



Every crisis presents an opportunity



It is often said that every crisis presents an opportunity, and Covid-19 is yet another example. The South African mining sector has over recent years initiated discussion and conversation around technology and the fourth industrial revolution (4IR). This comes at a time where South Africa's mining productivity has declined by over 7.6% in the last decade, with two-thirds of the mining output sitting in the upper half of the global mining cost curve. The discussions have always been a challenge, with various stakeholders highlighting the complexity of the South African mineral deposits, particularly the narrow reef deposits of gold and platinum. Another challenge that often arises is the interpretation of what a modern mine should look like in the South African context, as information in the public domain is focused on massive mines and trackless mobile machinery, which excludes a number of operations in the country.

Covid-19 regulations in the South African mining sector have forced the industry to rethink mining as it was previously known, with a reduced number of employees now being permitted on site and constant monitoring of the possible spread of the virus. Mines were forced to think of creative ways around communications and interconnectivity across various points within the mining value chain. These efforts have stimulated the industry to further embrace elements of 4IR such as artificial intelligence (AI) through the mapping of Covid-19 hot-spots, the Internet of Things (IoT), cloud computing, and advanced wireless technologies through the integration of on-mine reporting systems and overall communications.

PWC found that most South African mining companies invest in technology to increase efficiency while lowering costs and improving health and safety. The challenge, however, is that 69% of South African mining companies were considered digital followers, with only 6% being digital champions who have fully integrated their technology. A significant amount of work is still required from CEOs to inspire more confidence within mining companies to allow organizations to be more in the forefront of technology development. This is especially relevant given the nature and uniqueness of some of the gold and platinum mineral deposits.

Although one could argue that some of the changes are not extreme, given where South African operations are with their technology journey, some are extreme – and this is a step in the right direction. Covid-19 has made it more evident that 4IR is more than a necessity: it will be a key enabler for the South African mining sector to take its place in the world of global competitiveness, not forgetting its key roles of safety and environmental responsibility.

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