

## Kumba's investment in drone technology is paying off

Two years of navigating legal, governance and logistical challenges to obtain an operating licence to fly its own drones has paid off for Kumba Iron Ore. Already the technology is optimising surveying processes at its Sishen mine.



"Routine tasks historically carried out by surveyors, such as measuring the volume of waste dumps and stockpiles, are now being done by our drones. They collect digital imagery that is pieced together to perform volume calculations, giving us reliable data without having put anyone at risk," says Bongi Ntsoelengoe, technology manager at Kumba Iron Ore.

Various Anglo American subsidiaries have been using drones at their operations since late 2015, but these have been leased and operated by outside service providers. Now, with its own operating licence, five staff have been trained to pilot the drones, and licensed by the SA Civil Aviation Authority to fly at heights of up to 1,000 feet above ground.

## **Collecting data**

The technology has facilitated the collection, and subsequent, processing, of more data than in the past, and this is pushing innovation mine-wide as data management processes are enhanced to ensure that other functional areas also benefit from the technology.

"Our drones have improved survey turnaround time on large dataset deliveries tremendously, and large datasets can now be acquired with much less time being spent in the field. We can now inspect, monitor and survey large mining areas without impacting on operations. Using drones also eliminates employees' exposure to potential dangers, especially when compared with the old conventional survey methods," says Glen Mc Gavigan executive head of technical and projects, at Kumba Iron Ore.

Drones can also be used to survey accident scenes and areas that could be unsafe for workers to enter.

Introducing this technology into its operations means that the company has developed skill sets outside of the normal ambit of a mining company and established new working practices, such as scheduling flights, flight navigation and craft maintenance.

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