**Hack4Farming East Africa**

Nairobi, Kenya | October 2015

*Team Project Summaries*

**Product: AgriTrader**

**Problem:** The majority of small scale farmers lack access to variety of markets. Their vulnerable to exploitation by brokers, don’t know their cost production, and it is difficult for them to determine their break even points.

**Solution:** An application delivered via USSD and mobile that links farmers and traders. Farmers can log and track costs of production for different enterprises, place offers for sale, and receive bids. Brokers can send bids on farmer offerings. Farmers can determine whether or not to accept the based on break even points calculated by the application using the cost of production and prevailing market rates.

**Impact:** Farmers can track costs and are understand the concept of breaking even. Transactions are made through competitive bids and offers. All of this enables farmers to maximize their incomes.

**Revenue Model:** Farmers pay a monthly subscription fee. Traders pay a one-time registration fee and then are charged a fixed percentage for each successful transaction.

**Product: FinAgrow**

**Problem:** Most farmers are financially illiterate and consequently have poor documentation their finances and production. They also have a lack of access to agronomic information. An added consequence is low productivity.

**Solution:** A USSD and mobile application solution to streamline the agribusiness operational process. Farmers are delivered weather and agronomic data. Farmers report their production using their feature phones. The application can produce a business plan for the farmer given their reported data. Farmers can use the business plan to secure capital from banks and other investors.

**Impact:** Farmers will have greater access to credit since banks can effectively assess their credit worthiness. Farmers can increase their productivity with structured costs and revenue analysis. The aggregation of this data will provide more actionable information for governments and other stakeholders.

**Revenue Model:** Farmers pay a subscription fee for the USSD application and weather/agronomic alerts. Banks pay commission fee on loans sourced from application. Governments, other stakeholders, and third parties pay a licensing fee for access to the aggregated data. Vendors pay a commission fee on farm input sales sourced from the application.

**Product: Crowdfarm**

**Problem:** Farmers can’t afford the quality inputs required to produce food which greatly reduces their yields.

**Solution:** A financial support network that connects investors to smallholder farmers. Farmers and investors are matched using information like production data, amount willing to invest, desired investment period, etc. The network is accessible via a web and mobile application.

**Impact:** The smallholder farmer can now acquire the resources they need to maximize yield. Investors are engaged with smallholder farmers that were previously difficult to access.

**Revenue Model:** Investors pay a commission fee (between 5%-10%) on profits.

**Product: Mobile Product Authentication**

**Problem:** Counterfeit farm inputs are one of the biggest threats to agriculture in Africa, affecting germination, crop health, food security, production and income. It’s estimated that 70% of farmers are potentially exposed to fake inputs and that 30%-40% of seed and fertilizer products are counterfeit.

**Solution:** A product authentication system in partnership with farm input manufacturers that places labels with QR codes on farm input products. The labels can be read with a smartphone QR code scanner or a barcode number can be entered into a feature phone. The system will be accessible via USSD and mobile application.

**Impact:** This will reduce fake inputs on farmers’ fields. This will also help protect the brands of input manufacturers. The aggregate data about farm inputs can provide opportunities for banks and other input manufacturers to target farmers.

**Revenue Model:** Farmers pay for service per use. Input manufacturers pay subscription fee for labelling and monitoring service.

**Product:TreeWallet**

**Problem:** There is no efficient way for tree growers, buyers, and sellers to interact.

**Solution:** A web based application that connects tree growers, buyers, and sellers.

**Impact:** It will increase market access for tree farmers and quality information on tree production to buyers and sellers. The increase tree sales could potentially increase forest cover and reduce carbon dioxide in the atmosphere.

**Revenue Model:** Farmers and sellers will pay a commission fee on tree sales. Advertising slots will be sold to companies that market to tree growers, buyers, and/or sellers.

**Product: eFarm**

**Problem:** Many farmers have low incomes due to poor agronomic practices, unpredictable climate, and low market prices. These factors lead to an 80% yield gap potential and weak market structure.

**Solution:** A web platform that integrates information on agronomic practices, weather, and market conditions. Registered farmers will receive price, agronomic, and weather information. The farmers will provide information on production. Registered buyers will receive information on the amount and location of production.

**Impact:** Farmers will be equipped with information to implement better practices to increase yields with limited resources. The farmers will also have increased market access and bargaining leverage.

**Revenue Model:** Initially free to drive usage and credibility. This free introduction will be financed with seed capital from donors, NGOs, and governments. All users will incur a service charge after the platform has been successfully implemented.

**Product: Ushauri**

**Problem:** Many farmers lack access to extension agents and information to improve their farming practices. Some of the accessible information can be unreliable and lead to misinformed decisions.

**Solution:** A USSD and SMS system that delivers information between smallholder farmers and extension organizations. The farmer receives weather, agronomic, and extension information for their particular crop. The farmer provides production information that is shared to extension organizations.

**Impact:** The system will bridge the information gap between smallholder farmers in remote areas and extension organizations.

**Revenue Model:** Farmers pay for each request and delivery of weather, agronomic, and extension information. Extension organizations pay for custom web-based deployments of the platform to host production data.

**Product: Smart Farm**

**Problem:** Many farmers do not have actionable market information to gauge demand and negotiate better prices.

**Solution:** A web and mobile based tool that delivers actionable market information to farmers and buyers. The tool provides information on what is needed, where, when, in what quantity and quality. It also delivers information on the available produce supply and proximity to transportation.

**Impact:** Enables farmers to make informed decisions on where to sell and how much it will cost to get the produce there. These decisions will allow farmers to plan more effectively. Buyers can quickly assess the amount and location of supply.

**Revenue Model:** TBD