

## Smarter mining with shared location intelligence

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Depressed commodity prices, oversupply issues in the platinum sector, gold price gains offset by currency fluctuations, and simultaneous increases in costs, have led to leaner operations at many southern African mines. While this is an understandable reaction to the economic context, the financial benefits of developing smarter mining operations should not be overlooked in the drive to cut costs.

Mining operations are complex and there is often no automated flow of information to a single repository. This results in a lack of “overall” clarity as to what is happening on the ground across the mining enterprise. And insightful decision-making cannot take place in an environment where all the facts are not at hand.

Many tasks on mines are spatial in nature (e.g. locating and quantifying resource, planning drill and blast, movement of ore, managing environmental impact, etc.) and a wealth of geospatial information is collected in the process of addressing these tasks. This treasure trove of captured data is usually not mined for additional seams of valuable information. In addition, the lack of a centralised information portal often leads to data sitting in disjointed data silos in professional fiefdoms where it cannot be accessed for further departmental and enterprise-wide benefit.

Smart organisations are data driven. They enable strategic decisions affecting the bottom line to be made based on credible information. For this to take place in the mining environment there needs to be a seamless flow of data from various sources that can be easily accessed via a single portal. The solution is a map-driven platform which allows data to be easily visualised, understood and analysed by users. The data accessed via the platform enables users to make informed decisions regarding tactical day-to-day decisions and overall organisational policy, depending on their level of responsibility, by showing a holistic view of all relevant data related to the operation in a single dashboard. This real-world “digital twin” enables users to identify unanticipated opportunities to enhance operational functionality.

Interestingly, it is not always the complex datasets which provide the most value to mining enterprises. Often simply making key datasets readily accessible to users across the organisation reaps the most benefit.

The key to deriving maximum benefit from a central data portal is organisational buy-in. The benefits of sharing data in this way needs to be communicated with a clear understanding of the value it can provide to mining professionals, departments and the enterprise as a whole. Users also need to be rewarded for populating the portal with data and for using the data.

Location data is a valuable commodity on mines, and mining organisations should not overlook the role it can play in enhancing safety, productivity, profitability and efficiency within lean environments through its conversion into actionable intelligence.

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## ABOUT

Richard Kaufholz is an IT and GIS professional. He is a Solution Architect at Esri South Africa and works with clients to create a strategic approach to implementing Esri's ArcGIS Platform within their organisations.

Esri South Africa has been the primary geospatial industry software provider in Southern Africa for the past 25 years. Established in 1989 and with headquarters in Midrand, Gauteng, Esri South Africa has offices nationwide, enabling the company to offer professional, individual client services to its growing user base. The company believes in making a difference by simplifying decisions through spatial solutions, enabling its clients to make responsible and sustainable decisions.