

Virtual reality saving lives in SA's platinum mining sector

South Africa is world-renowned for clawing mineral wealth from the earth, often at depths that are unequalled anywhere else in the world. Working at these great depths means physical discomfort and danger - all risks that have to be considered and planned for. Ultimately, it is the combination of innovation and technology that save lives and ensures that miners return safely to the surface.

Because safety is taken so seriously by mines, millions of rands are spent every year on products and services designed to keep miners safe. Not many people would believe, however, that some of the most important and advanced technological safety solutions have their origins in the world of computer gaming.

"Innovation and technology are game changers in the mining sector. Minimising risks means maintaining production and reducing lost-time incidents," says Ethel Nyembe, Head of Small Enterprise at Standard Bank.

"Given that mining companies are operating under many constraints, it is to their credit that they have adopted all the technology they can to protect their people. Achieving this has meant investing in computer-generated, advanced visualisation techniques and tools that have crossed-over from the world of video gaming."

A recent episode of the Standard Bank-supported *The Growth Engines* series, highlighted how major mining company, Anglo American Platinum, works with specialised SME, The Cyest Corporation, to reduce risks and drive bottom line performance through 3D visualisation technology.

Anglo American Platinum is a key player in the global platinum market, and produces about 37% of the world's platinum in the Bushveld complex that is home to about 70% of the world's known resources of the mineral.

However, various factors such as a platinum price that has dropped by about 35% in the last five years, and reduced global demand, have placed a strain on the sustainability of platinum mining. Responding to tough times demands innovative strategies.

Says Ms Jeannette McGill, Head of Technology and Innovation at Anglo American Platinum:

“Innovation and technology in the mining sector is exceptionally important, particularly to companies like Anglo American Platinum.

We look at how we can increase our global competitiveness in terms of being able to produce sustainable operations and create maximum value for our shareholders. This requires a certain level of innovation and the application of technology both in underground and open-pit environments.

With shallow resources being depleted, we need to mine deeper. There are significant challenges involved with this, including being able to supply our mines with ventilation and support through a variety of applications. It is about mining safer and meeting our corporate objective of causing zero-harm.

Achieving this involves driving discontinuous change. Our need has been to stop making small continual changes in technology, by bringing about change that leapfrogs us into a different space. This is about being collaborative and comparing ourselves not only with other mining companies, but also about seeing what impacts other sectors as far as technology is concerned.”

Keeping pace with the demand for change led to The Cyest Corporation bringing different technologies - including advanced visualisation technology - to Anglo American Platinum.

It is in this visual discipline that they are making a major

impression. The technology is being used in the training arena, where virtual reality software is used to drive home the realities of working underground and making the intrinsically hostile environment as safe as possible for all workers.

Visualisations are used to simulate scenarios that can produce life-saving improvements in the mining industry. The relevance of gaming technology to business technologies is acknowledged by the company – particularly when it comes to promoting safety underground.

Andreas Cambitsis, Director of The Cyst Corporation, says:

“There is so much that technology can do in empowering people and making them more effective at their jobs. Whether it is advanced visualisation or beneficiating data to make better decisions, we are only touching the tip of the iceberg. Innovation and technology are the bridge to taking companies forward.

It is important to keep an eye on innovation and the bottom line. You must be clear on how the innovation is going to benefit profitability. It is also something that should be considered as a long-term objective. Great ideas are often stifled because they don't meet short-term needs.”

While *The Growth Engines* series has concluded on TV, episodes and in-depth articles on key themes explored on the programme can still be viewed by visiting bizconnect.standardbank.co.za or bdlive.co.za/indepth/growthengines.