

Introduction

An estimated 3.5 billion mobile phones are now in use around the world—more people now have one than don't.¹ This remarkable revolution—widespread access to the most ubiquitous communication device in human history—has changed the way societies and communities organize themselves and do business.

We, the authors, set out in this report to explore the ways in which non-governmental organizations (NGOs) and other groups deploy and use mobile technology in their work to help solve some of the world's greatest problems. This study is not meant to be exhaustive or definitive, but rather to provide a view into how a number of organizations are using mobile technology to achieve social impact. We selected case studies that enabled an exploration of significant innovations, opportunities, and emerging trends, as well as the obstacles, in the use of mobile technology to advance social goals.

¹UNCTAD (United Nations Conference on Trade and Development). *Information Economy Report 2007-2008* (UN Publications, 2008).

Innovative Uses of Technology Driving Change

Looking at the work of NGOs in three specific issue areas—health, the environment, and humanitarian relief—we found a number of creative and innovative uses of mobile technology for change. In exploring the various applications in these areas, we observed the following:

Innovation and Scaling

- Organizations are thinking in creative, innovative, and often very entrepreneurial ways about how mobile technology can advance their social impact.
- The potential to scale and replicate projects is significant. Although the vast majority of projects are groundbreaking, often they are pilot projects that are small in scale. Many of the organizations we talked to recognize that scaling their projects beyond a relatively small pilot and replicating them elsewhere will be vital to realizing the potential of mobile technology in the areas studied.
- Creative partnerships are key to bringing promising mobile initiatives to scale. For example, SexInfo, a text message-based health information service for youth, was made possible through collaboration between the San Francisco Department of Public Health and a local nonprofit. Now it is being scaled up in a similar way in two new locations. Similarly, both Satellife's project in Uganda and the EpiSurveyor project piloted in Kenya and Zambia are being replicated and scaled to use mobile devices for health data collection and analysis in several additional countries.



Credit: TSF

- Sharing information and technical exchanges could reduce the amount of time it takes to launch a solution and reduce the associated costs. Smaller organizations, in particular, continue to exercise a great deal of trial and error when it comes to utilizing mobile technology in their work. ISIS-Inc., the parent organization of the SexInfo project (Case Study 4) spent nearly six months researching cost effective ways of implementing its text messaging-based health information service before a technology firm in Australia offered to provide a short code at no cost.
- More needs to be done to overcome the ‘innovation silos’ some organizations operate in, where advances and knowledge gained in the use of mobile technology do not necessarily transfer across organizational boundaries.
- We have seen in the health field that mobile technology is facilitating data collection; yet health providers and local and national governments are now facing the need to create back-end systems capable of aggregating and analyzing a wealth of new data. Systems are complex and multi-faceted and interventions in one area may require investments in others. In some cases, advances made possible through mobile technology demand more sophisticated back-end systems.

Social Impact

- Mobile initiatives provide greater opportunities for social impact that other information and communications technology (ICT) projects do not necessarily share. For example, physical access to mobile phones is obviously much greater compared to computers and other less readily available technologies. With rapid mobile phone penetration in many areas of the globe and growing mobile network coverage,

access is increasingly assured. Likewise, mobile initiatives can be more affordable but the skills and training necessary to implement them less so.

- Mobile technology initiatives in this field are still emerging, with most of the projects we investigated at the ‘proof of concept’ stage. A report by the World Bank’s InfoDev program states, “It is harder to find examples of analysis that moves beyond the project purpose to [...] look at the conditions that might need to be in place to scale up interventions and what might be the impact of such activity.”²
- While we can point to solid outcomes for the programs, for example, the number of clients served or number of text messages sent, strong evidence-based information about the widespread impact of mobile initiatives on international development goals is elusive. In our review of organizations’ work and relevant literature, only rarely did we find solid impact assessments that evaluate whether an empirical link exists between a technology solution and the achievement of a social or international development goal.
- Investment in knowledge-sharing and impact assessments are vital to realize what we believe is the enormous potential of mobile technologies to further development goals such as those outlined in the United Nations’ Millennium Development Goals. Several donors, such as Canada’s International Development Research Centre, are now investing considerable resources to assess over several years the impact of mobile technologies in improving health, for example, to build a more solid body of evidence about social impacts.

²Chetley, Andrew, ed. *Improving Health, Connecting People: The Role of ICTs in the Health Sector of Developing Countries* (Washington, DC: InfoDev, 2006). www.infodev.org/en/Publication.84.html.

Challenges

- The costs of developing and deploying mobile technologies are often onerous for organizations, explaining, in part, why projects are small in scale. We found that many projects rely on heavily subsidized technology or transmissions or even direct donations by technology companies and mobile operators. While some players are willing to donate their services for smaller projects, there are questions as to whether scaled initiatives would receive the same level of support.
 - The potential for scaling up ‘mobile for good’ initiatives may come with identifying commercial incentives, as is the case with GSMA/Safaricom initiative that we describe in this report, designed to protect human populations and elephants in Kenya. Identifying potential win-win solutions for businesses and nonprofit organizations holds promise for expanding and sustaining the impact of such initiatives in the future.
- Mobile solutions, as with any other ICT project, need to be appropriate to their environment to have impact, and be responsive to local needs and conditions.
 - Users need to be involved in the planning and design of mobile systems and they need incentives (such as increased efficiency or time savings) to use the technology.
 - Training for users needs to be a focus of mobile projects within an organization.
 - There needs to be a focus on the benefits of a given system rather than the technology per se.
 - Governmental ICT policies and regulatory frameworks should be consistent and predictable and foster an environment for innovation. There are still significant barriers in this arena, despite efforts by trade associations such as the GSMA to increase awareness of these issues for development.

Lessons Learned

- Many of the same lessons learned in information and communication technologies (ICT) development and deployment apply to mobile initiatives. Our research has uncovered a set of potential best practices for technology deployment:
 - There need to be clear and realistic program goals and solid knowledge about the needs on the ground and of the intended beneficiaries.

We are hopeful that increased attention and investment into the real and concrete potential and actual use of mobile technologies will help improve lives around the world.