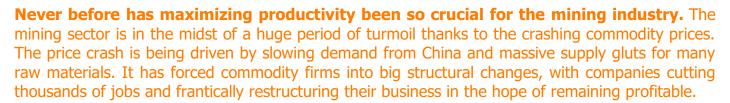
Just Not Good Enough! Mining Perspective 2017

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In a note titled "The Hangover Part II", a Chinese firm, Haitong Securities, revisits several calls it made in late 2015 - before earning season – on the state of the commodity sector and five large companies - Anglo American, BHP Billiton, Glencore, Rio Tinto, and Vale. Essentially, Haitong's analysts believe that the situation is so bad for commodity based companies right now that they have thrown out any long term plans, in favour of simply surviving until things start to pick up again. Haitong stated that CAPEX at mining companies fell by 34% in 2015 and will fall another 25% in 2016 (both

numbers are higher than any previous estimate). Most of the mining companies have now been downgraded by the analysts. But is the commodity price pick up, when it comes, going to deliver the expected results for the industry or is there something even more fundamentally wrong with the sector?

The industry needs to face some stark facts - performance has been poor and the report card clearly reads "must do much better." Performance in both volume and on a cost basis has been significantly declining in the mining industry since

2000. Labour productivity in Australia has declined 50% since 2001, the USA coal sector has seen a decrease in productivity of close to 30% from 2009 to 2014, while bankruptcy has gone through the roof recently and we have seen a 35% decrease in South Africa's Gold sector productivity, according to some industry commentators. McKinsey claims in a report that mining productivity has declined globally by 3.5% annually for the last ten years. Productivity by mineral does not offer a better picture; copper down 1.5%, iron ore down 1.6%, coal down 1.7% and PGM down 4.2% per year. (continued next page)

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Geographically things are just as bad, Latin America is down 4.1%, Australia 4.2%, North America 4.8% and Sub Saharan Africa is down 4.5% per year.

We accept that grades are diminishing, that miners have to dig deeper, that exploration is harder, we accept that some governments have tried to take advantage of the previous boom and that environmental costs are escalating, we accept the slowdown in China, but the mining industry seems to be slow in making any real inroads in delivering productivity improvements and will need to look at itself if it wants to break out of this vicious boom and bust cycle.

The requirement is for a serious turn-around in productivity, but do current management have what it takes to address the issues? This cannot just be about cutting CAPEX and OPEX. The industry is cyclical and management seems to respond in the same ways over

and over again, never really dealing with the fundamentals that can and should drive to improvements in performance and productivity.

"Tribal knowledge" in the mining industry leads to the same response, when times are good we pour money into the sector and when times are bad we cut back on CAPEX and OPEX, but as one CEO said "China cuts their purchasing faster than I can cut my costs." Well maybe we should focus on improving productivity.

The industry has done a lot over the last few years, costs have been brought down, debt has been reduced and balance sheets are beginning to look a better, but the fundamental issue of productivity improvement must now be addressed if the industry is going to take a real step forward.

Does today's management have what it takes to address the

issues? Current indications are not encouraging. The general view from many commentators is the mining industry is run by the wrong sort of people. The new regime is about efficiency, innovation and costs, and while costs have been addressed it is innovation and efficiency that the industry management seem to fall short of. Some have gone as far as stating that strategy at the biggest mining companies is dead!

Mining companies certainly have a real uphill struggle to drive productivity improvements. Yet before they can fix anything and keep it fixed they need to understand what went wrong previously and why the decline in productivity. In this paper we look at eight (8) basic management disciplines that must be mastered by the mining companies if they want to improve. These in our opinion should be addressed as a matter of urgency within the sector.

You Cannot Succeed "From the Outside-In"

Management tools and techniques brought from the outside will not guarantee improved performance. What is fundamental, in fact absolutely indispensable, is a strong grasp of the business basics.

4+2 = Sustained Business Success

Authors Nohria, Joyce, Roberson started from intuition and common sense in many people's minds – that a business must get the fundamentals right in order to survive and thrive – this was rigorously confirmed by the authors cited, through the 160 companies tracked in their Evergreen Project from 1986 to 1996. Through their work Nohria et al showed that the following four management disciplines are indeed fundamental to success:

- Strategy
- Execution

- Culture
- Structure

And in their original "4+2" analysis they established that, depending on the specific context that a company operates in two (2) of the following areas would also demand total focus:

- Talent
- Innovation
- Leadership
- Mergers & partnerships



Have Mining Companies Got It Right?

We now examine how well mining companies are doing, benchmarked against the list of practices identified above.

Strategy

Our experience confirms the view that, to get it right with strategy, mining companies cannot deal in vague abstractions. They have to:

 Put the markets and commodities in the driving seat.

- Listen to external stakeholders, not internal agendas.
- Decide where they are going and adjust course as needed to reach the desired destination.
- Avoid indecision. Equally, avoid rigidity in the face of relevant change.
- Tell stakeholders, staff and shareholders what is being done and why.
- Do what really matters avoid wasting energy, staying analytical and dispassionate about 'the next big idea'.

Mining Strategy & Mining Reality – The Sound of One Hand Clapping

Miners have not been astute or focused when it comes to defining their strategy around commodities or markets; quite the opposite in fact, with too much reliance on China along with the view that China was an unstoppable machine for demand. A common accusation is that growth for growth sake was the driving agenda to



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ensure management's advancement to the detriment of the mining companies themselves. Not even at a basic survival level have miners been particularly proficient in reacting to the operational reality in which they find themselves. The general trend today, especially in Western organizations, is shrinkage. In itself, this is not a wrong turn, particularly, but a fundamental look at the plan and the detailed style of execution is required and if we do not take this upturn in the sector as an opportunity to address the fundamental productivity problem we will never move forward as an industry.

The real issue is that circumstances have put miners out of the driving seat. Being on the back foot means they are still being made to pay for the errors that they have made historically. Strategically, these errors have been hugely compounded by a misjudged focus on short-term gains, as

opposed to the long-term sustainability of the business.

Execution

Strategy is literally nothing, unless you deliver and maintain flawless operational execution. Flawless execution means miners must:

- Effectively implement the basic changes required.
- Never disappoint stakeholders.
- Respond directly to the market.
- Run a "tight ship".

Our direct experience of working with the mining industry for almost 30 years confirms that the benchmark statements above on execution are very far from today's reality. Unfortunately, certain mining activities have fallen far short of adding value and meeting expectations. And as far as effective change implementation is concerned, there appears to be a real overload of poorly executed projects that have

failed to deliver the original business case.

Culture

We agree with Nohria et al, that holding and communicating high expectations about performance matters! If you don't make it clear that you expect the best, you won't get the best. A healthy high-performance culture is about:

- Inspiration.
- Empowerment, coupled with accountability.
- Dynamic Rewards.
- Recognition as well as cash.
- Making a great place to work.
- Walking the senior management talk, in front of the people who do the work.

Culture is a major flashpoint today in mining. It is the unpredictable spark that keeps threatening to ignite the

patience powder keg. We have seen some examples of this in South Africa. Like most potential explosions, its origins are historical. The legacy issues will have to be faced head on.

Structure

Most Global mining companies have ended up with too many layers of poorly defined management roles, mixing elements of product accountability and geographical location. This "mishmash" leads to unclear accountabilities, stress and waste. Achieving a structure that makes it rewarding to work with and for the institution means miners must:

- Simplify.
- Collaborate.

- Apply human resources intelligently.
- Enable people to know what they need to know.
- Make sure the buck has a hard stop with someone who has power to take meaningful actions.

Measured against the organisation structure benchmarks identified above, once again the mining industry has ended up doing little to effectively address the issues. In reality, miners have not at all simplified the way they work. Too many layers of management positions lead to dilution of accountability, confusion and excessive cost of delivery. Some senior

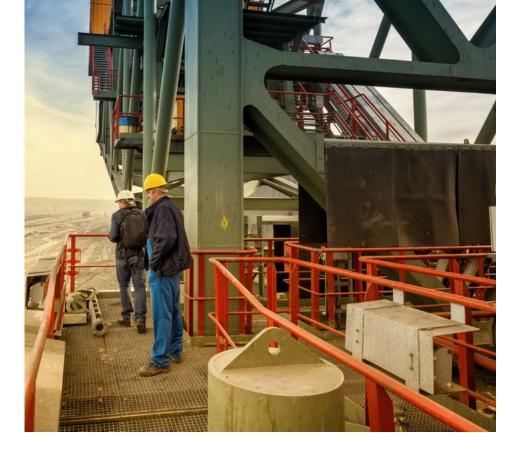
managers have to react to the input from 15 direct reports; people who themselves preside over huge 'empires'. Some of the large mining companies have up to 13 layers of management from CEO to front line supervisor. Yet, our direct experience confirms that they could be run more effectively with half those layers, if structured appropriately. There are certainly some initiatives that are looking at these issues. Rio Tinto's "Mine of the future" is not only a huge investment but an ambitious program to address some of the fundamentals in the industry that need to be looked at.

Talent

If you want to nurture and retain your talented people, you must:

- Give them a reason to stay around.
- Never let people stagnate.
- Keep the challenges coming.
- Never lose touch with your greatest asset – the people who do the work and build the loyal relationships with your customers.

Many mining companies, even now, create the *perception* of doing a good job with talent development and retention. However, they have often used the wrong techniques to attempt to retain excellent people. Specifically, they have thrown money at the problem (good for the individual recipients, not so good for the sustainability of the wider industry, downright irritating for many of its increasingly reluctant state sponsors).



Innovation

To stay innovative and to keep ahead, a winning business must:

- Never rest.
- Make the whole business as lean and fit as possible.
- Avoid confusing true innovation with mere repackaging and duplication.

Innovation is about tomorrow but it cannot remain on the "to-do tomorrow" list! Now is the time to innovate. Mining companies must make sure their planned innovation is actually innovative.

Innovation, taken seriously, must be developed beyond the existing structures, in order to insulate it from the self-interest and protectionism of the old hierarchies.

Leadership

Winning organizations tie the 'leadership factor' very closely in to day-to-day performance. Make sure this happens through:

- Implementing a "no passenger" policy; not even first class passengers!
- Putting the C-suite at street level, not at the top of a tower.
- Developing managers who actually manage and leaders who lead real teams working on real challenges; not furthering personality cults.
- Keeping leadership practical by rewarding results not promises

This is already difficult to accomplish. It will become even harder given the global nature of the industry. But the issue goes beyond; it reaches right down into corporate leadership

culture. The mining industry has worked on the premise of the "cult leadership figure" in the last several years. "Superstars" will not be the answer, going forward. It will be the overall team that achieves real results - measured by up-todate and relevant definitions of "results". The debate is ongoing - should we define success according to return on capital or earnings per share? Of course a lot depends on where a particular mine is in its life cycle. But a spread of indicators of satisfactory performance, achieved on an acceptable basis, should be developed and measured going forward.

Mergers and Partnerships

Merger mastery, defined as making sure that the proverbial 2+2 add up to 5, 6, or 7 (as opposed to 2.75) demands:

- Alignment not divergence between the entities involved.
- Collaboration not competition between newly configured entities.

 Certainty of facts and high likelihood of positive outcomes, rather than hope that all will be well.

Miners have been nothing short of prolific when it comes to pushing the mergers and partnerships agenda. But how many of the resulting "megadeals" have delivered any real value in the long run? Even the outsourcing model applied so often as part of post-merger "efficiency drives" has not delivered shareholder value, to the extent promised in the business plans. (although as one of its unintended consequences, it has given suppliers a disproportionately powerful platform to build on.) The lesson here surely is that mining companies must start to manage these core relationships – with newly merged or acquired entities and kev suppliers – much more proactively, in order to ensure real transparency of costs and maximum efficiency of service.



In 2016 and 2017, Mining Companies need to double-down efforts to realize needed gains in efficiency, innovation, and costs as they move forward in the uphill struggle to drive productivity.

Conclusion (Or a New Start?)

Mining companies are now facing a stark choice: to continue as they have always done, for as long as market forces and stakeholders permit them to; or to embrace the current opportunity. In this context, "current opportunity" goes far beyond a short term fix. It means a new degree of alignment with new realities, right across the operations — organization, culture, and innovation. Certainly, the platform for change is burning and the requirements are for significant step changes in performance and productivity.

If you and your organization are serious about changing, you need to redefine your terms. Holding fast and unquestioningly to the past is the route to at least one certainty: the lack of any kind of viable future. Change needs to be embraced. And the time to start driving productivity in the mining industry is now.



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