

Conversation #1

The Past, Present, and Future of the 'Digital Nyika': How to Fix an Aircraft in Flight

Jimmy Gitonga of Afroshok Media



Jimmy Gitonga took the scenic road to getting here. Having studied physics and applied mathematics at the University of Nairobi, he then studied electronics at Kenya Polytechnic. He ran a consumer and professional electronics firm, Audiophilia Electronics, that was involved in designing and installing a radio broadcast studio for WorldSpace (a global satellite radio network).

He then veered into graphic design, web design, Flash development, and motion graphic—after which he went into animation, working on the pilot project of the British–Kenyan children’s television series Tingatinga Tales. Jimmy is a founding member of the ARK, a design house that developed the Zuku brand for the Wananchi Group and designed the iHub space. He was also a past iHub community lead, overseeing the growing membership base, and targeted programs toward team members, start-up, and how these members can deliver solutions to the enterprise and public sectors in Kenya and across Africa. Today, Jimmy runs Afroshok, his own boutique design firm, and is an iHub ambassador involved in community projects.

Jimmy, what fascinates you about digital technology in Kenya?

Recently in Kenya, we witnessed a moderately sized exit through the purchase of a technology start-up at about USD1.7 million.¹ Several months later, we had another kind of tech start-up exit, not in realization of dollars but in a failure of top management, brought about by what I would call culture and vision fit issues.² During this period, I attended a number of seminars and industry events, and I began noticing interesting trends that affect how we, as Kenyans in particular and as Africans in general, are interacting with digital technology and the proliferation of digital products.

Let us look at this in more detail. In Kenya, we can see a cultural transition happening as the generation that witnessed the independence of the country moves off the stage. The generation born between 1970 and 1980 saw the political realignment that came after the Cold War and has now grown up. Apartheid and its proxy wars came to an end as propped-up countries like Somalia and Yugoslavia collapsed. In the 1990s, Mandela became a global icon because of the Internet and easy access to it through personal computers. The personal computer and the Internet came to Africa especially with the backdrop of these global political realignments. Remember, the electronics giant Apple could not sell a certain model of computers to so-called “enemy states” of the USA. The mobile phone arrived on the scene in the 2000s, and now so has cyber-warfare, where

¹ See Moraa, Hilda. 2015. *A Kenyan Startup Journey: My 10 Key Lessons*.

² See <https://medium.com/@brendawambui/corruption-in-the-silicon-savannah-9e393a00aa0e#.8uz9dnugf>.

politically opposed countries have taken their differences online. So the place of governments and the ICT sector are intertwined.

For most Kenyans, the mobile phone and the Internet arrived together—and the people picking up these two technologies are mostly below 35 years of age.

Jimmy, what would you say were the key milestones that brought Kenya's ICT sector to where it is today?

I handled my first computer at the University of Nairobi. There was no degree in computer science then, just a post-graduate diploma. For programming languages, we studied Basic, FORTRAN, and COBOL. We worked on Wang terminals connected to the university's mainframe. I finished at the university and joined Kenya Polytechnic for a transition course to electronic engineering, where we studied everything related to “light [electrical] current” technology. I was equipped for the computer age in Kenya. The pre-Internet software development industry was also gaining traction at the time, with names like Lotus, FoxPro, and Dbase coming in.

Around this time, the Internet landed visibly in Kenya through a company of young Turks called Africa Online and an older-guard company called FORM-Net Africa. Almost anyone who has become prominent in the Internet space in Kenya came from or passed through these two companies. One thing that did not happen is the landing of fiber-optic cables on the East African coast. The cables went round Southern Africa, passing Mauritius and landing in India. Kenya and other Eastern Africa countries would have to rely on expensive satellite Internet connections for another decade.

At the same time, most of Africa was in political upheaval as the Cold War period closed with the emergence of “multi-partism” and human rights. These were attached to the Bretton Woods institutions' Structural Adjustment Programs (SAPs) that were implemented from the 1980s onward. The SAPs wiped out most of the social facilities that African countries had created after their independence. In Kenya, health and

education were hit hard. A system called Cost Sharing was introduced. A lot of people who had already been hammered by falling prices of local goods, due to liberalized markets, could not afford medication for their babies or schooling for their children.

The real Kenyan economy shrank relative to population growth with rural-to-urban migration growing earnestly. Nairobi's population grew by over 61 percent between 1989 and 1999, compared with a 34 percent growth in the entire country. This is the time that Microsoft's Windows 95 spread and with it the Microsoft Office suite of packages. Computer manipulation skills were in demand, creating a market for computer-related training that was colloquially known as "learning packages." This fed the need for alternative tertiary training for the urban immigrants and school-leavers as well as bringing current management executives in many companies up to digital speed.

By the time the Internet 1.0 dot-com bubble burst, in 2001, Kenya entered into a "Second Liberation" political era, with the end of the rule of the political party that had been in power for close to 40 years. Foreign investment and the effects of the privatization of state corporations continued, with the entry of mobile telephony networks in Kenya as well as most of Africa. Safaricom, a spin-off from the state corporation Telkom Kenya, brought in affordable mobile connectivity to a country that had slightly over 320,000 fixed lines at the time. By 2002, there were 500,000 mobile phone users, and the growth has been in double-digit percentages ever since.

At this time, the Kenyan government removed importation-related taxes on mobile devices and computers. This allowed almost anyone to afford a mobile phone, and laptops began to be a common site at universities. Kenya's then Permanent Secretary in the Ministry of Information and Communication, Doctor Bitange Ndemo, led a move to break away from the bureaucracy-plagued Eastern Africa Submarine Cable System and set up The East African Marine System (TEAMS) consortium. Once launched in 2009 and after a number of cable mishaps, the TEAMS

cable has upgraded its designed capacity from 640 Gbps to the current 1200 Gbps, and Kenya—along with most East African countries—uses this cable because of its better transmission quality and reliability. Other cables have come in, too, leading to a total of four fiber-optic cables in Mombasa. Access to the Internet has become a reality for many people.

In 2007, Vodafone, through Safaricom, launched the M-PESA money transfer platform. Since then, M-PESA has become the global leader in mobile money transfer and raised the possibility of Kenya and Africa being at the forefront of world m-commerce. Just a year later, the crisis crowdsourcing platform Ushahidi was created to monitor the increasingly opaque Kenyan election scenario in early 2008. This platform then went on to become a globally recognized and used way to monitor crises.

In 2010, the first tech community-led “hub” was opened. The iHub, which stands for “innovation Hub,” is a co-working and hacker space and, in its own words, “a nexus for technologists, investors, young entrepreneurs, designers, researchers, and programmers.” The iHub was the pioneer among the numerous co-working and incubation spaces across Africa today. It is here and in other African technology, art/culture and co-working spaces that the question of the global positioning of the African digital entrepreneur began to be raised.

If Africa Online and FORM-Net Africa formed the first wave of digital entrepreneurs and companies, these four events—the Kenyan government’s genuine commitment to ICT, the M-PESA platform, Ushahidi, and the iHub—were the milestones in the making of the Kenyan technology landscape (with its new moniker, the Silicon Savannah).

What do you think of the Silicon Savannah’s future? What can we expect?

That is a good question. And such questions have started to be posed in the expounding of the vision of the Silicon Savannah. Is it possible or is it a dream, driven by the hype of tech-savvy Kenyans? Are these dreams realistic? What will it take to put Kenya and Africa on the global

technological map? In Kenya, again, you can see the two parties in it, the government with its politico-economic agenda and the people's relationships with this as they go along doing their business.

As the initial media spotlight continues to dim, a number of fundamental issues about business anywhere are becoming apparent. Kenyan entrepreneurs do not yet have the requisite knowledge and commercial infrastructure to build globally recognized technology companies when compared with their Western counterparts. What is being asked of them is equivalent to fixing an aircraft while yet in flight. Not only is the global technology landscape changing rapidly, but African entrepreneurs are being asked to stake their claim as it changes. And if that is based on the timeline of California's Silicon Valley, then we are 50 years late to the party.

Being late to the party is one thing. But what are the underlying issues at play?

Africans seem to have a penchant for accepting foreign ideas and absorbing them without critically investigating their source, history, necessity, and workability in the context of the African space. Look at the words being used in the African technology environment—words like Silicon Savannah—and you can see that not a lot of thought was put into the connotation, as if the perception of the American Silicon Valley had been taken wholesale and simply plastered onto an African scenario. This way of thinking started some time ago, and Silicon Valley is just the most visible part of that iceberg.

Stepping back a bit, Africa's destiny in the world began much earlier and changed significantly in the 1500s, when the Portuguese began sailing to Africa. At that time, Africa south of the Sahara could stand toe-to-toe with Europe in social, commercial, and military prowess. The Portuguese became the most active Europeans in Central Africa and met the Kingdoms of Kongo and Ndongo, among others, that were as good as the Portuguese were in diplomacy, war, and commerce. The Portuguese carried out the business of slavery in earnest to provide for the labor necessary to conquer the new colony of Brazil.

In order to gain a foothold in the kingdoms of Benin, Kongo, and Ndongo on the African western coast, a number of missionaries were sent to “Christianize” the Africans. One of the most important concepts was that “slavery was a normal part of world affairs”—a European Christian construct and a position favored by King Afonso I, ruler of the Kingdom of Kongo (1456–1543).³

The Portuguese slave traders had a plan. As the people became “enlightened” by Christian education, communities were convinced to rebel against Afonso’s rule. The ensuing rebellion would be used as an excuse by the Portuguese to wage war against these communities in the name of aiding Afonso, thus creating prisoners of war who invariably added numbers to the slave trade. Before long, Afonso’s kingdom was falling apart, his authority diminished, and some areas became depopulated. This was a strategy used again and again across Africa by the “other” Europeans.

The Industrial Revolution took this state of affairs to an even higher level. With the “Scramble for Africa” and colonialism, Africa fell behind the development of the European and later American and Asian nations in world affairs. Globalization picked up speed, accelerating in the twentieth century because of two World Wars and electronic communication. Now, in the twenty-first century, globalization is spreading at the break-neck speed of the Internet and the mobile phone.

Today, in the post-Industrial Age, a new concept has emerged—that of the digital entrepreneur. These two words carry a different emphasis, depending on whether you use the Western or African perspective. In the West, “entrepreneur” is massively important right now because it virtually disappeared during the Industrial Age. Before that, everyone was an entrepreneur. In Kenya, particularly, almost everyone is *still* an entrepreneur. It is the “digital” that is new. This means that in the future, formal

³ See ‘Portuguese and other Europeans in Africa in the early 1500s,’ <http://www.fsmitha.com/h3/h17port2.htm>.

employment, especially in ICT, will increasingly be seen as an option to an “informal” vocation or a transition to self-employment.

But this state of affairs is not spread evenly across Africa. Canal+, a French media company, held a conference in Nairobi where I participated as one of the organizers. Delegates from French-speaking countries in Africa were invited to understand how ICT hubs are spreading throughout Africa and the possibility of this happening in their countries in particular. As we talked about thinking outside the box, it became clear that most of French-speaking Africa lags behind the English-speaking communities in digital entrepreneurship, because the France-based education system follows the old paradigm of standardized learning, in which innovation is not encouraged. An entrepreneur needs critical thinking, persistence, adaptability, creativity, and initiative. The situation is not helped much by the fact that most Western technological ideas are shared on the Internet in the English language.

What is the way forward for the future of digital technology in Africa?

Let me give you an example. Africa is still portrayed in Western media as if we were in the sixteenth century. Adding post-colonialism and the international aid guilt trip, Africans are relegated to handouts that come in many forms while the extraction of minerals and human resources continues. Africans consume the messaging that they must take what they are given and become entrapped by Western ideas and ideology. This leads to collective low esteem and apathy, creating passive people who are absent from the conversations that affect them on the world stage.

There are things we as Africans can learn from our history when looked at from a Western worldview. But as Minna Salami, an African writer said, “These images are so negative that it takes us tremendous effort to not see ourselves through the eyes of this distortion.”⁴ It will take a lot of work and some time for the Western worldview of Africa to clear.

⁴ See Minna Salami. ‘To change the world, change your illusions’; <https://www.youtube.com/watch?v=PiVB5niLrWg&feature=youtu.be>.

In this digital era, African entrepreneurs need to see themselves clearly and consider a different, bolder perspective as they strike out to make their mark in the world. We need to reinvent Africa and use digital technology, the mobile phone, and the Internet to do it. Just as most of Europe is defined through the Industrial Revolution (“German engineering,” etc.), perhaps African communities can be defined and reimaged through the lens of digital technologies.

What are some of the lessons, implications, and changes in mindset that you think are necessary?

Allow me to propose three lessons that we need to take from our history. First, we must remove our Western-colored view of Africa and look at it in a new way in order to create a conducive environment. Individualism is the lens through which people in the West view themselves. We must recognize that we Africans base our social outlook on collectivism. This immediately explains the differences in approaching the identification of innovative solutions. For the West, innovation stems from solving concerns revolving around the individual. In Kenya, the innovations that have been built are to solve non-individual problems.

Before M-PESA, there was Sambaza. This was—and still is—a service designed to allow one person to buy mobile phone airtime for someone else, say, a son in the city buying for his mother, who lives up-country. The problem was that the airtime was sold in large denominations, even though most subscribers wanted small amounts at a time. So, enterprising Kenyans would buy the large-denomination cards, usually for 100 Kenyan shillings or more, and resell airtime to others in smaller amounts, charging a fee for the service—with the result that using a service developed for one purpose created opportunities for another. M-PESA took advantage of this enterprising nature, allowing two individuals to transfer money to each other and Safaricom to make some money off that, unlike in the Sambaza system. Safaricom then produced small-denomination airtime cards branded as Bamba. M-PESA and Bamba cannibalized Sambaza. This mobile commerce innovation was based on non-individual needs. The same non-individual premise could be attributed to Ushahidi, the company that I talked about at the beginning. And so, we

should expect more non-individual and social innovations to come from Africa (mobile banking and retail have already taken hold).

Second, the initial innovations in Silicon Valley focused on “silicon” based ideas. It was used in the production of electronic components and microcircuits. Some of the companies involved were Shockley Semiconductor Laboratory and Fairchild Semiconductor, from whom Intel and Advanced Micro Devices, among others, were spawned. These innovations were taking place in the Santa Clara Valley in San Francisco. It is these innovators who “developed a culture of openly denying the hierarchical culture of traditional corporations. People remained faithful to each other, but not to the employer or the industry.”⁵ This is Silicon Valley.

We need to recognize this, because nowhere in Africa is silicon itself being used to innovate through production. Africans are joining this innovation space during the digital—and, more correctly, the mobile—era. So “digital” is a better description of African innovation at this time. Also, though “savannah” is used to depict an African landscape, it is not an African word. It comes from a Native American community for the grassland prairies they inhabited.⁶ Should we not be using the name that Africans themselves gave their grasslands?—*Nyika!*

This renaming—“Digital Nyika”—even though a seemingly small change, is an exercise that forces us to look at the African innovation space without biases. We can then learn from other innovative spaces around the world, copy what is necessary, build what infrastructure we need, and innovate for Africa first. Only then can uniquely African knowledge and financial investment grow in an environment that is in itself unique.

Third, it should be noted that most of the tech solutions that have come out of Africa and ventured onto the international stage had a local problem at their core. That is all well and good. But the current Silicon

⁵ Access Wikipedia. ‘Traitorous Eight’. https://en.wikipedia.org/wiki/Traitorous_eight for more information.

⁶ Access Wikipedia ‘Savanna’, <https://en.wikipedia.org/wiki/Savanna> for more information.

Valley thinking in Africa has caused the ideas we see coming out of our innovation space to be mostly copies of what we see in America and other places, with the only new ingredient being “How can it work here?” Still, Ushahidi is an example of a global problem solved first locally. There was no other solution like it nor would there have been one, because the conditions for its creation were unique to Kenya and other developing economies.

Africa in space and time must take charge of its destiny, using digital technology to take advantage of the confluence of a young and growing demographic, an increasingly multipolar political world, and all the advantages of not being saddled with generally older populations and analogue technological systems. If you look around, this is already taking place—and is increasingly crossing over to innovations that combine software and hardware.

That is our Kenya, a new Africa, the birthplace of mobile money and crisis mapping.

What will be next?

Thank you, Jimmy!



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