

Mobile network operators can drive the revival and growth of agricultural sector

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The telecommunications industry is set to become an increasingly pivotal player in ensuring digital solutions are harnessed to boost productivity and competitiveness for the agriculture sector.



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The internet of things (IoT) ecosystem, which is defined as the increasing connection between machines, devices and people, stands out as one of the most efficient ways to accelerate solutions in agriculture. It not only generates huge amounts of data, but cloud computing helps store and analyse this data so that agriculture enterprises can maximise outcomes. This is imperative at a time when the sector is facing several headwinds, ranging from highly unpredictable weather patterns to low production of field crops and horticultural products.

Industrial-grade IoT solutions using a dedicated network can offer farmers immediate significant relief, including improving operational management through access to real-time data and automatic system warnings. The system can be equipped with a cloud analytics platform that analyses data and provides intelligent and actionable suggestions.

Driving smart solutions

For instance, the deployment of these solutions on the cloud will obviate the need for farmers to make routine visits to the site where the sensors are deployed to check the health of their assets and to retrieve data - they can simply access data online through a click of a keyboard or touch of a smartphone.

Smart solutions can source food from source to the table. For example, a calf can be tagged when it is born and the detail of date of birth, location and weight is recorded. Such a solution will monitor its activity during its lifespan including the feed it was fed, weight gain over a specified period and its health until it gets to the abattoir. Similar functionality can be replicated on crops as well when the seeds or seedlings are geo-stamped, probes installed in the ground to monitor growth and health of the crops until they are harvested and gets delivered at the silos.

Entire livestock herds can even be tracked in real-time through geo-location, their feed intake checked and monitored, and their health assessed regularly. The data that will be gathered will take the guesswork out of the equation to ensure that the operating expenditure of farms is used more efficiently.

Smart agriculture is a growing industry that can catapult an already competitive and developed agricultural sector in South Africa to greater heights. According to Statista, the global agricultural IoT market will reach almost \$30 billion by 2023, while the global market size of smart agriculture is expected to grow from approximately \$9.58bn in 2017 to \$23.14bn by 2022.

MTN, for example, is already pioneering change in agriculture through digital solutions and aims to do more. In 2018 MTN Business introduced a solution called **Connected Livestock and Wildlife**, which enabled small to large scale farmers to manage their herds – all from the palm of their hands. Connected Livestock and Wildlife is an Internet of Things (IoT) based solution where customised radio collars are fitted onto animals to track the animals and transmit animal location and movement data to the user, at designated intervals, via MTN's GSM and NB-IoT network.

To harness this potential and to open the door to even more innovative solutions, we have embarked on a massive network modernization programme that will see every site on our expansive network footprint enabled with narrowband IoT capabilities, which supports extensive coverage at low power consumption. These networks will enable enterprise customers, from the public sector to small and large multinationals and SMEs, to securely and remotely monitor and control large volumes of everyday devices, appliance, machines and vehicles.

This will give them added benefits such as greater convenience, better reliability and improved safety and security.

We are ramping up our efforts in 2020 to find more solutions that matter for the businesses, individuals and consumers we serve.

ABOUT THE AUTHOR

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