Mosavali

Helping Farmer Grow More, Better

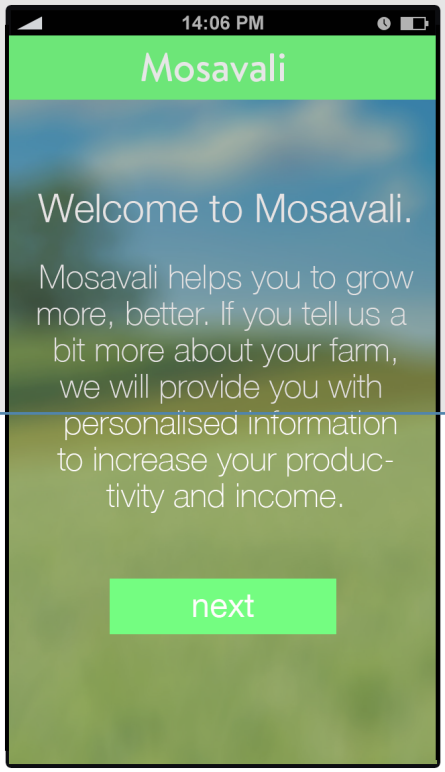
Mosavali

Background

Farming is the world's **most common profession**. Over 30% of the world's working population are smallholder farmers. Farmers that play a crucial role in reducing hunger and poverty worldwide. Education and information are key in helping farmers produce more, better.

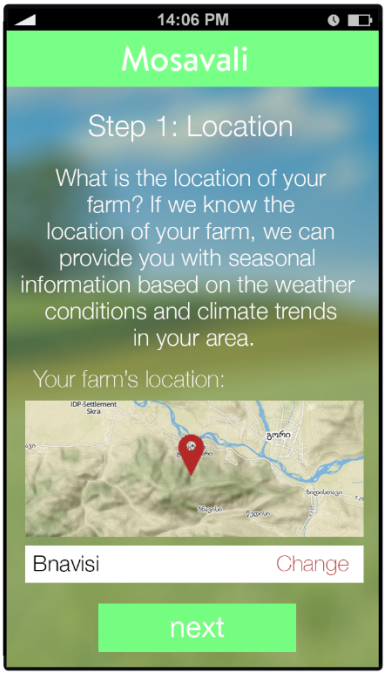
However, traditional education is not equipped to reach small farmers at large scale. Coursera, Lynda, the Khan Academy and others illustrate the potential of video and technology to expand education and training. Mosavali (**"harvest"** in Georgian) will use similar methods to take agricultural extension and outreach to scale.

In Georgia, Smartphone and/or tablet ownership is rapidly expanding to even the most hard to reach regions. Mobile data coverage is also rapidly improving and offered at accessible rates (0.8 USD/GB). As a result, over 50% of Georgian rural households use Internet at least once a month.



Phase of Development: Idea

Given these developments, Mosavali want to test a fully mobile-first approach in providing agricultural extension to Georgia's 300.000 smallholder farmers. We already see a clear demand for our services.



A series of rather casually recorded videos shot in Georgia received over 65.000 views in a matter of weeks. Within 6 weeks, over 800 farmers subscribed to our mailing list. **Those are big numbers, for a place like Georgia.**

Mosavali has raised enough funds to produce 50 more educational videos before May 2016. This means that over 70% of Georgian farmers will be able to improve the way they farm. For each crop or product, farmers will be presented with a set of basic techniques that don't require significant resources and are proven to improve output quantity and quality by at least 35%.

Summary of Help Needed and Time Estimation

However, to be really effective, Mosavali needs a smart content delivery system that can be easily scaled to other countries worldwide. We would like to test this approach with an Android application, given the fact that is by far the most used mobile device in rural areas in the developing world.

Mosavali plans to develop a **Digital Crop Calendar** that shows farmers:

- **what** they need; only the educational content that is relevant to them..
- **when** they need it; showing content at appropriate moments in the production cycle.
- **where** they need it: on their mobile device, at any given location.

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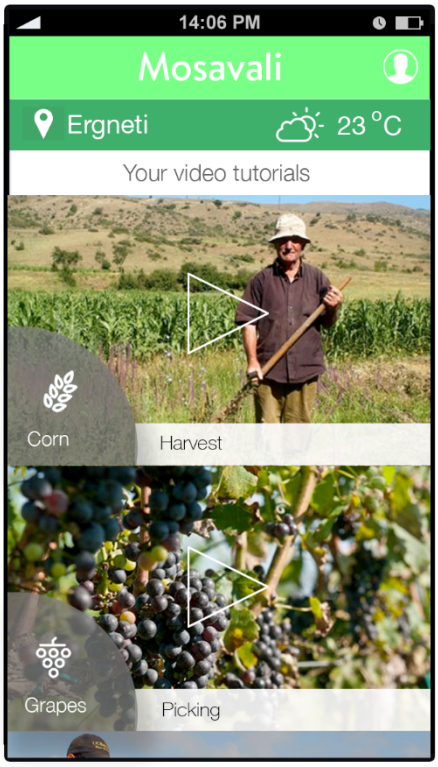
The Android application should connect to a back-end application and database that will allow the Mosavali team to easily manage data or add and categorize new educational videos. The entire platform should be built to scale, and allow for the easy integration of additional functionalities, such as:

- **weather reports** from our partner Meteoblue
- other relevant **notifications**, for example on pests and diseases.

The back-end application will be developed over the course of 3 months: **December 2015 – February 2016**

The Android application will be developed in **March 2016.** This is a longer-term project, requiring an initial intensive work session over a weekend or full-day, followed by a 4 week commitment of a few hours per week for follow up work.



Phase 1: Back-end Application and Database

Technology Stack - Skills Preferred:

Database: PostgreSQL

UI: Node.js

Programming Languages: Java, JavaScript

Overview of required functionalities

The back-end application will form the core of its content delivery system. It will consist of a database to support:

- collection of data generated through user registration and usage
- education modules (videos and problem sets)
- weather data
- other updates (e.g. pests and diseases)

The database should connect to an administrator's interface. This interface should allow Mosavali staff to:

- access and manage user data
- add, edit and manage educational modules.
- manage weather data and other updates

Phase 2: Android Application

Overview of required functionalities:

- **User registration module** - FB, Google or manual entry
- **Digital crop calendar** for crops of interest. The farmer selects a set of crops and products that he is interested in. Based on this selection, the user is provided with an overview of training videos based on:
  - Location
  - Crops of interest
  - Local weather
- **Notification center.** Updates from relevant agencies like the Ministry of Agriculture should be disseminated to farmers based on their geographic location and personal interests.
- **Weather forecasts.** Visualization of weather data as provided by our partner Meteoblue.

Most convenient time for a hackathon session: **March 2016**