

# OUR BUSINESS MODEL

## COMPETING ON REVENUE

### OUR REVENUES

Iron ore prices

Iron ore sales volumes

Rand/US\$ exchange rate  
(higher US\$ iron ore prices offset by the stronger Rand)

### OUR VALUE PROPOSITIONS

#### CUSTOMER VALUE PROPOSITION

Reliable supply of high-quality iron ore

#### EMPLOYEE VALUE PROPOSITION

The opportunity to earn, learn and grow in a zero harm environment

#### SOCIETAL VALUE PROPOSITION

Converting mineral resources into value that supports transformation in the country by providing opportunities for equitable and environmentally responsible economic growth

#### SHAREHOLDER VALUE PROPOSITION

Provide sustained and growing financial returns and dividends throughout the commodity cycle, through responsible management and good governance

HOW WE CREATE VALUE

### OUR ACTIVITIES (See page 8)

- Exploration – primarily in the Northern Cape
- Mining – extracting iron ore in the Northern Cape
- Beneficiating – improving the final product quality; ultra-high density media separation (UHDMS)
- Blending and outbound logistics – providing and transporting niche products
- Shipping, marketing and selling to markets in South Africa and globally
- Rehabilitation and environmental management

### KEY RESOURCES AND RELATIONSHIPS

- Quality and location of mineral resources
- Concluded prospecting and mining rights from **government**
- Social licence to operate from **communities and their representatives**
- Financial capital from **shareholders and investors**
- Life of assets and infrastructure (including rail and port)
- Positive relationship with **employees and trade union representatives**
- Technical, commercial and managerial skills, experience and leadership in **management team**
- Exploration, mining and processing technology and techniques in **technical team** and contractors
- Key **service providers** (including Transnet) and **suppliers** (with focus on BEE and local supplier base)
- Loyal customer base and customer satisfaction
- **Emerging miners**, supported by skills development and financial assistance
- Strong reputation, including with **media and analysts**

### OUR OPERATING CONTEXT: ISSUES IMPACTING VALUE

- Volatility in the iron ore price
- Flattening of the cost curve globally
- Increasing non-controllable costs: inflation, freight, currency
- Challenging regulatory and policy environment
- Heightened stakeholder expectations
- Zero harm drive – elimination of fatalities
- Sustained focus on operational excellence
- Quality of iron ore reserves and life of asset

### OUR COSTS

#### TO MAINTAIN VALUE PROPOSITION

- Distribution (rail, port and freight)
- Labour
- Energy
- Consumables
- Maintenance
- Drilling and blasting
- Beneficiation
- Taxes and royalties
- Mining and non-mining contractors
- Social investments
- Rehabilitation

#### TO EXPAND VALUE PROPOSITION

- Capital expenditure
- Exploration
- Marketing

## COMPETING ON COSTS

## POTENTIAL FOR REVENUE DIFFERENTIATION

Ability to achieve quality and lump premium for superior ore quality (64.1% vs 62% benchmark) ✓

Price differential potential due to higher lump: fine ratio (66:34 vs global average of 30:70) ✓

Ability to respond more quickly to market volatility due to greater operational flexibility as a result of company size and our superior ore quality ✓

Stronger price realisation, driven by effective marketing activities ✓

## POTENTIAL FOR COST DIFFERENTIATION

Scope for differentiation through UHDMS technology ✓

Potential leverage in operating costs through enhanced operating efficiencies ✓

Ability to deliver costs reductions in the supply chain ✓

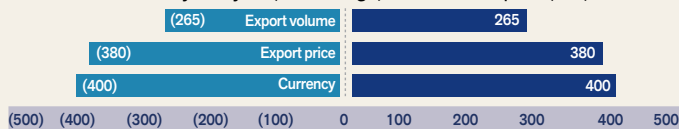
Higher stripping ratio due to inherent characteristics of the ore body resulting in higher mining costs ✗

Higher costs associated with distance from ports, and Australian competitors closer to key market in China ✗

### Sensitivity analysis

1% change to key operational drivers, each tested independently

Sensitivity analysis (1% change) – EBITDA impact (Rm)



Change per unit of key operational drivers, each tested independently

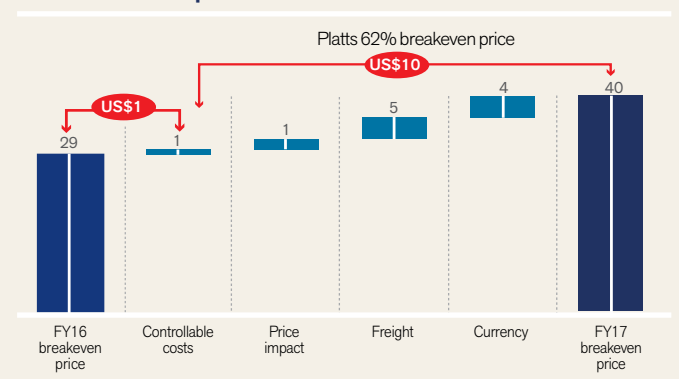
Sensitivity analysis	Unit change	2017 EBITDA impact
Currency (R/US\$)	R0.10/US\$	R300m
Export price (US\$/t)	US\$1.00/t	R535m
Volume (kt)	100 kt	R65m
	Unit change	Breakeven price impact
Currency (R/US\$)	R1.00/US\$	US\$2.75/t

## OUR TOP 10 RISKS

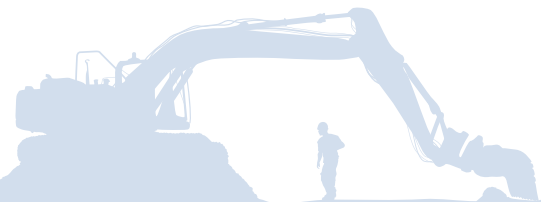
1. Commodity markets and exchange rate fluctuations
2. Safety and health
3. Third-party infrastructure
4. Mining legislation and regulatory compliance
5. Socio-economic and current governance challenges
6. Stakeholder relations and social licence to operate
7. SIOC empowerment status
8. Cyber risk
9. Resource depletion and securing our growth
10. Managing change (transformation of the business)

For more information see page 28.

### Cash breakeven price



# OUR VALUE CHAIN ACTIVITIES AND IMPACTS



## PRIMARY INPUTS

### EXPLORATION

### MINING

### BENEFICIATION

Our ability to generate value is dependent on access to financial capital, skilled people, quality relationships and key natural resources, supported by the right Company culture, and by access to necessary infrastructure, plant and equipment. An overview of key inputs across our value chain is provided on page 10.

## OUR ACTIVITIES ACROSS THE FULL VALUE CHAIN

Our exploration in South Africa is focused in the Northern Cape, close to our existing operations. On and near-mine exploration and resource definition drilling is conducted to increase confidence in the geological models; these are updated annually in support of life-of-mine and long-term planning.

We extract iron ore by mining the iron ore bodies within our mining leases using open pit methods. We are implementing a technology roadmap that aims to accelerate the adoption of technology to improve safety, quality, efficiency and resource utilisation.

We use dense-media and ultra-high density media processing and jigging technologies to regulate the physical properties of the finished product, removing impurities and improving product quality.

We also support the South African government's objectives to maximise the developmental impact of the minerals sector.

## KEY OUTCOMES

Implications of our activities on value in each stage of the value chain

- ✓ Positive outcome
- = Neutral outcome
- ✗ Negative outcome

- ✓ Contributing to long-term financial viability
- ✓ Developing relationships in Northern Cape
- ✓ Developing intellectual capital through enhanced technologies and techniques
- ✓ Contributing to tax base
- ✗ Increasing community expectations for economic opportunities

- ✓ Zero fatalities and reduced LTIFR of 0.17
- ✓ Skills development and assistance to emerging miners
- ✓ Community upliftment, enhanced service provision and infrastructure investment
- ✓ Investment in innovation
- ✓ Contribution to tax base
- ✓ Improved water supply through dewatering and water provision activities
- ✓ Advanced process control and automated drilling
- ✓ Impact of change in shift patterns on labour productivity and efficiency
- ✗ Dust emission challenges
- ✗ Influx of informal settlements around Sishen
- ✗ Competition over land use with communities

- ✓ Securing market premium through enhanced quality product
- ✓ Enhanced intellectual capital and technology development
- ✓ Contribution to tax base
- ✓ Contribution to government beneficiation objectives
- ✓ Unlocking low-grade potential with UHDMS technology
- ✗ Dust emission challenges

## STRATEGIC FOCUS AREA

### WHERE TO PLAY

- Focus on Northern Cape

### HOW TO WIN

- Use technology to extract maximum value

### KEY ENABLER

- Proactively engage with stakeholders

### WHERE TO PLAY

- Extend life of current mines

### HOW TO WIN

- Sustainably operate at lower unit costs to remain competitive
- Use technology to extract maximum value

### KEY ENABLER

- Provide leadership through responsible citizenship

### WHERE TO PLAY

- Compete through premium products
- Extend life of current mines

### HOW TO WIN

- Use technology to extract maximum value

### KEY ENABLER

- Provide leadership through responsible citizenship



### BLENDING AND OUTBOUND LOGISTICS

Blending allows us to utilise products from our operations to provide niche specification products to our markets. Products are screened and sized to match customer requirements, and then transported through our outbound logistics chain.

- ✓ Maximise value from the resource
- ✓ Investment in technologies and techniques
- ✓ Contribution to tax base
- ✗ Transport-related environmental impacts

### SHIPPING, MARKETING AND SELLING

We sell iron ore domestically and internationally. Export customers are in a range of geographical locations, including China, Japan, India, South Korea and countries in Europe and the MENA region. Domestically, we sell ore to ArcelorMittal SA.

- ✓ Enhanced financial returns through 'product differentiation' in sales
- ✓ Price risk management used to mitigate price volatility
- ✓ Quality of products and flexibility to market demand
- ✗ Transport-related environmental impacts and risks

### REHABILITATION AND ENVIRONMENTAL MANAGEMENT

The life-cycle of the mine needs responsible environmental management practices to ensure minimal disruption to natural resources during and after our operations, through application of our mine closure toolbox.

- ✓ Minimising longer-term environmental impacts and decreased longer-term liabilities
- ✓ Securing authorisations and licences
- ✓ Enhanced reputational benefits
- ✓ Positive biodiversity impacts in set-aside areas
- ✓ Continuous mine rehabilitation
- ✓ Responsible mine closure
- ✓ Progress with zero waste to landfill at Kolomela mine
- ✗ Increased financial costs

→ **45.0 Mt high-quality haematite iron ore with a lump-to-fine ratio of 66:34 in 2017. Our product portfolio includes niche lump products as well as standard fines and standard lump.**

#### WHERE TO PLAY

Compete through premium products

#### HOW TO WIN

Unlock full infrastructure potential to support maximum export volumes

#### KEY ENABLER

Align marketing and operational activities

#### WHERE TO PLAY

Compete through premium products




#### KEY ENABLERS

- Align marketing and operational activities
- Reinforce our reputation for product quality and consistency

#### KEY ENABLER

Provide leadership through responsible citizenship

# CREATING VALUE: UNDERSTANDING TRADE-OFFS IN THE CAPITALS

	 <p><b>PEOPLE</b></p> <p><b>CAPITALS AND TRADE-OFFS</b></p> <p>We depend on the expertise, wellbeing and motivation of employees, contractors and service providers to generate value.</p> <p>Providing a safe working environment, investing in training, ensuring fair labour practice and encouraging local employment are critical to optimising the contribution of our employees to the value creation process.</p>	 <p><b>OUR RELATIONSHIPS</b></p> <p>Developing and maintaining trusted relationships is a foundation for value creation. This has taken on added significance in recent years, with the challenging price environment requiring us to take actions that have tested many of our relationships.</p> <p>The trust we have developed over time has been crucial in facilitating an effective transition, informed by a common appreciation among our stakeholders of the challenging context.</p>	 <p><b>NATURAL RESOURCES</b></p> <p>Generating social and economic value through our activities has unavoidable negative environmental impacts. These are borne mainly by communities around our mines, with potential negative consequences for this critical relationship.</p> <p>In addition to mitigating the environmental impacts of our activities, we seek to offset them through rehabilitation, the provision of energy and water services to the local community, and the responsible sharing of socio-economic benefits.</p>
<p><b>KEY INPUTS</b></p> <ul style="list-style-type: none"> <li>– 10,727 skilled and motivated employees and contractors</li> <li>– A new <b>experienced and diverse</b> executive leadership team demonstrating values-driven behaviour</li> <li>– Contracted service providers delivering on agreed terms and conditions</li> <li>– An <b>effective zero-harm culture</b> programme</li> <li>– <b>Change in shift patterns</b> to increase labour productivity and efficiency</li> </ul>	<ul style="list-style-type: none"> <li>– <b>Strong engagement</b> with unionised and non-unionised workforce</li> <li>– <b>Positive relationships</b> with representatives from government and regulators</li> <li>– <b>Mutually respectful</b> and understanding relationship with neighbouring communities, civil society bodies and NGOs</li> <li>– <b>Open and timely communication</b> with suppliers and contractors</li> </ul>	<ul style="list-style-type: none"> <li>– Total water withdrawals: <b>33.2 million m<sup>3</sup></b></li> <li>– Energy consumption: <b>8.94 million GJ</b></li> <li>– Diesel purchased: <b>201.2 Mℓ</b></li> <li>– Land under management: <b>98,846 hectares</b></li> <li>– Inclusive mineral resources: <b>1,885.6 Mt</b></li> </ul>	
<p><b>OUTCOMES</b></p> <ul style="list-style-type: none"> <li>✓ <b>Zero</b> employee and contractor fatalities</li> <li>✓ <b>5,875</b> full-time permanent employees</li> <li>✓ <b>R161.9 million</b> invested in employee training and development</li> <li>✓ Improvement in lost-time injury frequency rate to <b>0.17</b></li> <li>✓ Reduction in new cases of occupational health to <b>two</b></li> <li>✓ <b>Three-year</b> wage agreement reached without any labour disruption</li> </ul>	<ul style="list-style-type: none"> <li>✓ No industrial action since 2012</li> <li>✓ <b>66%</b> HDSA in management</li> <li>✓ <b>21%</b> women in total workforce</li> <li>✓ Relocation of Dingleton town</li> <li>✓ Delivery of social benefit in communities through core activities, plus <b>R106.7 million</b> social investment</li> <li>✓ <b>R9.3 billion</b> B-BBEE procurement spend</li> <li>✓ <b>R8.1 billion</b> total tax contribution</li> <li>✓ Sustained confidence from shareholders and investors</li> <li>✓ <b>R520 million</b> spent on suppliers from our host communities</li> </ul>	<ul style="list-style-type: none"> <li>✓ Non-hazardous waste to landfill: <b>1.98 kt</b></li> <li>✓ Waste recycled: <b>0.04 kt</b></li> <li>✓ <b>94.8 Mt</b> year-on-year increase in mineral resources declared</li> <li>✓ Land rehabilitated in 2017: <b>104.5 hectares</b></li> <li>✓ Tailings dams (active and inactive): <b>27 273 kt</b></li> <li>✓ Hazardous non-mineral waste to landfill: <b>0.47 kt</b></li> <li>✗ <b>9%</b> decrease in ore reserve compared with 2016</li> <li>✗ Continuing challenges with dust emissions</li> <li>✗ Greenhouse gas emissions: <b>1.00 million</b> tonnes CO<sub>2</sub>e</li> </ul>	
<p><b>ACTIONS TO ENHANCE OUTCOMES</b></p> <ul style="list-style-type: none"> <li>– Provide leadership through responsible citizenship IR – p 44</li> <li>– Kumba culture and leadership programme SR – p 38</li> <li>– Developing a capable and engaged workforce SR – p 36</li> <li>– Ensuring a safe workplace SR – p 26</li> <li>– Promoting the health and wellbeing of our employees SR – p 28</li> </ul>	<ul style="list-style-type: none"> <li>– Addressing stakeholder interests IR – p 25</li> <li>– Provide leadership through responsible citizenship IR – p 44</li> <li>– Equity and transformation drive SR – p 39</li> <li>– Developing a capable and engaged workforce SR – p 36</li> <li>– Upholding the highest social standards SR – p 42</li> <li>– Making a positive social contribution SR – p 46</li> </ul>	<ul style="list-style-type: none"> <li>– Provide leadership through responsible citizenship IR – p 44</li> <li>– Water SR – p 62</li> <li>– Climate change and energy SR – p 64</li> <li>– Land stewardship SR – p 56</li> <li>– Air quality SR – p 59</li> <li>– Waste SR – p 60</li> <li>– Mine closure and rehabilitation SR – p 67</li> </ul>	



### FINANCIAL CAPITAL

The cost of financial capital has risen as a result of reduced investor confidence both in South Africa and the mining sector more generally. Maintaining our ability to generate financial capital is constraining investments in developing the other required assets.

**Balancing short-term and long-term interests remains one of the more challenging trade-offs.**

- Market capitalisation: **R51 billion** at end of 2016
- Capital expenditure to execute growth projects: **R575 million**
- Cash generated from operations: **R22.4 billion**

- ✓ Increased market capitalisation of **R122 billion** at end of 2017
- ✓ Best performing stock on JSE in 2017 increasing from **R159** per share at end of 2016 to **R379** per share at end of December 2017 (138% increase)
- ✓ Strengthened balance sheet with no debt
- ✓ Ended the year with a net cash position of **R13.9 billion**
- ✓ Earnings before interest and tax: **R21.4 billion**
- ✓ Dividend reinstated: **R30.97** per share (total)

The strong financial performance and benefit of cash flow conversion have delivered a stronger balance sheet. This resulted in a revised approach to capital allocation to ensure that:

- a robust balance sheet is maintained to provide resilience during times of volatility
- debt is not used as a buffer for margin stress due to market volatility
- capital expenditure to be funded from cash generated
- returning excess capital to shareholders

See further CFO review IR – p 46 – 53.



### MANUFACTURED ASSETS

Our substantial financial investment in the purchase, development and maintenance of **property, plant and equipment** has given us the capacity to generate longer-term returns. To maintain business viability, current market conditions have required changes in the application and use of key assets.

- Property, plant and equipment with book value of **R36.8 billion**
- Exploration, development and production operations in the Northern Cape and Limpopo provinces
- Marketing and sales operations in Luxembourg and Singapore

- ✓ **Sishen**: 2018 production and waste guidance increased to ~**30 to 31 Mt** and ~**170 to 180 Mt** with a stripping ratio exceeding **4** in 2018; life of mine (LoM) 13 years
- ✓ **Kolomela**: 2018 production and waste guidance increased to ~**14 Mt** and ~**55 to 57 Mt** with a stripping ratio exceeding **3.5** in 2018; LoM 14 years
- ✓ Capital expenditure for 2018 between **R3.9 billion** and **R4.1 billion**

Continued implementation of the mine plan and ongoing implementation of the Operating Model at Sishen mine delivered further productivity gains and increased direct operating hours (DOH). At Kolomela mine productivity and efficiencies were aided by automated drilling technology.

Further information is provided in the Chief executive IR – p 16 and CFO reviews IR – p 51, and in the review of our strategic objectives IR – p 36.



### OUR INNOVATION

**Our business model** depends on having the right people, in the right roles, informed by effective management systems and Company culture, producing the most efficient and effective outcomes. Investing in these skills and systems requires sufficient financial capital, and can have a positive impact in developing our people. Certain process and technologies can result in reduced workforce needs, with implications for employees and key relationships.

- **Technically skilled** and **experienced** employees and external experts
- **Operating model** providing a sequenced and repeatable set of work steps aimed at delivering the intended purpose of our teams' work in the most efficient manner
- **Values-driven** Company culture
- **R224.6 million** invested in technology roadmap

- ✓ Investment in skills development: **R161.9 million**
- ✓ Investment in technical studies: **R100 million**
- ✓ **Sishen**: DMS upgrade to UHDMS has moved to pre-feasibility stage
- ✓ **Kolomela**: recently commissioned modular plant delivered **0.5 Mt** in 2017
- ✓ Automated drilling and advanced process control at Kolomela

We have maintained our focus on driving the Operating Model across the group to ensure that we have the best processes in place to deliver the revised business expectations. Implementation of this Operating Model is enhancing the Company's operational stability and efficiency.

Further information is provided in the review of our strategic objectives IR – p 36.