

SEG 2024 Conference: Sustainable Mineral Exploration and Development

Embedding Good Governance in Mining Operations and Value Chains

Dennis O. Achoki^{1, 2}

1. RWTH Aachen University, Kisumu, Kenya, 2. Shanta Gold Kenya Ltd, Kisumu, Kenya

The core focus of a mining business should be to create value not volume growth. Africa is home to 30% of the world's minerals. Minerals crucial to the energy transition including copper, lithium, cobalt, titanium, nickel and manganese are found in the continent. Africa is also rich in precious minerals including gold, silver and gemstones. In particular, the geology of the countries in the East African Community (Kenya, Tanzania, Uganda, DRC, Rwanda, Burundi and South Sudan) has been demonstrated by a number of exploration activities to be rich in all these minerals. It is therefore imperative to strengthen the exploration and mining industry as a backbone for development. This work aims to tackle the two biggest bottlenecks to the success of the extractives industry: governance and value chains.

An effective way to tackle the bottlenecks is to embrace technology. Application of the right technology would ensure transparency and collaboration within the mining industry. One such technology is blockchain. This is a distributed and decentralized ledger system in which blocks on the chain hold information such as contracts and management transactions that no one person or party can change retroactively. It is similar to a shared database where information can be stored and accessed by designated individuals or groups. No one person oversees the data and as such it is secure, transparent, consistent, and reliable. Blockchain technology is the key to tackling a ubiquitous data problem in the mining industry, increasing efficiency in operations and transactions, and ultimately lowering costs across the board. Within the core mining business, blockchain technology would be applied to monitor mine stockpiles and reserves and ensuring appropriate assessment, disclosing information on sales, revenues, taxes, expenditure, profits and royalties due, as a trading platform and, allow for third party reviews.