

# Vale Benefits From Big Data

## A summary of Vale Chief Information Officer Gustavo Vieira

Future of Mining 2018 conference in Sydney, Australia

Brazilian mining giant Vale has already saved US\$399 million in 2017 by employing big data technology to help integrate its operations, its chief information officer Gustavo Vieira told the Future of Mining 2018 conference in Sydney, Australia.

Vieira said big data had the potential to optimise productivity right through the value chain for the company, which is the world's largest iron ore miner.

"Vale can bring its biggest benefits when it applies technology to its whole value chain using data," he commented.

"We can develop our mines while we are exploring.

"If you implement the whole chain, it would benefit not just the operation but the whole environment."

The company can also adapt mining plans to change mining strategy and respond to movements in commodity prices.

Vieira said it had recently started mining cobalt at some of its mines that had formerly mined nickel.

"We can reduce volume but also increase revenue by using data to focus on premium products," he said.

Vieira said a 90-million-tonne-per-annum Vale iron mine in the north of Brazil was being operated using automation and artificial intelligence (AI). It is a truckless operation that also scores highly in cost-efficiency.

"We start using artificial intelligence to make smart decisions and help the business to progress in advance of problems," he said.

Vieira added that the introduction of automation and artificial intelligence would not lead to job loss at operations.

"The countries that use more technology have the lowest unemployment," he claimed.

(South America's economies have had their GDPs grow 6% due to AI, but they are still lagging behind China, which enjoyed a 26% increase in its GDP because of AI.)