

Smartphone App Helps Track Aid in Tough Conditions

By Emmet Murphy

Delivering food aid to malnourished people in Southeast Haiti is challenging on many fronts. Roads are impassable, electricity is sporadic, the weather is frequently bad and beneficiaries must travel long distances by foot to get to distribution sites. These hurdles can also make it difficult to track aid and ensure that people are getting the food and health guidance they need.

Through its USAID-funded Multi-Year Assistance Program in Haiti, ACDI/VOCA distributes aid rations and provides guidance on health, nutrition, hygiene and sanitation to vulnerable people, particularly mothers and children. To date, we have tracked our activities by collecting paper forms and fingerprints of recipients to ensure they pick up their rations, attend health trainings and keep child-wellness appointments.

But this kind of monitoring takes time, leads to long lines at distribution sites and makes it difficult to ensure that the right people get what they need.

Students Develop Software for the Public Good

Our challenge was to replace tracking by paper with more efficient technology that can work in places where electricity and internet access are unreliable.

So ACDI/VOCA is working with the Humanitarian Free Open Source Software (HFOSS) Project, a National Science Foundation-funded activity at Trinity College in Hartford, Connecticut. Through HFOSS, Trinity computer science students develop free and open-source software that contributes to the public good.

Since the HFOSS project has created a variety of smartphone applications for international humanitarian organizations, the group was familiar with the challenges we face in Haiti.

Storing and Retrieving Data Made Easy

Working in Haiti with ACDI/VOCA, HFOSS has developed and tested a smartphone application that will allow our field teams to easily and quickly update records during distributions and register



new beneficiaries in the remote areas where health services are provided. If there is cell reception, field staff will be able to immediately send the data—for example, the name and health status of the child or mother—by SMS to a server maintained by ACDI/VOCA in Jacmel, Haiti. If there is no reception, they can store it on the phones and send it later.

Once these entries arrive in Jacmel, staff will update the database. Prior to each distribution, the updated beneficiary list will be emailed to the field offices and uploaded to each smartphone. During distributions, field staff then will be able to search beneficiaries' records, mark their attendance and make changes in their status, for example, from "pregnant" to "lactating mother." The smartphones will be charged and updated at ACDI/VOCA's field offices, which are solar-powered and have regular internet access. The application will be fully deployed in August.

More Apps in the Works

In addition to the beneficiary and registration app, the students developed and tested two more apps for rainfall and commodity price data collection, which will be used for our Early Warning System in the Southeast Department.

Such useful technology has tremendous implications in the countries where we work. Since most of them may never have extensive landlines or other infrastructure that high-income countries take for granted, technology based on growing cell phone ownership and network coverage holds a lot of promise, including—but certainly not limited to—streamlining aid delivery.

Emmet Murphy is chief of party for ACDI/VOCA's PL 480 Title II Multi-Year Assistance Program for Haiti.