

StanfordSOCIAL INNOVATION^{REVIEW}

10th Anniversary Essays
The Mobile Continent
By Erik Hersman

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SketchUp can perform many of the same functions as a \$4,500 AutoCAD system. Prototypes can be made with increasingly affordable 3D printers, then publicized via social media and funded by Kickstarter campaigns. None of this will threaten existing manufacturing or design firms in the near term, but in the long or even medium term, it points to a decentralization and de-capitalization of manufacturing, a de-professionalization of design, and a radical democratization of the way products are created, bought, and sold.

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THE MOBILE CONTINENT

BY ERIK HERSMAN

Africa today is a continent that evokes a collective sigh at the inefficiencies and idiosyncrasies of its past and present while it offers a glimpse of an astounding future.

Everything changes, or so goes the truism. But Africa is changing faster and more furiously than anyone imagined. Africans are acting like equals in business, government, and culture. They deserve a place at the table, and increasingly they are getting one. Some North Americans and Europeans feel unsettled when they realize that Africa isn't just getting better; it's getting better at certain things.

What happened? Mobile happened. That's the one new input that has disrupted much of African culture, business, and politics. The one meaningful change in the algorithm of Africa that no one expected is the cellular telephone.

Context is important. In the 1980s and '90s, computer and communications technology took hold in the West. But in Africa, if you ran a business, say in Kenya's cities or up-country, you were hard pressed to communicate efficiently with your suppliers. Lag time between customer demand and inventory levels was legendary. You could show up at one auto store to find that the owner had a mountain of supplies that would sit gathering dust for the next 10 years. Or you could show up at another auto store just 10 miles away and find that all its inventory had been snapped up and nothing was coming in for another two months.

In the 1980s and '90s, Africa didn't have the copper lines to support mass telephone communication. In 1993, my family had moved from Sudan to a middle-class neighborhood in Nairobi. It

took three years for my dad to get a working telephone line in the house. If the line was cut, weeks would pass before someone came to fix it. But we were the lucky ones. In the early 1990s, there were only a couple of hundred thousand phone lines in all of Kenya.

In 1999, the first mobile operator license was granted to Safaricom and Kencell by the Kenyan government. Outsiders thought this was a crazy idea; no one believed that Africans could afford to pay for either phones or phone service. People in the United States and Europe could barely afford mobile. Little did we realize that the revolution had begun, although it would be five or six years before the tsunami arrived.

Today: In Ghana, Bright Simons runs mPedigree, a breakout business that verifies medicine and prevents counterfeits via SMS. In Kenya, Nivi Mukerjee has created an Android tablet called eLimu that helps primary school students prepare for crucial exams. In South Africa, Fundamo pioneered mobile money solutions for millions of people before being acquired by Visa.

Today: A small kiosk owner who sells soda in a Nairobi slum sends an SMS to a supplier, who in turn uses both mobile and web-based apps to talk to the bottler. This improved supply chain has shortened delivery time from five days to two.

Today: A man in Dar es Salaam, Tanzania, who used to take a bus up-country to bring cash to his mother and father now sends money over his mobile phone. He joins the millions of other mobile money users in Tanzania, the second-fastest-growing mobile money market in the world, behind Kenya and ahead of Uganda. Africa now leads the world in mobile money transfer.

Today: A female college student calls to confirm an interview before she leaves her dorm for the hour-long commute across the city. Previously, she might have wasted two hours traveling across the city only to find that her meeting had been cancelled.



It's hard to overstate how much mobile phones have changed the shape and form of life in Africa. every stratum, every fiber of the fabric of life here has changed because of mobile phones.

—ERIK HERSMAN, Ushahidi

It's a small change, something that most people in the West take for granted, but this kind of increased efficiency means a great deal for people across the African continent.

The pace of innovation and efficiency continues to accelerate, much to the discomfort of those who find comfort in the way things used to be. African politics, media, business, and society are feeling the effects of a digitally connected populace in which the ability to create and disseminate information is no longer just for the elite.

Now more than 35 tech hubs in Africa provide homes to bright-eyed and optimistic startup entrepreneurs, who are incubating, mentoring, and driving a new narrative of Africa. We started the

iHub in Nairobi two and a half years ago, to see what would happen if the Kenyan tech community had a place of its own. We now count 9,700 members, a true cross-section of Nairobi's tech community, including people from academia, government, corporate multinationals, and startups, as well as investors.

Whether or not the rest of the world understands Africa's emerging powers, the big tech companies certainly do. Viewing Africa as the last blue ocean of consumer demand for technology, with a growing middle class, big tech is starting to invest. Google, Nokia, and Samsung have been here for a while; IBM opened a large research facility in Kenya; Microsoft and Intel have renewed their push of mobile devices and tablets. And that's just in Nairobi. Similar investments are being made in Nigeria, Ghana, Senegal, South Africa, and Egypt.

What is the single common denominator behind all of these developments? Mobile phones, the device in everyone's pocket, the technology that has cracked open the world to a billion new people. It's hard to overstate how much mobile phones have changed the shape and form of life in Africa. Every stratum, every fiber of the fabric of life here has changed because of mobile phones. The last decade has seen dramatic change in Africa, and the next decade promises even more.

ERIK HERSMAN is a co-founder of Ushahidi, a free and open source platform for crowdsourcing information and visualizing data. He is the founder of the website AfriGadget and of Nairobi's iHub, and he is a partner in the Savannah Fund, which provides seed capital for African tech startups.



TOWARD AN OPEN-SOLUTION SOCIETY

BY J. GREGORY DEES

We are moving toward a more open-solution society, one in which people of all walks of life are encouraged to apply their creativity and talents to crafting innovative solutions to social problems and increasing their impact. The democratization of social innovation is driven by a range of factors, from cultural shifts to advances in information and communications technology. *Stanford Social Innovation Review* (SSIR) has been making and will continue to make a significant contribution to this movement.

This is a good thing. Societies around the world are facing significant social problems for which they often do not have (or at least have not implemented) effective and affordable solutions. As they struggle, they also face significant uncertainty and rapid changes (from population shifts to technological advances) that result in new, complex, and shifting problems, and that open the

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