

**GSMA**

**GSMA Innovation Fund  
Impact Portfolio  
2023**

## GSMA

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The GSMA is a global organisation unifying the mobile ecosystem to discover, develop and deliver innovation foundational to positive business environments and societal change. Our vision is to unlock the full power of connectivity so that people, industry and society thrive. Representing mobile operators and organisations across the mobile ecosystem and adjacent industries, the GSMA delivers for its members across three broad pillars: Connectivity for Good, Industry Services and Solutions and Outreach. This activity includes advancing policy, tackling today's biggest societal challenges, underpinning the technology and interoperability that make mobile work and providing the world's largest platform to convene the mobile ecosystem at the MWC and M360 series of events.

We invite you to find out more at [gsma.com](https://www.gsma.com)  
Follow the GSMA on Twitter/X: [@GSMA](https://twitter.com/GSMA)



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This initiative has been funded in part by UK Aid from the UK Government; however, the views expressed do not necessarily reflect the UK Government's official policies.

## GSMA Innovation Fund

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The GSMA Innovation Fund accelerates digital tech solutions that are addressing key global challenges. Through grant funding and tailored technical assistance, we position innovators in low- and middle-income countries to scale operations and amplify social and environmental impact.

For more information, please visit:  
[www.gsma.com/innovationfund](https://www.gsma.com/innovationfund)

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# About the GSMA Innovation Fund

Since 2020, the GSMA Innovation Fund has been accelerating digital tech solutions that address key global challenges.



**Digital innovation** provides a unique opportunity to accelerate socio-economic development and climate action in low- and middle-income countries (LMICs), where mobile phones are the main – and often only – way to connect to the internet. More than 3.5 billion people in LMICs now access the internet on a mobile phone, and this technology has the potential to foster economic growth, connect people to jobs and other services and improve their resilience to climate shocks. Mobile technology also **enables start-ups and small and medium enterprises (SMEs) to scale**, as it provides the infrastructure for payments, communications and content, and opens new and more direct access to markets.

In this context, in partnership with the UK Foreign, Commonwealth & Development Office (FCDO) and the Swedish International Development Cooperation Agency (SIDA), the GSMA Innovation Fund positions innovative start-ups and SMEs in LMICs to scale their operations and amplify their social and environmental impacts. It does so by providing **grant funding** and **tailored technical assistance**.

The objectives of the Fund are to support digital entrepreneurs on the path to commercial **sustainability and scale**, profile them and generate lessons for industry **insights and advocacy**.

# Impact of the GSMA Innovation Fund Portfolio

MARCH 2021 TO NOVEMBER 2023



Mobile network operator (MNO) partnerships supported



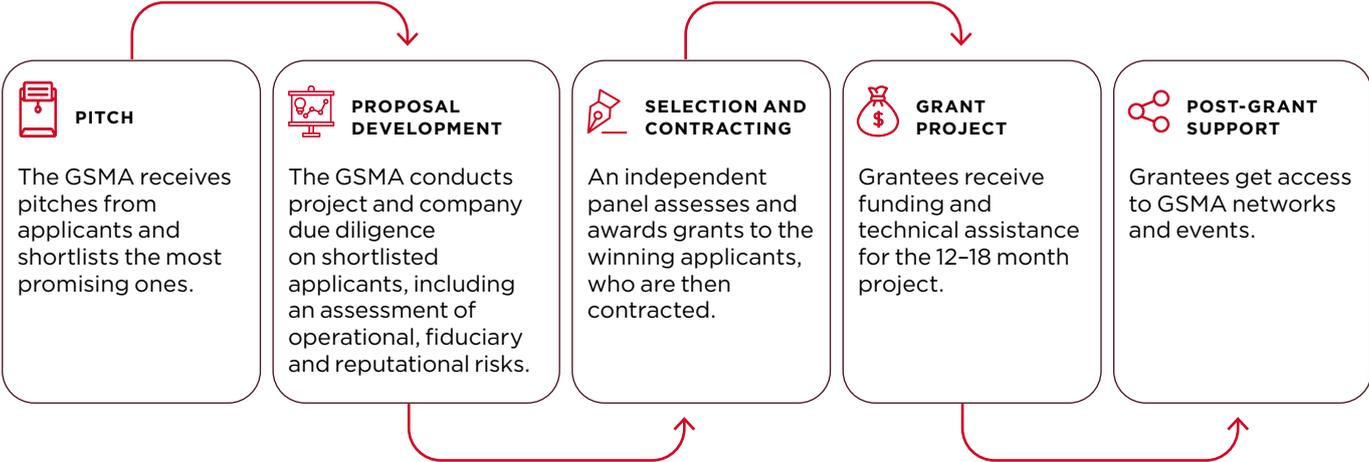
United Nations Sustainable Development Goals (SDGs) addressed



Note: data is current as of December 2023

# Methodology: end-to-end selection process and support

Figure 1  
GSMA Innovation Fund Methodology





GSMA®

## GSMA Innovation Fund

Accelerating mobile tech solutions that are addressing key global challenges



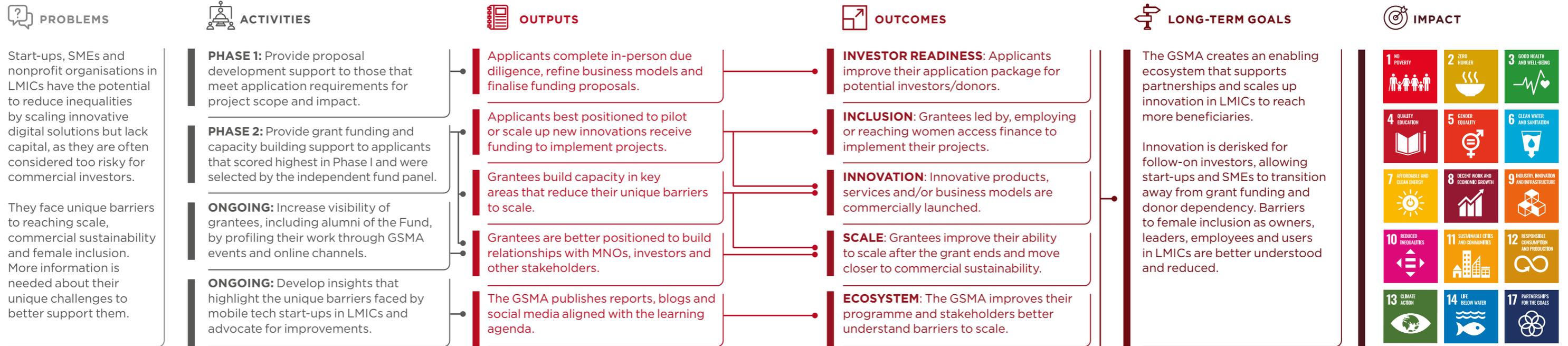
The GSMA Innovation Fund supports innovative digital solutions with positive socio-economic impact in low- and middle-income countries.

Our work is



# Our Theory of Change

Figure 2  
GSMA Innovation Fund Theory of Change



# Impact Portfolio Themes

21%

of the Impact Portfolio are organisations founded, co-founded or led by women



42%

of the Impact Portfolio offer solutions that disproportionately benefit women

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## Supporting female founders

The GSMA Innovation Fund is committed to supporting local founders, gender-inclusive teams and organisations that ensure their solutions reach women as well as men.

The Fund also recognises that, in some markets (particularly Southeast Asia), social norms may be a particularly strong barrier to gender inclusion. We therefore evaluate the efforts and commitment of our cohorts to be more gender inclusive. This is aligned with the **2X Global Challenge**, which aims to unlock gender-smart capital.

The GSMA Innovation Fund supports **female founders across a variety of sectors and geographic regions**. Of the 33 grantees in the Impact Portfolio, **seven are founded or currently led by women**, which is slightly above the market average. According to Disrupt Africa, only 20% of funded African tech start-ups had a female founder in 2022, and less than 6% of start-ups in Asia Pacific are founded by women. As of June

2023, **42%** of the Impact Portfolio offer products and services that specifically or disproportionately benefit women.

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## Emerging technology in action

**Emerging technologies**, such as artificial intelligence (AI), the Internet of Things (IoT) and blockchain, among others, are enabling smarter, data-driven solutions that address socio-economic challenges in LMICs, from urban services (e.g., utilities management) to rural development (e.g., precision agriculture).

However, grantees in the Impact Portfolio often operate in contexts where smartphone penetration is not widespread and legacy technologies (USSD, IVR, SMS) and feature phones remain important service delivery channels for reaching the underserved. To ensure their solutions have maximum impact and can scale, the following portfolio start-ups are combining emerging technologies with mobile apps and digital payments (Figure 3).

Figure 3

## Emerging technologies used by the GSMA Innovation Fund Portfolio



### IoT

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- **ATEC**'s eCook is an IoT-enabled stove that allows users to monitor their energy consumption, pay for their stove via mobile money and earn carbon credits by switching from polluting fuels.
  - **Aquarech** offers an IoT solution for fish farmers to check water temperature in real time. This is complemented by a USSD platform that they can use to purchase fish feed and access aquaculture tips.
  - **BENAA** launched an IoT-enabled, decentralised water sewage station that can be monitored remotely, allowing oversight of water quality and water flow for operation and maintenance support. This innovation is being delivered for the first time in water-scarce rural Egypt.
  - **Diyalo**'s IoT deployments help utilities identify and manage water that is lost in the network, helping to conserve water resources and reduce lost income in non-revenue water (NRW).
- **JanaJal WOW** (Water on Wheels) is an IoT-enabled three-wheeled vehicle that operates on compressed natural gas (CNG) and can distribute approximately 3,000 litres of water per day. WOWs offer real-time monitoring of water quality, customer orders and volume of water dispensed.



### AI

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- **Orenda** developed an AI system that enables them to automate most of their content creation, creating relevant content more quickly. They received \$1 million from the Qatar Foundation, which invested in them specifically because of their new AI technology and the potential to replicate their services in other countries.
- **I-Stem**'s mobile app uses AI to convert inaccessible complex documents, audio and video into accessible formats for users with visual impairments. Their solution caters directly to educational institutions and businesses by providing platforms to manage and deliver services seamlessly.

- **DeafTawk** has developed an AI chatbot that enables their mobile app to automatically interpret voice and text into sign language for users with hearing impairments.
- **Crop2Cash** is developing an AI-powered system to provide personalised, real-time agricultural advice to smallholder farmers in their local language. This is expected to help farmers strengthen their resilience to climate change.



### Blockchain

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- **J-Palm Liberia** uses two mobile blockchain apps to create transparent and traceable supply chains for Liberia's wild harvest palm oil, which will ultimately expand market access for thousands of smallholder oil palm farmers in Liberia.
- **Dayaxa** is using blockchain to be transparent about where and how they source their frankincense. It does this through an incorruptible platform where they document all their practices, including the origin and movement of resin, sustainable harvesting and ecosystem management and fair payments to harvesters.

Impact Portfolio:

# Africa

2020-2023



18

ORGANISATIONS

12

COUNTRIES

6

FEMALE  
FOUNDERS OR  
CO-FOUNDERS



**DIGITAL INCLUSION**



**ASSISTIVE TECHNOLOGY**



**DIGITAL URBAN SERVICES**

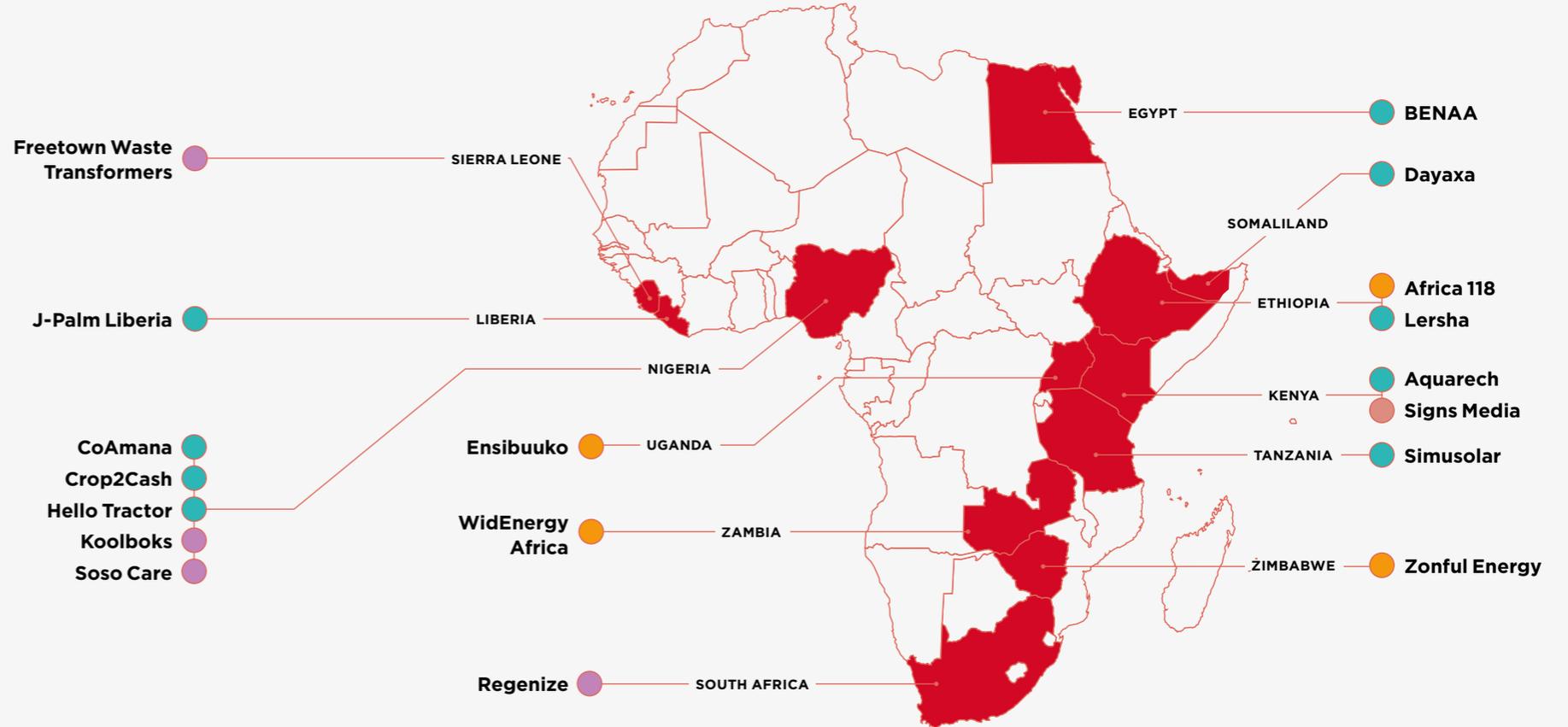
Water  
Energy  
Sanitation  
Waste management



**CLIMATE RESILIENCE  
AND ADAPTATION**

Agriculture  
Aquaculture  
Natural resource management

5 MNO partnerships:



# Africa

## Meet the Innovators

Ezana Raswork  
**Africa 118**  
ETHIOPIA



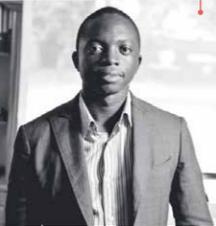
Dave Okech  
**Aquarech**  
KENYA



Aya Tarek Helmy  
**BENAA**  
EGYPT



Gerald Otim  
**Ensibuuko**  
UGANDA



Hafsah Jumare  
**CoAmana**  
NIGERIA



Liliane Ndabaneze  
**WidEnergy Africa**  
ZAMBIA



Michael Ogundare  
**Crop2Cash**  
NIGERIA



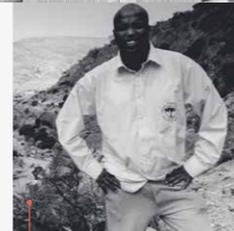
William Ponela  
**Zonful Energy**  
ZIMBABWE



Aminata Dumbuya-Jarr  
**Freetown Waste Transformers**  
SIERRA LEONE



Abdirizak Salah Mohamed  
**Dayaxa**  
SOMALILAND



Deborah Gael  
**Koolboks**  
NIGERIA



Jehiel Oliver  
**Hello Tractor**  
NIGERIA



Chad Robertson  
**Regenize**  
SOUTH AFRICA



Mahmud Johnson  
**J-Palm Liberia**  
LIBERIA



Chinonso Oporum  
**SOSO CARE**  
NIGERIA



Abrhame Endrias  
**Lersha**  
ETHIOPIA



Luke Muleka  
**Signs Media**  
KENYA



Marianne Walpert  
**Simusolar**  
TANZANIA



# Africa

Africa's Information Services Solution

**Africa 118** is a digital marketing platform that enables micro-, small and medium enterprises (MSMEs) to connect to the internet to access new markets.

LOCATION  
ETHIOPIA  
SECTOR  
FINTECH  
STAFF  
11-50 EMPLOYEES  
MNO PARTNERSHIP  
ETHIO TELECOM

STAGE  
**PRE-SERIES A**  
SEEKING  
**GRANT, EQUITY**



## PROBLEM

Less than 10% of SMEs in Ethiopia have a digital presence. Many lack the digital skills and expertise required to build and manage their online presence.



## SOLUTION

Africa 118's digital marketing platform offers comprehensive and accurate information about small businesses to online customers, and provides digital marketing services to individuals and SMEs, enabling them to grow by leveraging the power of the internet. Africa 118 received a GSMA grant in March 2021 to provide an affordable Mobile Digital Starter Pack to Ethiopian SMEs to help them build a strong digital presence and grow their business.



## IMPACT

Since partnering with the GSMA, Africa 118 has:

- Increased the number of SMEs using their Digital Starter pack from 21 in June 2021 to 1,863 by September 2022. Of these users, 1,249 are women.
- Partnered with Ethio Telecom to provide their SME users with an integrated payment solution that allows them to sell their products online.
- Received a grant from the Mastercard Strive Innovation Fund in December 2023 to improve and expand their offering through greater social media integration and launching a bundled offer with an MNO.



**Ensibuuko** is a fintech that promotes the adoption of digital financial products and improving access to mobile devices and services in rural areas.

LOCATION  
UGANDA

SECTOR  
FINTECH

STAFF  
11-50 EMPLOYEES

MNO PARTNERSHIP  
AIRTEL, MTN

STAGE  
**PRE-SERIES A**  
SEEKING  
**DEBT, GRANT,**  
**EQUITY,**  
**CONVERTIBLE**  
**NOTES**



## PROBLEM

Savings groups in rural Uganda tend to rely on paper records and analogue systems that are not connected to the larger financial ecosystem. Savings groups lack both knowledge of relevant digital products and services and the skills required to use them. These are major barriers to rural customers adopting internet services.



## SOLUTION

Ensibuuko received a GSMA grant in March 2021 to develop a digital skills training kit for rural customers that would leverage their existing network of digital field agents to deliver digital literacy training to village savings groups in various rural locations.



## IMPACT

Since partnering with the GSMA, Ensibuuko has:

- Reached more than 236,000 members of rural savings groups, providing them with digital skills training and access to their e-ledger interface. Of these members, more than 60% are women.
- Raised \$1 million through FCA Investments to recruit talent and scale in Uganda.
- Replicated their digital skills training in Malawi in partnership with the United Nations Capital Development Fund (UNCDF) and Community Savings and Investment Promotion (COMSIP), registering 50,000 users.





**WidEnergy Africa** provides last-mile delivery of clean, reliable and affordable energy and connectivity solutions, as well as affordable access to mobile phones.

**LOCATION**  
ZAMBIA  
**SECTOR**  
ENERGY  
**STAFF**  
11-50 EMPLOYEES

**STAGE**  
**PRE-SERIES A**  
**SEEKING**  
**GRANT, EQUITY,**  
**CONVERTIBLE**  
**NOTES**



## PROBLEM

In Zambia, the main barriers to mobile internet use are a lack of digital skills and accessible and affordable smartphones and data. In mid-2019, mobile internet adoption among rural and peri-urban populations was just 10%, considerably lower than the national average (24%). There is also a mobile gender gap, particularly in rural areas, which must also be addressed.



## SOLUTION

WidEnergy Africa provides rural communities in Zambia with 20 community-based distribution hubs for pay-as-you-go (PAYG) smartphones preloaded with airtime bundles. The GSMA supported WidEnergy in March 2021 to offer PAYG smartphones to their solar home system (SHS) users with proven repayment track records.



## IMPACT

Since partnering with the GSMA, WidEnergy has:

- Sold more than 1,300 PAYG smartphones, 470 of which to women. 71% of their users said their quality of life had “very much improved”.
- Trained 1,366 people in digital skills, 50% of whom were women.
- Signed an agreement with Beyond the Grid Fund for Africa to scale up their business operations by selling and establishing up to 37,000 new, high-quality, clean and affordable SHS to customers in rural and peri-urban areas of Zambia between 2023 and 2027.



**Zonful Energy** provides modular, decentralised and scalable PAYG solar energy systems to rural, urban and peri-urban off-grid customers.

**LOCATION**  
ZIMBABWE

**SECTOR**  
ENERGY

**STAFF**  
11-50 EMPLOYEES

**MNO PARTNERSHIP**  
ECONET

**STAGE**  
**PRE-SERIES A**  
**SEEKING**  
**DEBT, GRANT, EQUITY,**  
**CONVERTIBLE NOTE**



## PROBLEM

In Zimbabwe, only 56.5% of the population use the internet, which means 7.6 million people are not online.



## SOLUTION

By procuring, marketing and distributing low-cost smartphones and data bundles with 24-month data plans from Econet, Zonful Energy aims to reduce the mobile internet gap in Zimbabwe through an affordable PAYG model. Smartphones and data bundles are available to both their SHS customers and other customers. With the GSMA grant they received in March 2021, they also tackled the digital skills barrier by teaching customers how to use mobile internet through the **GSMA Mobile Internet Skills Training Toolkit (MISTT)**, in collaboration with Econet.



## IMPACT

Since partnering with the GSMA, Zonful Energy has:

- Sold 8,500 PAYG smartphones, 5,100 of which to women. Their customers purchased more than 14,000 GB of data during the GSMA grant period.
- Hosted 114 digital clinics in different regions of Zimbabwe, with MISTT content translated into two local languages as part of the grant.
- Been ranked by SolarEyes International as one of Zimbabwe's fastest growing and innovative solar companies.





## SIGNS MEDIA KENYA LIMITED

### LOCATION

KENYA

### SECTOR

ASSISTIVE TECH

### STAFF

51-200 EMPLOYEES

### MNO PARTNERSHIP

SAFARICOM

### STAGE

**PRE-SERIES A**

### SEEKING

**EQUITY**

**Signs Media** provides real-time, on-demand access to sign language interpretation services.



## PROBLEM

Sign language interpreters play a crucial role in the life of a person with a hearing impairment, helping them to communicate effectively and to access and use interpretation services. In Kenya, there are only 500 sign language interpreters serving the needs of more than 260,000 people with hearing impairments. They are mainly located in urban areas, and their services remain out of reach for low-income and rural populations.



## SOLUTION

The GSMA supported Signs Media in July 2021 to provide affordable, high-quality, virtual, on-demand sign language interpretation services to persons with hearing impairments through the **assistALL** mobile app. The grant was used to develop the app into a ready-for-market product, to train

sign language interpreters on the app and to acquire users (sign language interpreters and persons with hearing impairments).



## IMPACT

Since partnering with the GSMA, Signs Media has:

- Registered 6,400 users on their assistALL app, 60% of whom are women.
- Partnered with Safaricom to host the assistALL mini app on the M-PESA app. This means that the assistALL app will be accessible to more than 31 million Safaricom M-PESA subscribers, ensuring greater inclusivity and accessibility for Kenyans with hearing impairments.

## The Freetown Waste Transformers

**LOCATION**  
SIERRA LEONE  
**SECTOR**  
ENERGY, SANITATION  
**STAFF**  
1-10 EMPLOYEES  
**MNO PARTNERSHIP**  
ORANGE, AFRIMONEY

**STAGE**  
SERIES A  
**SEEKING**  
CONCESSIONAL DEBT

**Freetown Waste Transformers** turns organic waste to energy, replacing diesel generators with green technology.



### PROBLEM

Limited access to electricity and an unreliable grid has led to mass use of diesel generators in Sierra Leone, especially among MSMEs. The waste management infrastructure in Freetown is also beset with inefficient collection processes, making waste management a major challenge.

### SOLUTION

Freetown Waste Transformers received a GSMA grant in March 2022 to digitise the waste collection process and improve the efficiency of waste coordination by implementing a GPS mobile mapping app. The app, DortiBox, was launched for waste collectors in partnership with the

Freetown City Council, which can manage inputs from waste collection partners and provide live data on waste volumes, types of waste, collection times and locations.

### IMPACT

Since partnering with the GSMA, Freetown Waste Transformers has:

- Had 390 waste collectors use their DortiBox app (30% of their waste collectors are women). Their service has benefitted 46,552 household members who use the app for waste collection, or who indirectly benefit from the earnings from waste collection.
- Diverted 11.85 tonnes of organic waste from landfills and generated 12,205 kWh of clean energy through their waste-to-energy solution.

# KOOLBOKS

LIFE IS KOOL

## Koolboks

produces off-grid, solar-powered refrigeration accessible to everyone who needs it.

**LOCATION**  
NIGERIA  
**SECTOR**  
ENERGY  
**STAFF**  
51-200 EMPLOYEES

**STAGE**  
SERIES A  
**SEEKING**  
DEBT, GRANT,  
EQUITY



## PROBLEM

In Nigeria, up to 40% of all food produced is wasted, largely due to a lack of access to cold storage. Even where Nigerians have access to the electricity grid, power is unreliable and back-up diesel generators are ubiquitous. These generators are both more expensive for customers and harmful to the environment.



## SOLUTION

Koolboks' refrigeration uses ice, as well as batteries, to convert the power of the sun into cooling, cutting the cost of off-grid refrigeration by 40%. Koolboks offers their freezers on a lease-to-own basis with a locking device embedded in the compressor. Customers can make affordable weekly or monthly instalment payments. Following a successful pilot to test consumer response to their products, Koolboks received a GSMA grant in March 2022 to launch and scale their solution in Nigeria, targeting fish traders, most of whom are women. With the

introduction of IoT, Koolboks can monitor their refrigeration systems remotely and evolve their offering to include Cooling as a Service (CaaS).



## IMPACT

Since partnering with the GSMA, Koolboks has:

- Sold PAYG solar refrigerators for commercial use to 140 fish-trading MSMEs.
- Secured a strategic partnership with Orange to provide freezing and refrigeration solutions in 12 African countries.
- Partnered with Danone Nigeria to sell their solar-powered refrigerators in Lagos. They will pilot 300 innovative Koolboks freezers, introducing the CaaS model.



**Regenize** is a waste management start-up that recycles waste collected from households, apartments and offices. This is organised and tracked through mobile technology.

**LOCATION**  
SOUTH AFRICA  
**SECTOR**  
SANITATION  
**STAFF**  
1-10 EMPLOYEES  
**MNO PARTNERSHIP**  
MTN AYOBA

**STAGE**  
SEED  
**SEEKING**  
DEBT, GRANT,  
CONVERTIBLE  
NOTES



## PROBLEM

South Africa's recycling sector rests on the roughly 90,000 waste pickers who collect material from households and businesses, which represents 90% of all recycled paper and packaging waste. With no access to clean and separated recyclables, waste pickers work in dangerous conditions searching through bins or landfills.



## SOLUTION

Regenize provides a "freemium" recycling collection service that incentivises residents with a virtual currency that can be redeemed for rewards such as airtime, data and grocery vouchers. Their free model enables them to reach residents through a decentralised recycling operation that integrates

and supports waste pickers with uniforms, equipment, mobile devices, access to clean recyclables and a decentralised recycling hub. In March 2022, the GSMA supported Regenize to scale their solution by establishing new decentralised recycling hubs and developing their Recycling and Remali apps.



## IMPACT

Since partnering with the GSMA, Regenize has:

- Onboarded an additional 6,732 households to their collection services, totalling nearly 8,000 households, including more than 20,000 individuals.
- Created formal employment for 29 waste collectors.
- Integrated their Recycling and Remali apps on MTN's Ayoba super app, which offers users access to digital and rich media services through channels, microapps and payment solutions.





**SOSO CARE** provides micro-health insurance through waste plastic recycling.

**LOCATION**

NIGERIA

**SECTOR**

INSURTECH,  
HEALTHTECH

**STAFF**

1-10 EMPLOYEES

**STAGE**

PRE-SEED

**SEEKING**

GRANT AND EQUITY



**PROBLEM**

Nigeria generates more than 34 million tonnes of waste annually, including 20 billion plastic bottles, but less than 10% is collected, sorted and recycled. At the same time, pervasive poverty and poor healthcare financing (less than 3% of Nigeria's 200 million people have health insurance), have put quality health care out of reach for most Nigerians.



**SOLUTION**

A GSMA grant enabled SOSO Care to expand their current offering by purchasing recyclable waste from low-income individuals and selling it to intermediaries and recycling companies. Proceeds are used to provide health insurance premiums for households that register for the scheme. The GSMA funding aimed to

increase automation across SOSO CARE's systems by introducing digital and mobile apps. In March 2022, SOSO CARE streamlined their processing to enable more waste to be collected and to increase the value generated from waste collection.



**IMPACT**

Since partnering with the GSMA, SOSO CARE has:

- Onboarded 3,178 waste collectors to their platform, 86% of whom are female.
- Supported 1,811 of these waste collectors to access health insurance.
- Recycled 97,304 tonnes of plastic and onboarded 81 business-to-business (B2B) clients.



**Aquarech** improves the productivity of fish farmers, opens access to markets and creates an inclusive aquaculture value chain using mobile technology and IoT sensors.

LOCATION  
KENYA  
SECTOR  
AGRITECH,  
AQUAPONICS,  
CLIMATETECH  
STAFF  
11-50 EMPLOYEES

STAGE  
**PRE-SERIES A**  
SEEKING  
**DEBT, CONCESSIONAL  
DEBT, EQUITY, GRANT**



## PROBLEM

In Kenya, fluctuating water temperatures due to climate change have made it difficult for fish farmers to know when and how much to feed their stock. Fish are sensitive to water temperature and only eat when the temperature is within a certain range.



## SOLUTION

Aquarech is Kenya's first fish farming platform to enable fish farmers, fish feed manufacturers and buyers to trade and create trusted relationships. Aquarech received a GSMA grant in November 2022 to further test and scale their pilot project of IoT devices for fish farmers. This included enhancing their mobile app and USSD platform.



## IMPACT

Since partnering with the GSMA, Aquarech has:

- Increased the number of fish farmers and fish traders using the Aquarech app from 250 to 3,859. Of these users, 1,326 are women.
- Raised \$1.7 million in equity funding to hire talent, acquire more feed and set up infrastructure to support more vertical integration of their technology. The investment was led by Aqua-Spark, a Netherlands-based global aquaculture investment fund, with additional capital from Acumen, Katapult and Mercy Corps Ventures.





**LOCATION**  
EGYPT  
**SECTOR**  
WATER, CLIMATE TECH,  
SANITATION  
**STAFF**  
11-50 EMPLOYEES

**STAGE**  
PRE-SEED  
SEEKING  
GRANT

**BENAA** supports water resource management by using IoT to convert wastewater into irrigation water for small farms in rural Egypt.



## PROBLEM

Small rural communities in Egypt lack access to centralised infrastructure like sanitation. This contributes to soil, surface and groundwater pollution, leading to the proliferation of water-borne diseases and food contamination. They also face escalating water shortages due to population growth and climate change, a particular challenge for the agricultural sector, which consumes 86% of Egypt's water resources.



## SOLUTION

BENAA launched the Digital Water and Sanitation Solution (DWSS) project in remote rural areas of Egypt. BENAA received a GSMA grant in November 2022 to use an IoT system in decentralised water treatment units to monitor and analyse the quality of treated wastewater and the concentration of nutrients.



## IMPACT

Since partnering with the GSMA, BENAA has:

- Launched the DWSS app and within one month had 150 users (as of October 2023).
- Reported that an additional 2,905 individuals, including households and farm workers, have benefited from treated water after an IoT device was installed.



**LOCATION**  
NIGERIA  
**SECTOR**  
AGRITECH,  
CLIMATECH  
**STAFF**  
1-10 EMPLOYEES

**STAGE**  
PRE-SEED  
**SEEKING**  
EQUITY AND GRANT

**CoAmana's** digital agricultural marketplace management and trade platform provides farmers and stakeholders in the agri-value chain with essential digital tools. This platform improves agricultural productivity and helps farmers manage financial risks related to drought conditions, purchase drought-resistant seeds and access information on best practices and financial services.



## PROBLEM

More than 70% of Nigerians live in rural agrarian communities affected by rising populations and desertification. Farm production in northern Nigeria is disrupted by heavy rains and prolonged periods of drought, and farmers lack access to information and crucial products like drought-resistant seeds.



## SOLUTION

CoAmana's digital platform provides tools that support sales and procurement, facilitate price comparisons, enable digital payments, offer embedded financial services like digital credit and insurance and provide digital information, such as best practices and weather updates. CoAmana received a GSMA grant in November 2022 to enable 5,000 farmers to adopt best

practices and for new users to use the Amana Market platform to explore information on adaptation to climate change and resilience, as well as access drought-resistant seeds and other outputs.



## IMPACT

Since partnering with the GSMA, CoAmana has:

- Increased the number of farmers on their digital platform from zero to 9,593 - including 1,355 women - who use their digital products (USSD, web and mobile app) to order products and access climate-smart SMS and payment plans.
- Had more than 250 suppliers and sales agents get produce from farmers on their platforms.





**Crop2Cash** supports farmers facing drought conditions to adapt their farming practices through climate-smart farming content and to manage financial risks through their digital marketplace, connecting farmers to high-yield, drought-resistant maize seeds via USSD.

**LOCATION**  
NIGERIA  
**SECTOR**  
AGRITECH,  
CLIMATETECH  
**STAFF**  
11-50  
EMPLOYEES

**STAGE**  
SEED  
SEEKING  
DEBT,  
CONCESSIONAL  
DEBT, EQUITY,  
GRANT



## PROBLEM

Frequent drought and high temperatures from climate change are having a negative impact on maize production in Nigeria. Farmers in northern Nigeria struggle to access the financing they need to scale and transform their operations and build resilience.



## SOLUTION

Crop2Cash provides smallholder farmers with access to formal financing for agricultural inputs and enables them to receive digital payments and access other digital financial services, such as credit. Crop2Cash is also supporting access to affordable financing for smallholder farmers in Nigeria using a USSD platform. The GSMA supported Crop2Cash in November 2022 to connect farmers to high-yielding drought-resistant seeds via USSD, and to provide tailored SMS weather advisory to smallholder farmers on best agricultural practices.



## IMPACT

Since partnering with the GSMA, Crop2Cash has:

- Had 20,701 smallholder farmers access their USSD solution, 5,627 of whom are women. Of these, 1,650 have purchased drought-resistant seeds.
- Helped to build financial profiles for more than 100,000 smallholder farmers and unlocked \$2.8 million in credit. Farmers using the platform have reported a 70% increase in income.
- Integrated the Crop2Cash app on MTN's Ayoba super app, creating greater visibility and allowing Crop2Cash to onboard farmers outside their current network.



**Dayaxa** works with farmers in Somaliland to harvest sustainable produce, achieve fair pricing and improve living standards for farming communities.

LOCATION  
SOMALILAND  
SECTOR  
AGRITECH, CLIMATETECH  
STAFF  
11-50 EMPLOYEES

STAGE  
**SEED**  
**SEEKING**  
**CONCESSIONAL DEBT,**  
**EQUITY AND GRANT**



## PROBLEM

Communities in the Sanaag region of Somaliland do not set prices for the frankincense resin they tap from trees, with all value in the supply chain flowing to resin traders. Combined with the impact of climate change, these harvesters have few incentives to harvest sustainably, and instead overharvest to maximise short-term income.



## SOLUTION

Dayaxa works closely with farmers to achieve fair prices and improve their standards of living. Through their social enterprise initiative, Dayaxa seeks to have a positive impact on the lives of farmers and their families by investing back in these communities. The GSMA supported Dayaxa in November 2022 to improve earnings for

resin farmers through a mobile blockchain app that traces where resin is sourced and the price paid to harvesters. The grant was also used to build a tree health mobile app to enable traceability and ecological monitoring.



## IMPACT

Since partnering with the GSMA, Dayaxa has:

- Registered 1,023 frankincense resin harvesters and sorters, 69 of which were women.
- Started a community-based frankincense tree nursery to develop opportunities for community forestry and community-based plantations.





LOCATION  
NIGERIA  
SECTOR  
AGRITECH,  
CLIMATETECH  
STAFF  
51-200 EMPLOYEES  
STAGE  
SERIES A  
SEEKING  
DEBT

**Hello Tractor** is a digital platform connecting tractor owners and farmers through a farm equipment-sharing app and GPS fleet management solution. This helps farming communities improve planning and preparedness amid unpredictable rainfall patterns.



## PROBLEM

Manual labour is 2.5 times more expensive and 40 times slower than modern tractors. Despite the inefficiency, smallholder farmers in Africa cannot afford machinery like tractors and combine harvesters. Irregular and unpredictable rainfall patterns, combined with a lack of knowledge about mechanisation, have led to significant delays in tractor service, the underuse of machinery and low crop yields.



## SOLUTION

Hello Tractor's digital platform enables farmers to request affordable tractor services through community-based agents, while tractor owners have the enhanced security of remote asset tracking and virtual monitoring. Hello Tractor has expanded to 16 African countries and grown to more than 4,500 tractors and combines, servicing more than a million farmers and 2.9 million acres, all organised through a network of more than 2,500

booking agents. Hello Tractor received a GSMA grant in November 2022 to optimise tractor service, harvesting and yield, and build a more resilient, adaptive community of farmers and tractor owners.



## IMPACT

Since partnering with the GSMA, Hello Tractor has:

- Serviced more than 600 hectares by tractor.
- Launched a mechanisation hub in Nassarawa State, Nigeria.



### J-Palm Liberia

manufactures natural health and beauty products from palm kernels, using blockchain technology for improved traceability.

**LOCATION**  
LIBERIA  
**SECTOR**  
AGRITECH, CLIMATETECH  
**STAFF**  
51-200 EMPLOYEES

**STAGE**  
**SERIES A**  
**SEEKING**  
**GRANT**



### PROBLEM

Liberia's rural smallholder farming communities lack access to processing machinery and markets for their palm kernels. As a result, they largely throw away the palm kernels, losing thousands of dollars in potential income. This technology gap has caused these communities to miss out on significant economic development opportunities.



### SOLUTION

J-Palm received a GSMA grant in November 2022 to develop two mobile blockchain apps to create transparency and traceability in Liberia's wild harvest palm oil supply chains. This will ensure the protection of palm forests while also improving incomes and livelihoods for 7,500 palm harvesters, delivering a sustainable, no-deforestation palm product that makes communities more resilient to climate change.



### IMPACT

Since partnering with the GSMA, J-Palm has:

- Registered 2,532 harvesters and collectors on their mobile app, including 1,422 women.
- Secured \$1.2 million in investment from the USAID Africa Trade and Investment programme, which will help to increase their factory capacity, extend sales and distribution to two additional counties in Liberia, expand to 60 more villages, launch in another two West African countries and cover organic certification costs.





LOCATION  
ETHIOPIA  
SECTOR  
AGRITECH, CLIMATECH  
STAFF  
51-200 EMPLOYEES  
MNO PARTNERSHIP  
ETHIO TELECOM,  
SAFARICOM ETHIOPIA

STAGE  
SERIES A  
SEEKING  
EQUITY, GRANT

**Lersha** provides digital services to enable smallholder farmers to access farm inputs, hire mechanisation services and receive advice, credit and insurance through their in-house call centre, mobile app and agents.



## PROBLEM

Smallholder farmers in Ethiopia account for 95% of production, often managing multiple farm enterprises under variable climatic and uncertain socio-economic conditions. Farmers need additional information on the availability and prices of recommended farm inputs, as well as a mechanisation service to catch the short planting window, receive expected market prices for their produce and access credit services.



## SOLUTION

The Lersha platform provides a one-stop digital service for smallholder farmers to access farm inputs, hire mechanisation services and request dynamic agro-climate advice. The GSMA supported Lersha in November 2022 to scale up the use of their platform among smallholder farmers by promoting agricultural finance and climate-risk insurance.



## IMPACT

Since partnering with the GSMA, Lersha has:

- Onboarded more than 234,000 new farmers, 30% of whom are women. Nearly 130,000 users are accessing weather alerts, hazards alerts and agro-advisory, and 19,300 are receiving loans.
- Partnered with Safaricom Ethiopia to promote inclusive digital financial services to smallholder farmers. Safaricom Ethiopia will leverage Lersha's agent network to provide agricultural mobile loans.
- Partnered with the Ethiopian Agricultural Transformation Institute (ATI) to create digital profiles for 1,050,000 smallholder farmers and provide agro-climate advisory and fertiliser recommendations.



**Simusolar** supports fishers in securing livelihoods, adapting to weather changes and sustaining fisheries management through IoT-enabled productivity and activity tracking equipment.

**LOCATION**  
TANZANIA  
**SECTOR**  
AGRITECH,  
CLIMATETECH  
**STAFF**  
51-200 EMPLOYEES

**STAGE**  
**SEED**  
**SEEKING**  
**EQUITY, GRANT,**  
**CONCESSIONAL**  
**DEBT**



## PROBLEM

For artisanal fishers, a rise in water temperature in Lake Victoria is leading to a lower catch of a small fish critical to the local economy. Volatile weather and a lack of real-time information also make it difficult for local fishers to plan their fishing and dry the fish for transport, which leads to waste. Overfishing is difficult to regulate due to the resources required to cover the large territory.



## SOLUTION

Simusolar seeks to increase rural incomes through productive solutions like fishing lights, water pumps and freezers. The GSMA supported Simusolar in November 2022 to introduce an IoT fishing light that is locatable, trackable, energy efficient with dimming capability and remote controlled via smartphone. This light will be combined with a mobile app to track usage, monitor weather and

manage fishing operations. The tracking feature will allow Simusolar to provide the Ministry of Fisheries with anonymised data, supporting their goal of digitising the fishery.



## IMPACT

Since partnering with the GSMA, Simusolar has:

- Increased the total number of fish farmers who have purchased at least one Simusolar IoT light kit from zero to 168.
- Reported that 42 of these fishers were adopting a smartphone for the first time while using the light kit.
- Secured investment from DEG Impulse develop Ventures in December 2022.



# Impact Portfolio:

# Asia

## 2020-2023



15

ORGANISATIONS



5

COUNTRIES



1

FEMALE  
FOUNDER OR  
CO-FOUNDER



**DIGITAL INCLUSION**



**ASSISTIVE TECHNOLOGY**



**DIGITAL URBAN SERVICES**

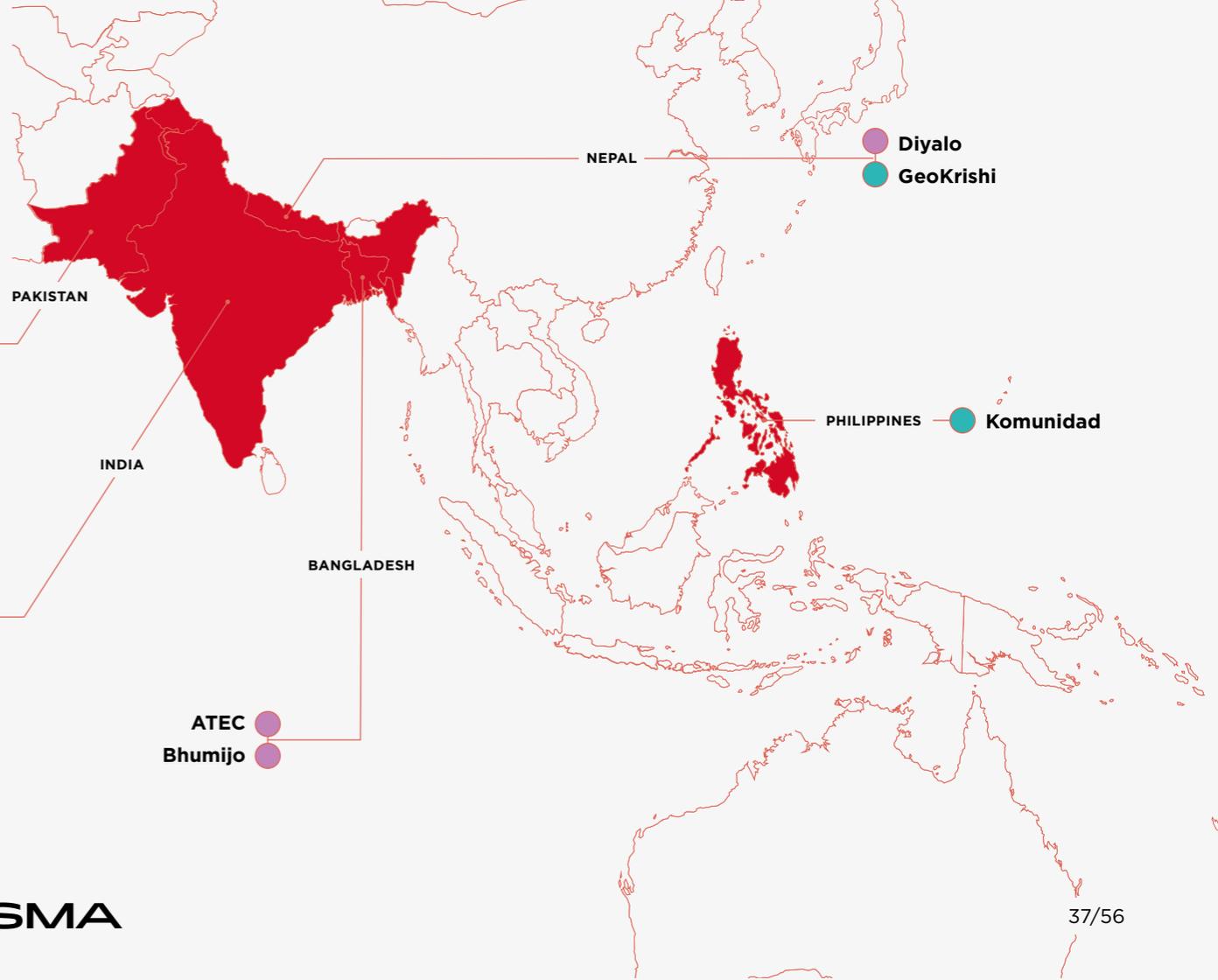
Water  
Energy  
Sanitation  
Waste management



**CLIMATE RESILIENCE  
AND ADAPTATION**

Agriculture  
Natural resource management

### 6 MNO partnerships:



# Asia

## Meet the Innovators

Talhad Munir Khan  
**Knowledge Platform**  
PAKISTAN



Jai Navavati  
**Navana Tech**  
INDIA

Haroon Yasin  
**Orenda**  
PAKISTAN

Akheel Khalid  
**Vceela**  
PAKISTAN



Ali Shabbar  
**DeafTawk**  
PAKISTAN

Shakul Sonker  
**I-Stem**  
INDIA

Tarun Sarwal  
**SignAble**  
INDIA

Farhana Rashid  
**Bhumijo**  
BANGLADESH

PR Khanal  
**Diyalo**  
NEPAL

Parag Agarwal  
**JanaJal WOW**  
INDIA

Rahul Nainani  
**ReCircle**  
INDIA



Ben Jeffreys  
**ATEC**  
BANGLADESH



Khizer Alam Khan  
**BaKhabar Kissan**  
PAKISTAN

Felix Ayque  
**Komunidad**  
PHILIPPINES

Rajan Bajracharya  
**GeoKrishi**  
NEPAL



LOCATION  
PAKISTAN  
SECTOR  
EDTECH  
STAFF  
51-200 EMPLOYEES

STAGE  
SERIES A  
SEEKING  
EQUITY, GRANT,  
CONVERTIBLE NOTES

## Knowledge Platform's

Learn Smart Pakistan is a gamified cloud learning platform for students.



## PROBLEM

In Pakistan, quality education is only affordable for middle- and high-income groups, leaving millions of students out of school. Although online learning resources are available, most people cannot afford a smartphone, tablet or internet connection to pursue online education.



## SOLUTION

The GSMA supported Knowledge Platform in March 2021 to roll out mobile educational devices through microfinancing, with the goal of introducing one education device per family. Knowledge Platform now provides access to quality education through a bundled learning app aimed at five- to 15-year-olds in Pakistan. They address the affordability barrier by offering a smartphone or tablet

financing scheme to underserved communities, enabling users to pay in instalments. They also partnered with Jazz Pakistan, which provides mobile internet to Knowledge Platform users at a subsidised rate.



## IMPACT

Since partnering with the GSMA, Knowledge Platform has:

- Onboarded 123 new schools to their platform.
- Registered more than 10,000 students on their Learn Smart Pakistan mobile app and just over 159,000 students on their Learn Smart Pakistan web portal.
- Partnered with Zong 4G in July 2023 to provide tailored courses to more than 60 schools in marginalised areas along the China-Pakistan Economic Corridor.



**Navana Tech** builds text-free, image-based and voice-assisted technology for low literacy smartphone users.

LOCATION  
INDIA  
SECTOR  
FINTECH  
STAFF  
11-50 EMPLOYEES  
STAGE  
PRE-SEED



## PROBLEM

Smartphone apps are text dependent and primarily in English, creating accessibility and usability challenges for internet users who speak local languages and have low literacy levels. Challenges are amplified in apps where money is involved, such as e-commerce and financial services. Because of this, there is a noticeable difference in app drop-off and user retention rates between urban and rural users.



## SOLUTION

Navana Tech develops text-independent, image-based and voice-assisted technology for low literacy users around the world. Their conversational AI voice bot enables digital actions through two-way conversations. In March 2021, Navana Tech received a grant to develop a conversational

voice bot in multiple Indian languages (Hindi, Telugu, Tamil, Marathi and Kannada) and launch financial services and e-commerce use cases.



## IMPACT

Since partnering with the GSMA, Navana Tech has:

- Increased the number of monthly active users to 1.75 million, 250,000 of whom are voice bot users.
- Acquired 60 new clients.
- Partnered with the Gates Foundation and the Indian Institute of Science ARTPARK (AI and Robotics Technology Park) to collect voice samples in nine languages to develop accurate speech-to-text and natural language processing technologies for agriculture and finance.





**Orenda** bridges the digital divide between private and public schools in Pakistan by providing engaging, high-quality digital education.

LOCATION  
PAKISTAN  
SECTOR  
FINTECH  
STAFF  
51-200 EMPLOYEES  
MNO PARTNERSHIP  
TELENOR PAKISTAN

STAGE  
**SEED**  
SEEKING  
**GRANT, EQUITY**



## PROBLEM

There are 22.3 million children in Pakistan out of school and enrolment and performance both decrease as children move from primary grades to secondary grades.



## SOLUTION

Orenda provides engaging digital education through animated videos and interactive quizzes via their digital platform, Taleemabad. The GSMA supported Orenda in March 2021 to expand both the curriculum and reach of the Taleemabad app by developing the app for KaiOS phones, which addresses affordability and accessibility barriers. Orenda also launched their B2B solution for low-cost schools by developing an enterprise resource planning (ERP) system to further improve accessibility.



## IMPACT

Since partnering with the GSMA, Orenda has:

- Raised \$2.3 million in funding to explore and experiment with new models, with funders including the Malala Fund and Sorenson.
- Received \$1 million from the Qatar Foundation (\$800,000 from the foundation and \$200,000 in matching funds), who invested in them specifically because of their new AI technology and potential to replicate their services in other countries.
- Been selected for the second cohort of London School of Economics 100x Impact Accelerator.



**Vceela** is a digital ecosystem for Pakistani artisans that connects them directly to local and international markets.

**LOCATION**  
PAKISTAN

**SECTOR**  
FINTECH

**STAFF**  
11-50 EMPLOYEES

**MNO PARTNERSHIP**  
JAZZ PAKISTAN

**STAGE**  
**SEED**  
**SEEKING**  
**GRANT, EQUITY**



## PROBLEM

The artisan sector comprises 15% of the total workforce in Pakistan, making this sector the second largest employer in the country. More than 85% of artisans are not connected digitally, which makes them more vulnerable to exploitation from intermediaries.



## SOLUTION

Vceela empowers artists and artisans by connecting them to local and international markets and helping them build sustainable businesses through skill development, design consultation, viable partnerships and market access. Through Vceela's mobile solution, artisans can source raw materials, market and sell their products, collect payments and receive microfinance more easily. The GSMA provided

funding Vceela in March 2021 to scale their existing solution to reach more artisans and train them to use mobile services. The project has a particular focus on disadvantaged groups, including women and persons with disabilities.



## IMPACT

Since partnering with the GSMA, Vceela has:

- Onboarded more than 97,000 users, including more than 78,000 artisans selling their products on Vceela's web and app platforms. This includes nearly 64,000 female artisans.
- Increased the number of unique buyers on their platforms to nearly 23,000.
- Increased the average income of the artisans on their platforms by 41%.





**DeafTawk** provides real-time, on-demand access to sign language interpretation services.

**LOCATION**  
PAKISTAN  
**SECTOR**  
ASSISTIVETECH  
**STAFF**  
11-50 EMPLOYEES  
**MNO PARTNERSHIP**  
JAZZ PAKISTAN,  
TELENER PAKISTAN,  
DIALOG AXIATA

**STAGE**  
**SEED**  
**SEEKING**  
**CONVERTIBLE**  
**NOTES**



## PROBLEM

There are more than 10 million people in Pakistan's deaf community, who face communication barriers due to limited access to sign language interpreters.



## SOLUTION

DeafTawk aims to empower the deaf community of Pakistan by bridging the communication gap with the rest of society through digital technology. DeafTawk used the GSMA grant they received in July 2021 to provide access to quality sign language interpretation services through digital technology. This included a video relay solution for one-on-one interpretation, group calling and interpretation through AI and machine learning.



## IMPACT

Since partnering with the GSMA, DeafTawk has:

- Onboarded more than 54,000 new users in Pakistan, including 20,918 female users with hearing impairments and 1,134 female interpreters.
- Improved quality of life for 91% of their customers.
- Launched in Singapore, Sri Lanka (in partnership with Dialog Axiata) and Puerto Rico.



**I-Stem** offers AI-enabled digital services to provide high-quality accessible documents for persons with disabilities.

LOCATION  
INDIA  
SECTOR  
ASSISTIVETECH  
STAFF  
1-10 EMPLOYEES  
MNO PARTNERSHIP  
DIALOG AXIATA

**STAGE**  
**SEED**  
**SEEKING**  
**GRANT, EQUITY**



## PROBLEM

Most persons with visual impairments, especially those in school or at work, face challenges with inaccessible documents, media and apps, and are not aware of the latest assistive technologies, leading to exclusion of students and employees. Lack of access to digital information hinders access to opportunities and the growth of persons with visual and hearing impairments.



## SOLUTION

I-Stem enhances access for persons with disabilities in education and employment through a web portal that offers accessibility conversion services and digital learning resources. In July 2021, the GSMA supported I-Stem to convert the I-Stem web portal into a mobile app that leverages

AI to provide document and audio/visual accessibility services. This will aid users with visual and hearing impairments. I-Stem will also provide digital learning resources for persons with disabilities.



## IMPACT

Since partnering with the GSMA, I-Stem has:

- Served more than 7,200 users, 20% of whom are women, through the I-Stem app, providing access to document, audio, video and app accessibility services.
- Created 10 B2B partnerships with educational institutions such as universities, as well as companies and government.
- Secured a partnership with Dialog Axiata to replicate their solution in Sri Lanka (yet to be commercially launched).





**SignAble** provides real-time, on-demand access to sign language interpretation services.

**LOCATION**  
INDIA  
**SECTOR**  
ASSISTIVETECH  
**STAFF**  
51-200 EMPLOYEES

**STAGE**  
**PRE-SERIES A**  
**SEEKING**  
**EQUITY**



## PROBLEM

In India, deaf persons face social isolation, high levels of illiteracy and little access to education and employment. To facilitate communication for the deaf community, SignAble's app offers a mobile interpretation service in Indian Sign Language, enabling individuals to communicate with anyone, anywhere, anytime.



## SOLUTION

SignAble Communications is a social impact start-up that has developed technology, a network of interpreters and engagement with the deaf community. SignAble promotes employment for deaf persons and hopes to make all aspects of daily living accessible in India. Funding from the GSMA in July 2021 supported SignAble to implement a two-way calling app, optimise the app's

user interface to improve user experience and video streaming for low-bandwidth settings and test and validate an affordable pricing model.



## IMPACT

Since partnering with the GSMA, SignAble has:

- Reached more than 29,500 individuals through their app, 14% of whom are women.
- Improved the quality of life for 88% of their customers in India.
- Won a monetary prize for the Prosus Social Impact Challenge for Accessibility, which is aimed at start-ups developing assistive technology to aid persons with disabilities.



**ATEC** provides PAYG eCook stoves for the very lowest income customers, with GSM tracking of climate impact.

LOCATION  
BANGLADESH  
SECTOR  
CLEANTECH  
STAFF  
51-200 EMPLOYEES



## PROBLEM

In Bangladesh, 65% of households still use biomass for cooking. The emissions and smoke inhalation resulting from dirty cooking methods cause multiple health issues, particularly for women. For households earning less than \$10 a day, 1.5 days a month are spent collecting wood, while up to three hours a day are spent on household chores due to inefficient cooking.



## SOLUTION

ATEC's electromagnetic induction stove provides clean cooking available on a PAYG basis, making them affordable for those on the lowest incomes. The GSMA worked with ATEC in March 2022 to develop and launch an Android mobile app integrated with their eCook stoves. The app shows users real-time electricity usage data, payment status, and any carbon offset data, costing as little as \$5 a month. The stove will also automatically mint

Gold Standard certified carbon credits, which can be sold to ATEC's international corporate partners and on carbon markets. The sale of these carbon credits will be shared with the users by subsidising the monthly instalments.



## IMPACT

Since partnering with the GSMA, ATEC has:

- Onboarded an additional 4,754 eCook users by the end of the grant in September 2023, bringing the total number of eCook users to more than 6,000.
- Diverted 1,705 tonnes of carbon emissions during the grant period.
- Signed a purchase agreement with renewable energy company ENGIE for the purchase of 11.5 million tonnes of carbon credits.





**Bhumijo** provides hygienic and affordable smart toilets in low-income areas by building new toilets or renovating and managing existing facilities.

**LOCATION**  
BANGLADESH  
**SECTOR**  
SANITATION  
**STAFF**  
51-200 EMPLOYEES

**STAGE**  
SEED  
SEEKING  
GRANT, EQUITY



## PROBLEM

For the more than 5 million people who commute daily on the roads of Dhaka, there are fewer than 50 usable public toilets. This has a disproportionate impact on low-income populations and women, who often spend 12 to 16 hours a day outside their homes.



## SOLUTION

Bhumijo provides hygienic, inclusive and affordable smart toilets in low-income areas, with extra services such as showers, clean drinking water, laundry, refreshments and advertising space. These services are available through a subscription or pay-per-use model. Their centres offer a separate area for women to ensure their privacy and safety. The GSMA supported Bhumijo in March 2022 to digitise the operation of their public toilets. With the grant, Bhumijo trialled a suite of technologies, including a touchless entry system and an Android mobile app for users to pay for a subscription and receive information on hygiene.



## IMPACT

Since partnering with the GSMA, Bhumijo has:

- Had more than 522,000 walk-in users and more than 3,600 subscribers to their digitised toilets. Bhumijo operates 42 centres in Bangladesh that serve 8,000 people daily, 20% of whom are female.
- Improved access to quality water and sanitation services for 100% of their users.
- Partnered with JTI Bangladesh through their JTI Global WASH Initiative to develop and operate sanitation centres at busy urban hubs in Bangladesh.



**Diyalo** specialises in IoT-based water production system automation, offering real-time water quality monitoring and a simplified water intelligence system.

**LOCATION**  
NEPAL  
**SECTOR**  
WATER, ENERGY  
**STAFF**  
51-200 EMPLOYEES  
**STAGE**  
**SEED**  
**SEEKING**  
**GRANT, EQUITY**



## PROBLEM

Only 52% of Nepalis have access to piped water for their homes and fewer than 30% of Nepal's 44,000 water schemes are fully functional. Issues such as water overflow, excessive energy usage, labour costs, and challenges in managing water distribution schedules adversely impact water distribution and quality. Where services fail, people often rely on tanker truck water. This water is, most times, of a much lower quality and can cost up to 40 times more than piped water, with price gouging in times of scarcity being well documented.



## SOLUTION

Diyalo provides Watermark software, a web/IoT-based solution that includes mobile meter reading, billing, account and stock management, SMS communication with end users and online bill payment.

The GSMA supported Diyalo in March 2022 to develop a mobile app and enterprise dashboard for urban utility providers, enabling them to use IoT to measure network performance and leakages, automate water pumps and update the enterprise resource planning (ERP) and customer relationship management (CRM) systems.



## IMPACT

Since partnering with the GSMA, Diyalo has:

- Provided 16 B2B water utility companies with an IoT-enabled water intelligence system. This led to a 5% increase in revenue and a 10% reduction in electricity bills.
- Onboarded 570 utility companies to their Watermark app.
- Onboarded more than 10,400 household users to their app, 51% of whom are women.



**JanaJal** WOW provides mobile water ATMs for middle- and low-income groups, small vendors, food carts, shops and business owners.

LOCATION  
INDIA  
SECTOR  
WATER  
STAFF  
51-200 EMPLOYEES  
MNO PARTNERSHIP  
JIO, AIRTEL

STAGE  
**PRE-SEED**  
**SEEKING**  
**EQUITY, GRANT,**  
**DEBT/LOAN**



## PROBLEM

In Delhi, 1.8 million people live in 800 slums without a secured, piped water connection. Despite demand and willingness to pay for safe water, they must buy water from unreliable sources that lack quality assurance and are unable to reach many areas. These sources are often considerably more expensive than water provided by the utility.



## SOLUTION

JanaJal operates multiple static water ATMs and JanaJal WOW (Water on Wheels), an IoT-based, clean fuel-powered, mobile water delivery vehicle across Delhi, Ghaziabad, Noida, Surat, Maharashtra and other densely populated areas. JanaJal WOW (JJWOW), a custom-built three-wheeled vehicle, was developed for the last-mile delivery of safe water to the doorstep of households. After successfully prototyping the JJWOW service, the GSMA supported JanaJal in March 2022 to trial and launch 25

JJWOW vehicles. Each JJWOW is IoT-enabled and distributes up to 3,000 litres of water per day. They offer real-time monitoring of water quality and customer orders remotely supported by their proprietary tech platform JJSUITE.



## IMPACT

Since partnering with the GSMA, JanaJal WOW has:

- Scaled from two to 32 JJWOWs and reached more than 12,082 users in three cities in India.
- Provided clean household drinking water to more than 48,000 people.
- Reported that 73% of users have gained access to safe drinking water services and 73% of their customer base use digital payment services instead of cash.



**ReCircle's** digital platform aggregates the collection and processing of dry waste, which can be sold as plastic credits to businesses.

LOCATION  
INDIA  
SECTOR  
SANITATION  
STAFF  
11-50 EMPLOYEES

STAGE  
PRE-SERIES A  
SEEKING  
GRANT, EQUITY



## PROBLEM

Low-value, non-recyclable plastics, such as food packets and wrappers, are usually dumped in landfills as there is no value attached to collecting it. Since companies producing plastic waste do not have a proper channel to recover their waste to meet their sustainability commitments and comply with local guidelines, waste is discharged into the environment.



## SOLUTION

ReCircle transforms waste into a valuable resource. They have built a traceable reverse supply chain for waste, especially plastics. They partner with local waste collectors who help to collect, sort and pre-process the recovered materials, after which the material is channelled to authorised recyclers/processors. The GSMA supported ReCircle in March 2022 to digitise their dry waste supply chain from collection to processing to enable

transparency and drive operational efficiencies in waste management. The ReCircle platform brings together individual, household-level waste collectors, large-scale waste aggregators, recyclers and processors.



## IMPACT

Since partnering with the GSMA, ReCircle has:

- Issued more than 77 million plastic credits (one plastic credit is equivalent to 1 kg of recovered plastic).
- Processed 77,885 tonnes of waste and diverted them from landfills.
- Raised a pre-Series A round from Flipkart Ventures, 3i Partners and Acumen Fund to expand their technology, service capabilities and partner networks into new waste supply chains.





### BaKhabar Kissan

(BKK) runs a network of weather stations providing hyperlocal weather information, enabling access to agricultural expertise through digital platforms.

**LOCATION**  
PAKISTAN  
**SECTOR**  
AGRITECH,  
CLIMATECH  
**STAFF**  
51-200 EMPLOYEES

**STAGE**  
**SERIES A**  
**SEEKING**  
**GRANT, EQUITY**



### PROBLEM

There are 8.2 million smallholder farmers in Pakistan working to meet the basic food and nutrition requirements of the country's population. However, a lack of weather data stations and high-quality weather data in the country has meant farmers do not have the information they need for efficient decision-making and disaster management. This has hindered food security and left poor communities, particularly farmers, even more vulnerable to the effects of climate change.



### SOLUTION

BKK's platform provides access to various services, including weather information and agricultural expertise on the latest pesticides and better farming methods. The GSMA supported BKK in November 2022 to enhance their digital weather platform and provide farmers with real-time, hyperlocal weather information. The

grant was used to disseminate content related to agriculture and livestock practices to enhance the resilience of farmers to climate change-induced weather impacts. Their platform also provides access to agriculture and weather experts who can help farmers learn and adapt to new farming techniques.



### IMPACT

Since partnering with the GSMA, BKK has:

- Increased the number of subscribers (including farmers, livestock owners and non-farmers subscribed to weather updates) who access their conventional digital services to 11.2 million.
- Deployed 135 automated weather stations.
- Reported a total of 212,351 app downloads.



**Komunidad** uses Software as a Service (SaaS) solutions and AI-powered mobile apps to improve disaster response. Komunidad's typhoon early warning system (EWS) and weather analytics platform help local governments plan and prepare for hazards more efficiently and accurately.

LOCATION  
PHILIPPINES  
SECTOR  
CLIMATE TECH  
STAFF  
11-50 EMPLOYEES  
MNO PARTNERSHIP  
GLOBE

STAGE  
SEED  
SEEKING  
CONVERTIBLE,  
SAFE NOTES



## PROBLEM

Ranked first in the World Risk Index, the Philippines is significantly impacted by extreme weather events, with an average of 20 tropical cyclones affecting the country each year.



## SOLUTION

Komunidad focuses on data and analytics to improve climate resilience and sustainability by enabling businesses and communities to build and deploy their own decision-support tools to strengthen climate resilience and generate data to support climate action. The GSMA supported Komunidad in November 2022 to use a data-driven approach to integrate environmental intelligence, EWS and mobile phone alerts.



## IMPACT

Since partnering with the GSMA, Komunidad has:

- Provided all nine municipalities in Siargao Island with weather analytics and an EWS dashboard, mobile app and SMS alerts, and onboarded municipality staff and local stakeholders in Siargao Island, 102 of whom are women.
- Launched Curbeet, an AI-powered mobile safety app, to decentralise EWS and provide activity monitoring during natural hazards and extreme weather events.
- Replicated the project in two coastal municipalities in Luzon through a strategic partnership with City Savings Bank and Aboitiz Foundation, which aims to strengthen disaster risk reduction (DRR) programmes in the bank's host communities.



# GeoKrishi

**GeoKrishi** helps smallholder farmers adapt to climate stressors and adopt climate-smart agricultural practices through digital learning content and advisory services.

**LOCATION**  
NEPAL  
**SECTOR**  
FINTECH,  
CLIMATE TECH  
**STAFF**  
11-50 EMPLOYEES

**STAGE**  
PRE-SERIES A  
**SEEKING**  
BLENDED FINANCE,  
LOAN, GRANT



## PROBLEM

Without technical understanding or advice, smallholder farmers in Nepal are unable to respond to the risks of climate change. Extension services, climate-smart tools and technologies are often inefficient and not tailored to the changing climate.



## SOLUTION

GeoKrishi is Nepal's first fully integrated, data-driven digital agriculture platform designed to help remove the financial, technical and cultural barriers preventing farmers from accessing and using information to improve farm productivity and maximise profitability. The GSMA supported GeoKrishi to upgrade their existing system to expand the reach of their bundled smart agricultural solutions. The GSMA grant was also used to build a sustainable public-private-community business model by engaging closely with local government, local service providers and farmer cooperatives.



## IMPACT

Since partnering with the GSMA, GeoKrishi has:

- Onboarded 145,860 farmers to their mobile app, and more than 25,000 users have adopted the climate-smart features that were launched as part of the grant.
- Partnered with GSMA Innovation Fund grantee eSewa to explore financing services for smallholder farmers in Nepal.



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