



Choosing appropriate technology includes consideration of not just technical aspects, but also environmental, cultural and economic factors.

Success stories

- **Kazi650** Kenyan job-brokering service notifies subscribers of employment opportunities via SMS. People see value in paying for the service, which has filled more than 60,000 jobs since its launch. www.kazi560.co.ke
- **FrontlineSMS** Standalone SMS hub developed by kiwanja.net requiring a PC and a GSM phone. Meant for new growth market conditions, it allows organizations in areas with sparse infrastructure to communicate with users, staff and communities. www.frontlinesms.com
- **Entrepreneurial Programming and Research on Mobiles (EPROM)** In Kenya, computer science students are taught to create applications for mobile phones, not just PCs – prime example of a project that builds future capacity. web.mit.edu/eprom

Applying appropriate technology helps create sustainable solutions. In new growth markets especially, “appropriate technology” signifies much more than just the technology itself.

More than **technology**

Policy-makers, regulators and operators pondering possible solutions for expanding the scope, efficiency and usefulness of mobile communications can find insights in the work of nonprofit organizations. Mr. Ken Banks, an anthropologist and technologist and visiting

scholar at Stanford University in the Reuters Digital Vision Program, has spent the past 15 years dealing with ICT solutions for nongovernmental organizations and other groups involved in new growth market social and environmental development initiatives. He believes that a key principle of ICT

projects revolves around the application of appropriate technologies that are primarily needs-driven or people-driven, rather than technology-driven. Banks explains, “Appropriate technology means the technology most appropriate to the environmental, cultural and economic situation.”

“Needs-driven” refers to a technological product or service responding to real needs of the target community or customers. Development of these technologies should also be people-driven. “People are different all over the world,” says Banks, “so local customs, social context and infrastructure need to be considered.” By contrast, a technology-driven solution would be more about simply implementing the latest technology rather than specifically aiming to meet people’s needs.

Communications in local context
“We should not just march on and on with technological advancement, without reflecting on what we are doing

and who we are ultimately doing it for,” Banks continues. Local context – cultural, social and physical – needs to form an important aspect of mobile communications projects.

“Developing tailored products and services for new growth markets is now seen as the best way forward,” says Banks. “We can expect to see more of this as the bottom of the economic pyramid increasingly becomes a focus.” He cites an example of a service designed specifically for new growth markets: “Vodacom’s ‘Call me!’ service in South Africa allows users to send a free SMS requesting to be called back.”

In some mature markets, customers are charged to both send and receive calls and text messages – a business model that Banks says would likely falter in new growth markets for lack of compatibility with local conditions. “If this model had been replicated en masse in new growth markets,” he comments, “then we would not be having this conversation right now, because mobiles would not have become the engine of this amazing revolution we are experiencing today.”

Sustaining solutions
In his work, Banks lists economic value as part of his recipe for a sustainable mobile communications project – one that will someday be able to carry on

without continuing financial support or subsidy. “One World’s Kazi560 job alert service in Kenya has found the balance perfectly,” he says. “Users get economic value – jobs and income – so it is a cost they are willing to take.”

Financial stability, whether in the nonprofit, private or public sector, is not always easily achieved. To ensure that local context is taken into account, Banks “sense-checks” potential solutions against grassroots reality. Are the assumptions that form the basis of the project proposal or business plan consistent with the onsite situation? Engineers, programmers and planners have not necessarily had exposure to the prevailing conditions. For example, will local traditions make citizens wary of giving their phone numbers to field workers, even if it is for a good cause such as disaster warnings via SMS?

“Internet access via wireless devices is still a long way off for rural communities in new growth markets,” says Banks. He hopes that dialogue will result in the “appropriate, relevant applications” that hold so much importance. Technology, he notes, “will not bridge the digital divide alone.” ■

For more info about the work of Ken Banks, see www.kiwanja.net, where “technology meets anthropology, conservation and development.”