

Life Is On



HOW SCHNEIDER ELECTRIC'S DIGITAL TECHNOLOGY IS POWERING THE MINES OF THE FUTURE

**Rob Moffitt, Schneider Electric's
President – Mining, Minerals & Metals
Segment – reveals how the business
is leading the digital transformation of
energy management and automation**

A black and white photograph of a man in profile, wearing a dark sweater, pointing his right index finger at a large digital display. The display shows a complex technical diagram with various lines and text, likely representing a mine's infrastructure or a digital control system. The word "INNOVATION" is overlaid in large, bold, green letters across the bottom of the image.

INNOVATION



Studies indicate that the world needs to cut CO2 emissions by 50% by 2050 to avoid drastic consequences from climate change.

However, due to population growth and increased urbanisation, at the same time, the world will require twice the amount of energy as today. To meet that challenge, Schneider Electric is developing intelligent energy management solutions to help businesses and consumers monitor and control energy usage efficiently.

The global energy management, automation and industrial software specialist has 144,000 employees in

more than 100 countries and creates products and solutions to ensure 'Life is On' by helping its customers manage their energy and processes in ways that are safe, connected, reliable, efficient and sustainable.

Its integrated solutions combine energy management, automation and software through EcoStruxure™, its Internet of Things (IoT) enabled, open and interoperable architecture.

EcoStruxure™ leverages the latest advancements in digital technologies, such as cyber security, analytics, cloud, and mobility to deliver real-time control and operational efficiency, and

Alliance 2017



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Schneider Electric's Mining, Minerals & Metals Segment President, Rob Moffitt, reveals how the company is leveraging solutions from its primary domains of expertise – IT, buildings, industry and infrastructure, and utilities – to help companies in the mining sector achieve new levels of efficiency and productivity.

“We see enormous potential in terms of plans for the year ahead and growth,” he says. “From a product and solution perspective, we are a leader in industrial software, power management,

which includes medium voltage, low voltage and secure power, and in industrial automation and control.

“In 2018, we see a return to favourable conditions, in which we expect to see a cyclical upturn and continuing recovery in mature economies, plus accelerated momentum in developing economies that will allow for growth in the segment.

“Our focus is around two main areas – customers and technology. On the customer side, we want to expand our presence in certain

geographies and increase our partnerships with strategic customers. For technology, our focus will be to support and develop solutions based on digitalisation.”

Enter EcoStruxure™

Schneider’s competitive advantage is its open EcoStruxure™ architecture, underpinned by an enviable combination of people and technology, and the segment team within the organisation dedicated to partnering with strategic customers to harness its potential.

Moffitt explains how EcoStruxure™ is redefining automation and power connectivity, and adds an unprecedented layer of software applications and services to help companies improve shareholder value by increasing productivity, reducing costs and improving safety.

And by bridging IT and OT, EcoStruxure™ lets customers maximise the value of data, which translates into actionable intelligence for better business decisions.

“EcoStruxure™ is an open, interoperable, digital, and IoT-enabled



Rob Moffitt

President – Mining, Minerals & Metals Segment

Rob Moffitt, who joined Schneider Electric in 2016 as President of the Global Mining, Minerals & Metals segment, has had a career spanning 32 years in the global mining industry. He started his career in deep level gold mining before working with various multi-national organisations supplying a range of innovative products, technologies, services and solutions into the industry.

Moffitt has formal qualifications in Metalliferous Mining and a MBA from Henley Business College in the UK. He is a Fellow at the Institute of Quarrying, Australia and was previously Chairman of the Institute of Quarrying South Africa, and has served on the boards of several companies.



Schneider Electric
Global Family Leave

“We see enormous potential in terms of plans for the year ahead and growth”

—Rob Moffitt, President – Mining, Minerals & Metals Segment

system architecture that combines our broad range of solutions across connected products and edge control, and leverages them through our industry leading suite of industrial software, apps and analytics,” Moffitt says.

“Few other companies in the world have such a complete portfolio of integrated products, and our main differentiation is to bring an open

and integrated architecture from sensors to business applications that addresses the multitude of challenges our customers face each day. We go beyond applications focused solely on just process or asset performance.”

Master of mining

Another competitive advantage is Schneider’s dedicated segment approach, having built an entire



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organisation dedicated to mining, and investing significantly over the years to increase its competence in the industry from an application standpoint, helping it to solve its customers' challenges. In fact, to that end it has developed specific expertise around process control, mineral processing, energy optimisation, and supply chain efficiency.

Mining is facing significant challenges but the fundamentals are sound, and Moffitt says Schneider expects increased demand for mined raw materials will be driven by population growth as well as rapid and increasing urbanisation.

"The resources industry is constantly challenged by market volatility, grade decline, regulations,

social license, skills gaps and workforce demographics," he says. "This puts a premium on operational and business efficiency – something we're well-positioned to help our customers with.

"Of all the trends impacting the industry, none will be as critical as digitalisation. It will impact every aspect of the industry operation and provide the greatest potential for improving business and operational efficiency."

He points out one of the main challenges has always been to make real-time decisions based on information that is spread across various databases and applications. With that in mind, the company, which devotes 5% of sales to



‘SCHNEIDER WAS RANKED AS ONE OF THE GLOBAL 100 MOST SUSTAINABLE CORPORATIONS IN THE WORLD FOR 2016, COMING 12TH OVERALL AND FIRST IN ITS GLOBAL INDUSTRY CLASSIFICATION STANDARD INDUSTRY’

research and development, believes the technology that has provided the most value to its customers has been around the integration of mining operations from 'resource to market' or as it is sometimes expressed, from 'pit to port'.

"It's one of the industry's most challenging problems," explains Moffitt, "and AMPLA, our integrated mining operations software, has become somewhat of the de facto standard for this type of integrated solution.

"It's a modular software suite with specific mining functionality that supports mine operations from extraction and processing, to blending and storage, all the way through to shipping logistics."

The software enables value chain visibility and optimisation by collecting data automatically from multiple plant and business systems or through manual data entry, and establishing a single trusted source of information which can be collaboratively used to drive efficiency, reduce cost and make better business decisions.

"A case in point would be a recent



Jean-Pascal Tricoire
CEO of Schneider Electric

implementation of Ampla across five mine sites at a major metal mining company. The system was used to monitor and capture real-time asset performance and condition data and to provide root-cause analysis when assets were being underutilised. Globally across all five mines they improved capacity by over 10%."



“We go beyond applications focused solely on just process or asset performance”

–Rob Moffitt, President – Mining, Minerals & Metals Segment

“Our resource to market integrated solution consolidates and manages data from multiple mine, plant and business systems,” he adds. “This enables customers to identify production issues, manage inventory and quality, track and management production and asset performance, understand costs, and analyse business KPIs.

“As another example, one of the biggest iron ore miners in

Australia uses it to optimise their port logistics by predicting how each entity in the supply chain will operate – from mine to plant to rail and port – and has improved supply chain efficiency by 20%.”

Futureproof

Remaining ahead of the curve is tough when it comes to market changes and advances in technology, especially in mining where change is constant, but

RELIABILITY



Access to Energy: Our Ambition for Tomorrow

Moffitt cites open platforms, the IoT and digitalisation as good examples.

“We also see significant turnover at the engineering and technical levels in the industry,” he explains, “meaning we sometimes need to fill that void with our own project engineering or remote asset monitoring services, for example. It also means we need to partner with our customers over the medium to long term and not simply just sell them things.

“Now that the outlook has improved and mining operations are starting to make CAPEX investments again, they also need a workforce that can ramp up and become productive quickly, and much of our software and workforce enablement

solutions help them do that.”

Training solutions made possible by virtual reality or maintenance troubleshooting tools that utilise augmented reality are examples of the industry looking for new technologies to transform the way it operates in the future.

“To give another example, one of our customers in Canada has deployed our training and simulation solution at a groundwater treatment plant that had to meet critical environmental requirements, and was used to train new operators on how to prevent above-limit groundwater from being dumped into their outflow.”

Moffitt says the only way to achieve this ‘future state’ is to develop them



Schneider Electric Company Story:
Our technology is everywhere

Unearth hidden value without spending capital

Interlate is transforming the mining sector, our results speak for themselves. See a 10-15% increase in economic benefit and improve the efficiency and effectiveness of your mine.

Transform your data. Unlock your potential



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DIGITAL

jointly with Schneider's strategic customers and partners and work closely to understand their challenges and find new ways to solve them.

There are going to be 50bn connected devices in 2020, and Schneider wants to help its customers succeed in their digital transformation and reap the rewards it can deliver in terms of energy, process, and business efficiency.

"The rewards are significant for those willing to try," he adds. "It's been estimated that in the next five years, mining industry leaders will achieve their most significant improvements by embracing digital technologies like the IoT and advanced analytics that

can harness the power of big data."

Some reports indicate that digitisation could bring more than AU\$470bn by 2025 in additional value to the mining, minerals and metals industries by means of productivity gains, cost reductions, and fuel and energy savings – but only if they are able to overcome some of the challenges.

"One of the challenges is in making technologies available in ways that are easy to implement and leverage," Moffitt adds, "and that brings us back to EcoStruxure™ once again, because it provides that common open architecture on which everything can be connected. ■

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Global Supplier Day
Paris, July 5th 2012

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