**Adapted from:**

**https://www.bdo.co.za/en-za/insights/2020/financial-services/taking-off-using-drone-technology-understanding-the-flight-risk**

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What are drones?

In layman’s terms, a drone is a flying robot that can be remotely controlled.

Combined with advanced technologies including GPS, sensors, artificial intelligence and video cameras, the term drone technology is derived.

Drones themselves provide insight and perspective previously unavailable. This is done by using the latest camera and video software which allows for detailed imagery and data that can be further analysed. With the rise in the other emerging technology fields, such as artificial intelligence and machine learning, not only does the drone software become enhanced but the data captured by the drone becomes more insightful. It is because of these other technologies that drones are becoming more prevalent across different industries. Drones are equipped with software capable of capturing images including infrared and 4k resolution, automated object avoidance technology, and technology making drones capable of flying along human- defined routes without human intervention. There is no real value without insights into the data captured by drones and that is where the true power of drone technology lies. Being able to understand patterns and trends and running predictive analytics over the captured drone data allows one to make informed decisions.

Previously, drone technology or Unmanned Aerial Vehicles (UAV’s) would be related to the military industry. Drone technology in the common context spans across various industries where these technologies are being used innovatively to produce value for the stakeholders. Currently, drone technology is being used in the following areas: Express shipping and delivering of goods; Agri-finance where drones are analyzing current crops and the yields these crops will provide; capturing and understanding the cracks in dam walls and bridges to predict when a disaster could occur; current property valuations and the stage of completion around these properties. These are but a few applications of this technology and the power it holds. The more integrated drones are with the latest technology, the more they can enhance value.

A few case studies have been noted locally and globally, outlined below:

Case Study 1: Drone technology is becoming integrated into the audit space where BDO performed a drone assisted stock count. The drone was used to capture images of sheep livestock and ran these sheep images through a machine learning algorithm. The algorithm was then able to identify the sheep and appropriately count each sheep per pen. Based off this, a total summated value was produced of all sheep, where this was compared to the sheep count performed by the client.

Case Study 2: One of the major banks has launched its new division within CIB promoting the use of drone technology within the Agri-finance space. This division aims to accurately capture and assess crops determining the current value and future value that the crop may yield.

Case Study 3: Insurance firms within South Africa, are looking into the implementation of drones within South Africa. The aim of these drones is to firstly capture images of the vehicle or house when the insurance is taken out. Once a claim is filed the insurance company can use the drone to capture images at the scene of the accident and ensure the claim filed is appropriate.

Although drone technology has not been fully implemented within South Africa, the market is growing whereby different industries are looking to embrace this emerging technology. With the rise in supporting technologies, the rise in the use of these drones will become more prevalent.