MineRP

Value White Paper

Data unlocks value

A paper by **Donald Lekenge**, **Junior Mining Professional** at MineRP, and finalist of the Value through MineRP staff challenge

THE RIGHT DATA AT THE RIGHT TIME UNLOCKS VALUE

Mining companies must change the way they do business. Market volatility, changing global demand, lower ore grades, and commitment to operational excellence demands that future fit mines adopt modern business strategies and operating models.

For mining to navigate these challenging times, mining companies need to leverage digital strategies to transform key aspects of the mining value chain by rethinking how they generate, analyse and process data.

When data is consolidated from siloed databases such as fleet management, dispatch, historians and combined with information in ERP solutions, powerful analytics can provide operational intelligence and trend analysis- to enable the mining operation to make better decisions. The implementation of MineRP tools enables intelligent mining by integrating the mining technical systems (Figure1) world onto a robust, proven spatial information management platform- and it WORKS like MAGIC!

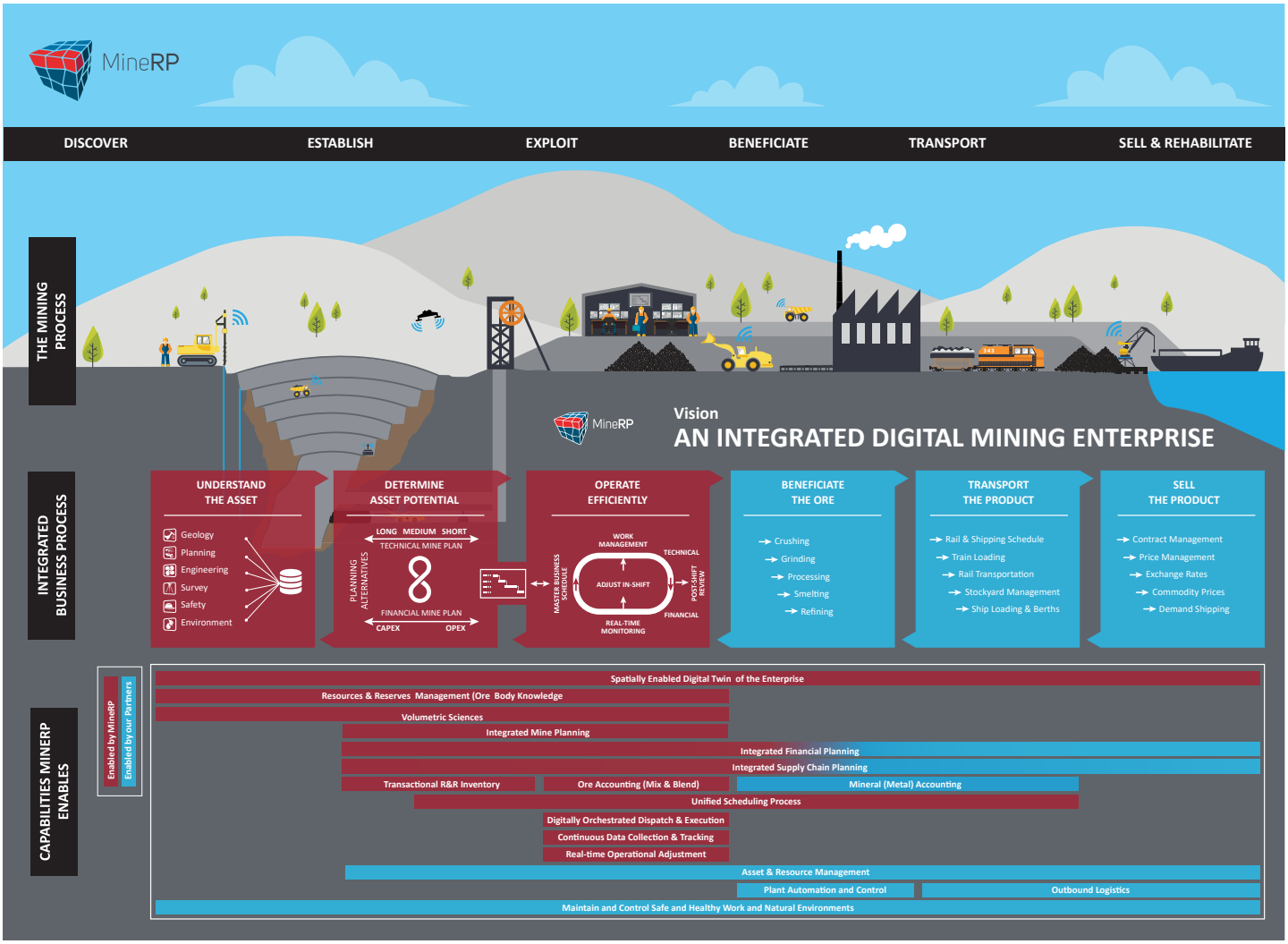

Figure 1: An Integrated Digital Mining Enterprise

DATA UNLOCKS VALUE

Utilization of data within a business has been proven too add value in many industries such as motor manufacturing, banking and insurance companies. For example, a company like Discovery has the ability to continuously monitor and collect data from their clients including exercise activities, spending or saving habits and real-time driving behaviour. All this data is then consolidated on a single platform. Algorithms are applied to the collected data to determine whether the client qualifies for discounts, vouchers or personalised interest rates. Utilizing their data in this way, the company has unloked value for their customers, and gained significant market share!

Equipment and system effectiveness in these industries is greater than 88% compared to mining which is less than 39% in terms of performance (Durrant-Whyte, et al., 2015), which is a huge concern considering that mining is the backbone of the economy in many countries.

To date, most mining companies do not realise they have the ingredients to answer and resolve their current challenges. The typical mining company collects extraordinary amounts of data from mining technical systems, digitized mining equipment, environmental sensors, fleet management systems, financial reports, processing plants and much more, but rarely is this information used to generate actionable insight. In some cases, mining companies use less than 1% of the information collected from their operation (Figure2).

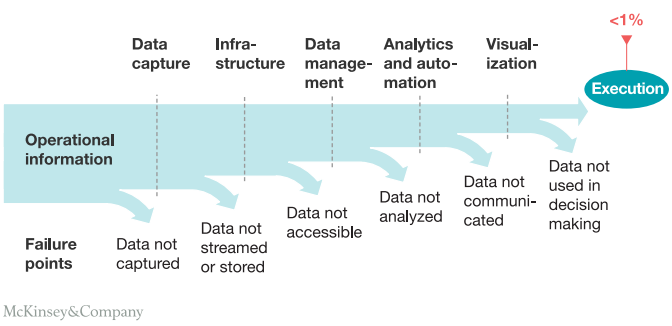

Figure 2: Mining use only a fraction of their data (Durrant-Whyte, et al., 2015)

Mining companies are spending huge amounts of capital on siloed systems that generate data but rarely is this data amalgamated with other siloed systems to provide a holistic view of all the processes along the entire value chain. The application of mining enterprise integration enables business units across the mine to collaboratively contribute towards strategic value for the company.

Total System Thinking

- **The performance of the whole is greater than the performance of the individual parts.**
- **Value increases when the parts do something together that they cannot do alone**

MineRP believes that the Right Data at the Right Time, has the ability to transform key aspects of the mining value chain by:

- Speeding up production,
- Reducing decision-making time, increasing confidence of the investors and key stakeholders,
- Reducing errors and increasing accuracy, and
- Speeding up of processes – when data is centralised, because all the systems use the same shared data results in alignment of outcome.
- Reducing time to collect, collate, verify and distribute reports for actionable insight.

DATA UNLOCKS VALUE (CONTINUED)

With MineRP, mines are able to consume, process and respond to the insights offered by the big data generated by its various systems.

With its proven ability to amalgamate all mining technical data onto a single spatial platform, MineRP enables operations and corporates to standardize their business and delivers collaboration, consistent information sharing and timeous analytics. This enables mining operations to standardize their business and makes it easy to act in unison or share information and generate consistent and aligned reports and analytics at all times.

This means that crucial reports required to make decisions can be produced in real-time vs weekly/monthly/yearly.

CONCLUSION

The ability to process big data in real time unlocks tremendous value, leading to better decision making and increases productivity. The implementation of MineRP's Platform enables the mining operation to intelligently and securely manage data and processes to exponentially increase efficiencies within a mining operation.

BENEFITS OF PARTNERING WITH MINERP

MineRP goes beyond delivering functionally rich mining software. We persistently focus on the ultimate goal of delivering a fully integrated mining enterprise. This means that we're not only about mine planning, or geological modeling, or schedule optimization.

We work with mines to understand where opportunities exist to unlock value, and then use the MineRP 4.0 platform to amalgamate their various data sources and find the best way to solve real mining problems.

Our unique approach to rapid value analysis, and unrivaled capability to integrate hard-to-connect enterprise domains makes us a highly desirable partner.

MineRP 4.0 is the only mining method & mineral independant software platform that integrates your entire mining technical systems domain while seamlessly integrating with ERP systems, IoT platforms, digitized mining assets and even downstream processing plant systems.

About the author:

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Donald Lekgenge is a Value Engineer – Mining Professional at MineRP with a strong foundation in production geology, economic geology and mining. He has over 6 years' experience within the mining industry, including project management and digital transformation. As a Value Engineer and an advocate of digitalization, he plays a crucial role as an impetus for data amalgamation and integration across the mine value chain. His ability to understand, process and analyse data enables mining clients to theorize and make decisions based on multiple factors and options available.

He is knowledgeable on MineRP's Platform that enable the client to manage data, understand their ore body and operate efficiently unlocking value across the mining value chain – from rock to dock.