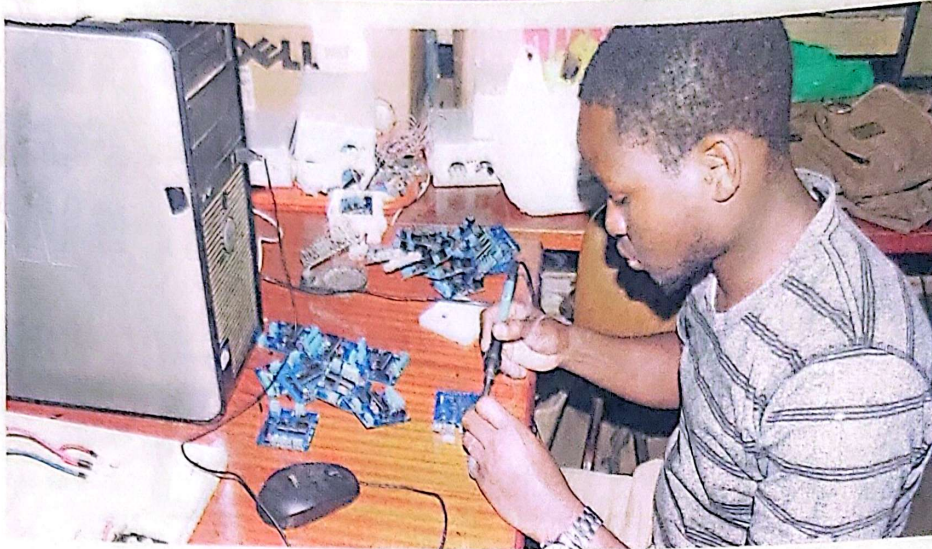


MY BRIGHT IDEA



REMOT TECH WILL MONITOR YOUR SOLAR SYSTEM

BY AHMED MUTO

Innovex, an innovations hub in Makerere University, reeks of innovative ideas, with one of their past being agricultural drones.

Fast forward, their current flagship is called Remot, a smart technology that makes it easier

for solar contractors to monitor and collect money from their clients.

They use mobile money integration and enable remote monitoring and on/off switching of solar systems using energy management and monitoring hardware and software.

David Tusubira, the chief technical officer, says right now, their Remot smart off-grid technology is their identity and emphasizes that they are not a solar distributor, but make technology that makes it easier for solar companies to collect money from their customers. They have been selling this idea since early 2015.

How it works

Tusubira says they want to enable the solar distributors observe the performance of the solar systems, also to know when and why the systems fail.

"Our first entry in the energy space was after sales. The distributors sell you a solar system, install it and offer you a warranty of one year. But they want to know how you are using the solar system," he says.

Their hardware called the Davix is connected to the solar system to measure the energy generated, stored and used then send them over a wireless mobile connection to their software platform,

the solar distributor's and the end user's.

"In case of misuse of the solar system, the solar distributor will know if, for example, you use a flat iron, yet it was installed for lights," Tusubira adds.

The software and hardware does the switching on/off of power remotely without having to go to the clients. They can also track usage and know how much energy is generated and how much is used.

The system automates the bill collection and after sales services for 40% to under 10% as distributors will not need to have a physical presence in an area. Those defaulting on payment are disconnected automatically.

As of last year, they started dealing with solar distributors that exercise the Pay-As-You-Go payment model. This is where you buy energy from the company, but not pay to own the system.

"There are distributors that will install the systems in your premises, but you are expected to pay a certain fee at a flat rate monthly for energy using the solar system. And the ones with that model probably have the largest company base here in Uganda," he notes.

Tusubira says the uniqueness with their product as Innovex is they do not have to sell a whole solar system.

How the payments work

In the distributors accounts, they can track payments and so they can see that a customer is supposed to pay a particular amount and system will expect that amount and every time they default, the system knows, be it via mobile money or cash. If one defaults, it switches them off automatically.

What capacities are they available in?

Tusubira says this is on the solar distributor's end and so decide which solar system they are going to install and which capacity it is. But according to him, they will typically have 60watts, 100watts, maybe some will be 320watts.

"Those are distributor modals. For us we ensure our hardware can work on all those. A switching hardware can do up to 250watts although we have other models that can do even more. It does not matter what size the solar system our hardware will still work," he asserts.

The monitoring hardware which is a bit bigger and sophisticated measures the battery voltage, panel voltage, current and sends them to their software clouds.

How necessary is the hard and software?

"Many solar systems installed in Uganda are donor-funded, therefore, what happens is a donor wants to do analysis and evaluation. When they make proposals for contractors to submit bids to supply solar systems and they win, the donor will want a method of evaluating the services.

Our hardware goes a long way in helping them achieve that. So now they are forced to purchase monitoring software," explains Tusubira. According to him, they have sold over 100 monitoring units in and outside Kampala. The monitoring hardware is \$60 (about sh290,000) and the switching is \$30 (about 109,500).

However, the monitoring hardware also does switching. So, basically one can execute pay-as-you-go with the monitoring hardware.

The switching hardware called the Davix switch and the monitoring hardware depending on the type of solar system can be a Davix AC or DC.