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Why should we 'think big' on closure?

L Tyler *BHP, Australia*

J Heyes *BHP, Australia*

1 Introduction

Mining is the bedrock of our society. Its presence is felt in everything we touch. It delivers the products that we need to make the world work. Yet, at the same time, social acceptance of mining continues to be a challenge. Industry must develop trust with the communities in which we operate. If we damage the environment through our operations but fail to remediate it, we will lose trust and lose our social license to operate.

This is why we must 'think big' on mine closure.

2 Social license to operate requires ongoing attention

A recent Kellogg Innovation Network (ca. 2015) report estimated the mining industry directly accounts for around 21% of all measured global economic activity. We produce the iron and coal for the steel that creates our buildings and railways, the fertilisers that support our food production, the petroleum that generates our electricity and runs our vehicles, and the copper that brings electricity into our homes and powers our devices.

From the earliest days, mining has been an important enabler for society and it always will be. The demand for the types of minerals that we target and mine may change as technology evolves, but mining will still be critical to meet continuing population growth and the rise in living standards. However, it cannot take its place in the world for granted. Trust is the foundation for any healthy relationship, mining has to earn and maintain the trust of society.

Historically, mining focussed on the resources that were easiest to reach; and on extracting them as quickly and cheaply as possible. Extraction was often prioritised ahead of safety, community longevity and engagement, and environmental impact. The industry reputation is still tarnished by these legacy practices today.

In 2017, the Commonwealth Scientific and Industrial Research Organisation published a study into Australian attitudes towards mining. It found that the majority of Australians supported the industry, but 60% believed mining has a negative impact on the environment (Moffat et al. 2017).

The implication of this is that society generally accepts that mining is essential, but it is uncomfortable with the potential impacts. If mining continues to damage and not remediate the environment, the industry will be unable to sustain the trust it needs to survive.

In 2018, Larry Fink, CEO of Blackrock, one of the largest global investors, wrote to business leaders to urge them to give the same weight to their societal and environmental performances as their financial performance.

Therefore, there is a clear business case for our industry to improve our practices and demonstrate our ability to close, as well as operate, mines in a sustainable manner. If we fail, we will lose our social license.

3 Integration of technical and social skills and expertise are the key

Leading practice in industry has made sustainability a standard work practice. It is thinking more holistically, placing a higher value on people, the environment, and the communities that host operations.

BHP's closure standard, *Our Requirements for Closure*, is very clear on the need for optimised closure outcomes to be developed, and enabled through regular and ongoing stakeholder engagement. The drive for optimised closure outcomes reinforces that we must include closure options that balance the company's values, obligations, safety, costs and the expectations of external stakeholders to support long-term shareholder value, and our license to operate and leave a sustainable and positive legacy.

Whilst the sustainability policies and principles of companies are set at the corporate level, it is the scientists and engineers who play a fundamentally important role in the sustainability of mining operations, our industry, and our place in the world.

The integration of sustainability principles starts at the exploration stage, through operations into closure and beyond. It is the role of our scientists and engineers to identify and implement long-term solutions to the sustainability challenges that our industry inherently brings.

A great example of where BHP is thinking big about closure is on our new South Flank project in Western Australia. South Flank is expected to generate iron ore for over 25 years. This means it will benefit, through investment and jobs, a large section of the local community that have not even been born yet. This is a huge responsibility.

The life-of-mine plans for South Flank have integrated closure from the earliest stages, with mine planners taking ownership for the development of robust closure plans. The resultant mine plans maximise the amount of progressive infill of waste into the pits and minimise the disturbed footprint. Mineral wastes with beneficial properties for final landforms are preserved with problematic wastes being managed in a proactive manner. Operational discipline will be required to ensure that these plans are followed, at the same time showing respect to the resources that we have been trusted to extract.

If we want superior sustainability performance, technical professionals must understand the 'why'. The need to educate and upskill technical professionals to understand and appreciate the importance of social license cannot be underestimated.

The curricula of university mining related degree programmes must evolve to address the changes in society's expectations. The view that sustainability is the responsibility of health, safety and environment professionals is outdated and insufficient. Technical professionals must have strong fundamental skills that will enable them to collaborate and better communicate and engage, whilst understanding how their technical skills can be applied to prevent or solve potential closure risks.

4 Conclusion

Industry must show its commitment to sustainability through application of technical excellence, innovation and technology, partnered with operational discipline and delivery of results.

The world needs a healthy and productive mining industry. And society demands one that is also safe, environmentally responsible, sustainable, and transparent. If we are to meet rising demand for energy, metals and fertilisers for decades to come, we must become all of the above.

To conclude, expectations of the resources sector have changed. As scientists and engineers, we must rise to the challenge and 'think big', otherwise we risk our social license.

References

Kellogg Innovation Network ca. 2015, *Reinventing Mining: Creating Sustainable Value*, Evanston.

Moffat, K, Pert, P, McCrea, R, Boughen, N, Rodriguez, M & Lacey, J 2017, *Australian Attitudes Toward Mining – Citizen Survey –2017 Results*, Commonwealth Scientific and Industrial Research Organisation, Canberra.