



Data Driven Development



mergdata
by Farmerline

A Case Study

Problem

The Ghanaian Ministry of Food and Agriculture is tasked with surveying 24,000 farmers across 60 districts every year for their Ghana Agricultural Production Survey (GAPS). Collecting this data and entering it into the system takes over 9 months, making the reports outdated by the time they are published limiting GAPS' utility in the development and monitoring of effective agriculture policy. This reduces the ability of the Ghanaian government to use all their available resources to address poverty and create economic growth through sustainable production for the 54% of Ghanaians involved in agriculture.

Solution

We created and piloted CAPI, the Computer-Assisted Personal Interviewing system, in 2 districts. Our electronic survey platform streamlines information flow between governments and citizens, making data collection more efficient and policy more responsive.

Results

By moving data recording to a tablet and data storage to the cloud, MoFA was able to conduct surveys faster and eliminate the time needed to manually enter data and fix errors, reducing the overall duration of the survey process by 82%. Timely data collection and analysis leads to responsive policy creation that focuses on economic growth as well as sustainable production and consumption. The Planting for Food and Jobs program launched by President Akufo-Addo in April 2017 was created from the pilot data and responds to these goals.

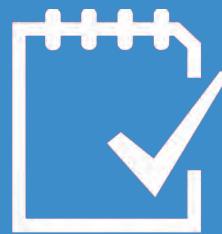
"It's a form of revolution"

James Ayittey

(Information and Communications Technologies,
SRID)



80%
Performance
rating, compared
to 20% with paper
surveys



99.7%
Percent of valid
entries, compared
to 70-80% with
paper surveys



81.4%
Average reduction
in survey duration



A Data Revolution

At the Statistics Research and Information Directorate (SRID), James Ayittey, a 17 year veteran of mass data collection, works in an office cramped by filing cabinets and boxes. He is the head of Information and Communication Technologies for SRID, overseeing MoFA employees who are piecing together piles of survey responses to understand the realities faced by Ghanaian farmers. The GAPS survey responses must be meticulously checked for errors and manually entered into the system before analysis occurs. Mr. Ayittey expressed frustration that processing takes even longer than conducting the surveys, leading to outdated reports. Despite these hurdles, Mr. Ayittey and his team are committed to holistically and efficiently portraying the needs of farmers to policy makers.

In an agricultural community south of Kumasi, farmers Margaret and Yaw work hard to make a living but often struggle to access or afford the necessary agricultural inputs. Their yields have been severely impacted by bushfires, an unpredictable environmental factor that causes instability in the lives of many farmers. To combat this instability, Margaret and Yaw seek reliable access to agricultural inputs. The Ghanaian government tries to deliver using extension officers and policy to support subsidies, but in Margaret and Yaw's experiences inputs are limited and arrive too late in the growing cycle, making them irrelevant for that production year. To address this issue, MoFA needs to transform data collection into an efficient, relevant process.

Our team of young, passionate software engineers set to work turning mountains of data into actionable insights. In collaboration with Mr. Ayittey, we created the CAPI data collection system customized for MoFA's extensive surveying process. It is "a form of revolution," Mr. Ayittey proclaimed as he excitedly described the benefits of our customized survey application. He firmly believes in CAPI's ability to be the spark MoFA needs to reach the UN's Sustainable Development Goals by providing timely, effective support to farmers like Margaret and Yaw.

Planting for Food and Jobs, a new policy that will use CAPI's surveys for implementation and monitoring, aims to decrease Ghana's reliance on imported food and increase support for farmers who are helping Ghana reach this goal, in essence leveraging all the government's available resources to improve agricultural livelihoods. By creating a responsive, efficient survey system in collaboration with the Ghanaian government, we at Farmerline are fulfilling our mission of transforming smallholder farmers into successful entrepreneurs.



SUSTAINABLE DEVELOPMENT GOALS

1

Amplify
Underserved
Voices

2

Improve
Production
Data

3

Inform
Supportive
Policies

1 NO POVERTY



2 NO HUNGER



8 GOOD JOBS AND ECONOMIC GROWTH





mergdata

Developed by Farmerline, Mergdata is a cloud-based communication, surveying, and data management tool. The combination of Android application and web service provides instant analysis of data collected in the field and allows broadcasting of voice and text messages to thousands of phones at once.

**10
countries**





Farmerline is transforming smallholder farmers into successful entrepreneurs by increasing their access to information, inputs, and resources to increase productivity. Using the innovative Mergdata platform, Farmerline offers subscription-based information services to rural farmers and licenses its software to agribusinesses to bridge the information gap between organizations and farmers.

For more information visit: farmerline.co

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MINISTRY OF
FOOD & AGRICULTURE
REPUBLIC OF GHANA

The Ministry of Food and Agriculture of Ghana's mission is to promote sustainable agriculture and thriving agribusinesses through research and technology development, effective extension and other support services to farmers, processors and traders for improved livelihood. MoFA works towards these goals by formulating, planning, and monitoring agricultural policy within the broader scheme of national economic development.

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