CASE STUDY:

Kukua and Eseye - Harvesting the benefit of connected farming

A much needed improvement in weather predictions for Sub-Saharan Africa

Eseye has enabled **Kukua** Weather Services to offer its customers reliable and securely connected weather stations. These are used to provide a much needed improvement in accuracy in weather predictions. The connected weather stations give **Kukua** the ability to create constantly updating weather maps of Sub-Saharan Africa to ensure the frustrations of uncovered areas are a thing of the past.

THE **SITUATION**

Climate change is increasing the unpredictability of weather patterns resulting in problems for many people globally. This issue is magnified within Sub-Saharan Africa where many smallholders rely upon the rainfall to provide the water for crops that millions of people are dependent on in order to survive. Sub-Saharan Africa's rural areas have a lack of weather monitoring infrastructure due to the associated costs.

*"Considering that the provision of basic and accurate weather forecasting helps to mitigate the effects of droughts and floods **Eseye** is proud to be working alongside **Kukua**. We utilise our relationships with MNOs to ensure that the AnyNet SIM card has the ability to choose between numerous networks to ensure the weather station has the best possible signal even in the remote areas to which **Kukua** are shipping"*

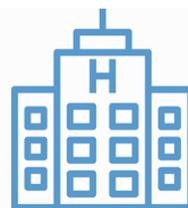*Stephen Stewart, Regional Director – Africa at **Eseye**.*

The Institute for Climate and Society in Mali has concluded that yields can be increased by up to 20% when smallholders have access to advice based on weather conditions.

Kukua's thrifty innovation collects information on the local weather including wind speed, wind direction, solar radiation, rainfall, temperature, humidity, and much more. The design uses a specifically designed frame that can accommodate a range of different sensors to suit the precision and price point required by the customer.

Building upon the universality of weather conditions, **Kukua** Weather Services are currently partnering with large NGOs to establish networks of weather stations across Africa. The data is used for NGO research purposes, and plans are being made to sell the data to both commercial and smallholder farmers, in order for **Kukua** to become financially sustainable. The service will also be provided to disaster relief charities, renewable energy firms, transport and logistics companies, as well as event organisers.

One of **Kukua**'s current partners is using the weather information to help understand the difference in yields across groundnut plantations in Tanzania. Comparing the farming techniques with the weather conditions allows the partners to find the best farming techniques for the conditions. This in time can enable accurate and useful yield improving training to help the farmers.

THE **SOLUTION**

The World Meteorological Organisation-standardised sensors inside a **Kukua** weather station are attached to a small solar panel, which is then attached to a battery, two microcontrollers, modem, and an **Eseye** AnyNet SIM card. Using **Eseye's** connectivity, the collected data is sent off at regular intervals to be analysed and interpreted after which it is presented and used to inform and advise farmers using precise weather predictions. The raw data is used by scientists in yield models and other research project helping to nourish Africa.

With the **Kukua** team focused on the collection and interpretation of the information, **Eseye** were brought in to manage the connectivity. Due to the flexible nature of the AnyNet SIM card and **Eseye's** bespoke bundling service, the collaboration was a great match. Within a week of first contact, the AnyNet SIM cards were inside the **Kukua** stations on their way to being deployed in-country.

Eseye manages the relationships with Mobile Network Operators to ensure the AnyNet SIM is always within network coverage. Customers are invoiced using easily understandable zonal tariff and bundles which allows **Kukua** to ship products anywhere in Africa.

'Eseye was instrumental in ensuring the connectivity worked smoothly'

*"**Eseye** has been instrumental in ensuring the connectivity works smoothly and we have noted how helpful its dedicated support team is in problem solving. The nightmare situation of having devices offline no longer exists. **Eseye** was very supportive from the onset and enabled us to get started immediately",* Tom Vanneste, Project Coordinator at **Kukua** Weather Services.

THE **BENEFITS**

Eseye and **Kukua** Weather Services' partnership has ensured the solution has been quickly deployed in multiple nations, all within a fixed monthly connectivity cost. With ongoing **Eseye** support, farmers in Sub-Saharan Africa can be sure the information that assists them in harvesting success is in safe hands.

ABOUT **ESEYE**

Eseye takes the cost, risk and time out of M2M Internet of Things (IoT) deployments, enabling enterprises to take more products to market and succeed. Through the simplification of global cellular connectivity, businesses benefit from one SIM, one monthly bill service provider and one tech support for all device types, versions and end locations.

With over 800 customers across the globe, Eseye delivers highly secure and resilient cellular data services through its revolutionary AnyNet and AnyNet Secure Subscriber Identity Modules (SIMs). These SIMs provide unique zero-touch, highly secure, remote device provisioning and true freedom to roam across a vast number of international mobile network partnerships.

Eseye is an AWS Advanced Technology Partner - IoT Competency, recognised in the 2016-17 Gartner Magic Quadrant for M2M managed services and holds ISO 27001

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