



Mobile phones bring revolution to developing world

A wave of mobile technology spreading across the third world promises more efficient disaster relief, cheaper energy and a faster route out of poverty

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People at a Aids medical centre in Mombasa, Kenya, receive food aid from a community health worker.
Photograph: Alamy

We all know how fast technology can change markets and businesses. Now the web and the mass proliferation of mobile phones, as well as falling costs for all kinds of technologies, are allowing rapid change to affect more than just the developed world.

And advances in technology and the falling cost of delivery are driving big corporations as well as entrepreneurs to take new or renewed interest in solving some of the most seemingly intractable issues we face as a global community, from health care to education, from economic development and rolling out affordable alternative energy to coping with the social and economic fallout from natural disasters.

Even non-governmental organisations (NGOs), many of which not claim to be particularly skilled in technology, are catching on, using it both in field work and in publicising what they do.

In some ways technological advances will happen first in the developing world because there are less entrenched interests in the way. There is, for example, a free software program called episurveyor that allows health workers in Kenya to track disease outbreaks more efficiently using web-based data-gathering tools on their mobile phones. It has been embraced by Kenya's ministry of health, but it is unlikely to enter developed markets so quickly.

The same pattern can be seen in alternative energy technologies. A year ago Alcatel Lucent ramped up its work by making cellular telephone sites in areas off the electricity grid affordable for its mobile operator clients. "The big driver is to bring telecoms beyond the electricity grid to reach the 1 billion people who are famous for being outside the reach of telecommunications," says Frederic Wauquiez, marketing director of Alcatel Lucent's alternative energy programme. "It's not a telecoms challenge. It is an energy

challenge."

Alcatel Lucent now sees producing alternative energy for telecoms as a strategic imperative and a moral one in terms of reducing the carbon footprint of the telecoms industry. Recent strides in solar and wind power technology mean the return on investment makes them cheaper than running diesel engine-powered generators or avoiding certain remote, off-the-grid areas altogether.

"We're done with the stone age and the pioneering stuff in alternative energy," says Wauquiez. "We are now talking about large-scale rollouts."



Alcatel Lucent wind and solar technology on a cell site in Qatar

Cellular mobile phone transmission towers in emerging markets will be the first to benefit from alternative energy – they are cheaper to build than laying down landlines – which helps explain why mobile phone use is outpacing landline use in the developing world. Landlines will also adopt alternative power but at a slower pace depending on the country, predicts Alcatel Lucent.

"As the technology evolves, as we do a better job at integrating and the price of electricity from the grid becomes more expensive - and it will - this technology will also become applicable in grid-connected situations and for all type of networks, wireless and wireline," he says. "It's not just emerging markets but all markets. We built this programme with this in mind."

The proliferation of technology tools that individuals can afford is changing how quickly new ways of doing things can be developed and rolled out. "We haven't even begun to realise what it means when every health worker, every schoolteacher, when literally everyone has a connection to the internet," says Joel Selanikio, MD, assistant professor at Georgetown University's Department of Pediatrics and also the co-founder of DataDyne, the company that created Episurveyor software being used in Kenya. "People underestimate the effects this change is having. I think it will rival the printing press for its effects on society."

Episurveyor itself has been transformed in the last year, moving from being a Windows download to Palm Pilots to a Web-based app that works on almost any mobile phone. "Five years ago I was trying to figure out how to afford to buy Palm Pilots for all the health workers we wanted to reach in Africa," says Selanikio. "But then everyone ran out and got a mobile phone. This has been transformational."

Since episurveyor became a web application, its business has exploded with 2,000 downloads across 120 countries. With a company staff of just 10, this growth wouldn't have been possible if the software wasn't easy to use.

"This many users in a year is a record for international development software," says Selanikio. "I don't even know most of the people who have downloaded it because it is user-friendly and doesn't require us to send a programmer in to make it work... If you really want to free the health workers in countries to be able to assess their health situation there is nothing more powerful than making it a web app as easy to set up as a Gmail account."

The ability to reach more people more easily and directly through technology is also supporting the work undertaken by the overseas aid charity, Oxfam. Taking its cue from the blogging tent at the US Democratic conference in 2008, and working with several other organisations including Save the Children, the Voice Project was developed for the G20 Summit in London last year.

The idea was to bring 50 hand-picked bloggers to the summit so that coverage of the global financial crisis would include the impact on people living in poverty. "I saw we could engage our existing supporters and wider audiences on the issues that mattered to our organisations through the discussions and debates that bloggers were having online," says Karina Brisby, head of interactive campaigns at Oxfam GB.

"Not only did we get a lot of coverage on the issues that are important to us but the mainstream media were interested in them (the bloggers) as well...We only got permission to do this one month before the summit but we polled the web to tell us who they wanted to represent them."

Oxfam has put its message onto Facebook, where it has 20,000 fans, and on Twitter where the charity has 10,000 followers. This month it has set up a participation video on YouTube called [Don't Drop the Ball.com](#) to try and capitalise on the World Cup but also to raise the profile of issues that could lead to the end of poverty and injustice.

In July Oxfam will unveil a new digital monitoring and outreach programme that better uses the Web. "We are moving from a broadcast mode of: here is what we stand for, to one where there is more space for people to also have a conversation with us as well," says Brisby. "Oxfam isn't anything if people don't support it."

Weblinks

alcatel-lucent.com/alternative-energy/

episurveyor.org/user/index

oxfam.org.uk/?ito=1482

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