

Ready or not, technology rings the changes for African agricultural sector

By [Josua Taljaard](#)

11 Jan 2018

Emerging technologies, like the Internet of Things (IoT), are changing the way entire industries work, enabling better resources conservation, more efficient operations, and higher productivity levels and, in the case of agriculture, increased yield.



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Smart farming isn't a new emerging tech conversation and, on a global level, we have reached a point where the actual benefits of technology deployments in farming are being seen. From farmers in Myanmar (formerly Burma) who are tripling rice harvests from using data that uncovered how carefully sowing rice seeds reaps a greater harvest than casually scattering them, to Kenyan small holdings owners who have learned how to best use and store grey water for use during the drought seasons – the digital disruptor in farming is already here.

In fact, Forrester tells us that today's young generation of farmers will be the last to use traditional farming techniques. The next generation will probably never even travel on a gravel road, choosing instead to farm virtually, an option that is actually available to them today.

Consider that around 10 years ago, the mobile phone had become an agricultural tool empowering farmers with early access to information about weather which helped them plan planting and harvesting more effectively. Introduce a concept like IoT and its very real benefits to the agricultural conversation, and we can clearly see the immense opportunities that will benefit even small-scale farmers.

According to the [Internet of Food and Farm 2020](#) (IoF2020), a project established to explore the potential of IoT technologies for the European food and farming industry, "with the help of IoT technologies, higher yields and better quality produce are within reach. Pesticide and fertiliser use will drop and overall efficiency optimised. IoT technologies also enable better traceability of food, leading to increased food safety."

Connectivity is key to this transformational journey

And how this translates for South Africa, and indeed farmers on the greater African continent is technology companies making good use of the data available right now (through existing technology implementations) and applying it to enhance farming operations productivity while maximising yield.

Connectivity is key to this transformational journey, with smart, connected devices at the heart of this process. Connectivity will not just enable the delivery of IoT, it will also allow for greater collaboration between all players within the agricultural supply chain – from the producer right through to government and the public.

The data collection, real-time insight and process automation capabilities of IoT have already been proven across a number of industries. The agricultural sector itself is seeing an increase in production with more accurate planting, watering and harvesting. In water challenged areas, technology empowers conservation by alerting through weather prediction and soil moisture sensors that enable watering only when and where necessary.

Today, from his desk, a farmer can check and fix solar powered pumps remotely, optimise irrigation based on soil and plant needs, use artificial intelligence to calculate the best fertiliser, and even use location tracking to improve livestock monitoring and management.

The impact of technology on the industry is real, and as a company, Datacentrix believes that South African agriculture is ready to embark on this journey, capitalising on these means to deliver competitive advantage and business value. This step is what will ensure that our farmers truly thrive in an increasingly challenging environment.

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