

LIFELINE

About 85% of Haitian households have cell phones, according to the Red Cross. Phones enable cashless financial transactions and emergency messaging.



Out of the Rubble, Into the Lab

Since the 2010 earthquake, not-for-profits and corporations have developed new technologies to better deliver services to Haitians, transforming aid in disaster areas everywhere.

BY JOCELYN C. ZUCKERMAN

✦ **JOKEBED AUGUSTE**, a 31-year-old single mother from Mirebalais, in Haiti's Central Plateau, has come to see her cell phone in a whole new light. A team leader in one of the cash-for-work programs run by the international relief agency Mercy Corps—she oversaw 15 colleagues in an initiative to clean up roads and canals—Auguste was among the first Haitians to begin receiving payments for the project directly through her phone. The convenience of the T-Cash system means she doesn't have to stand in line for hours at the bank, but even more impor-

tant is the security. "There's no cash for people to steal," she says, "and nobody knows how much money you have, or how much you're taking out." The "mobile wallets" are one example of a handful of new technologies that emerged in the aftermath of the earthquake that rocked the Caribbean nation one year ago—and that will likely impact disaster-relief and development efforts for years to come.

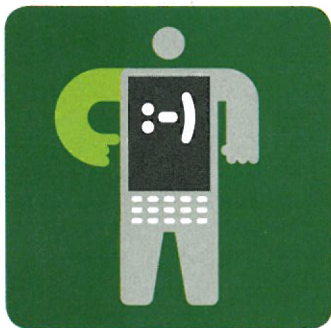
MORE THAN A THIRD of Haiti's banks, ATMs, and money-transfer stations were destroyed in the earthquake (and even

before the disaster, fewer than one in 10 Haitians had ever used a traditional bank). So last June, the Bill & Melinda Gates Foundation and the U.S. Agency for International Development created a \$10 million competition to jump-start financial services by mobile phone. “When the earthquake happened,” explains Amolo Ng’weno, deputy director of the foundation’s Financial Services for the Poor Initiative, “we were sitting in Seattle watching on TV and saw the long, long lines of people trying to get money.” She and her colleagues figured that if they could get companies to build mobile financial services, it would not only help get money into the hands of Haitians but also reduce the risks and costs of financial transactions.

AMONG THOSE COMPETING for the award is Voilà, a mobile provider with more than a million Haitian subscribers that is the partner of Mercy Corps on its T-Cash program. In December, the charity also began transmitting \$40 monthly vouchers to thousands of families who have taken in quake survivors and suffer from strained resources. Recipients type in a code on their phones in designated shops to indicate they want to make a purchase with the funds; the merchant then confirms that transaction on his own phone. “Normally, when you have money in your hands, you spend it easily,” explains Auguste. “But when it’s on your phone, it’s a whole process you have to think about.” The hope is that, over time, mobile banking will give Haitians access to savings and

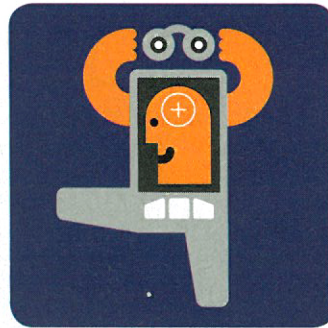
other financial programs that weren’t widely available before the quake.

IT WAS ALSO in the aftermath of the quake that Voilà and the International Federation of Red Cross and Red Crescent Societies (IFRC) created a short-message-service application that could target cell-phone users based on their specific location. In the days following the January 12th disaster, more than 1 million SMS messages went out every day containing information in Creole about emergency treatment, vaccinations, and other IFRC programs. Voilà also helped the group establish a hotline, in English and Creole, that allowed victims to call (at no cost) for information about hygiene, water and sanitation, and condom distribution. In August, when storms were bearing down on the country, the IFRC sent messages to subscribers near the northern



coast instructing them to prepare or relocate. SMS messaging continues to play an important role in the ongoing cholera crisis, replacing old-fashioned practices like pamphlet distribution. (Cell phones also have been key to the continued success of Noula, a call center established last year by the Haitian government and Solutions Inc. that incorporates a database of major health-care facilities and enables callers in distress to get information on the nearest places to get help.)

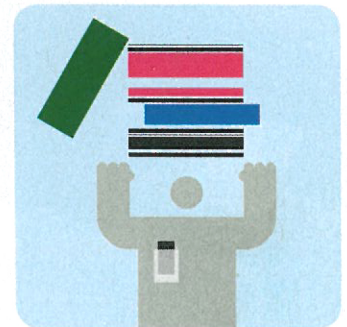
ANOTHER IMPORTANT initiative came out of a conference call organized by the U.S. State



Department shortly after the quake. Attended by various nongovernmental organizations and players in the tech community, the call addressed the synchronization of the missing-persons databases that had been launched by everyone from *The New York Times* and *The Miami Herald* to CNN and your random bighearted geek. Within 36 hours, Google engineers built and launched Person Finder, which linked the different databases through a common, back-end technology. Aid agencies could embed Person Finder on their own websites and any information entered would automatically go into the centralized pool. An extension of a program that Google had developed after Hurricane Katrina in 2005, Person Finder was so successful that the Chilean government used it after the earthquake in its country, and moving forward, it is expected to be the go-to app for missing people.

TRACKING-DEVICE technology was revolutionized by the quake as well. In particular, a program called Last Mile Mobile Solutions, or LMMS, which had been developed by a Canadian software company and the Christian organization World Vision, found an entirely new application. LMMS is a digital system that replaces paperwork associated with ration cards and registration. Capable of functioning in places without electricity or Internet, LMMS had been piloted in Africa but had never been used in a “rapid-onset emergency” situation. Nor had it entailed distributions of anything other than food. In Haiti, World Vision began using

the system’s laptops and handheld devices to register people at distribution sites (beneficiaries receive photo IDs with scannable bar codes) and to track goods dispersed. The result was not only fewer errors but also vastly shorter waiting times: Instead of spending the entire day standing in the hot sun, Haitians now were able to join the line and walk away an hour later with their food and supplies. Similarly, the Salvation Army automated its distributions tracking, replacing handwritten ration cards with bar-code Trackpad technology, developed by the delivery company UPS to find displaced pets after Katrina.



Some look at the developments in Haiti and see the potential for a model wireless society—the first “copper-free” country in the world. Whether that comes to pass or not, the technological fruits of the Caribbean nation’s disaster are already spreading far beyond the country. World Vision hopes to soon roll out its LMMS system in Pakistan and China, and Otto Farkas, the organization’s director of humanitarian and emergency affairs, resource development, and collaborative innovation, has visions of LMMS one day being adopted by all aid organizations, in every emergency situation. “This is the holy grail,” he says, “to get real-time data that’s all integrated.” He concedes, of course, that such cooperation isn’t just about solving a few technological glitches. “We can’t just throw technology at the human challenges,” he says, “but certainly, technology can help.” ^{CC}

