

### **Iron Ore – investor roadshow**

**9 August 2017**

The attached presentation will be given by Chris Salisbury, chief executive, Iron Ore, at investor briefings in North America from 9-11 August 2017.

The presentation slides will also be available at [www.riotinto.com/presentations](http://www.riotinto.com/presentations).

---

**Steve Allen**  
Company Secretary

**Rio Tinto plc**  
6 St James's Square  
London SW1Y 4AD  
United Kingdom

T +44 20 7781 2058  
Registered in England  
No. 719885

**Tim Paine**  
Joint Company Secretary

**Rio Tinto Limited**  
120 Collins Street  
Melbourne 3000  
Australia

T +61 3 9283 3333  
Registered in Australia  
ABN 96 004 458 404



An aerial photograph of a large-scale industrial operation at a port. A massive conveyor system, painted in bright yellow, extends from the bottom right towards the center of the frame. It is loading a large cargo ship with a rusted, reddish-brown hull. To the right of this ship is another large vessel with a green hull. Several smaller tugboats are visible in the deep blue water. In the top left corner, a long bridge or pier structure stretches across the horizon.

RioTinto

# Iron Ore - delivering optimal value

Investor roadshow – August 2017

Chris Salisbury, chief executive, Iron Ore



# Cautionary statements

This presentation has been prepared by Rio Tinto plc and Rio Tinto Limited ("Rio Tinto"). By accessing/attending this presentation you acknowledge that you have read and understood the following statement.

## Forward-looking statements

This document contains certain forward-looking statements with respect to the financial condition, results of operations and business of the Rio Tinto Group. These statements are forward-looking statements within the meaning of Section 27A of the US Securities Act of 1933, and Section 21E of the US Securities Exchange Act of 1934. The words "intend", "aim", "project", "anticipate", "estimate", "plan", "believes", "expects", "may", "should", "will", "target", "set to" or similar expressions, commonly identify such forward-looking statements.

Examples of forward-looking statements include those regarding estimated ore reserves, anticipated production or construction dates, costs, outputs and productive lives of assets or similar factors. Forward-looking statements involve known and unknown risks, uncertainties, assumptions and other factors set forth in this presentation.

For example, future ore reserves will be based in part on market prices that may vary significantly from current levels. These may materially affect the timing and feasibility of particular developments. Other factors include the ability to produce and transport products profitably, demand for our products, changes to the assumptions regarding the recoverable value of our tangible and intangible assets, the effect of foreign currency exchange rates on market prices and operating costs, and activities by governmental authorities, such as changes in taxation or regulation, and political uncertainty.

In light of these risks, uncertainties and assumptions, actual results could be materially different from projected future results expressed or implied by these forward-looking statements which speak only as to the date of this presentation. Except as required by applicable regulations or by law, the Rio Tinto Group does not undertake any obligation to publicly update or revise any forward-looking statements, whether as a result of new information or future events. The Group cannot guarantee that its forward-looking statements will not differ materially from actual results. In this presentation all figures are US dollars unless stated otherwise.

## Disclaimer

Neither this presentation, nor the question and answer session, nor any part thereof, may be recorded, transcribed, distributed, published or reproduced in any form, except as permitted by Rio Tinto. By accessing/ attending this presentation, you agree with the foregoing and, upon request, you will promptly return any records or transcripts at the presentation without retaining any copies.

This presentation contains a number of non-IFRS financial measures. Rio Tinto management considers these to be key financial performance indicators of the business and they are defined and/or reconciled in Rio Tinto's annual results press release and/or Annual report.

Reference to consensus figures are not based on Rio Tinto's own opinions, estimates or forecasts and are compiled and published without comment from, or endorsement or verification by, Rio Tinto. The consensus figures do not necessarily reflect guidance provided from time to time by Rio Tinto where given in relation to equivalent metrics, which to the extent available can be found on the Rio Tinto website.

By referencing consensus figures, Rio Tinto does not imply that it endorses, confirms or expresses a view on the consensus figures. The consensus figures are provided for informational purposes only and are not intended to, nor do they, constitute investment advice or any solicitation to buy, hold or sell securities or other financial instruments. No warranty or representation, either express or implied, is made by Rio Tinto or its affiliates, or their respective directors, officers and employees, in relation to the accuracy, completeness or achievability of the consensus figures and, to the fullest extent permitted by law, no responsibility or liability is accepted by any of those persons in respect of those matters. Rio Tinto assumes no obligation to update, revise or supplement the consensus figures to reflect circumstances existing after the date hereof.

# Supporting statements

## Mineral Resources and Ore Reserves

The Pilbara Mineral Resource and Ore Reserve estimates which appear on slide 14 are reported on a 100% basis. These Mineral Resource and Ore Reserve estimates, together with the ownership percentages for each joint venture were set out in the Mineral Resource and Ore Reserve statements in the 2012 to 2016 Rio Tinto annual reports to shareholders released to the market on 15 March 2013, 14 March 2014, 6 March 2015 and 3 March 2016 respectively. The Competent Persons responsible for reporting of those Mineral Resources and Ore Reserves were B Sommerville (Resources) and L Fouche (Reserves 2012-2014) and C Tabb (Reserves 2015-2016).

Rio Tinto is not aware of any new information or data that materially affects the above Mineral Resource and Ore Reserve estimates as reported in the 2016 annual report. All material assumptions on which the estimates in the 2016 annual report were based continue to apply and have not materially changed. The form and context in which those findings are presented have not been materially modified. Mineral Resources are reported exclusive of Ore Reserves. Ore Reserves are reported as dry product tonnes. Mineral Resources are reported on an dry in situ basis.

# Rio Tinto value proposition

## Long-term strategy

World-class assets

Delivering >2% CAGR<sup>1</sup> CuEq growth

Licence to Operate

## Cash focus

Value over volume

\$2 billion cost savings delivered six months early

\$5 billion free cash flow from mine to market productivity by 2021

## Capital discipline and shareholder returns

Strong balance sheet

40-60% returns through the cycle

Portfolio shaping

## Team and performance culture

Safety first

Assets at the heart of our business

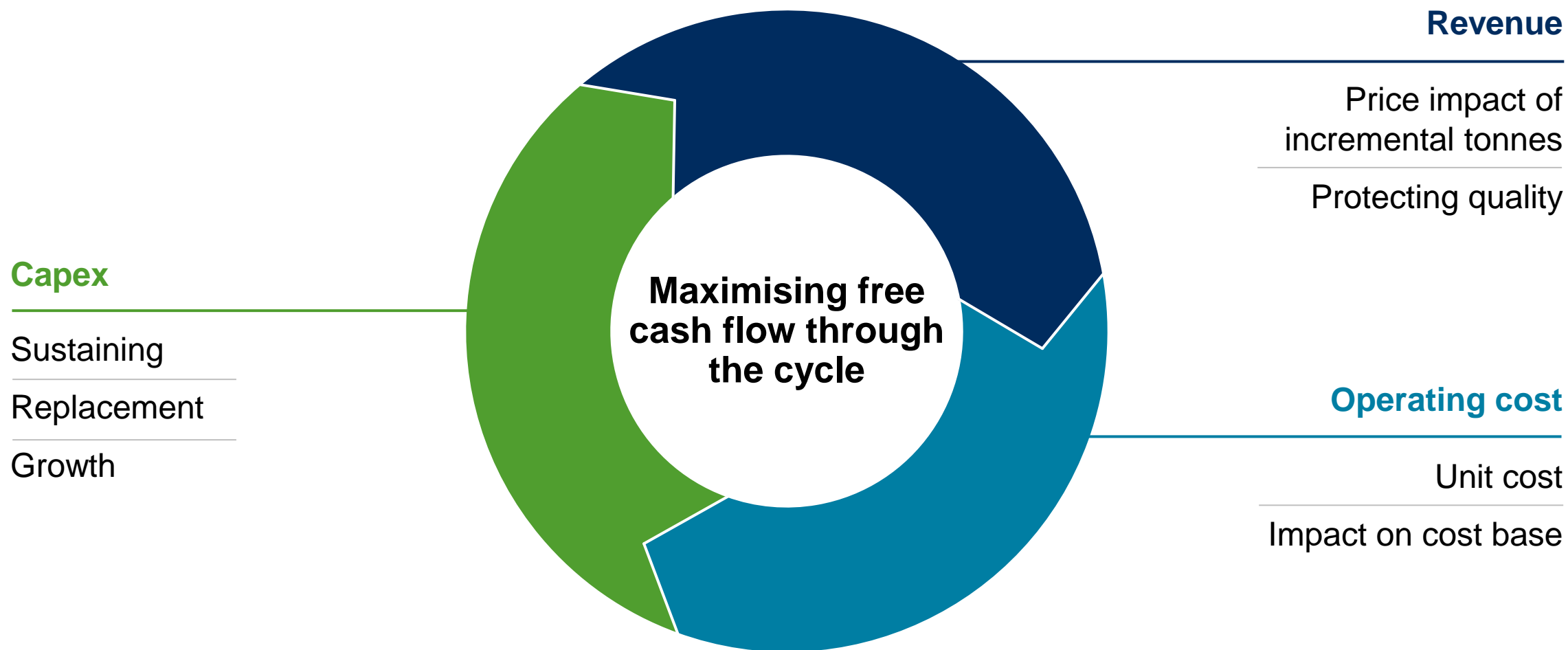
Commercial and operational excellence



# World-class assets at the core of our business

	Iron Ore	Bauxite	Aluminium	Copper
Main businesses	Pilbara	Bauxite	Canadian smelters	Oyu Tolgoi, Escondida
Competitive advantages	Low-cost, world-class assets Integrated infrastructure Benchmark product Technical marketing	Large, low-cost bauxite assets Technical leadership and marketing	First quartile smelters Low-cost renewable power	Large, long-life, low-cost Attractive growth options Technology and innovation
H1 2017 margins	<b>69%</b> FOB EBITDA margin	<b>45%<sup>1</sup></b> FOB EBITDA margin	<b>35%<sup>1</sup></b> Operating EBITDA margin	<b>47%<sup>1</sup></b> Operating EBITDA margin

# Focusing on value over volume



# Delivering optimal value from one of the world's best businesses

## Strong foundation

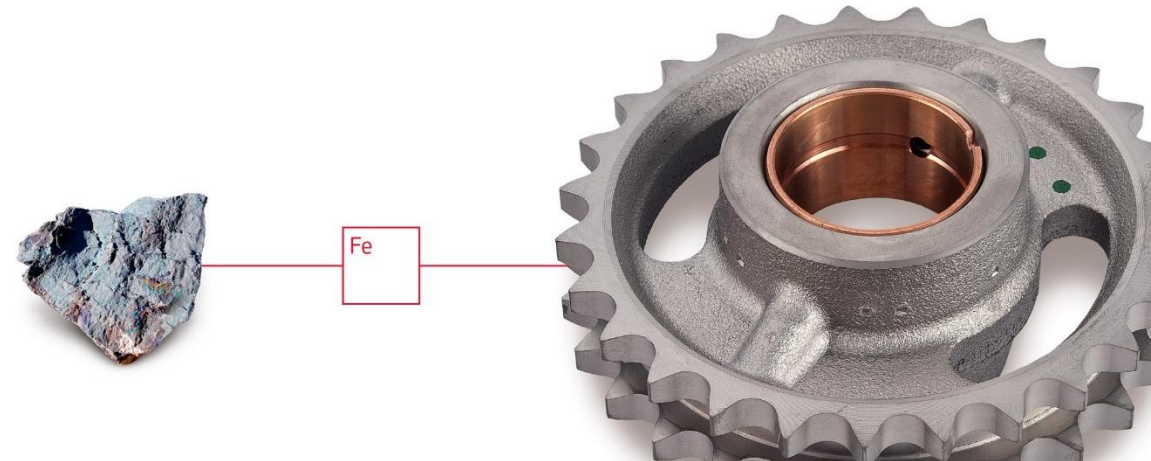
- Exclusive use of assets, fully integrated system, consistent returns through the cycle
- Highly-valued product suite, sustained by significant resources
- Quality people and partners

## Mine to market productivity

- Maximise cash flow from existing asset base
- Innovation and technology to assist the drive to superior performance
- Delivering productivity, cost and revenue outcomes

## Value over volume

- Resource development sequencing to optimise mines and product
- Disciplined capital allocation
- Low-cost, productivity-enabled options

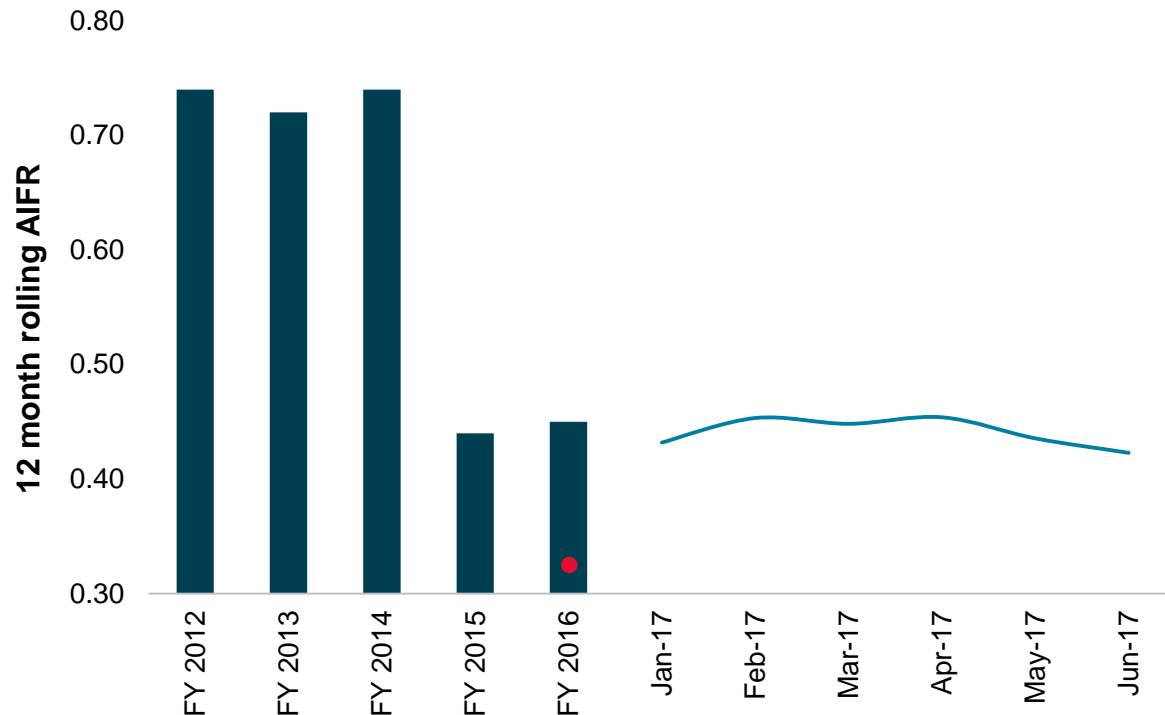




# Safety effort targeting fatality elimination and injury prevention

## Iron Ore All Injury Frequency Rate

Per 200,000 hours worked



● June 2016 - Fatality within Pilbara Mines (Paraburdoo)

## Focus on fatality and injury elimination

Fatality and critical incident learnings

Embed critical risk management program

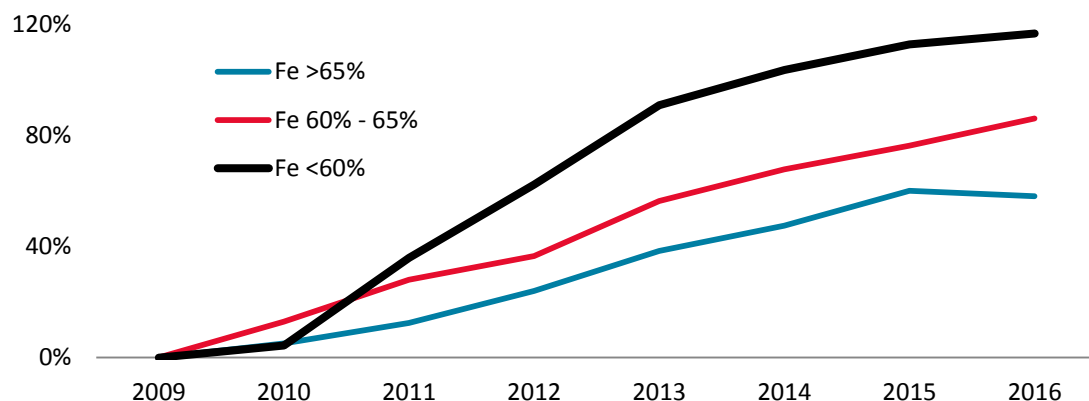
Leadership and employee engagement

Leveraging data insights and technology

# Low-quality ores driving iron ore supply and inventories

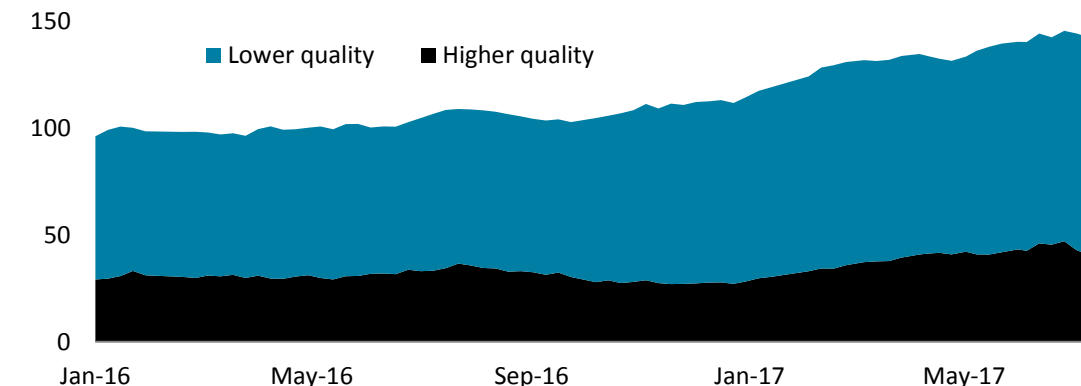
## Iron ore supply growth

Percentage



## Iron ore inventories across 45 Chinese ports

Million tonnes



Lower-quality iron ore supplied into the contestable market has doubled since 2010 (now ~400Mtpa)

Lower-quality products account for 29Mt (80%) of the 36Mt increase in port stocks over the last 12 months (to July 2017)

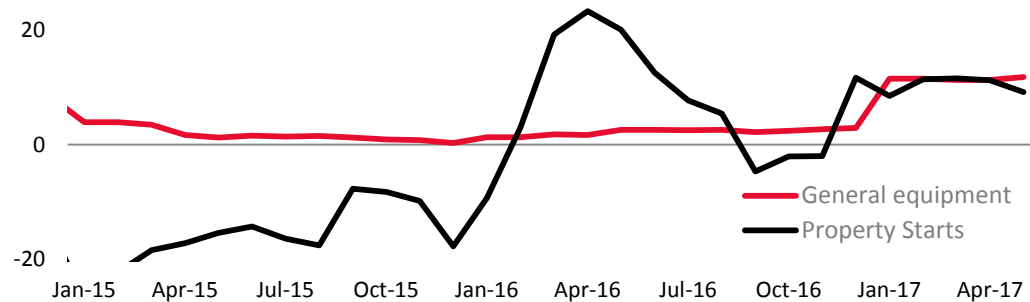
Overall:

- Supply growth expectations for 2017 have moderated in recent months, reflecting disruptions and latest production guidance
- Seaborne supply growth of ~100Mt for 2017 and 2018 is still likely, although weighted to 2018
- China's domestic iron ore production has been relatively consistent during 2017 and has stabilised at ~275Mtpa

# China steel demand remains strong, driving steel inventories lower

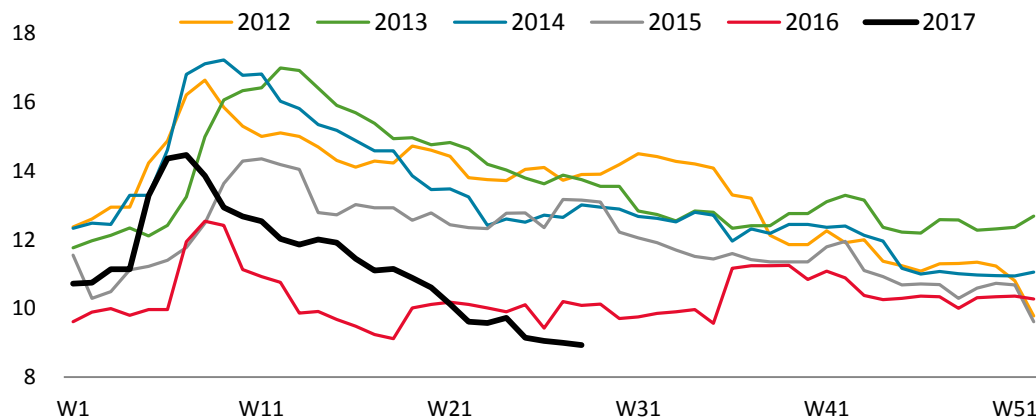
## China's Property and Machinery Sector Growth

Percentage (% YoY Ytd)



## China's Supply-chain Steel Inventories

Days



## Robust end-use steel demand

- Developers remain confident and have accelerated new starts to >10% YoY in 2017
- Sharp rebound in machinery sales YTD; auto growth continues to trend upwards
- Credit tightening has been gradual and not detrimental to steel demand or steel industry liquidity

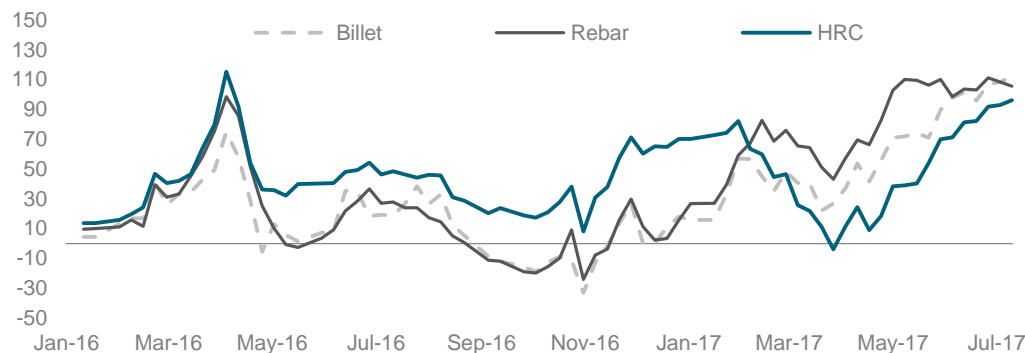
## Steel order books are full

- Steel supply-chain depleted to record lows for this time of year despite typical seasonal slowdown
- Steel demand in China has proven stronger than both mills and traders expected it would be

# Steel production: China prioritising productivity

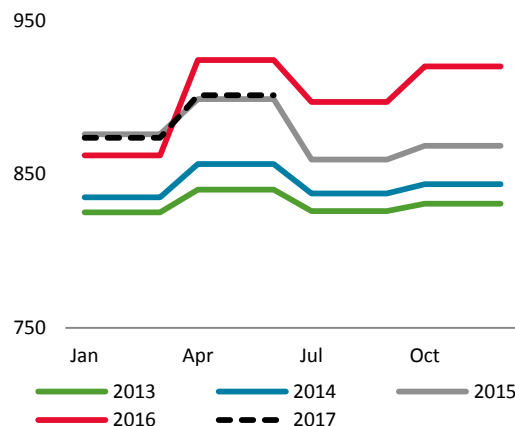
## China mill cash margins

\$ per tonne



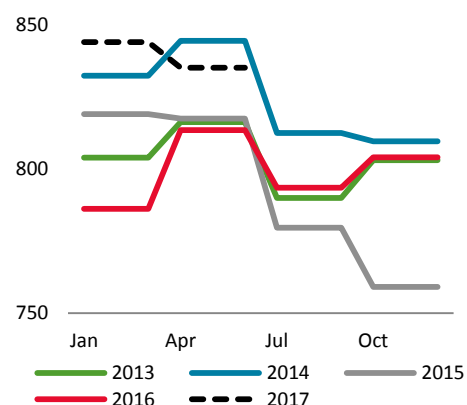
## China's crude steel production

Million tonnes per annum



## ROW crude steel production

Million tonnes per annum



Underpinned by healthy industry liquidity and mill profitability, China's steel production has been running close to historical highs:

- Mills incentivised to simultaneously rationalise/eliminate capacity and maximise output, which has naturally favoured higher-grade products
- Pollution controls and elevated coking coal prices have further increased the appeal of higher-grade products

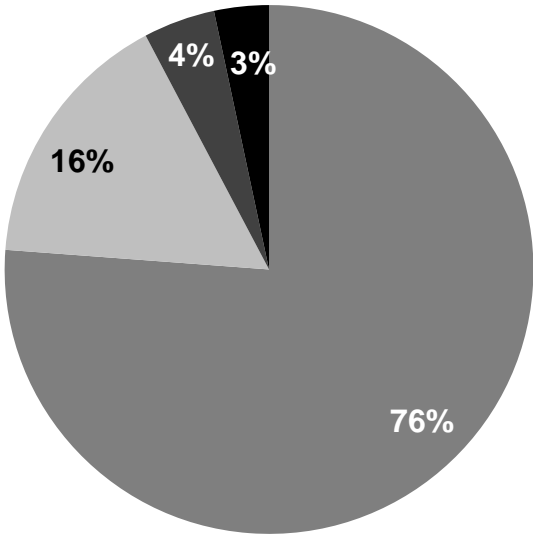
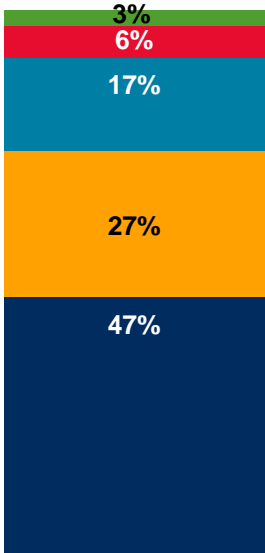
The elimination of induction furnace capacities in China has not been aimed at or resulted in lower steel output:

- Compliant steelmaking operations have already expanded production and absorbed most of the former IF market segment
- IF closures initially liberated scrap supply, but most of it has been re-absorbed with heavy discounts and new sales channels, the support to iron ore demand and prices from IF elimination has already diminished



# Our product portfolio is well-placed, translating into strong H1 2017 achieved FOB prices of \$67.8/dmt...

Shipments by product and market H1 2017  
Percentage



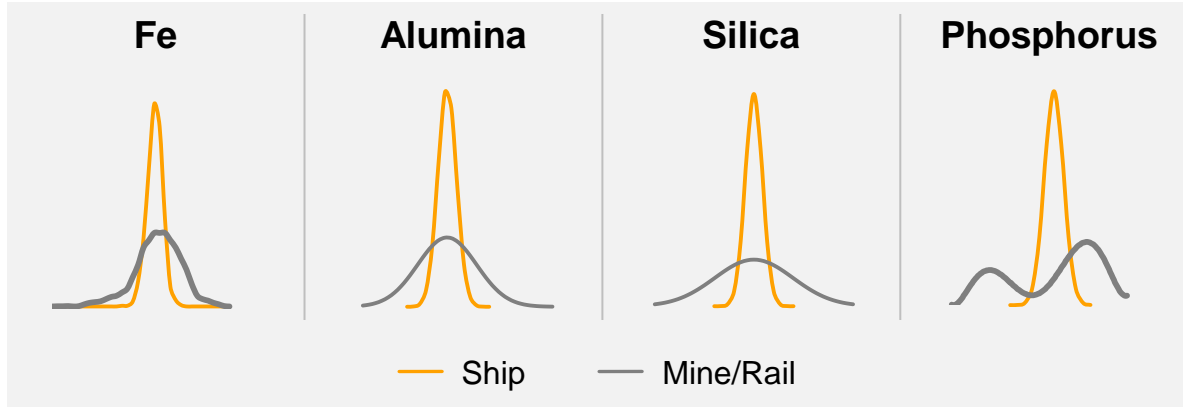
Product	Strengths
Pilbara Blend Fines	<ul style="list-style-type: none"><li>– The most traded iron ore product globally</li><li>– Base load sinter blend in Asian markets</li></ul>
Pilbara Blend Lump	<ul style="list-style-type: none"><li>– Avoids the costs of sintering</li></ul>
HIY Fines	<ul style="list-style-type: none"><li>– Ideal chemical composition for the Asian sinter blends and favourable coarse sizing.</li></ul>
Robe Valley Fines	<ul style="list-style-type: none"><li>– Favourable coarse sizing, low phosphorus</li></ul>
Robe Valley Lump	<ul style="list-style-type: none"><li>– Low phosphorus</li><li>– Avoids the costs of sintering</li></ul>

■ PBF ■ PBL ■ HIY ■ RVF ■ RVL ■ CHINA ■ JAPAN ■ KOREA ■ TAIWAN & OTHERS

# ...including the industry benchmark Pilbara Blend

## Blending reduces product variability

Product quality variance from mean



## Platts 62% Fe index and lump premium H1 2017

US\$/dry metric tonne



Customers value the consistency and liquidity of the Pilbara Blend

- Easier to manage blast furnace mix
- Technical expertise provided to maximise value in use
- Most traded product and widely available at China ports
- Reduces inventory

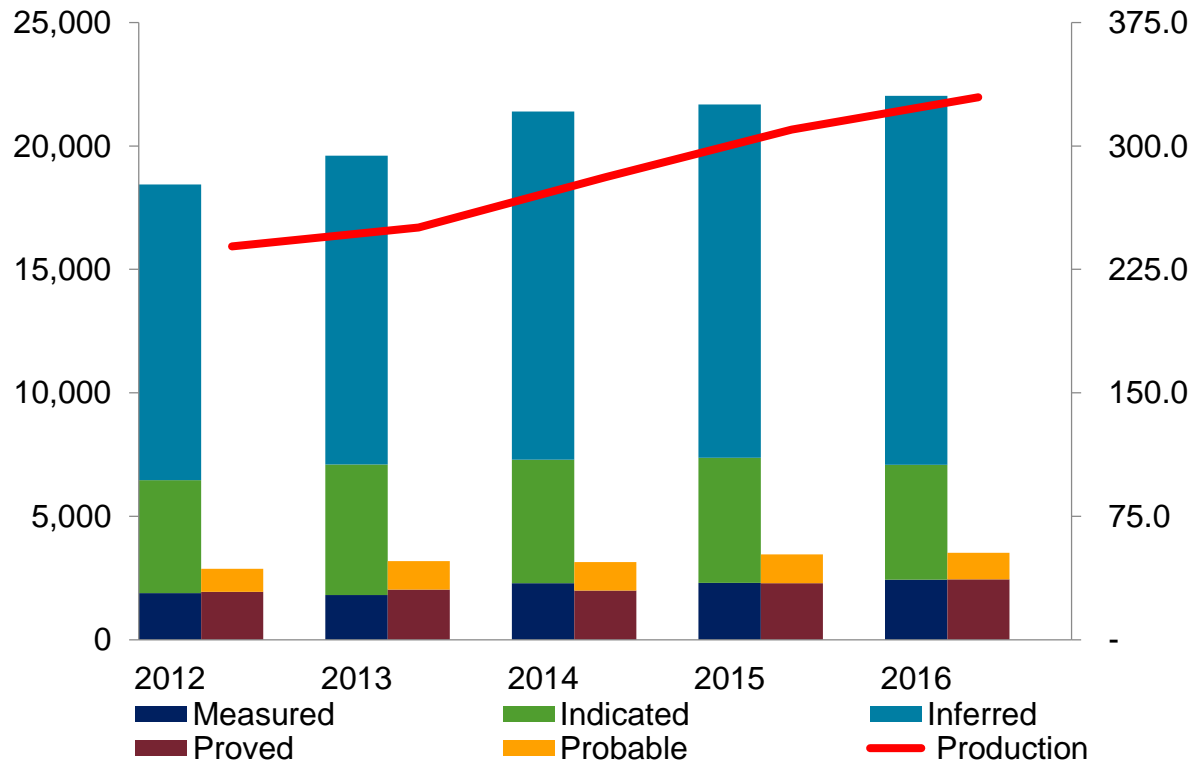
Our Pilbara Blend products have been produced for over a decade and have experienced robust customer demand throughout market cycles

- Rio Tinto is the largest lump producer (~27% of tonnes)
- Platts lump premium averaged ~\$4.9/dmt to the 62% fines index during the first half of 2017

# We have substantial resources sustaining future production...

## Pilbara resources, reserves<sup>1</sup> and production

Million tonnes (LHS, dry; RHS, wet)



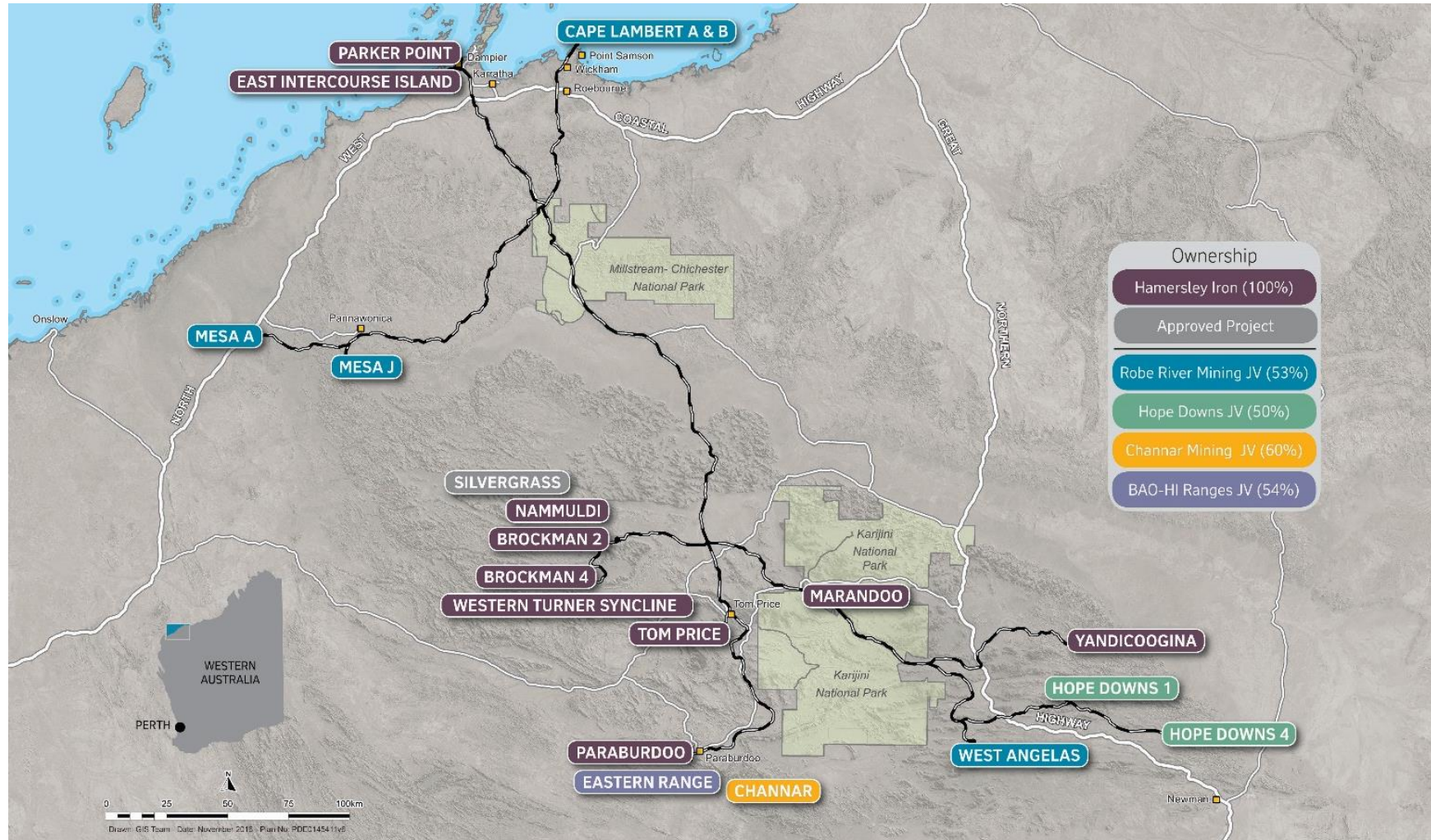
Mineral Resources (LHS), Ore Reserves (LHS), Production (RHS)

Large Mineral Resources support system optionality and sustain premium Pilbara Blend

Ore Reserves maintained in line with depletion

Maintaining evaluation drilling and resource development programmes

# .....and a fully integrated asset network



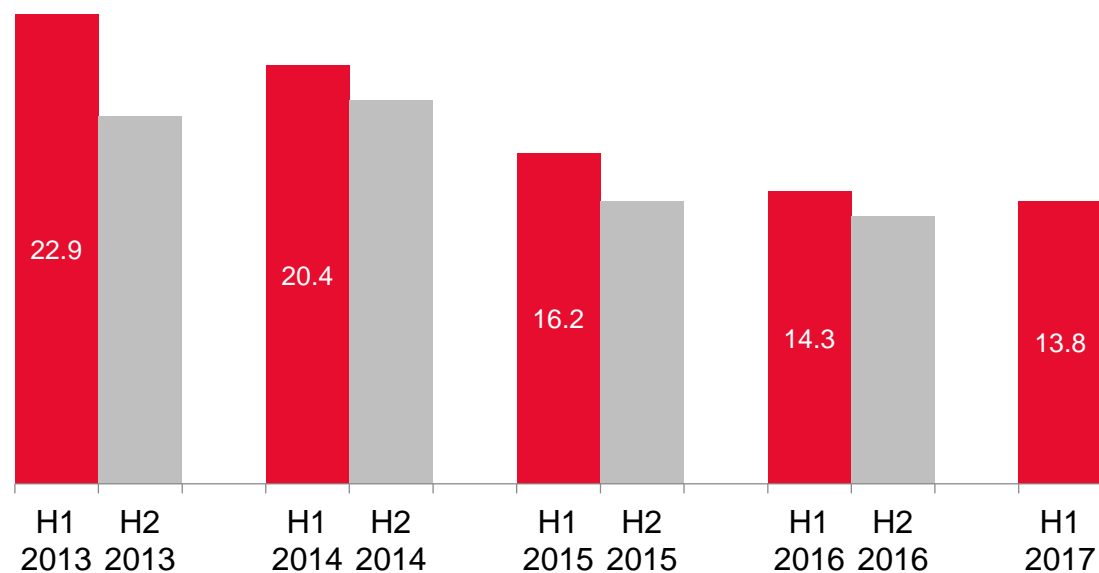
11,000	Workforce
15	Mines
1,700km	Rail
4	Port terminals
3	Power stations
370	Haul trucks
51	Production drills
190	Locomotives



# Iron Ore: continues to sustain our low-cost advantage

## Pilbara cash unit cost

US\$ per tonne

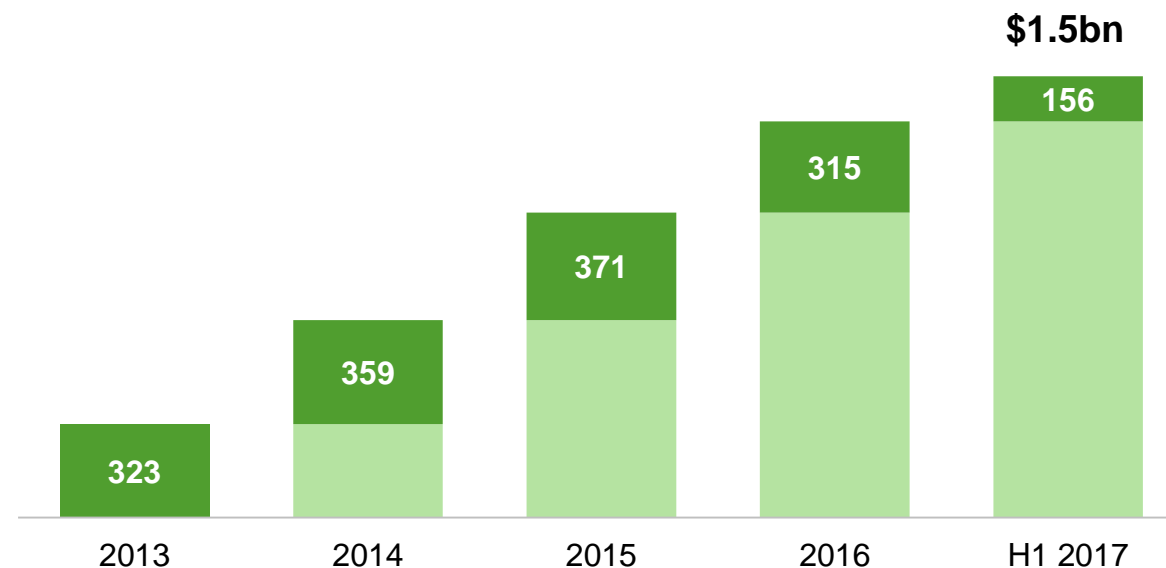


1H 2017 cash unit cost of \$13.8/t (3% lower than 1H 2016)

Maintaining attractive FOB EBITDA margin (69% in 1H 2017)

## Pre-tax operating cash cost improvements

Reduction vs. 2012 US\$m



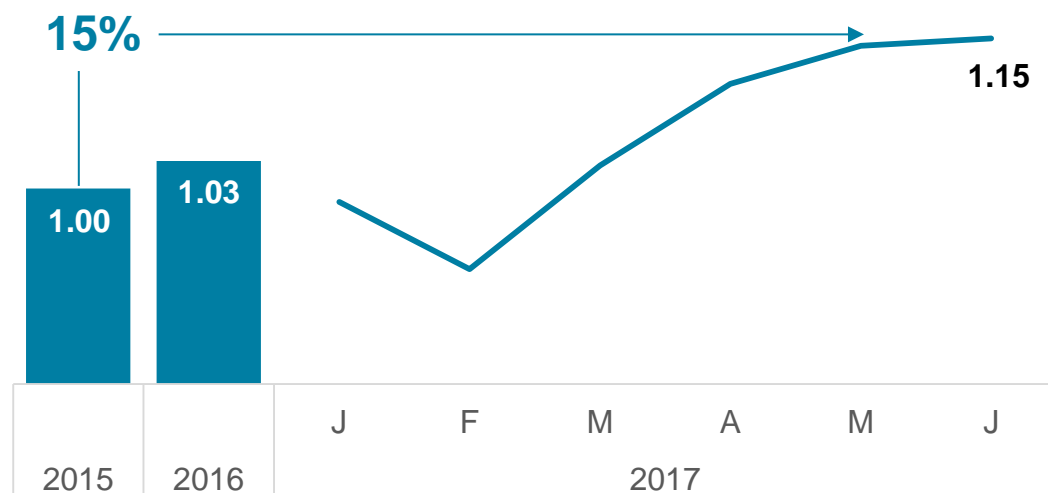
> \$1.5 billion in pre-tax cost improvements since 2012

Pipeline of >2000 productivity and cost improvement initiatives

# Replicating best practice drives greater value.....

## Haul Truck Effective Utilisation

Time %, indexed, Jun YTD, site comparison



Collaboration and standardisation, with data analytics assisting rapid change

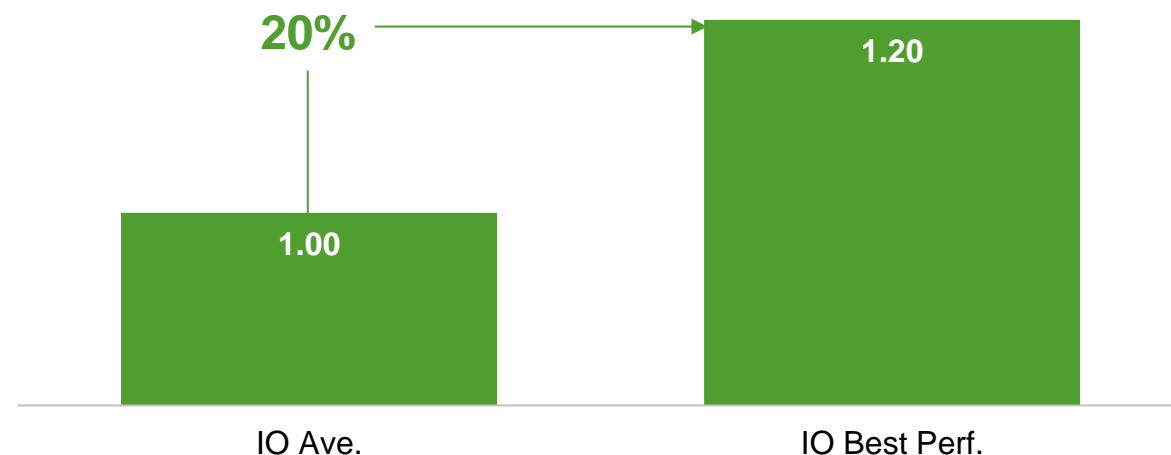
Around 23% of operating fleet autonomous

15% improvement in load & haul costs; reduction in capex & opex

Automation retrofit potential being explored

## Plant Effective Utilisation

Time %, indexed, Jun YTD, site comparison



Currently >30% volume beneficiated

- Ore quality and product handleability

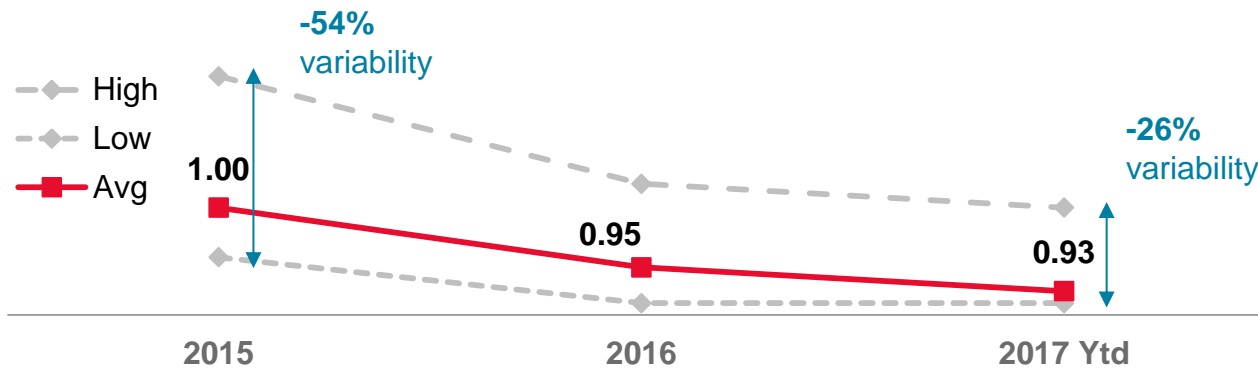
Replicating best practice across the system:

- Conveyor system availability
- Process control improvement

# ...as does productivity and technology

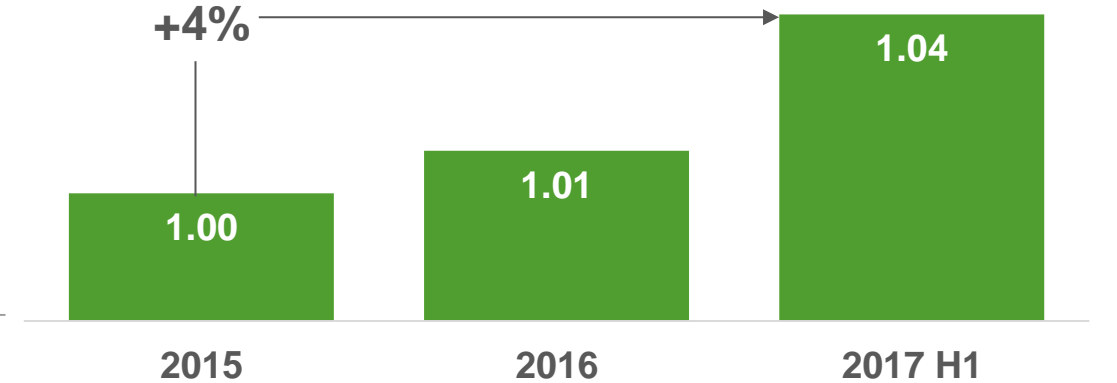
## Train dumping cycle time

Indexed to 2015 monthly average



## Haul truck payload <sup>(1)</sup>

Indexed to 2015 average



## Improving cycle times from Mine to Port

System wide maintenance scheduling from mine - port

Improvement focus at the rail interfaces reducing cycle time

Technology advancements through upgraded control system logic

## Whilst increasing haul truck payloads

Implementing improved tray and tyre specifications

Increased confidence in truck payload measurement systems

Sharper real time operational focus on delivering payload targets

# AutoHaul® already delivering benefit

Significant progress made in 1H 2017:

**32%** of rail kilometres<sup>1</sup> now in Autonomous mode (with drivers on-board)



**80%** of production tonnes<sup>1</sup> now AutoHaul®-enhanced

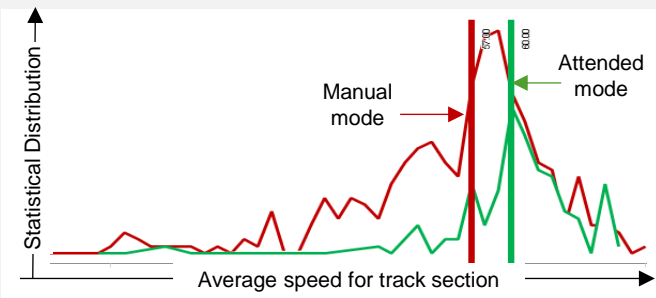


Early benefits are being realised...

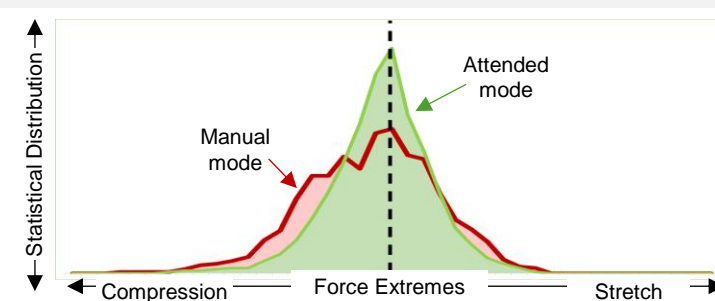
... and on-track to achieve full network capacity uplift by end 2018.

## Reduced variability, increased speed

- Computerised driving improves cycle times



## Reduced in-train forces will benefit maintenance



## Fewer train stoppages

- Avoids train stops for driver changes

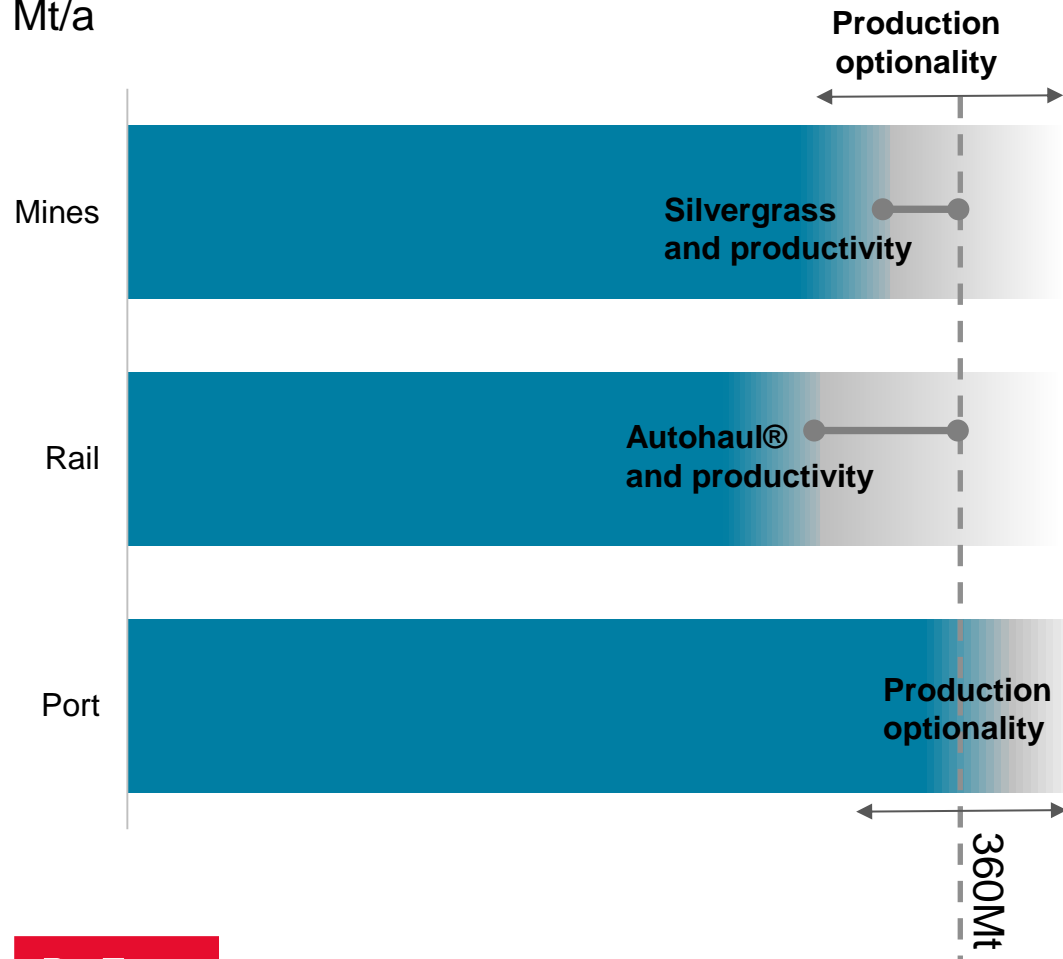
**>1hr** reduction in average cycle time



# Installed infrastructure offers high-value optionality

## Optimising system capacity

Mt/a



Mine capacity can be delivered through productivity and low capital brownfields pathway

Rail capacity can be delivered through productivity, low capital investment and progressive implementation of Autohaul® from 2017/2018

Port capacity at 360Mt/a, with potential to further optimise

2017 shipping guidance around 330Mt, weather dependent

# Silvergrass on track to deliver world-class investment returns

## Silvergrass first production on-track for Q4 2017

~21Mt/a at US\$29/t  
capital intensity (CI)

Mine sustains  
Pilbara Blend quality

Autonomous Haul trucks  
now operating  
Conveyor being installed

IRR >100%<sup>1</sup>

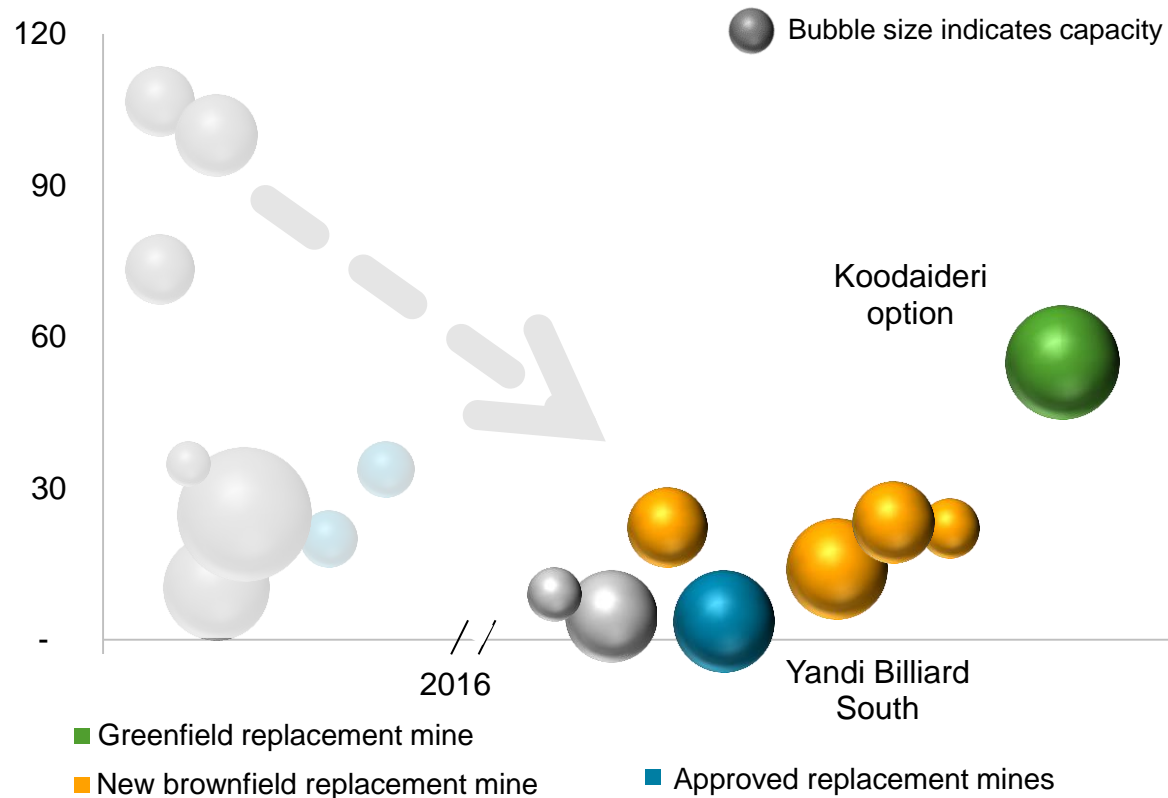
<sup>1</sup>IRR calculated using consensus iron ore prices at May 2016



# High-quality, low-cost options available to offset depletion

## Pilbara mine development options

US\$/t Installed capital intensity



Low cost option leveraging existing infrastructure

- Yandi Billiard South Capital Intensity <\$10/t; IRR >100%<sup>1</sup>

Brownfield replacement mines to sustain current production range (Capital Intensity \$5-\$20/t)

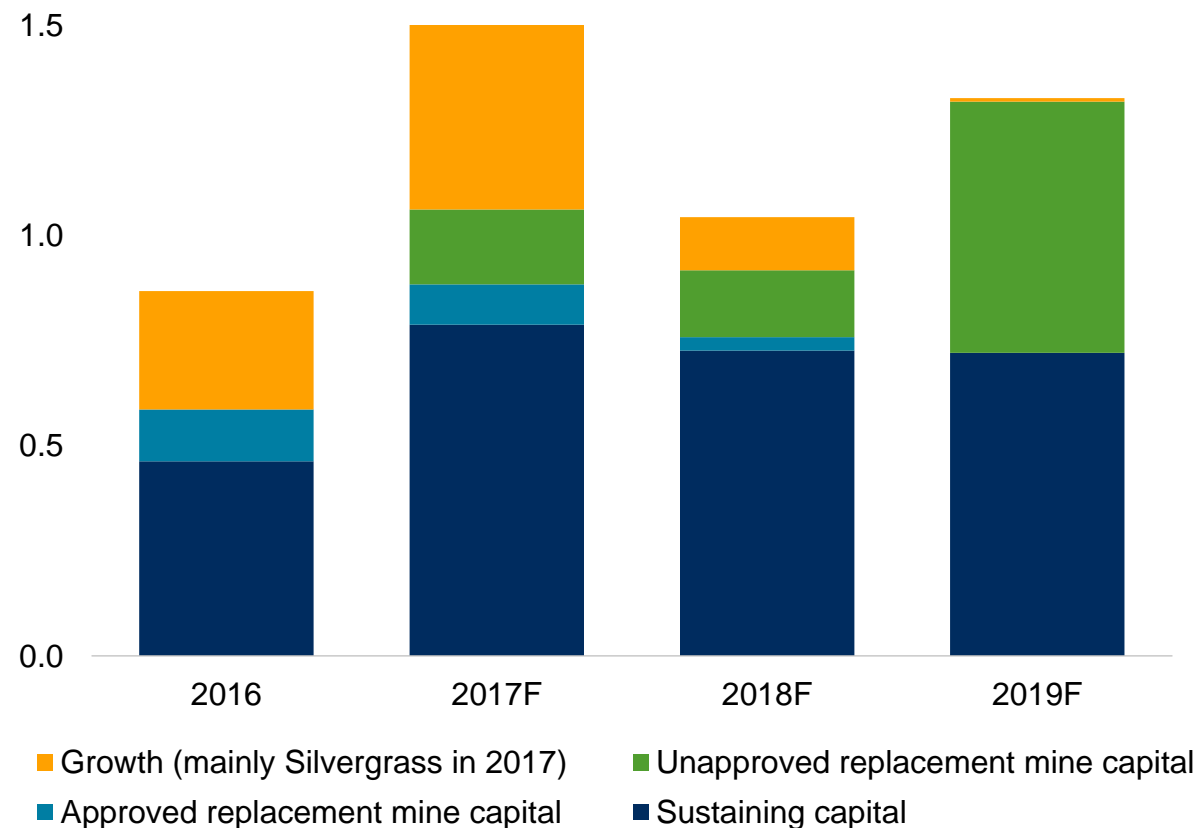
Koodaideri option underpins Pilbara Blend, low-cost operations, in feasibility study. Present view:

- Phase 1 ~40Mt/a plant capacity at \$55/t Capital Intensity (\$2.2bn)
- Potential capital spend from 2019
- Potential for first ore available around 2021
- Feasibility study includes full automation options

# Sustaining best value production

## Capital expenditure

US\$bn (RT share)



Silvergrass - majority of growth spend in 2017

~\$100m approved replacement mine capital over next three years, e.g.

- ~\$64m Yandicoogina Oxbow

~\$1bn unapproved replacement mine capital over next three years

~\$2.2bn sustaining capital over next three years, e.g.

- Mine mobile fleet replacements
- Process plant conveyors
- Rail track replacement



# Unlocking productivity through strong engagement

Safety remains fundamental priority

---

Strengthening workforce engagement

- Recognising great contributions from our people
  - Enabling our inclusive and diverse culture
- 

Enhancing our business through transformation

- Technology enabling our exciting future workplace
- Driving replication of great practice to unlock productivity improvement
- Looking to new skill and capabilities required in supply chain logistics, data analytics, automation



# Highly-valued partners and sustainable local and regional investment remain a priority

## Production



## Employment



## Suppliers



## Taxes and royalties



## Community



# Delivering optimal value from one of the world's best businesses

Quality people and partners

---

Exclusively operated integrated asset, significant resource base, highly-valued product suite

---

Strong cash flows through the cycle

---

Focus on raising mine to market productivity

---

Multiple options to optimise system value

---

Low-capital intensity replacement mine options



An aerial photograph showing a massive iron ore ship being loaded by a long conveyor system. The ship is positioned vertically in the center of the frame, with its deck covered in orange-brown ore. To the right, a long conveyor belt extends from the bottom right towards the ship, with several smaller support vessels and barges along its length. The water is a deep blue, and the sky is clear. The text is overlaid on the left side of the image.

RioTinto

# Iron Ore - delivering optimal value

Investor roadshow – August 2017

Chris Salisbury, chief executive, Iron Ore