

Juhudi Kilimo Mobile Client Intake and Data Tools

1. Organizational Background

Juhudi Kilimo is a social enterprise that provides asset financing and technical assistance to smallholder farmers in the Central, Western, and Rift Valley provinces of Kenya. Unlike traditional microfinance, which primarily provides loans for working capital to informal businesses, Juhudi finances specific assets that offer immediate and sustainable income for farmers. Assets vary from high-yield dairy cows and other livestock to agricultural equipment and greenhouses. Most assets are insured and can also act as an alternative form of collateral to protect farmers from over-indebtedness.

Juhudi clients support each other within farming groups and co-guarantee their loans through a sub-section of five members of the group, called the Watano. To maximize the effectiveness of farming groups and asset-financing, Juhudi provides targeted agricultural and business training and loan officers provide individual support and advice.

Juhudi began in 2004 as an initiative within K-Rep Development Agency (KDA), an NGO that performs research and development in the microfinance sector. Over the past two years, Juhudi has transitioned to an independent for-profit microfinance institution. In May 2011, the Acumen Fund and Grameen Foundation became co-investors in Juhudi. Juhudi now has over 7,000 members managed by seven field offices. As of July 2011, Juhudi had 4,262 active borrowers, 48% of whom are women, and a 95% repayment rate.

2. Project Background

To complete the transition to an independent and sustainable organization, Juhudi is leveraging technology to streamline its back office processes and systems. Currently, loan officers and clients complete several paper forms as part of the group intake, loan application, and repayment processes, including client intake forms, the group constitution, business appraisal forms (including a poverty assessment), Kiva interview and waiver forms (and photograph), household goods waiver, loan application forms, and monthly repayment receipts and ledgers. In an effort to reduce costs, data entry errors, and delays in processing, Juhudi has targeted some documents and processes to convert to electronic forms that loan officers can complete via mobile phones.

Juhudi is currently completing integration of a mobile repayment option for clients through Safaricom's M-Pesa. Mobile payments dramatically improve our monthly repayment operations and eliminate the need for paper receipts and ledgers. In addition, a volunteer developer created a tool to allow loan officers to view client data via mobile phones. The tool, called Simple MFI, syncs with Juhudi's MIS (Microsoft Dynamics Nav) to display client data by region and loan officer. Simple MFI is an open source Java-based tool that runs on any Android phone. All Juhudi loan officers and regional managers are now equipped with IDEOS Android phones and began accessing and testing Simple MFI in the field in August 2011. (See <https://github.com/kevgibbs/simple-mfi/wiki> for more information and images of Simple MFI and the related Manta software.)

To expand on these efforts and loan officers' new mobile capacity, Juhudi seeks to combine and convert its business appraisal, the Kiva interview processes, and poverty assessment (Grameen's Progress Out of Poverty Index) to a mobile form using Open Data Kit (<http://opendatakit.org/>). By entering this client data electronically, Juhudi can eliminate significant duplication of data entry, facilitate import into our MIS, export data to an online source that is available to all offices, begin to collect and analyze valuable social

performance data, and improve the speed at which it funds loans through Kiva and disburses loans to clients.

3. Scope of Work

Juhudi is seeking technical assistance to aid development and testing of XML- and Java-based mobile tools, including mobile forms created in ODK and the Simple MFI tool.

Mobile business appraisal

Juhudi has detailed the format and structure of the combined mobile business appraisal and created a draft in ODK and seeks the following technical assistance to complete the project.

- Review the overall design and functionality of the form and XML file
- Develop and implement items in the form that can't be built directly in ODK:
 - Progressive questions on expenses, income, and credit history that result in a summed amount
 - Automated answers on date, loan office name, field office name based on phone presets
- Improve the numeric parameters of some items to ensure correct entry: client ID, mobile number, and year started farming
- Resolve XML export and import errors
- Improve display of collected client data in an internal online source

Juhudi seeks to further develop the appraisal tool to offer increased operational capacities:

- Implement signature capture to allow clients (including co-guarantors and group leadership) and staff to sign the Kiva legal waiver and approve the business appraisal data
- Implement GPS capture and develop a client farm and loan group location map listed by loan officer

- Develop and implement a credit score calculation based on collected income, expenses, and credit history
- Develop and implement a loan schedule calculator
- Develop and implement an automated PPI assessment score based on preset values
- Develop and implement an accessible online application to allow managers and other staff to review and approve collected data, including a credit score and poverty assessment score

Simple MFI

Simple MFI is being used throughout our field offices but technical errors are limiting its use. Simple MFI's original developer is available for questions and review but not for continued development. Juhudi seeks technical assistance to complete implementation of the tool:

- Review and resolve technical errors that occur when running Simple MFI on IDEOS phones, primarily the application freezing and closing, but other errors may be identified with further use
- Document Simple MFI functionality in a specification that facilitates further development
