

What mobile tech innovation offers food security

By *Elena L. Pasquini* @elenapasquini 19 January 2016 <https://www.devex.com/news/what-mobile-tech-innovation-offers-food-security-87499>

Humanitarian organizations delivering food assistance in conflict-affected areas or regions plagued by natural disasters or outbreaks of epidemic diseases cannot do their job blindly. **Practitioners operating on the ground need a steady flow of accurate, up-to-date information to remain effective — and safe.**

In order to design, implement and monitor programs when access is limited and risky, critical questions must be answered to understand the cause of the crisis, ascertain the number of people affected, what type of assistance they require and where, and whether they have successfully received that assistance.

The World Food Program's Department of Vulnerability Analysis and Mapping boasts a network of about 150 food security analysts in more than 70 countries, tasked with gathering such "actionable food security information." In 2012, the organization piloted **mobile Vulnerability Analysis and Mapping**, or **mVAM** monitoring, in the Democratic Republic of the Congo, to collect food security data remotely via mobile phones using short surveys and interviews, SMS interaction, and an Interactive Voice Response system.

According to Arif Husain, the WFP's chief economist, the organization's ability to collect and collate information has improved "exponentially" thanks to mobile technologies and the use of such projects.

However, that's just the "tip of the iceberg," according to Husain.

"There is so much more we can do," he said. "We are always looking at ways in which we can get this information quicker and in a way that we can process it very quickly; in a way that is inexpensive and, most importantly, from places that are hard to reach because of conflict, diseases or because the terrain is very difficult."

In an exclusive interview with Devex at the WFP's Rome headquarters, the chief economist shared the organization's strategies to increase the use of technologies for data collection and what role partners can play, explaining the challenges humanitarian organizations face in implementing those solutions, why it is worth the investment, but also why development organizations should seek WFP's advice when designing them.

It's not just about technology

The idea beyond mVAM is simple: gathering information on food access, consumption, prices and coping mechanisms. Mobile phone operators provide the numbers from which WFP draws relevant samples. Although it doesn't totally replace face-to-face investigations on the ground, it makes humanitarian action more focused on the areas where there is the real need, instead of "going blindly to 50 places," minimizing risks and saving human and financial resources.

"The beauty of the system is that we can get information out of places that were previously 'dark' ... If you can get information out, then you can do something about it," Husain said.

Doing the same job by traditional surveys takes anywhere from four to six weeks; **using mVAM it takes only one week and is 60 percent cheaper.** Even if a high number of calls are required to gather significant data, it is still more efficient and more timely: “It is still worth getting that information out, because it tells you not only what happened three months ago, but what is happening right now,” Husain said.

But unless done properly, this type of approach can harbor a number of risks.

In Yemen, for instance, the start was slow and difficult. People legitimately feared answering their phones: “Imagine your phone is ringing and somebody is asking you questions in a conflict,” he said. Politically sensitive questions must therefore be carefully avoided, and it should be made clear that the communication history can be removed from the phone — in some cases this could help protect the user from harm.

Choosing between phone calls, automated IVR calls or SMS messages depends on the situation. If literacy is a big issue, SMS becomes impossible, but in spoken interviews, dialects can pose additional problems.

“You do need some kind of a baseline beforehand ... What [language or dialect] people speak, what is the literacy rate, what is the telephone coverage rate ... all of that type of information,” Husain said.

And sometimes an incentive is needed, for instance in the form of credit for the time spent on the phone. “When we start in a place it often takes time ... you have to be patient,” Husain said.

What’s next?

Today, mVAM is used in 11 countries, including fragile and conflict-affected states such as Central African Republic, Iraq, and Yemen and during the Ebola outbreak in Liberia. WFP aims at scaling up the project to reach some 30 countries in the next couple of years.

“We are trying to get resources to mainstream it,” Husain said.

Meanwhile, there is something else cooking at the U.N. organization to take such types of engagement forward: call detail record and satellite technologies.

In the event of a disaster, using CDR can help ascertain not only how many people left a place, but also where they went, whether they made or received phone calls, and even whether they called internationally to request money and what type of remittances were sent.

“If you know that people are moving through point A and are at point B, and you know exactly how many they are, and you know exactly what type of assistance they require, imagine the savings you make because your response is so efficient,” Husain said. “You get to the right place, with the right type of assistance, at the right time.”

WFP hopes to undertake small-scale pilots to test efficacy, but the issue is securing the right partners. The agency is talking to companies like Google for satellite technologies, with phone companies on CDR, as well as firms specializing in data processing and the design of algorithms.

“We are always looking for partners that can provide technology, financial assistance and any help that can improve efficiency,” Husain said. “There is a lot for the private sector and the public sector to gain by investing in us.”

Call WFP

The mVAM methodology and data are freely available for the academic, humanitarian and global development communities and many players are using WFP information to make operational decisions, according to Husain. But what WFP also puts at the aid community’s disposal is its expertise.

Other organizations have implemented their own systems, but according to Husain, WFP is “ahead of the curve”, due to its unique position as the largest humanitarian agency. Why? “Because for us this is a need,” he said. “We don’t do this because we need to provide it to somebody else, we do it because it improves our efficiency ... We go, we test, we see, we test ... we continue doing that. And that’s really the reason why we are ahead of the curve.”

And Husain’s advice to aid organizations that want to implement solutions for data gathering? Call the WFP.

“Because of our on the ground experience, and because of our deep field presence ... we can help in the design of these new tools and methods,” he said.

Oftentimes, according to Husain, organizations design “fancy gadgets that miss the point,” such as elaborate survey tools that have no relevance in the place where they are to be applied. “If you’re going to be spending a lot of money designing something, a drone for example, please take the time not only to talk to the scientists actually designing the product, but to the users,” he said. “And do not underestimate the significance and the importance of the practitioners who are dealing with the people on the ground.”

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Elena Pasquini covers the development work of the European Union as well as various U.N. food and agricultural agencies for Devex News. Based in Rome, she also reports on Italy's aid reforms and attends the European Development Days and other events across Europe. She has interviewed top international development officials, including European Commissioner for Development Andris Piebalgs. Elena has contributed to Italian and international magazines, newspapers and news portals since 1995.