

Knowledge economy appeals to youth

Somewhere between the equator and the Kenyan town of Nanyuki, five students sit inside a classroom watching a YouTube video describe how to extract aluminum from bauxite. “Once you see it, it makes it so easy,” exclaims 19-year-old Kenneth Karue.

By [Jacob Kushner](#) 7 Apr 2017



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Two years ago Gakawa Secondary School had no internet access. But thanks to an initiative by Mawingu Networks, a solar-powered internet service provider, rural Kenyan youth are going online for the first time, and with amazing results. High school students like Karue, who didn't know how to use a keyboard, much less a search engine, are now Googling entry requirements for information technology programmes at Nairobi universities.

Some of these students aspire to careers in Africa's blossoming information and communications technology (ICT) sector. The World Bank estimated that in 2016, African nations would invest between \$1 billion and \$180 billion in the ICT sector, accounting for 6%–7% of Africa's gross domestic product (GDP). But young people say there are major barriers preventing them from finding jobs in the industry.

“We have a lot of young people. But unfortunately they come from neighbourhoods that don't have a lot of opportunities,” says Tim Nderi, the chief executive officer of Mawingu Networks.

Since 2013 Microsoft has invested in Mawingu Networks on the premise that enabling young Africans to access the digital world is the first step towards getting them employed in it.

However, “Do people have access to the internet, and is that access affordable?” asked Microsoft's Antho Cook in an interview with *Africa Renewal*. “As you think about moving towards a knowledge economy, you have to be able to take the bulk of the population with you.”

By October 2016, 10,000 people were using Mawingu's internet in four different Kenyan counties. And in September, former President Barack Obama lauded Microsoft and Mawingu's success during his address at the US-Africa Business Forum in Cape Town.

Many African countries have embraced the idea of a *knowledge economy*, a term coined in the 1960s to describe economies in which the production and use of knowledge are paramount. Academic institutions and companies engaging in research and development are important foundations of such a system. And so are those who apply this knowledge—the programmers developing new software and search engines to use data, and the health workers who use data to improve treatments.

A long way to go

Some African governments have begun employing tech-ready youth in the public sector. In Kenya, where an estimated 5 million youth are unemployed, the Presidential Digital Talent Programme recruited 400 university graduates to work on major projects at different ministries. A \$150 million, five-year public-private partnership launched last year by the World Bank set out to help 280,000 unemployed Kenyan youth learn about employment opportunities and undergo employability training.

But elsewhere on the continent, such government initiatives have fallen short. Three years after it began, Innovate Lagos, a 2013 Nigerian government-funded ICT incubator that set out to prepare youth and other entrepreneurs to “drive growth and development through innovation”, no longer even owns the domain name of its website.

Africans have good reason to be hesitant about the idea of their countries’ economies being centered on information technology. “Many of the new jobs that have been created over the past two decades are fundamentally different from the ones that have been lost, and the new jobs tend to favour educated workers over those with less education and skills,” says author Dan Tapscott in the 2014 edition of *The Digital Economy*, his book about the global ICT industry.

For those preparing for careers in ICT, access to the internet and to education are fundamental prerequisites. Fortunately, in places like Nigeria, cellular internet is becoming eminently affordable.

“Recently, data prices in Nigeria crashed by more than 50%. For just a dollar and a half you can have access to internet each month,” says Adeloje Olanrewaju, a Nigerian entrepreneur who co-founded SaferMom, which gives expecting mothers access to health and pregnancy information via cell phones.

“Internet penetration is going to increase, more people are going to come online, and sectors like ours are going to get more attention,” he predicts.

By “attention” he means investment in educational and job opportunities. “Nigerian youth are brilliant. We need to get them jobs,” says Olanrewaju. “Lagos wants to be the Silicon Valley of Africa, but we see lots of youth struggling to gain the skills and experience to find employment.”

Generational gap

Part of what’s holding them back, he says, is a deep generational gap.

“Technology is still new in Africa,” Olanrewaju told *Africa Renewal*. “People in power often are in the range of 50 years old. Technology is new to them.” He says African governments have been slow to incorporate any of the promising tech achievements conceived by private sector start-ups or the established firms that start-ups are good at attracting.

More than two years after the Kenyan government announced that it would require its public minibuses,

or *matatus*, to use cashless payment services in an effort to reduce bribery between operators and traffic police, *matatu* owners continue to resist those efforts.

But Olanrewaju isn't surprised by the slow rate at which some African governments are adapting. "Innovation isn't usually led by the government—it's led by people like you and me."

Olanrewaju would know. As project director for Nigeria's Youth LEAD initiative, he oversaw the training of 400 students in different technology skill sets and mentored 25 of them in social entrepreneurship with the goal of helping them begin their own companies. He says the private sector has been essential in generating opportunities for youth in ICT.

"We have more than 20 incubators in Africa," says Olanrewaju. "That means that if I have an idea, instead of paying thousands of dollars in rent in Lagos every month, I can pay a few hundred dollars and have access to the internet, space and mentors and all that. I can do a lean start-up."

Still, he says, Nigeria's technology sector is no panacea for Africa's unemployed youth. "Not everybody is going to build a viable business. If you actually have the right network, the right mentorship, and you have access to funds, there's no reason not to try. On the other hand, if you don't really have enough experience managing a company, why not get a job, learn some innovative roles, and learn how that works before starting your own business?" He explains that not every African needs to be an entrepreneur: "Different people, different strokes."

When private sector isn't enough

African governments should do more if they hope to grow a knowledge economy to absorb the continent's young workforce.

"We have a lot of talent in Africa," says Esther Muchiri, a Kenyan consultant and a recent vice-chair of Kenya IT and Outsourcing Service (KITOS), a trade association of IT and IT-enabled companies.

Much of Africa's progress in generating job opportunities for young people interested in technology is coming from the private sector — entities like Africa's 300 tech hubs and business incubators, including iHub in Nairobi, CTIC Dakar in Senegal and the Bandwidth Barn in Cape Town "all of which nurture young talent and innovative ideas," says Muchiri.

She adds, "What is clogging the tech scene in Africa is the gap between innovations and market needs." Muchiri says that too often, developers make assumptions about what consumers want or need, only to discover later that their idea isn't exactly what the local market is looking for.

One way African countries are bridging that gap is through partnerships with leading global educational institutions.

Many foreign universities already operate satellite campuses in Africa. A partnership between Rwanda and Carnegie Mellon University, a top US engineering school, is enrolling hundreds of young Rwandans in programmes leading to Master of Science degrees in information technology. Rwanda's government is covering half of each tech student's tuition, easing the financial burden of a tech education.

Rwanda is also home to one of Africa's largest technology universities, the

University of Rwanda's College of Science and Technology, which hopes to enroll 9,000 students by 2020. As African governments continue to invest in internet access and technology education, the potential for young Africans to find jobs in the continent's IT sector is sure to grow.

Source: [*Africa Renewal*](#)

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