

Mobile technology key to closing Africa's digital divide



By [Brendan McAravey](#)

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The Internet has undeniably become the lifeblood of our society, providing essential access to jobs, public services and resources to citizens. Digital services and the Internet are likely to be the future of the economy and of the workforce. It follows, then, that those who are unable to engage online, or who do not know how to engage online, are excluded from the innumerable opportunities that the Internet provides. They are facing a hidden, digital poverty.



It is this digital poverty that is plaguing much of the African continent. According to the World Economic Forum's Global Information Technology Report 2015, the world's developing and emerging economies are failing to exploit the potential of information and communications technologies (ICTs) to drive social and economic transformation and catch up with more advanced nations. Not having access to the Internet due to lack of broadband infrastructure, data costs or because someone does not have a smartphone prevents the citizens of these countries from accessing and sharing a wealth of information and knowledge.

Government organisations across the continent have a key role to play in ensuring that citizens have access to the Internet to gain knowledge, with a long-term goal of eliminating digital poverty, by ensuring that everyone has the opportunity to get themselves online - whether it's for their business, their school work or to access critical public services.

Joint initiatives

Technology companies and government need to work together to improve the digital services available via joint initiatives. Technology should be viewed as a utility, essential to every individual in the country, and needs to be provided at a very affordable rate. In a household where people are living hand-to-mouth, the priority is on fulfilling basic needs; therefore, if accessing the Internet will use up a large portion of their income, it is unlikely that adoption will occur, even if this could ultimately empower them with knowledge and skills. Governments therefore need to work more effectively with providers to drive prices down to ultimately increase the uptake of Internet connection.

Some African governments have taken active steps to ensure their citizens have access to the Internet at an affordable rate. An example of this would be Rwanda, which has recognised the value of the Internet and the role it can play in helping to transform its agrarian, lower-income economy into one that is both knowledge-based and middle-income.

The Rwandan government has also acknowledged that focusing purely on the development of infrastructure to access the Internet is not enough, and that they need to build the capacity to promote, develop and host content locally. Alongside this, the government also pioneered infrastructure sharing as a way to lower the costs.

In addition, when content was hosted locally it decreased delays and usage increased. The government of Rwanda has developed content to increase demand, and requires it to be hosted locally. Increasingly, international content such as YouTube videos, is available locally as well.



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Need to foster learning

As well as continuing to establish infrastructure, there is a need to foster learning and education, addressing the necessary skills for Internet adoption to encourage uptake and ultimately closing the digital divide. According to an [article published by The Guardian](#), survey evidence in many countries shows that a lack of interest, rather than affordability, is the reason for not going online.

Ultimately there is a strong need for African governments to pursue the issue of digital poverty, educate, embrace and drive interest in getting online - including working with businesses and providers to put infrastructure in place and drive down costs for increased accessibility.

Africa's continued skills deficit is also being compounded by a lack of technical skills, which is having a negative impact on employment across many sectors of the country's economy. Improving education in Africa is crucial in aiding people to develop the technical skills to grow the economy.

Governments in Africa have put together policies to offer young generations the opportunity to enhance their ICT skills - one step to start closing the digital divide. According to IST Africa, Botswana, Burundi, Cameroon, Egypt, Kenya, Lesotho, Mauritius, Mozambique, Senegal, South Africa, Tanzania and Uganda have all put together comprehensive ICT policies.

Advanced courses

In South Africa, WITS University's School of Electrical & Information Engineering and the Joburg Centre for Software Engineering (JCSE) now offer a programme of advanced courses in software engineering. This initiative is a good example of how the lack of skills could be overcome.

The good news is that from a technology perspective, the key to enabling things such as remote working and mobile communications already exist. For continents such as Africa, mobile technologies are crucial in closing the digital divide as they are not restricted by slow bandwidth, service interruptions, electricity outages or remote locations. Mobile technologies also cost a lot less as anyone can access the Internet with a smartphone or mobile device.

The continued rise in mobile penetration can make it possible to deliver data and applications virtually. It makes it much easier to provide schools, for example, with content and material, even if a device is relatively 'low tech' - as long as it is serviceable and has a web connection. By using thin client delivery methods, access to a variety of applications and resources, as well as the web, becomes possible.

Remote schools with an Internet connection can access the same courses that are being taught in city schools - if the curriculum changes, the changes are made in one place and delivered everywhere. Furthermore, learners who live too remotely to attend school can 'attend' classes via mobile device and have equal opportunities to their less remote peers.

Mobile is ideal

Digital services are vital for the future of the continent, and mobile technology is an ideal way to provide learning. However, in order for education to be facilitated through mobile devices, there needs to be continued improvement of mobile broadband infrastructure to deliver 3G and 4G across Africa.

If digital poverty on the continent is to be addressed effectively, it is vital that governments and service providers work closely in order to enable Africans to access information in a cost-effective manner. Mobile is one such vehicle. Education on the power of the Internet is also key in ensuring communities understand the potential it offers to them personally so that they will be more likely to invest in accessing it.

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