

'Mining Indaba 2024 embraced its theme' - Barloworld

By [Elia Nandjiwa](#)

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Three decades in, Mining Indaba boldly proclaimed its theme: *Embracing the Power of Positive Disruption: A Bold New Future for African Mining*. This audacious vision of the future is a precursor to a set of potent industry trends. The 2024 edition of the conference was an invaluable platform for the sector to confront these trends head-on.



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Energy transition minerals

The move to limit global carbon emissions, as expressed in the Paris Agreement, has led to growing demands for critical energy-transition minerals such as lithium, graphite, cobalt, nickel and manganese, as well as copper.

These minerals are used for battery power, solar-energy, wind, hydrogen, and other solutions.



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Different resources require different solutions, therefore, there are growing opportunities for miners and equipment suppliers to build partnerships.

Specialised equipment and technology are required to develop deposits of these energy-transition minerals. The International Energy Agency has estimated that to hit net-zero globally by 2050, the world will require six times more mineral inputs in 2040 than today. As a sector, we must work together to meet these timelines.

ESG imperative

Responsible corporate citizenship is now more important for mining companies than ever before. To secure their social licence to operate, they must meaningfully drive social development in their host communities, manage their operations in an environmentally sustainable way, and also give their staff and community a stake in their operations.

As our understanding of social and environmental impacts evolves, we are also finding better ways of achieving these critical objectives. Broader stakeholder engagement is now understood as being vital. Water management is a critical competence.

And despite the urgency of the energy transition, the idea that it be a “just transition” is fundamental. In an economy like South Africa's, the lives and livelihoods of millions of people depend on the coal sector.

“ *Transitioning from this hydrocarbons economy must be managed extremely sensitively.* ”

Energy-efficient mining

Mining businesses are looking for more energy-efficient equipment solutions for their own operations. Be it generators, solar micro-grids, hybrid-power wheel loaders, or built-in load-efficiency software, there are many ways for mining operations to achieve both carbon- and production efficiency.

It is now common cause that renewable energy can be more cost effective than hydrocarbon energy, so building an onsite solar micro-grid, for instance, is not just environmentally responsible – it enhances productivity.

A successful example of this was the 7MW CAT solar microgrid solution employed at the B2Gold mine in Otjikoto, Namibia. The microgrid plant and monitoring systems helped the operation to reduce fuel expenses, lower utility bills, decrease emissions, and reduce the total cost of ownership while increasing energy efficiency in a challenging environment.

Renewable solutions are often more affordable than hydrocarbon energy from a life-cycle cost perspective, and more efficient.

The advisory opportunity

Mines are complex operations looking to achieve a simple objective as efficiently as possible. There are therefore growing opportunities for consultants and advisors who can support mines in balancing these considerations.

Asset-solution advisors conduct site visits, fleet audits, fleet application studies and condition-monitoring checks to advise customers on how they might achieve their production and sustainability objectives through the equipment and technology choices they make.

Asset management solutions employ technologies such as digital twinning, data analysis, operation modelling and purpose-built software solutions to make these recommendations. It's not just about deploying the latest mining technology, it's about using technology optimally and return on investment.

New industry players

Where mining in Africa was once dominated by major multinationals, we are now seeing smaller independents, contract miners, and so-called junior miners entering the sector.

These businesses are often laser-focused on the bottom line. However, too much emphasis on short-term savings can be a false economy. These new market entrants are best advised to look for long-term value and productivity.

New miners can lay a durable foundation for long-term growth by investing in resilient, high-quality equipment solutions that will last longer, require less maintenance, and significantly lower overheads.

Focusing on fleet productivity

Operating a mine profitably is about the equipment you use, as well as how you use it. Besides the resource being mined and the mining methods employed, miners need to choose appropriate equipment for their application.

They then need to consider which specific piece of machinery to choose, the purchase or rental terms, repair options, rebuilds, after-market plant management, training, financing, automation levels, compliance and sustainability.

“ *The fleet that a mine operates is a key asset to achieve its business objectives.* ”

It is becoming increasingly important for miners to choose the appropriate fleet, then find the most cost-effective and sustainable way of running that fleet. This is something we find mine owners increasingly concerned about.

Uptime (availability) and reliability of the fleets are key factor to achieving productivity, this requires concerted effort to ensure there is an effective maintenance strategy and execution, tools, skills and use of technology to achieve this.

Facing such a complex range of variables, mining companies are looking for value. Every decision they make must support their ability to operate in this rapidly shifting environment – productively, sustainably and as an asset to their community.

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