



sage X3

*How Software solutions
can help mining
companies increase
efficiency levels*

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Summary

For any mining operation, downtime is expensive. For example, if a critical power source unexpectedly stops your processes; unplanned downtime ensues, resulting in lost production revenue - revenue many mining businesses cannot afford to lose.

Other examples include hydraulic power and belt drive failures, which have been calculated to cause up to 47 per cent of downtime in mining operations. With each failure resulting in \$3000 per hour of lost production and an average of 60 hours of downtime per incident, companies' losses can easily add up to \$180,000 in lost production¹.

Now that Australia's mining sector has well and truly moved on from the build stage and into process optimisation, the need to enhance their process efficiencies and get the most out of existing mining CAPEX and other assets is more crucial than ever.

While the fundamentals of mining have not changed, what's needed is a change at the operational level that embraces the latest facets of digital communication and modern technologies that are de rigueur in consumer products to drive efficiencies.



¹ https://www.gates.com/-/media/Files/Gates/Industrial/Odyssey%20Markets/Surface%20Mining/Surface%20Mining_Infographic_Final.pdf

The Challenges

of improving mining efficiencies

A recent report from the professional services group PricewaterhouseCoopers (PwC) found that the global mining industry's open cut equipment productivity fell 20 per cent over the past seven years, despite a push for increased output.

PwC found that misinterpretation of common productivity metrics is costing the mining industry billions of dollars in lost earnings, and its research further revealed considerable financial gains could be achieved through more attention to the reliability and physical output of mining equipment.

So while investment in earthmoving equipment grew 17 per cent annually over this period, aggregate output had only improved by 5 per cent.

Other key findings also included an inherent conflict between a productivity plan based on increased volumes and one based on cost reduction.

Maintenance practices were found to make the difference between equipment achieving typical availability rates of 85 per cent and those achieving best practice of 90 per cent or more.

The study concluded that Australia's mining equipment ran at a significantly lower level of availability compared with most other mining regions, with the exception of equipment in Africa, which could not be considered best in class in any category².

Another study, this time by consultancy firm McKinsey, showed that productivity was increasing up until 2005; then it dropped 0.7 per cent per year until 2011, when the study was carried out.

This trend is supported by a report published by the Mineral Council of Australia, which highlighted that the mining industry last delivered a productivity increase in 2003. Since then overall productivity in the minerals sector has fallen by 30 per cent.

Similarly, according to a 2015 report by Ernst & Young, mining labour productivity has declined by about 50 per cent since 2001³.

Given that the Australian mining sector clearly has some way to go to optimise its operational performance, what can be done to halt the decline in productivity and reverse the trend?

Research conducted on behalf of Venmyn Deloitte in South Africa found that by implementing new technology including automation, using analytics and big data processes to identify trends for greater productivity, rationalising supply chains through six Sigma processes, right sizing capital projects and transitioning to modular plants and projects are all strategies which can drive continuous improvements.

This merging of automation technology and computer hardware in to existing processes is helping to increase mobility on and off site in regards to information and operational control, and giving mining companies a sharper edge⁴.



2 <http://www.miningnews.net/archive/miners-losing-billions-on-ignored-inefficiencies-pwc/>

3 <http://www.australianmining.com.au/Features/Making-the-mining-factory>

4 <http://www.australianmining.com.au/Features/Making-the-mining-factory>

Software Solutions

helping mining companies increase efficiency levels

Mining businesses are continually looking for ways to win new customers, expand into new markets, eliminate inefficiencies, and increase profit.

With mining operations usually dispersed across multiple sites, the possibility of stock and productivity losses, as well as a multitude of operational issues, the impact on workflow, productivity and even safety can be drastic.

One way to help increase the productivity and efficiency of mining operations is to use Business Management Software solutions.

Described by various names and acronyms, Business Management Solutions help mines increase their service levels and profitability, while also controlling costs, managing inventory and improving output and staff safety levels.

With the ability to control a mine's operation via Internet-enabled dashboards, every aspect of mining from output, workflow, logistics, sales, procurement and employee management and all the way to financial management can be visualised and controlled.

This means mine managers can automate and accelerate their end-to-end processes while at the same time, driving down costs and boosting efficiencies. This translates into higher operating margins, safer working conditions and, ultimately, increased cash flow.

Some of the best Business Management Solutions are designed to take users well beyond basic accounting functions, with a real-time and unified view of financials and operations, including providing visibility across mobile environments.

This provides visibility and insight into how a mining business is performing, along with helping to drive fast, informed decisions and greater productivity.

Business Management Solutions turn insight into opportunity that drives and supports a mining business's growth.

companies are looking very closely at their operations and working out how they can improve and boost productivity

For Mine Management

there are a number of available solutions

With the mining industry facing more challenging conditions, companies are looking very closely at their operations and working out how they can improve and boost productivity⁵.

Mining companies also need clear insight into how contractors and/or subcontractors deal with OH&S policies, even though not all of them have the systems in place to efficiently capture and report on the necessary information.

With the advent of end-to-end vertical solutions such as the Sage X3 Business Management Solution for mining, companies are now able to take back control of complex operations and increase their performance with faster, simpler and more flexible business management software.

In a nutshell, unlike traditional enterprise resource planning (ERP) solution, the web-based Sage X3 solution is a simpler and more flexible business management solution that provides the tools and insight needed to reduce costs, gain new customers and grow revenues.

Mobile Dashboards

provide a range of productivity enhancements

Theses days, access to mobile data is not only desirable, but integral for 24 x 7 visibility across the enterprise.

Sage X3 Business Management Solution for mining provides seamless mobile access to data from any mobile device, thereby improving efficiency and productivity as well as reducing communication errors or the need to go to the office to access data.

With its mobile-enabled dashboard, users have real-time visibility into the status of all processes, providing the ability to alert team members of process deviations, or to an incident or hazard.

Along with integrated sales and inventory control that has the ability to minimise stock-outs, reduce excess inventory, or simplify ordering and provide forward and backward traceability, Sage X3 enables management of multiple orders from multiple customers simultaneously, ensuring real-time quality control of warehouse stock and inventory fluctuations and levels.



⁵ <http://www.australianmining.com.au/news/five-key-ways-technology-can-help-mining-companies>

Conclusion

With the decline in commodity prices and the shifting focus from throughput to efficiency and productivity for Australian mines, implementing new technology and software solution is essential to driving continuous improvements.

Having the ability to forecast yields and losses and giving visibility across multiple and remote sites through a virtual dashboard gives mining businesses greater information and operational control, leading to improved productivity and profit.

Most web-based business management solutions are not mining specific, and if they are promoted for the mining sector, the vast majority of those solutions are basically rebadged business management software developed for other industrial sectors.

The Sage X3 Business Management Solution for mining is designed to be a key differentiator for operators in the mining and resources sector to turn any mining business into a more efficient and responsive organisation, both locally and globally.





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