



**USAID**  
FROM THE AMERICAN PEOPLE

## Hacking for Hunger

*Building Next-Generation Solutions – the Food Security Open Data Challenge*

“To support an open source development approach, our Agency must serve as a platform that connects world’s biggest development challenges to development problems solvers – all around the world. We recognize that talent is everywhere, but opportunity is not.”

- USAID Administrator Rajiv Shah,  
August 1, 2012

**The Office of Innovation and Development Alliances (IDEA) seeks to reach development goals more quickly, cost-efficiently, sustainably, and at wider scale through innovation and partnership. IDEA manages specific models and programs and helps USAID bureaus, offices, and country missions grow their own capacity for producing high-impact development through innovation and partnership.**

U.S. Agency for International Development  
[www.usaid.gov](http://www.usaid.gov)



*Photo Credit: USAID*

### **Innovation and Information to Help End Hunger**

Almost one billion people—more than one-seventh of the world—suffer from chronic hunger, while more than 3.5 million children die each year from undernutrition. At the same time, communications and connectivity is greater than ever: there are nearly 6 billion mobile phone subscriptions worldwide; almost 500 million are in Africa.

Drawing on the expertise of U.S. universities, industry, non-governmental and private voluntary organizations, multilateral development partners and its own technical staff, USAID is working to transform agriculture so that every nation can grow enough

food to feed its own people. In an increasingly networked world, USAID is ensuring that food security information is more readily available to people on every corner of the earth, and that local farmers have better access to the information they need to produce fruitful harvests and improve nutrition. In its commitment to increasing food security, USAID:

- Increases “open data” --data freely available in formats that are easy to use in new and innovative ways, while rigorously protecting privacy; and
- Engages governments, the private sector, and individuals to work together and develop new apps that use open data in game-changing solutions.

“We want your help looking towards the future to identify what the next big breakthrough built on open data will be. Breakthroughs that can harness the power of data mojo to help solve some of the biggest problems that the world faces today.”

-Todd Park,  
Assistant to the President and U.S.  
Chief Technology Officer

## The Food Security Open Data Challenge

From June to October 2012, USAID's Food Security Open Data Challenge convened food security experts, data scientists, technologists, and other development professionals to use public data sets to build innovative solutions in the field of food security and agriculture.

After two brainstorming “ideation jams”, over eighty volunteers across five countries joined virtually and in person for the 48-hour “Hack4Hunger”. Teams built rapid prototypes of live software applications to help address food security gaps. USAID then supported these teams as they sought to build interest in their apps, featuring promising products and their creators in a special session on World Hunger Day at the Iowa Hunger Summit and World Food Prize.



Photo Credit: Amanda Gibson, Dexis Consulting Group

### An App for That

Three standout teams emerged from the Food Security Open Data Challenge:

- Grameen Foundation & Palantir Technologies built a tool that analyzes data to give real-time crop disease alerts and make suggestions for farming best practices. The tool connects smallholder farmers to multinational organizations and back again. In one instance an early warning alert of a maggot infestation in soybean crops prevented an outbreak in Ugandan farms.
- Sonjara, a small women-run IT business, built a website that links the importance of nutrition to local farming practices. Using weather, soil, and nutrition open data sets, their online tool can suggest the plants to farm and eat that both provide the nutrients people in the region lack, and have the best chance of growing in a specific location.
- PineApple and Grower's Nation worked together to further a text- and web-based tool that recommends crops to plant based upon geo-location. Through the Food Security

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**ABOUT OPEN DATA? From the time it made data from the Global Positioning System (GPS) publicly available, the U.S. government has been increasingly interested in making sure information is open and accessible to the public. Today, nearly 40,000 government data sets are available to the public at [www.data.gov](http://www.data.gov). And additional initiatives are underway to increase the number of open data sets while making existing open data easier to access and use to build new innovations.**

Open Data Challenge, they learned of valuable open data sets from participating development experts.

*For more information about the Food Security Open Data Challenge and USAID's other open data initiatives, contact Katherine Townsend, Special Assistant for Engagement at [rtownsend@usaid.gov](mailto:rtownsend@usaid.gov).*