Scope of Work

Firm or Individual:	Individual
Program:	**GIZ DAA2 and OKTA- Sprout Smart Farmer Innovation (SSFI)**
Scope of Work:	Web Engineering Consultant, Sprout Platform Feature development and support
Country:	**Kenya**
From:	**March 15th, 2023**
To:	**Nov 15th, 2023**
Task Manager:	**D-CSA Program Director and Sprout Lead – Elias Nure**

Mercy Corps Background

Mercy Corps is a leading global organization powered by the belief that a better world is possible. In disaster, in hardship, in more than 40 countries around the world, we partner to put bold solutions into action—helping people triumph over adversity and build stronger communities from within. Now, and for the future. As a global organization with programs in over 40 countries, we focus much of our advocacy on influencing governments, multi-lateral institutions as well as foundations and the private sector to improve relevant policies, practices and decisions in order to better help vulnerable communities lift themselves out of poverty.

Program Context

Nearly one and a half billion poor people live on less than US$1.25 a day. One billion of them live in rural areas where agriculture is their main source of livelihood[1]. An estimated 70 million Small Holder Farmers (SHF) live in Sub Saharan Africa, over half of whom are women[2].

Smallholders, who typically farm two hectares or less, provide over 80% of the food consumed in a large part of the developing world, contributing significantly to poverty reduction and food security[3]. However, increasing fragmentation of landholdings, especially in infrastructure, coupled with reduced investment support, growing competition for land and water, rising input prices and climate change threaten this contribution, leaving many smallholders increasingly vulnerable.

Given increasing world populations and demand for food, SHFs occupy an important segment of the global agricultural value chain[4]. Multinational buyers will increasingly rely on smallholders to secure their supply of commodities and to help satisfy consumer sustainability preferences[5].

At an estimated $450 billion, the global demand for smallholder agricultural finance is large—and largely unmet. Credit provided by informal and formal financial institutions, as well as value chain actors, currently only meets an estimated USD 50 billion of the more than USD 200 billion need for smallholder

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[1] IFAD, Smallholders, food security, and the environment, 2013

[2] IFAD, "Sub-Saharan Africa: The state of smallholders in agriculture", Schonberger and Delaney 2011.

[3] Peck, Anderson, "Segmentation of Smallholder Households: Meeting the Range of Financial Needs in Agricultural Families", CGAP Focus Note #85, April 2013.

[4] Dalberg, 2013

[5] Dalberg, 2013

finance in the regions of sub-Saharan Africa, Latin America, and South and Southeast Asia[6]. Impact driven smallholder agricultural lenders, currently satisfy less than two percent of the demand.[7] The volume and value of savings, lending and payment transaction SHFs in most African countries is not specifically measured.

Mobile phones are a powerful tool to access the electronic national retail payments system and enable vast numbers of clients to use a range of financial and informational services at lower cost. In agriculture, progressively more services are being delivered via mobile phone. Applications now deliver direct specific, timely information on agricultural production methods to farmers through their mobile phones. Moving beyond one-to-one communication, there are internet- and SMS-based services that allows farmers to access inputs; access price information on different crops and provides a platform for smallholders to collectively sell crops and buy inputs, thereby lowering costs and accessing new markets.[8]

We believe that digital innovation can revolutionize the way smallholders farmers feed the world, that's why, based on years of learning and iterating, we built the AgriFin model to facilitate that process.

Launched in 2012, AgriFin's primary target group is un-banked smallholder farmers living on less than USD 2 per day. Mobilizing a vast network of partners, AgriFin ensures that the needs of farmers inform the design of partner products and services. Our shared global context is challenging – climate variability and population growth present unprecedented challenges. Yet, our experience tells us that farmers are determined to beat the odds.

With access to the right tools, smallholder farmers can build the resilience they need against climate and emergency shocks, and continue to feed their communities. We know that government and private sector partners are best suited to deliver those tools, and that technology is a critical accelerator. Our aim is to connect smallholder farmers to products and services that increase their productivity and income by 50%, with a 40% target population of Women and Youth.

Mercy Corps AgriFin: GIZ #SmartDevelopmentFund Overview

The challenges in agriculture in Africa, particularly for the smallholder farmers producing 80% of its food for consumption, are complex, and no single solution exists to reverse age-old issues around markets, infrastructure, poverty and exclusion. Digital solutions can provide relatively low-cost solutions that reach scale quickly, open new markets, and surpass the traditional brick-and-mortar approach to customer acquisition and the distribution and sales of products and services. Over the past five years, AgriFin has worked both to build capacity of fintech and agtech innovators to scale and also worked to broker partnerships for them onto larger digital platforms, typically hosted by banks, mobile network operators, large agricultural enterprises and government. Digital platforms are evolving as drivers for impact and viability in delivery of key services for agriculture and also for scale up of young, breakthrough technology providers. Digital platforms can host multiple service providers, working to offer "end to end" services to drive transformation in agricultural markets and impact for smallholders, while decreasing risks and increasing revenue models for fintechs, agtechs and other market actors.

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[6] MasterCard Foundation, "Inflection Point: Unlocking growth in the era of farmer finance", April 2016

[7] Dalberg, 2013

[8] Peck, Anderson, "Segmentation of Smallholder Households: Meeting the Range of Financial Needs in Agricultural Families", CGAP Focus Note #85, April 2013.

Drawing on Mercy Corps' experience implementing the AgriFin Mobile, AgriFin Accelerate and AgriFin Digital Farmer programs, GIZ has engaged Mercy Corps to understand how young technology innovators can be supported in scale and operational viability by engaging with emerging models of digital platforms. The GIZDigital Agriculture Africa Phase 2 is a six-month, €1,300,000 initiative to work with a cohort of partners in Kenya and Nigeria to develop digital solutions that address challenges in the agriculture sector especially brought about by the Covid 19 pandemic. The COVID-19 pandemic has drawn attention to the complex fragility of many countries, highlighted most clearly in the interplay of public health, markets and food systems. Early warning signs are emerging that the continent is on the brink of an unprecedented food security crisis. In Kenya it is estimated that there are sufficient strategic reserves for three months, but disrupted food systems, logistics and evidence of food hoarding may shorten that timeline, particularly as the largest desert locust invasion in 70 years.

The World Bank estimates that the COVID-19 pandemic is likely to push upwards of 115 million into extreme poverty and set back poverty reduction by around three years. The primary risks to food security at the country level include: disruptions in domestic food supply chains, other shocks affecting food production, and loss of incomes and remittances that have created strong tensions and food security risks in many countries. A number of countries are experiencing varying levels of food price inflation, at the retail level, due to measures taken to combat the spread of COVID-19. Higher retail prices, combined with reduced incomes, mean more and more households are having to cut down on the quantity and quality of their food consumption, with potentially lasting impacts on nutrition and health. The U.N. World Food Programme has warned that the number of people at risk of encountering acute food insecurity will come close to doubling at the end of the year, from the initial 135 million currently facing acute hunger.

OKTA- Sprout Smart Farmer Innovation (SSFI) Program Overview

Smallholder farmers feed 1/3rd of the world's population, but studies project agricultural productivity throughout sub-Saharan Africa will not be able to meet growing demands. In addition to growing population, environmental shocks, major market disruptions and reliance on outdated agronomic practices, the majority of smallholder farmers have little access to updated agricultural information that addresses the causes of climate change and how best to adapt to its effects. There is a vast pool of this modern agriculture information and content, but it's not easily accessible to many of these smallholder farmers. The **Sprout Smart Farmer Innovation (SSFI) Program** intends the Sprout Platform to play the role of a global public good, where content can be consolidated and shared with farmer-facing organizations and distributed to smallholders through their various digital channels, supporting farmers to leverage the information to build their capacity and become more resilient. As part of the initial pilot we have launched the Sprout Platform - https://sproutopencontent.com, an open data platform and Sprout Learning - https://wa.me/254711943939?text=hi , a white labeled WhatsApp for Business platform open to all partners to utilize and share with the smallholders they support.

The program aims to develop and pilot the delivery of hyperlocal services for farmers via the Sprout Platform. In its current MVP stage, Sprout provides access to static data sets stored as files. There are plans to enable interactive API access to the platform to provide bite sized information that can be hyper-local, relevant to specific needs and real-time. The program will leverage Mercy Corps AgriFin's experience in developing and implementing data strategies for partners and adopt the best practices and policies from partners to ensure safeguarding of beneficiary data. OKTA will play a valuable role in the project to support development of platform ability to secure user identity, particularly the identity of farmers accessing the platform to both learn and link to the marketplace of farm services. Given low technology

literacy of Africa's smallholders and also the nascent platforms of many technology innovators serving them, OKTA engagement to support secure sign in, authorizing and user management will optimize the user experience.

Mercy Corps AgriFin (MCAF), has partnered with a wide range of highly reputable content creating and organizations to provide a rich, digital, and farmer friendly content into the Sprout Platform so that content distribution and farmer facing partners can reutilize and share the content to their respective smallholder farmers they support at scale. The goal is to enable partners to cost effectively, acquire and use this content to build productivity, earned income and resilience of farmers at scale.

The project aims to promote the use of technology to expand access to food, improve distribution of agriculture outputs by consumers through support farmers utilize updated agriculture extension information to bolster production, cultivation, marketing and distribution of food in Kenya, Ethiopia, Nigeria, Tanzania, and Uganda. The Sprout Platform is an open content agriculture platform where global agriculture experts and farmer facing organizations meet to share and discover farmer-friendly, digital ready content and services designed to build smallholder skills, resilience and income earning opportunities.

Web engineering consultant will be expected to support new feature development and provide technical customer care support.

Purpose of Engagement

To engage a web engineering consultant to support new feature development and technical customer care for the Sprout Platform. The engineer will report Task manager- D-CSA Program Director and Sprout Lead for deliverables; and will work closely and collaborate with other Sprout consultants and staff of MCA the work with and support the senior technical architect.

Scope of Work

The consultant shall:

- Support
  - Provide ongoing technical support to
    - Sprout Team members and
    - Customers who make inquiries about passwords and other functionality. Specifically, monitor Info@sproutopencontent.com and respond to technical queries.
- Feature Testing/UATs
  - Develop and run the User Acceptance Test for new features form Keitaro project with support from Sprout Team members
  - Develop and run User Acceptance for other new features as required, specifically for new DWAS and other features

      ○   Develop support documentation as needed for features that can be posted on the website.

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- Feature Development
  - Google Analytics
    - Aid the technical team in transitioning the site to Google Analytics v4
    - Aid the team in setting up Google Analytics reporting for Sprout that reflects Sprout tracking needs.
  - Monitor Sprout site analytics to ensure they are accurate and complete
  - Aid in the design and implementation of user interface (UI) and user experience (UX) design improvements, such as improving page load speeds, improving site navigation, and creating additional help and support content
  - Develop photo carousel feature for homepage

Deliverables & Deliverable Schedule

Deliverable #	Deliverable Description	Deliverable Estimated Completion Date
1	● Report detailing ongoing status and or completion of support, testing and development activities. ● A report detailing ongoing and or completion status of Investigating and resolving production issues and bugs ● A report detailing opportunities for improving usability and increasing conversions as a result of continuous Monitoring of the website traffic. Successful completion of Design and Implementation of UAT for Keitaro Features.	4/15/23
2	● Report detailing ongoing and or completion status of support, testing and development activities. ● Report detailing ongoing and or completion status of Investigating/resolving production issues and bugs ● A report detailing opportunities for improving usability and increasing conversions as a result of continuous Monitoring of the website traffic. Successful Design and Implementation of Photo Carousel for Sprout Website.	7/15/23

	● A report detailing opportunities for improving usability and increasing conversions as a result of continuous Monitoring website traffic. Successful Implementation of 3-5 software features identified on roadmap in February ● A report detailing opportunities for improving usability and increasing conversions as a result of continuous Monitoring website traffic. Successfully written code to achieve project specifications for new system functionality, yet to be determined	
3	● Report detailing ongoing or completion status of support, testing and development activities. ● Report detailing ongoing or completion status of Investigating and resolving production issues and bugs ● A report detailing opportunities for improving usability and increasing conversions as a result of continuous Monitoring website traffic. ● Report detailing support to the Senior Technical Architect with U/I design, HTML / JavaScript/Python and CSS programming. ● A report detailing opportunities for improving usability and increasing conversions as a result of continuous Monitoring website traffic. ● Successfully created wireframes, mockups, or prototypes to visualize site layouts. ● Report detailing ongoing and or completion status of Investigating and resolving production issues and bugs. ● A report detailing opportunities for improving usability and increasing conversions as a result of continuous Monitoring website traffic ● Report detailing support to the Senior Technical Architect with integrating data from various back-end services and databases	9/01/23

4	● Report detailing ongoing and or completion status of support, testing and development activities. ● Report detailing ongoing and or completion status of Investigating and resolving production issues and bugs ● A report detailing opportunities for improving usability and increasing conversions as a result of continuous Monitoring website traffic ● Report detailing support to the Senior Technical Architect integrate commercial off-the-shelf (COTS) and bespoke software packages into the Sprout Platform as products and services for platform users to utilize ● Successfully Documented technical designs and technical requirements	11/10/23

Required Qualifications

1. A bachelor's degree in Computer Science, Information Technologies, or related field
2. Experience developing software using the Python programming language
3. Experience working with core web technologies (HTML, CSS, JavaScript)
4. Excellent Computer, verbal and written communication skills, including report development, writing and editing
5. Strong interpersonal skills.
6. Pro-active, self-disciplined, responsive to requests
7. Demonstrated analytical and problem-solving skills
8. Demonstrated attention to detail, ability to follow procedures, meet deadlines and work independently and cooperatively with team members

Project Learning Agenda

The following Key ADF II Learning Agenda questions will be addressed:

1. What financial and value-added products and services do SHFs, including women and youth, value most and why?
2. How does bundling of products and services impact uptake and usage of digital financial services?

3. What capacity building tools have the highest impact on SHFs willingness and ability to use digital financial services?
4. How and to what extent have ADF II partners been successful to achieve scale and commercial sustainability?
5. What are the main drivers of success and failure of different partnerships and bundled approaches?

Ownership/Control of Work Product/Publication

Matters relating to ownership and control of work product and publication of materials produced during course of this engagement are addressed in the main contract agreement entered between Mercy Corps and the Consultant for performance of services.

Authorship and Acknowledgement

Matters relating to authorship and acknowledgment of any materials produced by the Consultant during the course of this engagement are addressed in the main contract agreement entered into between Mercy Corps and the Consultant for performance of services for AgriFin Digital Farmer II.

Task Manager/Coordination/Reporting

The Task Manager for this engagement is the Mercy Corps AgriFin's DCS-A Director with oversight from Mercy Corps AgriFin's Program Director. The consultant will direct all communications to the Task Manager and is expected to collaborate with the other Sprout Platform Consultants. All invoices will be received by the Task Manager, with final approvals by the program Director.

Interested bidders can submit their application i.e. CV, Cover Letter, Proposal and daily rate to mnzaumi@mercycorps.org .