You can't simply "buy" Asset Performance Management

How 4Sight is Selling that which Cannot Simply be Bought

Many technology vendors are selling APM solutions. They claim that their product or products will fast track your mine's digital transformation journey - creating a smart and autonomous mine, quickly. Luckily, most of the mining companies currently evaluating digital solutions, know that APM cannot simply be bought.

Mining is the most asset-intensive and asset diverse industry on earth. Simple optimisation of individual assets or asset groups, in isolation, could very often lead to bottlenecks or put undue pressure on aspects of the supply chain that cannot handle overall increases in throughput. True APM requires building hybrid systems, that bridge the human-vs-technology divide, and optimise the assets of the mine holistically and comprehensively, to achieve synergy between all the assets that will create a safer, more efficient and sustainable mining enterprise.

OPERATIONAL TECHNOLOGIES

By Wilhelm Swart, Managing Director, 4Sight Operational Technologies

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Increasing Profitability by Producing Less

Asset Performance Management isn't always about increasing production. Greater profitability can often be achieved by maintaining output or simply reducing operating costs, by increasing operator safety or minimising the environmental impact.

True asset performance management is data driven and analysis dependent. For those pursuing intelligent mines, this means that they need to implement extensive:

1. Industrial Internet of Things (IIoT)
2. Big Data analytics
3. Predictive analytics leveraging artificial intelligence (AI) and machine learning (ML)
4. Modelling and Simulation-based on Data, AI and ML
5. Mobility to serve up information anywhere, on any device
6. Augmented reality / virtual reality (AR/VR) to present information in an enhanced user experience
7. Fostering the Human/ Technology partnership

Few companies can offer all of the above in one single, implementable package. That is why mines need to choose their digital transformation partnerships with extreme care. 4Sight is one of the few technology companies that can supply, implement, maintain and train your mine's staff on all aspects of building a smart, autonomous mine.

Better Data = Better Disaster Response

Training should be based on scenarios as well as experience. The better your mining operation is at gathering actual data, the better you can plan for any kind of disaster or equipment failure. Digital twins and AR/VR simulations can go a long way to equipping your engineers and operators to perform their daily tasks better, while also being well equipped to deal with any disaster or emergency.

Proper implementation of AI and ML will not only allow you to avoid most disasters but also allow your mining operation to become more resilient when bouncing back after setbacks - minimising financial losses while boosting investor confidence.

Transforming Digital Twinning

Digital Twin:

Engineering Design + **The Past** + **The Present** = **The Future**

In principle, this could not be more simple. But the reality is that creating effective and accurate digital twins require the above-mentioned ingredients combined with a wealth of experience and insight that can only be offered by experts in their respective fields. Many simulations are simply guesses based on past data and the estimated weights or impacts of variables.

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Your digital twin programs should:

- Reconcile actual ore body concentration against geotechnical models
- Understand operator impact of productivity and equipment operating costs to drive higher profitability
- Modify block plans to facilitate consistent margin as prices vary
- Reduce MRO spend by altering operating profiles
- Improve safety through enhanced training
- Allow autonomous operations

Once your digital twins are optimised, new benefits start compounding, allowing your mining operation to pursue improvements in value such as:

- Reduced downtime
- Increased uptime
- Higher reliability
- Improve planned to unplanned maintenance ratios
- Reduce energy costs
- Boost delivery performance

Unsurpassed Digital Transformation

Contact 4Sight today to learn how our products, services and combined partner expertise enables us to offer unsurpassed services and solutions that will allow your mine to follow a profitable trajectory while moving seamlessly into the future of smart, autonomous mining.

OPERATIONAL TECHNOLOGIES

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