SolarNow, Eseye and AWS

Enabling IoT to Change Lives Across Africa

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2017 BEST PRACTICES AWARD

EUROPEAN M2M CELLULAR
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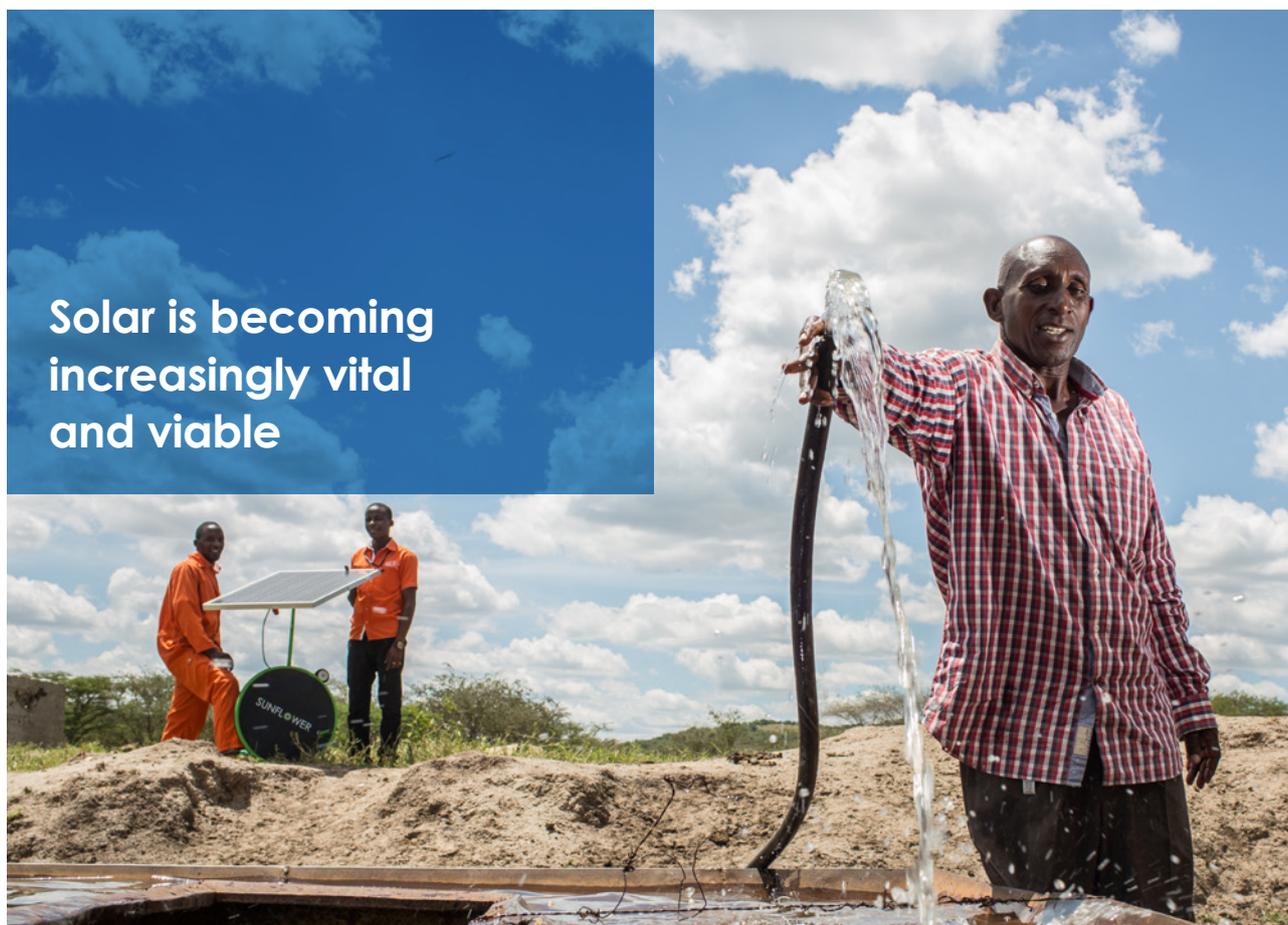
Solar is becoming increasingly vital and viable

The Internet of Things (IoT) is impacting the lives of millions around the world – but none more so than those in Africa. It is for this reason SolarNow, a social business which is passionate about transforming lives by providing high quality solar energy, appliances and financing solutions in East Africa, has turned to IoT.

Solar as an energy source is becoming increasingly vital and viable to off-grid populations in the East African region; in part to reduce the widespread use of polluting and dangerous kerosene lamps, but also to harness the significant economic, social and health benefits reliable power sources provide.

SolarNow addresses the unmet need for sustainable, quality solar energy in the region through the provision of solar powered equipment, appliances and services to remote or off-grid home, farm, school, health centre and business locations. To make a deployment achievable, the company offers affordable and flexible credit with every solution, a key feature in widening access to solar energy in the African market.

The organisation's decision to now integrate M2M cellular connectivity and AWS Cloud within its solutions has developed out of a desire to innovate and to provide more and better services to customers. SolarNow's requirement was to enhance access to and use of device data. They wanted better oversight of remote equipment and to be able to communicate with clients, for example when payments are due or if there is an issue with their device.

However, the time, costs and risks involved in setting up IoT deployments can appear to be a daunting, even impossible task.

Data through the AnyNet Secure SIM, with seamless integration onto the AWS Cloud

> By turning to cellular connectivity, SolarNow can further credit provision, mostly through better insights into client behaviour; making solar more accessible through affordable finance. Using cellular connectivity also means the performance of the solar system can be remotely monitored, ensuring a much better service for customers.
>
> **Peter Huisman, CTO at SolarNow**

For the solution, SolarNow turned to IoT M2M connectivity specialist Eseye to deliver highly secure and reliable global cellular network data through the AnyNet Secure™ SIM, with seamless integration onto the AWS Cloud. The SIM's enhanced features also enable SolarNow to remotely and securely activate, provision, authenticate and certify deployed devices over-the-air, in up to 190 countries. Integration with AWS Cloud Services, further simplifies project set up and deployment by reducing the need for investment in specialist inhouse infrastructure and development resources. By adding AWS' software tools and cloud SolarNow establishes the means to simply and quickly analyse data and to scale instantly and securely, on demand.

The integration of the AnyNet Secure SIM means when SolarNow creates a new customer and a new device on its customer management system, the AWS IoT service is automatically informed that a new connected 'thing' exists. AWS then creates a certificate with all the required security material and device information, and through its integration with Eseye, delivers it directly and securely into the device using GS signalling channels.

The capabilities provided have empowered the company

Working with developers at SolarNow, Eseye also created software and supplied a reference design which the company could simply copy onto the circuit board of the microprocessor, which sits on a solar controller and manages SolarNow's solutions.

> Previously, the microprocessor only had the ability to communicate locally on the circuit board. However, by wiring the new Hera 100 reference design to the existing microprocessor, messages can be instantly sent and the data delivered directly onto the AWS IoT Cloud,
>
> **Paul Marshall, Chief Customer Officer at Eseye**

The AWS IoT platform can then control communication with the remote device, using the AWS' Rules Engine and Lambda function. Every time information is received from a remote device, the Lambda function is automatically activated to receive and package the data, and transfer it into SolarNow's AWS system running on the AWS Cloud.

The capabilities provided to SolarNow have empowered the company to become completely self-reliant and secure in connecting and managing its growing product portfolio.

From a non-connected to a connected product offering

Taking a proven design and effectively copying it into its devices, has enabled SolarNow to move from a non-connected to a connected product offering, and to take full advantage of the capabilities of IoT. This not only provides the company with huge growth potential, but also adds a new level to its customer service offering.

For example, providing connectivity to SolarNow's previously standalone devices has for the first time enabled the company to use remote monitoring to understand the full picture of its customer's system. With this new capability, problems can be pre-empted and remote support provided to ensure a faster and more efficient service.

SolarNow has also been able to improve further key elements of its offering, for example, by analysing enhanced system data to communicate with the clients if there is an issue with their device, when payments are due, or to issue a warning. By building a wider picture of the customer and understanding how they use the system to develop product value and customer service the company has gained a new way of interacting with customers through its solar solutions.

> Previously if a customer had an issue with their system they would have to phone and report the problem. The remote monitoring of devices reduces this by predicting and detecting problems much earlier; enabling a proactive resolution prior to a major fault or failure.
>
> **Rose Atkinson, R&D Manager, at SolarNow**

About Eseye

Eseye is a leading global provider of M2M cellular connectivity for the Internet of Things (IoT). We specialise in simplifying complex global device deployments for enterprises seeking to realise the efficiency-driving, data-enhancing and product-innovating opportunities of over-the-air IoT. With 800+ customers, we deliver highly secure and resilient cellular data services through our revolutionary AnyNet Secure™ Subscriber Identity Module (SIM). The SIM offers a seamless data feed onto the AWS Cloud and provides unique zero-touch, device provisioning and certification, and true freedom to roam in more than 190 countries. Eseye is an AWS Advanced Technology Partner - IoT Competency, winner of the 2017 Frost & Sullivan Product Leadership Awards; recognised in the 2017-18 Gartner Magic Quadrant for M2M managed services; and holds ISO 27001 accreditation.

aws partner network

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For further information, please contact the **Eseye** Marketing Department 01483 802509 or visit: **www.eseye.com**

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