

Resourceful thinking



A new direction for transactions, driven by technology

January 2016

Mining may not be universally renowned for its green credentials, but the sector's reputation could be in line for a major makeover. A copper mine in Western Australia is to be powered by the country's largest solar energy system, in a deal that could revolutionize the use of renewables in a traditionally carbon-intensive industry. The facility, operated by Sandfire Resources, will incorporate over 34,000 solar panels and provide most of the plant's energy needs, in combination with the site's existing diesel power station.¹ Another Australian miner, Sirius Resources, is also introducing solar power to its Nova nickel mine.²

These groundbreaking developments reflect the growing importance of a responsible approach to communities and the environment, in order to earn a 'social license to operate.' They also highlight the increasing role of technology. Where once, mergers and acquisitions (M&A) were primarily about growth, or divestment of non-core assets, more and more transactions are now likely to be driven by a need to innovate, whether it's to reduce the carbon footprint, cut costs or improve performance and safety, or simply to provide a service or product differentiator, or to attract new sources of capital.

As is often the case, the leaders in the mining industry tend to spearhead this new direction, investing in research and development (R&D), either through deals or organically. Prominent among these are the mining services providers, eager to offer differentiated capabilities to their clients by acquiring start-ups and established businesses.

Indicative of this is the recent KPMG Energise accelerator program, known as Energise, which was conceived and is led out of KPMG in Australia's Western region. This saw extremely positive interest from Tier-1 resource houses looking to partner up with technological solutions providers, ranging from start-ups to more mature companies. These relationships were looked at in an attempt to find solutions for operational problems in enhanced, safer and more cost-effective ways.

Highlights

 <p>Deal advisory is increasingly driven by a need for innovation</p>	 <p>Automation and robotics are becoming integral to the industry</p>
 <p>New financiers are entering the market, such as PE houses</p>	 <p>Innovation is the new buzz word in energy and natural resources</p>



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¹ Solar Plus Storage To Power Copper Mine In Western Australia, Clean Technica, 15 February 2015.

² Australia's Nova Nickel Mine To Harness Solar Power, Energy Matters, 5 August 2015.

New financiers are also entering the frame, notably private equity (PE) houses, such as North American-based Resource Capital Finance, whose Jolimont technology fund invests in high growth mining equipment, technology and services. In August 2015, Jolimont bought a majority stake in Blast Movement Technologies, who have created a method to accurately locate ore and waste zones after blasting, helping mines to minimize the amount of valuable ore they discard.³ Jolimont was also a prize sponsor of Energiise.

The decline of coal and the increased focus of optimization and cost reduction has opened up technological solutions opportunities for growth in the hard rock sector, something that attracted US equipment manufacturer Joy Global. Rather than use traditional, slower, drill and blast approaches, Joy Global chose in 2014 to buy MTI, which has pioneered continuous cutting and material flow, through its range of hydraulic drills and shaft sinking equipment.⁴

Robotics is another exciting area. Automated trucks have been around for several years, and, more recently, new maintenance systems such as Sandpit Innovations "Spidler" system are emerging for conveyors, which can monitor the need for maintenance, as well as enabling rollers to be repaired or changed while allowing the belt to remain operational, avoiding the need for costly shutdowns and improving safety levels.

The skies above many mining sites are increasingly filled with hovering drones. These miniature helicopters can map deposit sites, explore for minerals, monitor stockpiles and collect data on pipelines, fence lines and tenements, spotting any actual or potential faults. Photo evidence can be used to show environmental and heritage compliance, while geological mapping missions reduce the need for staff to travel to dangerous parts of the mine.

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Rio Tinto has stated that its 'Mine of the Future™' will incorporate drones in a wide array of activities, and mining computer tech company Maptek has made

a bold commitment to this technology, by making a significant investment in start-up drone specialist DroneMetrex in 2014.⁵

The pervasive presence of software

Like every industry, mining is benefiting from innovative new software, to speed up processes and reduce the need for laborious, manual tasks. Selecting and mobilizing employees, for example, is incredibly time-consuming, involving a detailed examination of each individual's records to confirm skills and safety history, as well as travel booking. New systems are now available that do this all automatically, hugely cutting the costs of mobilization and reducing the chance of a poor selection.

Other tools can enhance a host of activities, including: recording and managing land inventory and history; mine accident, injury and illness reporting; designing open and underground pits; planning and production; capturing and analyzing data from mining and exploration activities; and estimating reserves.

 Not surprisingly, mining services companies are proving active in the M&A market, to acquire the latest intellectual property. 

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As mines grow ever more dependent upon digital technology, they also need fast, reliable networks through which to send data and video. With its 2015 acquisition of ActiveControl Technology Inc.'s mining division, Northern Light Technologies (NLT) can now offer mine operators enhanced, high-speed, broadband Wi-Fi across their sites, both above and underground.⁷

Visit Energiise: kpmg.com/energisemining

³ Blast Movement Technologies majority stake acquired, International Mining, 17 August 2015.

⁴ Joy Global completes acquisition of MTI, Sudbury Mining Solutions Journal, 1 September 2014.

⁵ The Mining Sector Puts Drones to Work, Mining Global, 24 September 2014.

⁶ Hexagon to Acquire Mintec, Software Developer and Service Provider for the Mining Industry, Reuters, 14 April 2014.

⁷ NLT announces acquisition of ActiveControl Technology Inc. assets, Plant Engineering & Maintenance, 4 September 2015.

Technology: an under-utilized resource

Natural resource industries are under-investing in technology, spending just 1 percent of revenue on information technology (IT) compared with 5–7 percent for most other sectors.⁸

This leaves many mining companies with a huge amount of data that is not being sufficiently utilized, despite the growing availability of tools and technologies that can transform every aspect of their operations.

According to IT solutions provider Timetric, who studied data from more than 630 mines across six regions, the

biggest areas for technology investment are: fatigue management; collision avoidance/proximity detection for vehicles on site; mine management software for scheduling and optimization; fleet management/vehicle monitoring; remote control equipment/machine automation; and environmental monitoring/emissions management.⁹

Given these significant opportunities to improve productivity and safety, we could see more deals in the coming years, as various players seek to acquire essential technology that should be in high demand.

Mapping the future M&A landscape

Given low exploration levels globally and a resultant dearth of new discoveries, many operating mine resources are becoming depleted, while few new reserves are being added. This can only lead to the bigger miners moving away from divestment back into acquisition mode, albeit for core commodities and assets, and will almost certainly see increased activity to buy into existing companies or assets, in order to improve production levels and replace depleted assets.

Having experienced depressed prices, uranium could be one of the next big growth areas, due to increasing demand, with, most recently, Japan re-activating its nuclear power generation industry. If governments (such as Australia) choose to become more active in production, processing, and even containment and storage of remote uranium waste, they will need substantial investment into new technologies, opening the door to PE investors and wider M&A to buy into innovative processes that satisfy strict environmental and safety standards.

 Technology and innovation is set to have a huge impact on transactions over the next decade. 

Technology and innovation is set to have a huge impact on transactions over the next decade. Resource companies have some tough decisions to make about whether to outsource innovation and technology, or whether to own it as a proprietary distinctive capability. If they choose the latter course, they will undoubtedly be on the search for suitable acquisition targets. As the mining industry becomes more reliant on technology, it might also attract potential new entrants from the technology sector itself, which could add a new layer of competition, as well as shake up the transactions market.

Key questions:



Do you need an innovation focused M&A strategy to retain your competitive edge?



Does your organization possess a competitive edge in the innovation space?



Have you embraced robotics and automation?



Do you have innovative leaders in your organization that are willing to embrace constant change to respond to a fast-paced and dynamic market?

⁸ Top 10 Use Cases For Big Data In Mining, Courtesy Of Mining Journal, D!gitalist Magazine by SAP 18 February 2015.

⁹ What is next for key technology investments in the mining industry? Mining.com, 16 June 2015.

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Publication name: Resourceful thinking — A new direction for transactions, driven by technology

Publication number: 132982-G

Publication date: January 2016