INTERNATIONAL PGM ASSOCIATION MEETING
KEYNOTE ADDRESS
Joel Netshitenzhe (MISTRA)
25 October 2018

TRANSFORMATION AND COMPETITIVENESS IN THE MINING INDUSTRY

Thank you for this invitation to interact with global leaders in the Platinum Group Metals value chain.

As the introduction intimated, my ideas will be based on mining-related research being conducted by the Mapungubwe Institute (MISTRA). And so, if some of the musings are, in places outlandish, attribute this to the researcher's poetic licence.

MISTRA aims to launch a book on the political economy of mining in South Africa soon, one among many that we have published over the eight years of our existence. One of these, in 2013, was on South Africa and the global hydrogen economy.

Why venture into the political economy of mining, you may ask! The logic behind this is that we are of the view that South Africa not only has vast mineral endowments; but it also has performed quite well historically with regard to the technical aspects of mining.

You would know that this applies to equipment and products such as underground locomotives, ventilation, shaft sinking as well as engineering and other services. On mining design and operations, one observer lauded the turnkey capacity of South African mining thus: *Wherever you go [in sub-Saharan Africa], you will find mining experts from South Africa and the Philippines…because they are well-trained and have experience.* [Andries Rossouw, PwC, M&G 08/03/2013)]

You are also familiar with the fact that, in terms of reserves, South Africa ranks first or second in relation to such mineral reserves as chromium, manganese, platinum group metals, titanium and vanadium – and many of these, if judiciously managed, would have a lifespan of hundreds of years.

One can go on about this quasi-Trumpian advertisement. However, the qualification needs to be made that these advantages have not been fully exploited even during the commodities super-cycle. In the past decade, South Africa has not done well with regard to value-added to Gross Domestic Product, employment and levels of investment. Until recently, relations with government have been fraught, and much more needs to be done in terms of levels of social cohesion in relation to labour and mining communities.

What is one then driving at? It is to answer that basic question about the need fully to master the political economy of mining. And this is where I will seek to focus my input today; proceeding from the premise that, while the ebbs and flows of pricing, and negotiations around the Mining Charter are critical, we should differentiate between cyclical factors and long-term structural dynamics.

The challenges that South Africa faces may not exist in quite the same way in other mining jurisdictions. But the question of political economy generally is coming out in bold relief to confront all of us wherever we may be located. It applies to mining as much as it does to virtually all other sectors; and the debate has sharpened in the wake of the global economic crisis, the malign impact of which still lingers in most economies.

I was thus reminded of three observations that should form the backdrop to our discussions.

The first one is by Lynn Forester Rotshchild, CEO of EL Rothschild:
[F]aith in market institutions has rarely been lower... Although it is not the business of business to solve society's problems, it is dangerous when business itself is viewed as the problem. To reverse this…will mean investments must be measured not just by short-term returns but by the development of human capital, management of innovative potential, compensation aligned with true value creation, supply chains that are sustainable and measurable evidence of the overall contribution of the enterprise to society. [FT 21/05/2014]

The second one is by Dominic Barton and Mike Wiseman, until recently, of McKinsey and Company, and the Canadian Pension Plan Investment Board, respectively:
Capitalism may be the greatest engine of prosperity ever devised. But it requires taking a long view to really deliver. Yet corporate leaders know all too well that any action that negatively affects income statements in the next few quarters risks bringing down the wrath of investors — even if it is likely to create more wealth over time. [Dominic Barton and Mark Wiseman: MD, McKinsey & Co and CE, Canada Pension Plan Investment Board, FT 31/03/2015]

The third observation is by Paul Polman of Unilever:
[Unilever] has abandoned guidance and moved away from quarterly profit reporting. We don't run the business on 90 day horizons, so why report on that basis? … [P]ut more emphasis on rewarding performance over the longer term. [Unilever (2012 F/J Award]

Some have argued, in relation to Polman, in particular, that having been given a scare by Kraft Heinz Company he was forced to rethink Unilever's operating model; but this is neither here nor there, as he insisted earlier this year:
I don't get it… If business cannot show what positive impact it has, why should the citizens of the world let business be around? [FT, 27/02/2018]

These observations speak to the challenging environment in which mining companies have to operate, and to the growing expectations among its myriad of stakeholders. Global discourse on the mining industry gives expression to this challenging environment.

On the one hand, there is what is colloquially referred to as resource nationalism. This is broader than the narrow discourse on nationalisation, and it reflects claims by nations with commodity endowments to extract maximum benefit from these resources. It is driven by such dynamics as politics, local community demands, attempts to avoid the resource curse and efforts to take firmer control of legislative and contractual arrangements.

In a sense, and at the positive end of the scale, the African Mining Vision and Agenda 2063 of the African Union represent this resurgent resource nationalism. Both the Vision and the Agenda call for such instruments as enhanced geological knowledge, improved state bargaining capacity, technology transfer, increased local ownership and higher levels of beneficiation. The African Mining Vision also places greater accent on monitoring of implementation. Instructively, at the same time as underlining the importance of partnerships with global players, the Vision argues that context-specific considerations rather than purist ideological postures, should inform approaches to the balance between private and public ownership.

Across mining jurisdictions in all parts of the world, various manifestations of this typology of resource nationalism are much in evidence.

The other discourse pertains to the changing landscape for mining and metals companies, with growing expectations, to quote the World Economic Forum, *for companies to operate in a responsible manner*. This discourse cites such changing dynamics as: sustainable mining; varied ownership models; the importance of stakeholder partnerships; enhanced environmental requirements; advances in nanotechnology, robotics, digital technologies and 3D printing; as well as possibilities of deep sea and asteroid exploration. Critically, the WEF argues that we'll start witnessing gradual movement *from linear business models, in which products are manufactured from raw materials and then discarded, to circular business models where products or parts are repaired, reused, returned and recycled*. [WEF Scoping Report, 2014].

The last category of current global discourses on mining is about growing activism as reflected, for instance, in the Responsible Mining Index which measures:

- how companies contribute to national-level socio-economic development in producing countries
- their commitment to ethical behaviour and good corporate governance
- whether they manage their impacts throughout all phases of their operations and plan for post-closure viability from the earliest stages
- how they engage with affected communities and manage their socio-economic impacts at a local level
- whether they provide safe and healthy workplaces, respect the rights of their workers and prevent unethical labour practices
- how they assess and manage their environmental impacts in a systematic, collaborative and transparent manner.

In its first report, issued this year, in which it ranks various mining companies, the Responsible Mining Foundation welcomes the fact that the *vast majority of companies have made policy commitments on* these measures*.* But …*few companies can demonstrate that they have systematically operationalised their commitments into effective actions and fewer still show they are tracking their performance on these issues.* [RMI: 2018]

Now, having described the context within which mining companies operate, the natural question that arises is: quo vadis!

I wish to make the firm assertion that all these expectations are not a threat; but an opportunity for the mining sector fully to become a dependable partner in the global commons. They help to position mining not as scavenger, but as an asset for current and future generations. Therefore, in answer to the question quo vadis, I would argue that mining is a sunrise industry, not some sunset endeavour that belongs to a vanishing age.

Where does such confidence derive from, and how can mining attain its full potential in that context?

It is a simple but profound truism and, in fact, an understatement, to proclaim that humanity cannot do without mining. An additional three-billion people, it is estimated, will be located in urban areas by 2050. In the next decade, these areas will require residential and commercial floor space that is equivalent to the land area of Australia, *which would require some US80-trillion worth of investments* [Creamer, 2012]. The middle class is growing all over the globe and consumption patterns are changing. The global car fleet, for instance, is expected to double to about 1.7 billion in the next twelve years. Needless to say, all manner of minerals will be required to feed these trends.

Many argue that, because the resource boom was driven by voracious Chinese demand, this is bound to decline systemically as that country climbs up the manufacturing sophistication ladder. Yet, low-end manufacturing is offshoring to other countries which are seeking to industrialise: Vietnam and Bangladesh in Asia; as well as Ethiopia and Kenya in sub-Saharan Africa, for instance. Demand for minerals is therefore bound to continue, even if somewhat muted, well into the future.

We need to differentiate between cyclical factors and long-term structural dynamics also because many of the minerals will be required for emergent technologies. From the water and food sectors, logistics and life-sciences, to high-tech materials and new energy sources, the mining sector will continue to be a critical supplier.

Platinum Group Metals illustrate this perhaps more than any other minerals. 'Diesel-gate' may have dented the role of platinum in auto-catalysts; but – beyond palladium – it should take a year or two to convert the petrol catalytic convertors into using platinum. Beyond this, it's a matter of time before fuel cell technology comes of age on a massive scale.

As we all know, the first hydrogen-powered train is entering commercial service, and countries in Europe and North America intend to introduce these locomotives in large numbers by the turn of this decade.

Many motor manufacturers across the world are scaling up production of fuel-cell vehicles, with China, for instance, targeting the production of two million platinum fuel-cell-based buses, trucks and passenger vehicles by 2030. Hyundai's Nexos attained pre-order demand that surpassed even their wildest expectations; and Toyota and its partners have announced plans to increase fuel cell stack and hydrogen tank production from three-thousand to thirty-thousand a year. The Japanese fuel cell market is projected to grow to some US$70-billion by 2050.

In South Africa, mining and other entities are introducing underground dosers, forklifts, electricity-generators and other practical applications for fuel cells.

These are just some of the examples on the demand-side.

There is also welcome progress on the supply-side. Hydrogen South Africa's centres of competence have not only made progress on research and pilot studies. Practical partnerships for commercialisation have been entered into with global players from Europe and Japan. This includes agreements for the manufacture, within South Africa, of proton-exchange membrane fuel cell components and systems – providing the required momentum towards commercially viable local manufacturing. The Industrial Development Zone, specifically designated PGMs, has been initiated in the industrial hub close to South Africa's largest airport.

In addition to this, the search for reliable and clean generation of hydrogen within South Africa has started in earnest. We can quote the Shell-Amplats investment in hydrogen compression technologies, SASOL's high-purity hydrogen Hestia technology, the Thyssenkrupp alkaline water electrolysis, and so on.

In other words, the totality of the value chain of fuel cell application, in the context of transition to a low-carbon future, is falling into place.

Mining is a sunrise industry also because, within sub-Saharan Africa, close to US$200-billion will be spent in infrastructure development by 2025, compared to less than half that amount in 2013. And so, at one level, supplies for these infrastructure programmes will require minerals that the continent itself produces. At another level, mining activities themselves will require more and more infrastructure capabilities. In other words, sub-Saharan Africa is gradually becoming a significant consumer of minerals.

What then are some of the considerations that mining companies and other partners along the value chain should take into account in order optimally to take advantage of these opportunities?

We referred earlier to the global expectations with regard to business in general and mining in particular. When we made the point about mining acting – and being seen to act – as partner in pursuit of human well-being, it was to underline a critical organising philosophy that should inform the sector's paradigm. Simply put, the mining industry cannot and should not conduct itself as a hapless object of other social actors' fancies. It commands massive social agency which can be utilised, even more effectively, for the collective benefit of the global commons.

At the core of this is what was once referred to by a famous (or is it infamous) President as 'the vision-thing'. This applies to conscious migration from short-termism in terms of a staccato of ever-rising quarterly returns, to a long-term view. A number of factors should inform such visioning; and I will cite just a few:

- The mining enterprise should undertake judicious extraction and trade, taking into account the fundamental questions about responsible mining. Related to this, is the responsibility of the mining operators and the jurisdictions in which they are located to ensure global security of supply.
- While mining companies require specific infrastructure to operate and trade, they should partner with governments and regional communities to implement infrastructure programmes that serve national and regional economies beyond mineral extraction. This requires, among others, deliberate planning in partnership with the state at national and sub-national levels.
- Mining cannot close its ear to the bugle of modernisation. Beyond simply responding to the advent of new technologies about smart mines in the context of the Fourth Industrial Revolution, we would all agree that productivity, safety and environmental sustainability all stand to benefit from modernisation. Naturally, a critical consideration in this regard should be a 'just transition' that includes deliberate human resource development, so labour and society at large are not left socially stranded by what is meant to be an advancement in human civilisation.
- Many of us in South Africa argue that we can only take full advantage of our resource endowments if we build a mature mining cluster that brings into alignment forward,

backward and human resource linkages. This can only succeed if mining companies, government and research institutes work together in what is referred to as a Triple Helix approach.

- It is a matter of simple logic that inclusivity in asset ownership – in terms of entrepreneurs, communities and state entities – is critical not just from the point of view of sense and sensibility; but also, to ensure social cohesion and long-term sustainability of mining operations. An element of this, is the need for rational policies to address the issue of artisanal mining.
- While regulatory regimes in most jurisdictions do impose obligations on cleaning up after the termination of operations, what is required are comprehensive economic and social plans for the full cycle of mining, including when mines are long gone. Many ideas have been floated in this regard, including the possibility of building agricultural fertiliser industries from the treatment of acid mine water, and even phytomining. A simple but profound idea on the creative use of the large tracts of surface land owned by mining companies – which otherwise is lying fallow – for agricultural purposes by communities, requires more comprehensive implementation.

We emphasise the responsibilities of mining companies simply because of the setting of our interaction today. The underlying assumption in any visionary thinking is that each social partner – including government, labour and mining communities – has a critical role to play. With regard to government, in particular, policy certainty, market development, research and human resource development, are among some of the issues on which it should give decisive leadership. In the South African setting, there are urgent challenges that government needs to address, such as administered prices for energy, transport and other services as well as incentives that promote exploration.

In the same measure, labour and communities need to develop approaches that benefit their constituencies at the same time as they ensure the sustainability of mining operations. This demands strategic acumen on the part of the leadership of all social partners.

Many of the issues that we have raised form the strategic backdrop to the debate on South Africa's Mining Charter. It is heartening that consensus is now being forged on the details of the Charter. We can debate a single magnitude here and a specific formulation there; but, for me, the critical question is whether the debate on the Charter is located within the context of a long-term mining vision and whether its core content serves that purpose.

Let me conclude by reverting to the observation that South Africa has, over the past two decades, not optimally utilised its mining endowments. All the social partners are to blame for this. But the past ten years, in particular, have been quite disastrous, with the hollowing out of the state and systemic corruption.

As we all know, there currently are concerted efforts to reverse the malign impact of the 'lost decade' and set the economy and society on a higher trajectory. This, definitely, is starting to have a positive effect. But the headwinds are quite strong as various factors conspire to create a fraught environment. The measures required to deal with the profligacy and corruption of the past decade will, in the short-term, have a negative social impact (as in the case of the increase in Value Added Tax and reduction in government expenditure). At the same time, global economic developments and geopolitics are currently not kind on small open economies like ours.

But there is hope. It resides in the determination, methodically, to correct the weaknesses of the recent past and mobilise society in pursuit of a new and higher development path. The possibility to forge a social compact of all major social partners has never been stronger. Sub-Saharan Africa is climbing out of the economic difficulties of the past few years; and this presents major opportunities for South Africa in terms of multi-directional osmosis.

And so, the mining industry within South Africa, on the rest of the African continent and across the world, can and shall steadily rise to become an even better asset in improving the human condition and in serving the global commons.

END