in their operations. On the other hand, a small number of indigenous tech companies have been able to turn the digital and technological revolution into a transformational tool that positively impacts human, social, and sustainable development.

In recent times, profit-driven organisations have become more purpose-oriented in their approach to business, aiming to strike a balance between profitability and impact. These initiatives have distinguished themselves by formulating ideals, moral standards, and truly people-centric cultures. This hybrid model is not without its challenges, especially in the African context, because of the divide between the relevance of profitability versus social impact encountered in organisational formation, business model execution, investment and fundraising, and stakeholder expectation.

The Five "Es" of Tech for Good

According to a report by Accenture, while pursuing technological impact, entities must seek to build a strong foundation of digital **ethics, engineer** solutions for the next billion, **embed** social good in business models and offerings, **empower** civil society with digital capabilities to address market cracks and **educate** to build capacity to absorb innovation for the masses.

The report also pointed out that different players seek to pursue good through technology for various reasons, with a **responsible government** seeking transformational change, businesses aiming to create shareholder value and academia driven by ideas.

Why the Nigerian Tech for Good Scene is Interesting

The Tech for Good market is new and unsaturated, given the peculiar challenges in Africa and the nature of tech. There is room for new entrants willing to pioneer social change, with the stage open to innovations and catalytic technologies.

In pursuing this, it must be noted that a local impact-driven technology startup differs significantly from the traditional business enterprise.

Nigeria is highly mobile: with an increasing internet penetration of 53.51% and mobile internet users amounting to 111.83 million in 2022, the opportunity to impact lives via tech is constantly widening.

Increase in funding opportunities: in 2021, Nigeria's 41.4

per cent share equivalent of tech startup funding raised in Africa amounted to \$168.9 million and 11 rounds of seed capital. Though investment in Africa's start-up space is meager in comparison to the global north, more investment opportunities still abound for Tech for Good initiatives in Nigeria now and in the future.

Limitations to Tech for Good initiatives in Nigeria

- Lack of an innovative tech ecosystem that encourages tech ideas to thrive: Despite the efforts to build a sustainable tech ecosystem in Nigeria, the existing infrastructure still leaves much to be desired.
 - Meagre government investment in digital infrastructure: Increasing government investment in digital infrastructure will require new investment tools, both local and foreign, and sustainable digital policies to de-risk tech startup investment, with governments and donors partnering with the private sector, will result in a reduction in the cost of doing business.
 - Outdated government regulation that stifles tech startups: For tech startups seeking to scale in Nigeria, the cost of ambiguous and bureaucratic regulatory standards is high. Despite the approval of the Nigeria Startup Bill that seeks to harmonise all facets of legislation towards incentivising and protecting investments in innovation, increasing industry-government engagement, building Nigeria through talent development, and encouraging investments in infrastructure as a tool for economic stability, the advantages of the Nigeria Startup Bill are still far from being maximised by the average tech entrepreneur. The government and relevant stakeholders like the Ministry of Communications and Digital Economy, National Information Technology Development Agency (NITDA), Nigerian Communications Commission (NCC), and the Nigerian Economic Summit Group (NESG) need to develop a harmonised framework that promotes seamless execution of tech ventures in the country.
- Many promising startups which have the potential to contribute significantly to society have had to stop operations due to the rapidly shifting position of the government and irregularities in policies.
- Lack of technical expertise: Most Nigerian techpreneurs do not have the technical skills or mentorship required to run an enterprise. Many startups are plagued by mismanagement and misappropriation that hinder growth and expansion. While many tech startups can sustain operations in the first few years of operations, many fold up after a few years.

Some Leading Tech for Good Initiatives in Nigeria

- Releaf - Releaf was formed by Isaiah Udotong, Ikenna Nzewi, and Uzoma Ayogu to accelerate agricultural-based industrialisation in Nigeria through proprietary hardware and software solutions. Its current primary initiative is the production of palm kernel oil (PKO), which is in short supply among industries that use it as a raw ingredient. It has a "smart" facility in Ikot Ukana Village, Obot Akara LGA, Akwa Ibom State, with a daily processing level of 25 tons and a weekly goal of purchasing 60 tonnes of palm kernels from farmers. The factory employs a variety of algorithms in its operations, resulting in a highly efficient digital-industrial facility.

They provide zero-interest equipment financing to farmers, thus driving increased access to mechanization, improving productivity and working conditions. Before Releaf, farmers spent more than 10 hours de-shelling and separating palm nuts each week. Working with Releaf allows them to be paid immediately, saving them time that they can use to improve their economic returns. Through their online payment solutions, unbanked and underbanked farmers can build a digital transaction history, allowing them to participate in the formal economy.

- MOBicure - MOBicure, founded in 2015 by Charles Immanuel, Emmanuel Owobu, and Jephthah Chidozie, is a mobile health company that offers cost-effective health care services and solves some of the most pressing healthcare problems plaguing Nigeria and Africa using mobile technology solutions. These problems are related to sexual and reproductive health as well as maternal and child health. MOBicure's products are myPaddi and the OMOMI app.

myPaddi provides young people with access to accurate, unbiased, and youth-friendly sexual and reproductive health information while maintaining their anonymity, emphasising the prevention and management of sexual abuse, teenage pregnancy, and sexually transmitted diseases (STDs). The app also connects young people to trained counsellors and medical personnel.

OMOMI is a health and social platform based on the WHO/UNICEF childhood survival strategies. The platform has a unique range of features that support parents in keeping their children healthy with easy and simple well-being monitoring. OMOMI provides mothers and pregnant women with life-saving

maternal and child health information, connects millions of mothers worldwide, and grants access to doctors in real-time.

- Agricorp- Kenneth Obiajulu and Wale Omotimirin founded Agricorp in 2018. Agricorp is an Agric-tech company that provides global exports of ginger to clients in key trading markets, with an origination processing facility in Kaduna, Nigeria.

The Agricorp team owns a semi-mechanised processing facility in Kaduna, which can process over 5,000MT of ginger annually. The facility employs over 100 local workers, of which 80% are women, in the cleaning and sorting sections of the business. Agricorp has also invested in a medium-scale 0.5MT/hour integrated spice processing equipment. The technology meets both international and local standards in producing clean fresh ginger, dried ginger, ginger powder, dehydrated garlic powder, chilli powder, dehydrated onion powder, and lime powder.

- Zenvus - Zenvus is a novel innovation for agriculture that uses proprietary electronic sensors to collect soil data, including moisture, nutrients, temperature, and pH. It subsequently sends the information to a cloud server via GSM, satellite or Wi-Fi. Algorithms in the server analyse the data and advice farmers on what, how and when to farm. As the crops grow, the system deploys hyperspectral cameras to build a crop normalised difference vegetative index, which helps detect drought stress, pests and diseases on crops.

The data generated is aggregated, anonymised, and made available via subscription for agro-lending, agro-insurance, commodity trading to banks, insurers and investors. Zenvus offers a hosting solution that connects farmers to online ecosystems at a low cost to help farmers in rural areas access their data and use analytics. Zenvus is located in Owerri, Nigeria.

- SaferMom - SaferMom was founded in 2014 by Adeloye Olanrewaju. It leverages the power of cost-effective technologies to provide accessible, scalable, and affordable mobile health services to pregnant and nursing mothers through SMS and voice calls in the user's preferred language(s).

The platform is easily accessible irrespective of location, type of phone (whether or not one has a smartphone), and language. Its services include tracking vaccination history, pregnancy follow-up, dispersing emergency information, educating health workers, reaching underserved communities in the case of epidemic disease, and educating at-

risk children. SaferMom addresses the high maternal and infant mortality crises in Nigeria.

- Dokilink – Dokilink was founded in 2013 by Dr. Niyi Osamiluyi and is a medical ecosystem that helps doctors stay connected, seek second opinions, collaborate on medical cases, earn rewards, and influence corporate decision-makers by sharing insights. Through Dokilink, doctors can share unique case files with each other, leading to a greater awareness among doctors of the treatment options available locally.

Dokilink is Africa's largest online physician network as it has over 11,000 registered doctors. It helps consumers easily find and book appointments with specialists, using personalised and customisable calendars to facilitate the scheduling of appointments with doctors. Once the appointment is scheduled, the slot gets 'locked', and the doctor receives a notification via email and SMS.

- Agrobint – Agrobint is a Lagos-based agritech firm created in 2020 by Afolabi Kilaso. The tech start-up provides services that facilitate consistency, profitability, and sustainability to agri-businesses, thereby boosting the entire agricultural sector. Agrobint has a database of experienced workforce, including veterinary doctors, who provide farm support to farmers. They empower small and medium farmers with training, funding, processing, packaging of farm output, sales and marketing support, knowledge and resource sharing; all operating on know-how in the four key agricultural sub-sectors in Nigeria: crop production, livestock, fishery, forestry etc.

Agrobint provides small and medium farmers with profitable and sustainable agri-business templates and modern farming techniques, with a mission to create a self-sustainable agricultural ecosystem for growth, finance, and insurance through technology.

- Verdant AgriTech – Nasir Yammama, a farmer from Katsina State, developed Verdant AgriTech to help farmers access market information, financial services, and other assistance, such as extension services that educate novel farming practices.

The Verdant AgriTech app unites all parties in the agricultural value chain, to maximise the benefits of agriculture for everyone, particularly farmers in various parts of Nigeria and Africa. They aim to enhance agricultural sustainability in Africa by using simple technologies in increasing productivity, improving the efficiency of resource use, and reducing ecological impacts. Through their farmer-

centric products, they do not only offer crucial data for agricultural decision-making, but also garner insights to inform service and technology providers.

- DrugStoc – The company was founded in 2015 by Adham Yehia and Chibuzo Opara, and is headquartered at Oregun-Lagos. DrugStoc is a secure and interactive procurement platform that protects healthcare providers and their patients through access to safe and quality pharmaceutical products facilitated by consolidated supply chain systems. The DrugStoc solution uses technology to enhance supply chain management, financial solutions, and access to genuine products in emerging economies.

They are one of the fastest-growing tech-enabled procurement partners for pharmaceutical & consumer health companies, reaching thousands of their key stakeholders across Nigeria. Users can discover and order thousands of pharmaceuticals products, consumables and devices, with the option of having them delivered within 24 hours. However, the service is strictly restricted to doctors, medical specialists, pharmacies, hospitals, and nursing homes.

- LifeBank – LifeBank, a health startup founded in 2016 by Temie Giwa Tubosun, facilitates the transmission of blood from labs to patients and doctors in hospitals across the country.

The company mobilises and takes inventory of all blood donations available in the country and delivers the blood wherever it is needed. It also provides a service that supplies medical necessities to hospitals in parts of Africa through technology and a multi-modal distribution platform. LifeBank is used by over 500 hospitals in Nigeria and Kenya.

- ThriveAgric – ThriveAgric is an agritech company in Africa founded by Uka Eje. ThriveAgric supports farmers with access to finance and technology-driven advisory (pre and post-harvesting — including linking them to profitable markets) that help them increase their yield.

- 54Gene – 54Gene is a health technology company founded by Dr Abasi Ene-Obong in 2019, that seeks to significantly improve the inclusion of African populations in genomics research to more appropriately arrest, diagnose new diseases, and treat the continent's population.

The company collaborates with health and research institutions in African countries to generate primary data and biospecimen. They own a state-of-the-art biobank, a facility used to store biospecimen in the

right conditions to retain quality for when needed for secondary use.

Tech for Good is Good Business Ethos

The list of Tech for Good businesses above are just a few of the growing number of development-driven tech ventures in Nigeria today. The importance of tech for managing environmental, social and governance issues, including health, equity, education and infrastructure, cannot be overemphasised, especially in Africa. It, therefore, behooves government, technology, and

communication stakeholders, entrepreneurs, communities, and individuals to play their respective roles in ensuring that only the positive benefits of technology are constantly harnessed.

When governments create the enabling environment and infrastructure for technology ventures to thrive, technology and communication stakeholders create an innovative ecosystem and engage in sustainable ways to create products and services that would allow communities and individuals reap the benefits of tech.

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