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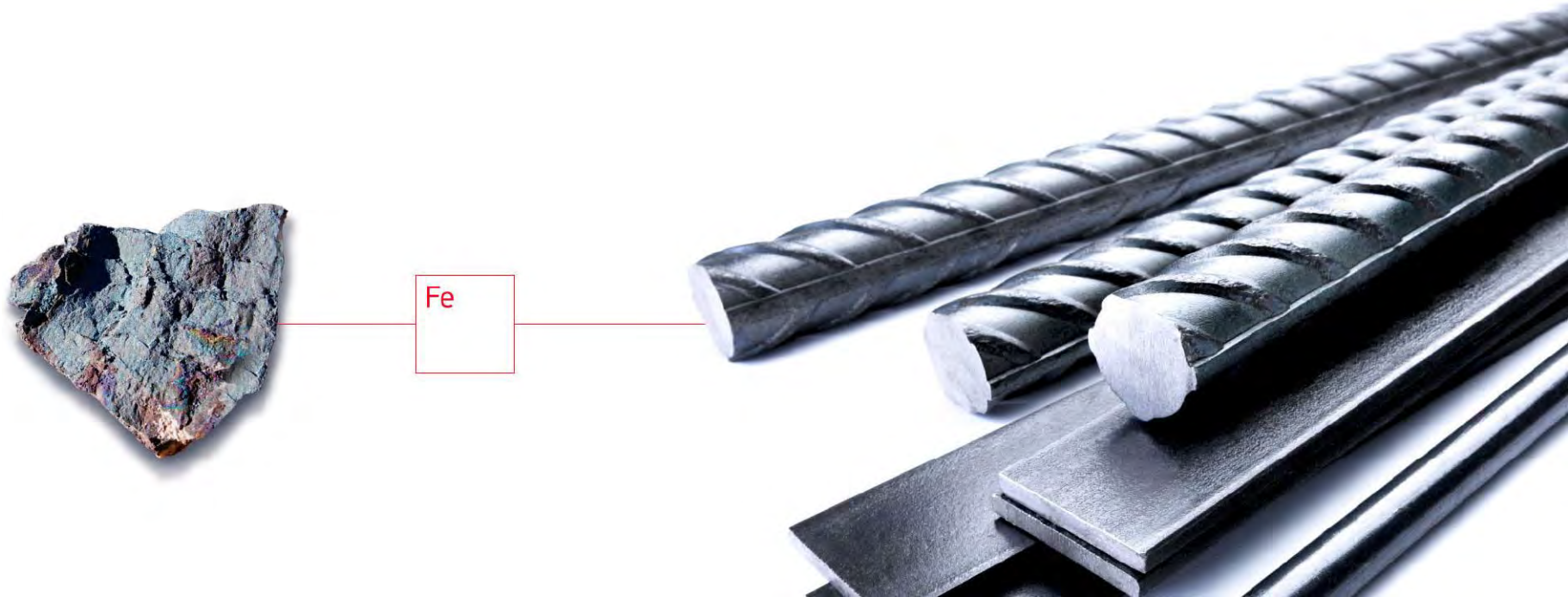
# Iron Ore Seminar



# Cautionary statement

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**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.

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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.

JORC Code references are to the "Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves, 2012 Edition.

# Mineral Resources and Ore Reserves

Details of the Pilbara Mineral Resource and Ore Reserve estimates from 2006 to 2014 which appear on slide 66 of this presentation are set out in the Rio Tinto Annual Reports for those years. The references in the chart on that slide to the 2014 estimate of Rio Tinto's Mineral Resources and Ore Reserves base in the Pilbara are an aggregation of estimates as at 31 December 2014 that were previously reported in accordance with the JORC Code on pages 199 and 204 of the Rio Tinto 2014 Annual Report dated 4 March 2015 and released to ASX on 6 March 2015, and in respect of those Mineral Resources or Ore Reserves for which the information in relation to the relevant criteria in Table 1 of the JORC Code is required, this information is found at www.riotinto.com/JORC.

Rio Tinto confirms that it is not aware of any new information or data that materially affects the Mineral Resource and Ore Reserve information on slide 66, that all material assumptions and technical parameters underpinning those estimates continue to apply and have not materially changed, and that the form and context of the Mineral Resources and Ore Reserves has not been materially modified. Details of the Competent Persons responsible for that previous reporting are set out below.

# Competent Persons

To the extent that information on slide 66 of this presentation relates to the Pilbara Mineral Resources, it was prepared by Mr Bruce Sommerville, a Competent Person who is a Fellow of the Australasian Institute of Mining and Metallurgy. To the extent that information on slide 66 of this presentation relates to the Pilbara Ore Reserves, it was prepared by Mr An Do, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Sommerville and Mr Do have overseen the aggregation of the Mineral Resources and Ore Reserves data for inclusion in this presentation.

Messrs Sommerville and Do are full-time employees of Rio Tinto Iron Ore and have sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity which each has undertaken to qualify as a Competent Person as defined in the JORC Code. Messrs Sommerville and Do consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

## Production Targets

Production targets for 2017 for our Pilbara operations and Iron Ore Company of Canada appear in this presentation.

For our Pilbara operations, slide 25 states “Pilbara integrated production system is expected to deliver … 350 Mt in 2017”. This production target is underpinned as to 71% by proved ore reserves, and as to 25% by probable ore reserves, and as such 96% of the production target is based on ore reserves. The remaining 4% of the production target is sourced from identified inferred mineral resources within the detailed pit designs. There is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that the production target itself will be realised.

For our Iron Ore Company of Canada operations, slide 35 states “Nameplate Capacity of 23 Mtpa concentrate to be achieved in 2017”. This production target is underpinned as to 61% by proved ore reserves, and 39% by probable ore reserves.

The above 2017 production targets are based on internal modelling of integrated supply plans derived from the relevant estimates of mineral resources and ore reserves, which have been prepared by Competent Persons in accordance with the requirements of the JORC Code, scheduled from within the current pit designs. Pit design, ore scheduling and economic assessments, which form the basis of the production target are based on detailed studies using the actual operating performance of our existing mines, processing plants and infrastructure as the basis of the assumptions. These studies include assessment of mining, metallurgical, ore processing, marketing, government, legal, environmental, economic and social factors.

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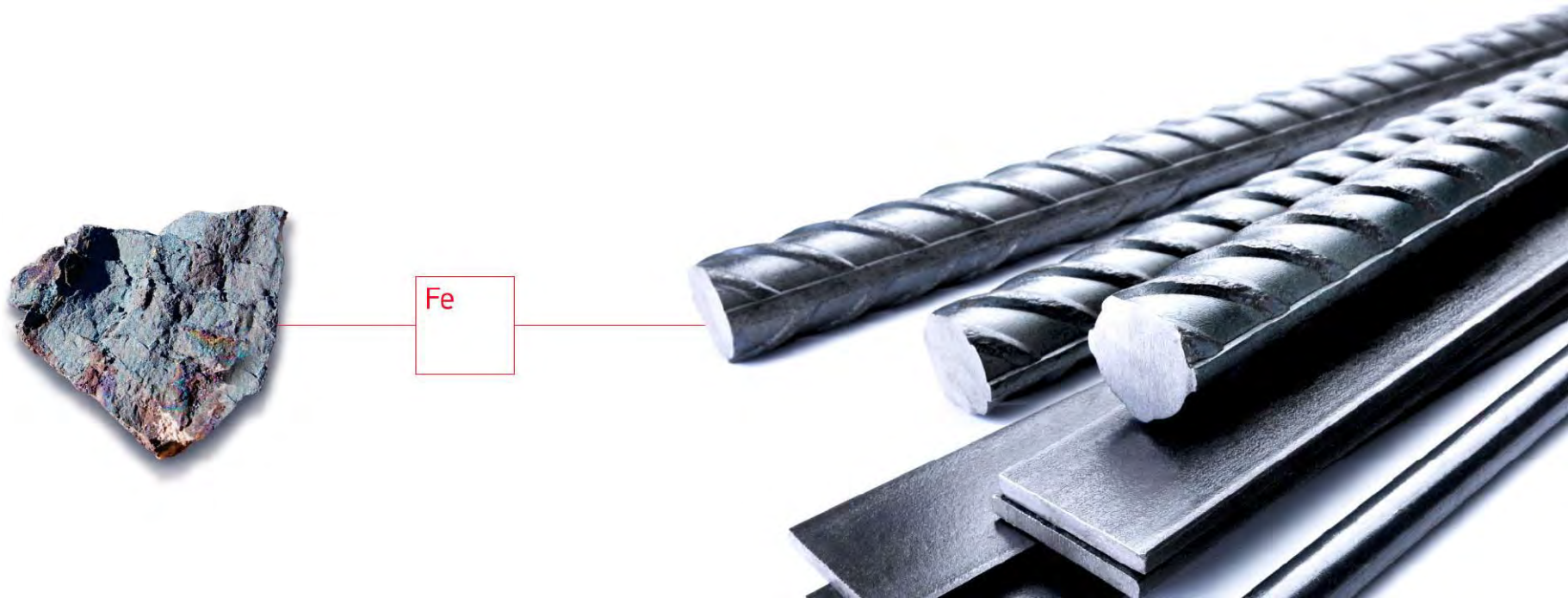
# Introduction

Andrew Harding, chief executive, Iron Ore



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# Iron ore demand fundamentals

Vivek Tulpule, head of Economics & Markets

# Rio Tinto Economics & Markets

**Independent advice**

Report to CFO

Independent from Product Groups

**Extensive data collection**

Primary research

Internal and external resources

**Risk and scenario analysis**

Rigorous testing of results

Understand and quantify uncertainty

**Fundamental demand and supply analysis**

Proprietary cost curves

Detailed sectoral country modelling

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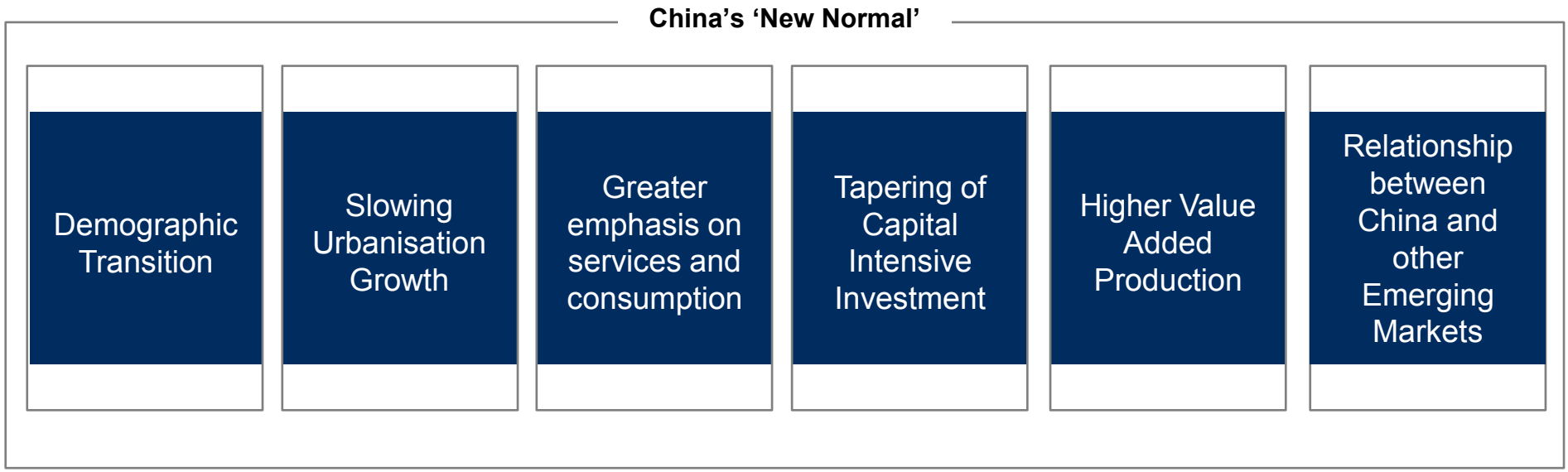
# China's transition toward high-income status involves a structural transition to slower growth

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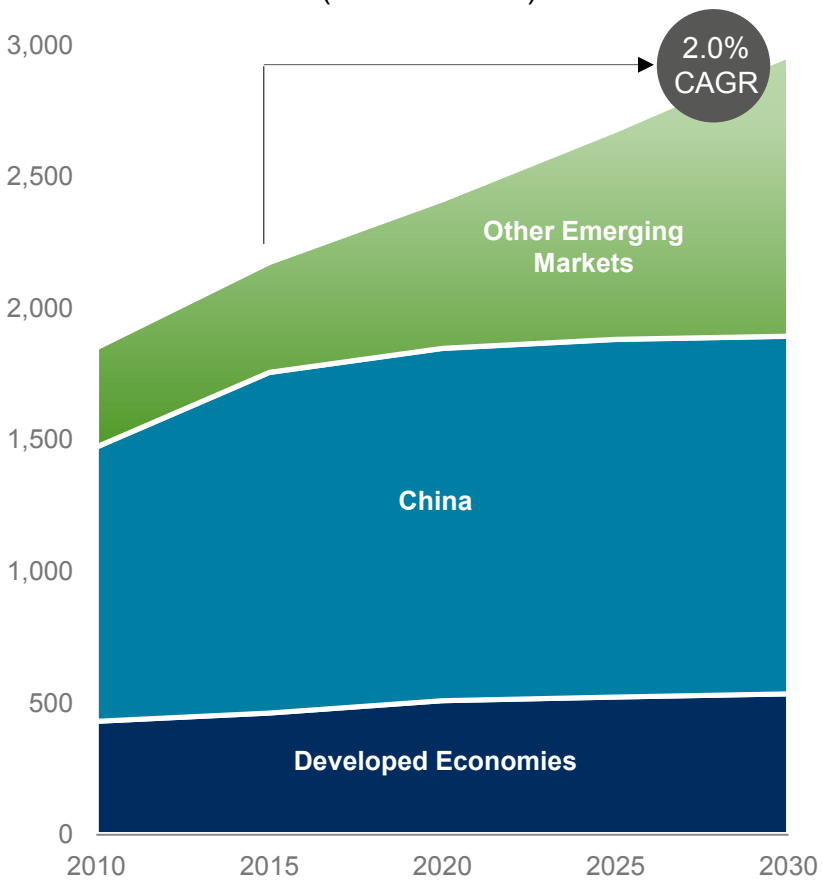
# Continued global iron ore demand

**Moderate growth in iron ore demand**
Total iron ore demand (million tonnes)




Source: Rio Tinto

- Global steel demand grows by 2.5% pa, versus GDP growth of 3.0%
- Chinese steel demand is evolving with an increasing focus on exports
- Increasing importance of emerging markets beyond China, especially in Asia
- The world will need 3 billion tonnes of iron ore by 2030, that is a growth rate of 2%
- New supply will be required
- Over 50% of the additional supply will be delivered through the seaborne market

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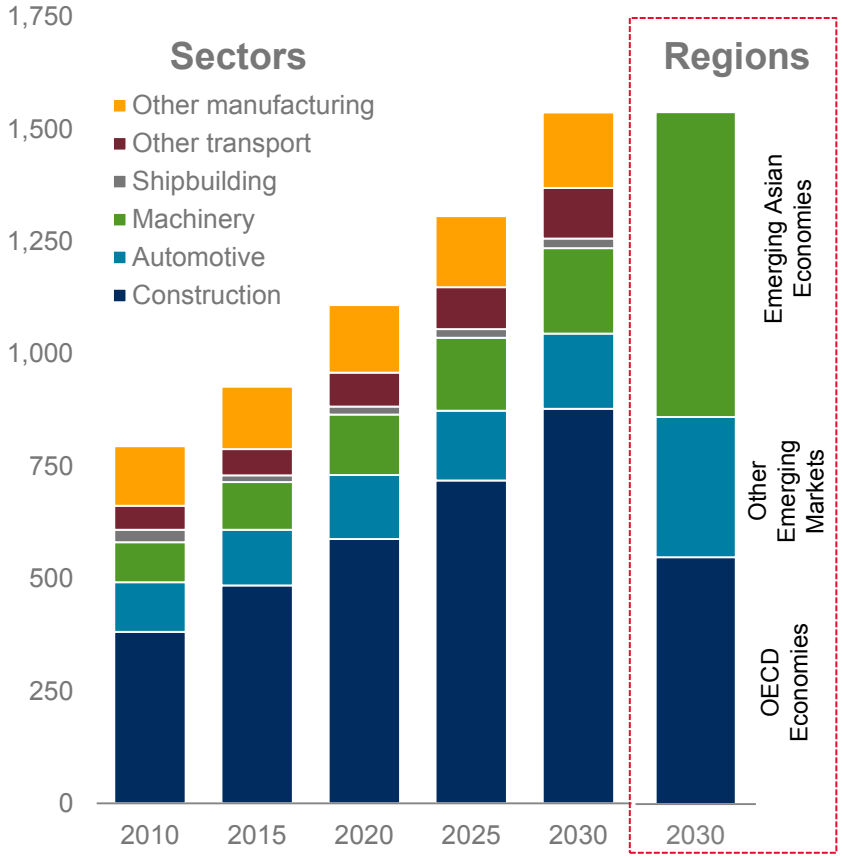
# Robust growth in rest of world demand

**Rest of World (ex-China) steel demand**

Crude steel production (million tonnes)




Note: Crude steel production basis and does includes steel trade

- Process of industrialisation and urbanisation in the rest of world will be highly steel intensive
- Rest of world steel demand to increase by 65% by 2030
- India's share of rest of world demand will double from 10% by 2030
- In 2030, China remains the largest demand region, followed by India and then ASEAN
- Construction of commercial and residential buildings and infrastructure supports Chinese exports of finished steel and machinery

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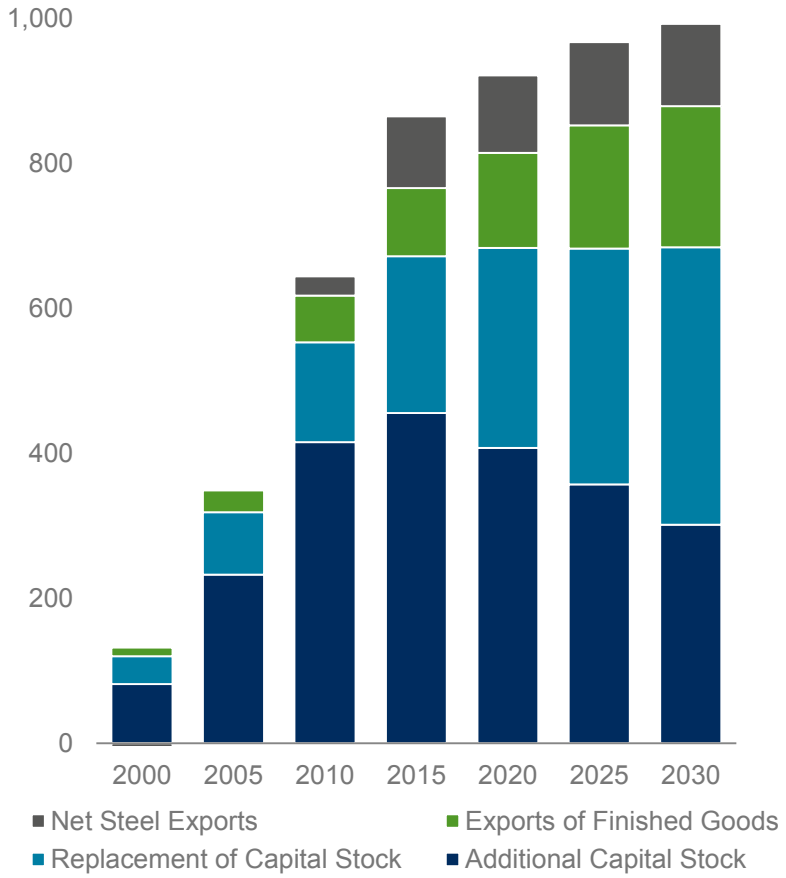
# China steel growth will continue

**Maturing domestic steel demand**

Crude steel production (million tonnes)




Source: Rio Tinto

- Crude steel production expected to reach around 1 billion tonnes by 2030
- Growth in capital stock is slowing leading to a declining demand for steel to support growth
- Replacement of capital stock will maintain current levels of Chinese domestic consumption
- Growing global markets generate demand for manufactured exports containing steel (e.g. machinery, cars)
- Steel exports to be maintained at current levels – though with a declining global share (e.g. flat and long products)

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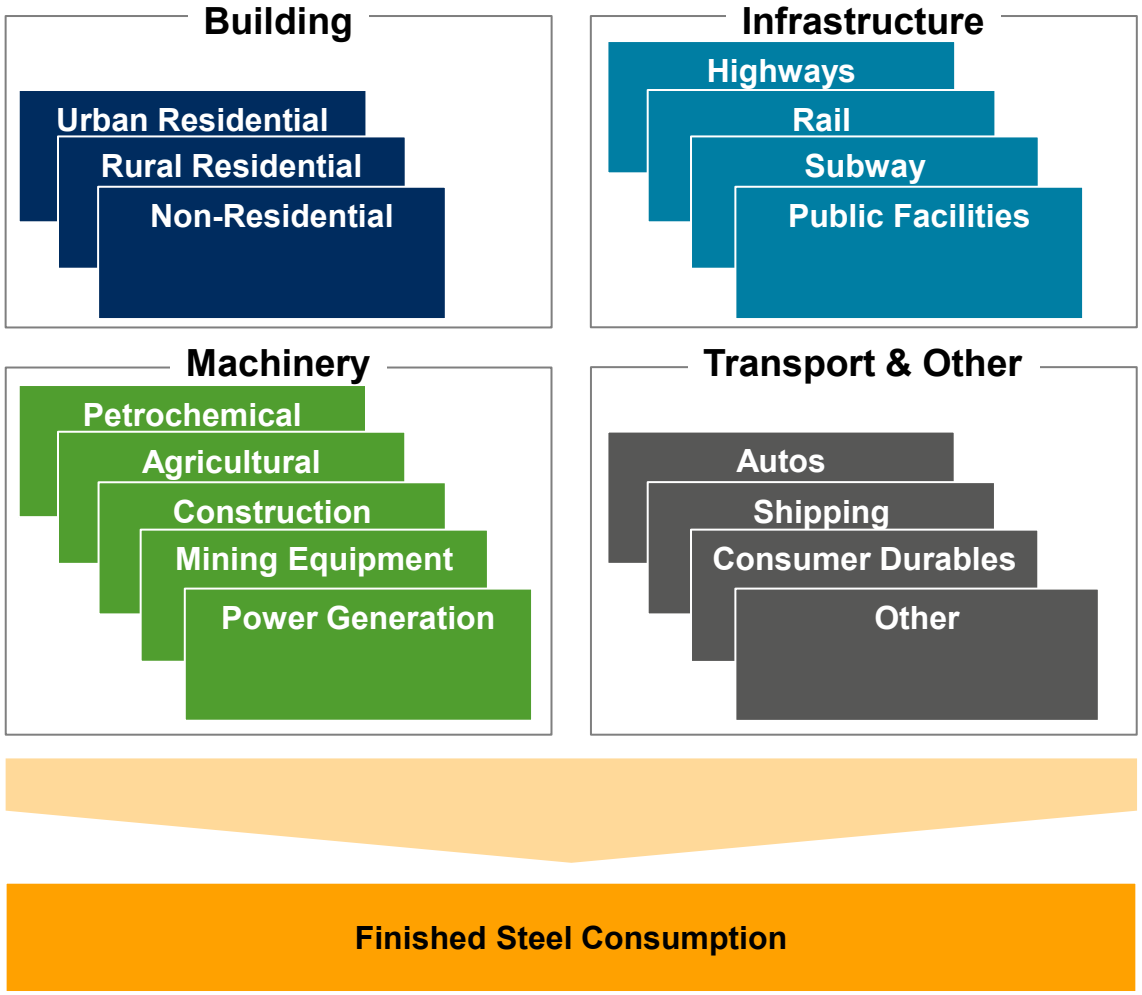
# Chinese steel demand based on detailed analysis

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# Case study I: Residential steel demand

GDP per capita | Population

*Typical ~30 storey high rise*

| | Steel Intensity | Floor Space | Steel |
|---|---|---|---|
| Superstructure | 50 kg/sqm | 120,000 sqm | 6,000 t |
| Basement | | | |
| Foundation | 175kg/sqm | 50,000 sqm | 8,750 t |

| | |
|---|---|
| Regulation | Building height |
| Seismic rating | High strength rebar substitution |
| Car penetration | Prefabricated concrete |

Source: Rio Tinto

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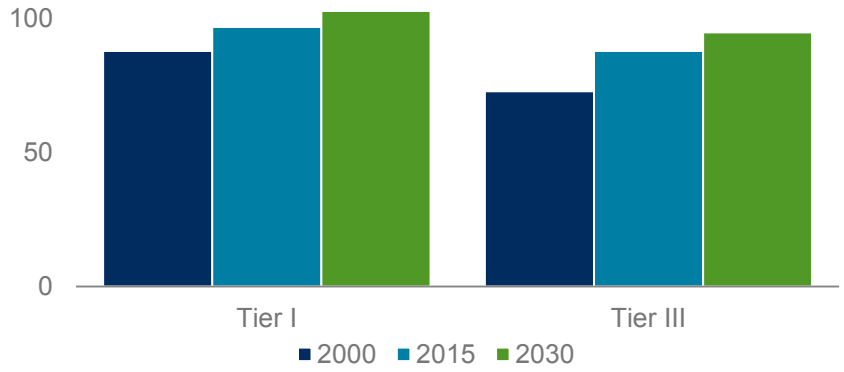
# Case study II: Residential replacement demand

**New-build urban residential intensity**
Kg / square metre




Source: Rio Tinto

- By 2030, nearly 25% of the current urban residential building stock will be demolished and rebuilt
- The average life of an urban residential building in 1980 was 37 years
- In 1980, 65% of urban residential buildings completed were 1 storey and around 5% above 7 storeys
- By 2030, a third of the buildings completed will be above 7 storeys
- Newly built residential will be more steel intensive than those they replace

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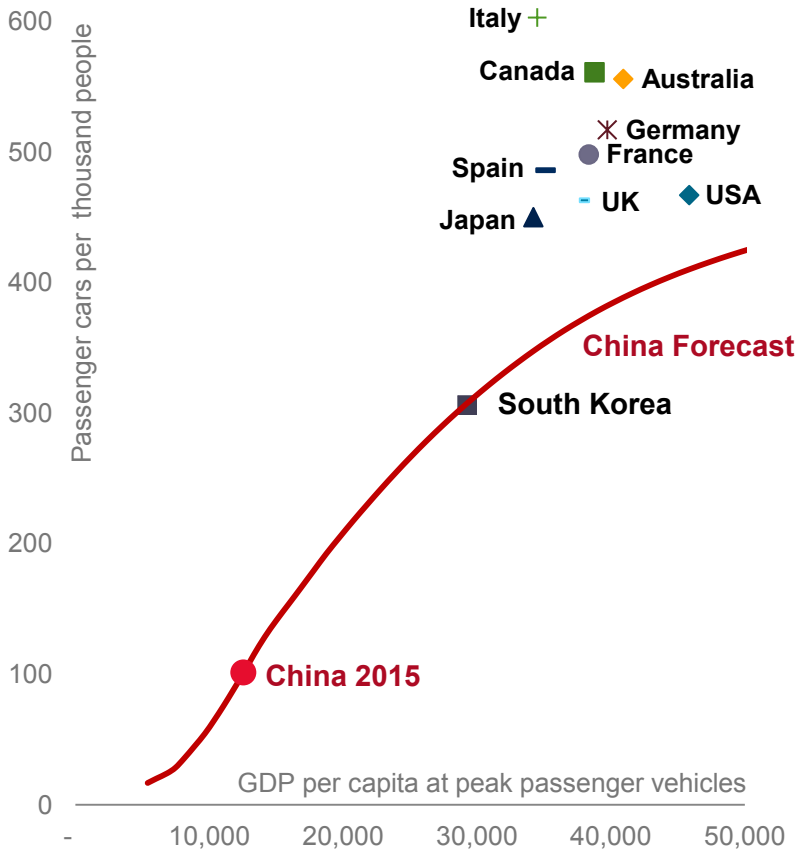
# Case study III: Automobile steel demand

**China automobile saturation**




Source: World Bank, OICA, Rio Tinto calculations

- China passenger vehicles rise by 280 million from 2015 - 2030, a nearly three-fold increase
- The typical steel in a passenger vehicle is currently ~900kg
- Passenger vehicles are replaced on average every 15 years, buses every 12 years and trucks every 8 years
- By 2030 over 20 million cars a year will need to be replaced

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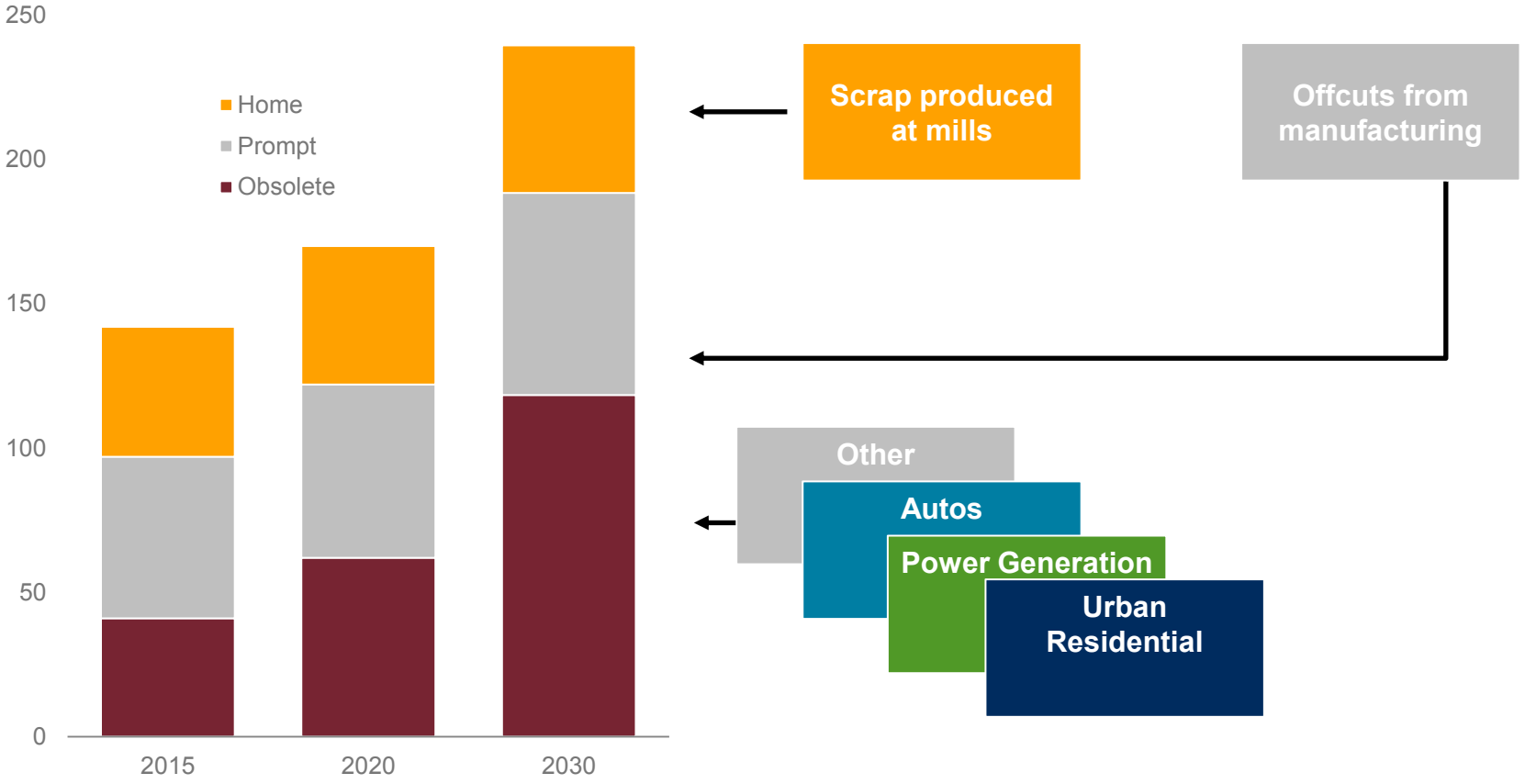
# Obsolete Chinese scrap triples in fifteen years and will displace some iron ore requirements

**Chinese scrap supply**
Million tonnes




Source: Rio Tinto

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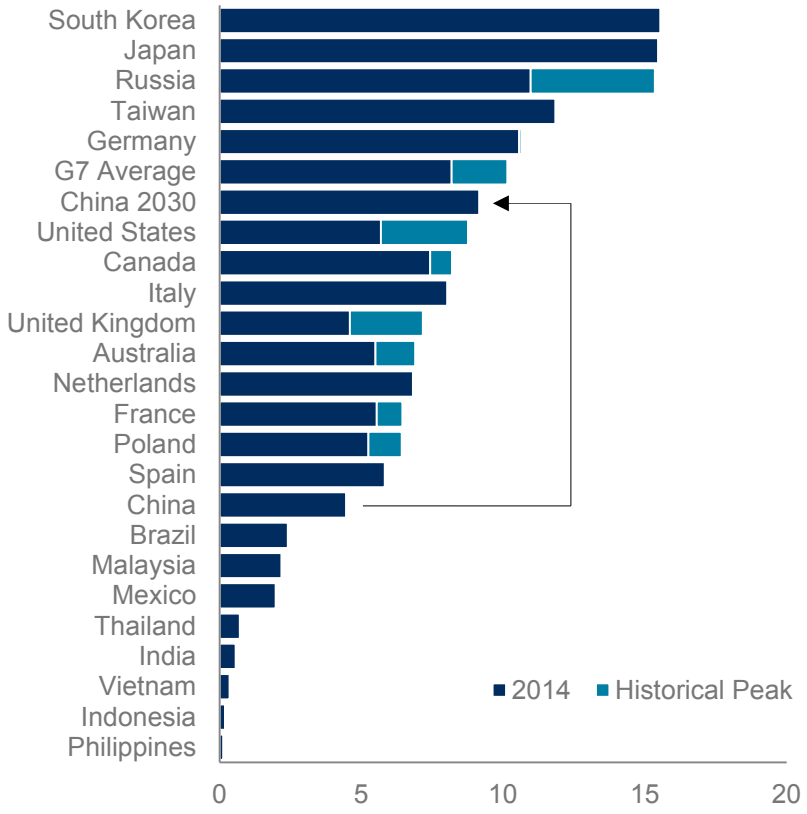
# China steel demand growth consistent with international experience

## Substantial steel potential for developing Asia

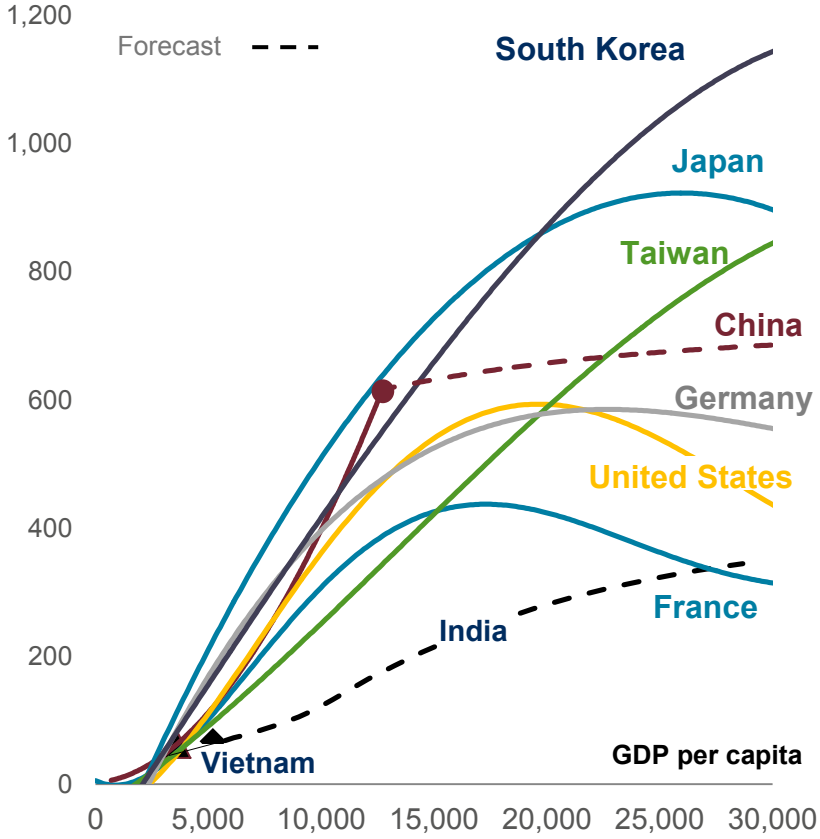
Global steel stock per capita (tonne/capita)




Source: World Steel, Maddison, Correlates of War, E&M forecasts and calculations

## China steel intensity to increase at slowing rate

Global crude steel intensity per capita (Kg/capita)




Source: World Steel, Maddison, Correlates of War, Global Insight, E&M China Forecasts
Note: Stylised intensity curves

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# Summary

**The world will need increasing volumes of iron ore: 2.0% CAGR 2015-2030**

**Emerging markets, other than China, will play an increasingly significant role in the iron ore market with demand expected to increase by 65%**

**Continued modest Chinese steel production growth to 2030**

**Growing role for replacement of capital stock and exports to other emerging markets**

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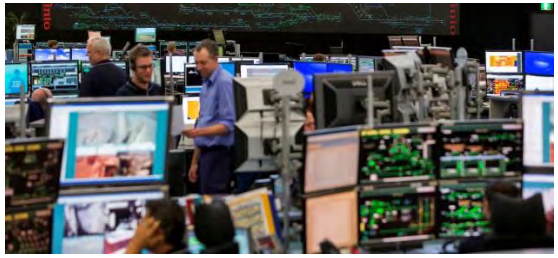
# Delivering value through the cycle

Andrew Harding, chief executive, Iron Ore

# The world's best iron ore business

## Underpinned by a comprehensive strategy that drives compelling value:

| Production at the right cost | Value-driven growth | Maximising portfolio value |
|---|---|---|
|  |  |  |
| Safest and lowest cost production through unrivalled technology and high performing teams | Disciplined phasing and low cost quality growth options | Leveraging our portfolio of growth options, product strategy and sales and supply chain capabilities |
| Examples:<br>• Operating excellence<br>• Increasing automation | Examples:<br>• Benchmark product quality<br>• System capacity creep | Examples:<br>• Sales & marketing expertise<br>• Product and development synergies |

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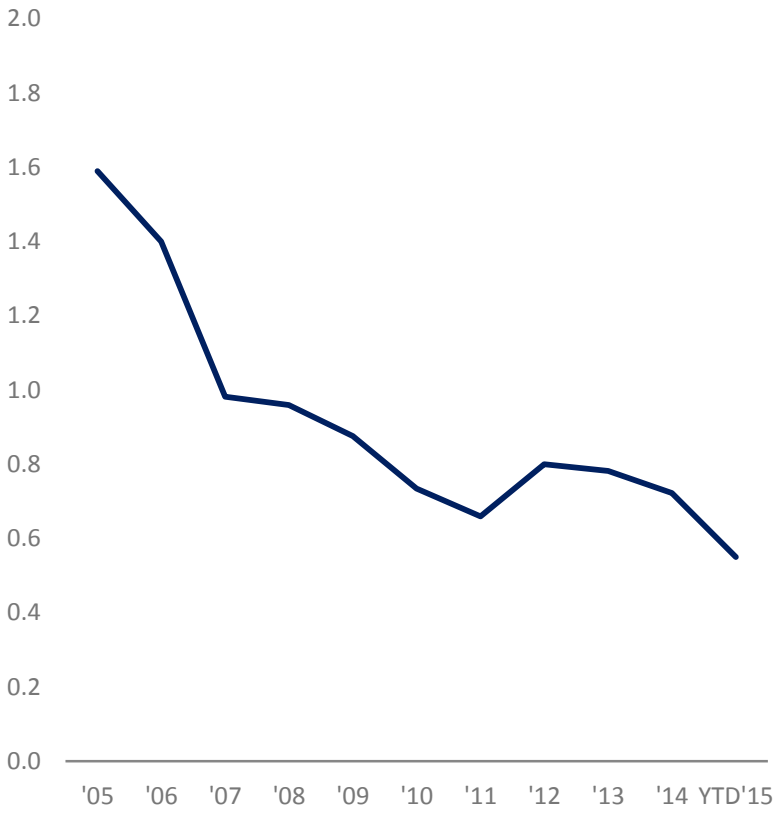
# Personal safety, health and well-being is a fundamental business priority

**Iron Ore all injury frequency rate**
Per 200,000 hours worked




Note: Year to date 2015 is January to end of July.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# Consistently delivering value

**Staged Pilbara infrastructure** expansion completed at **capital intensity of ~$105/t**

**Operating costs** have been reduced by almost **$1 billion** compared to 2012

**Iron ore workforce** +15,000 people delivering **1 million tonnes** of ore per day

More than **400 million tonnes** of material **moved by autonomous trucks** in the Pilbara

**Maintaining** the lowest first quartile cost position in the industry at **US$16.20/t**

**IOC** concentrator expansion project complete – record concentrate run rate of **21.5 Mt/a** in July 2015

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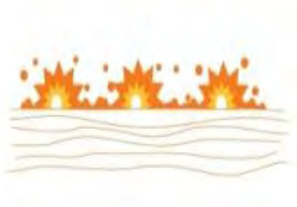
# The Pilbara - a fully integrated system…

**Leading edge technology**

~30TB analysed by the OC per month

~5TB added by Library of Congress per month

## 1 Drill & Blast

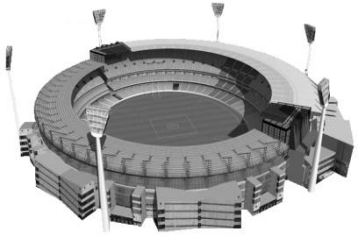


> 12,000 kilometres
drilled each year

Equivalent to the diameter of the earth

## 2 Load & Haul

~1 billion tonnes
rock moved per year



Enough to fill the MCG every two days

## 3 Process

> 400 kilometres of conveyors
across the Pilbara

8 times the length of the Channel Tunnel

## 4 Rail

> 15,000 kilometres
rail travel per day


Almost a return trip on the Trans-Siberian railway

## 5 Ship

> 300 million tonnes
ore shipped annually

Cargo shipped through the Panama Canal

Note: approximate comparative estimates based on publically available information

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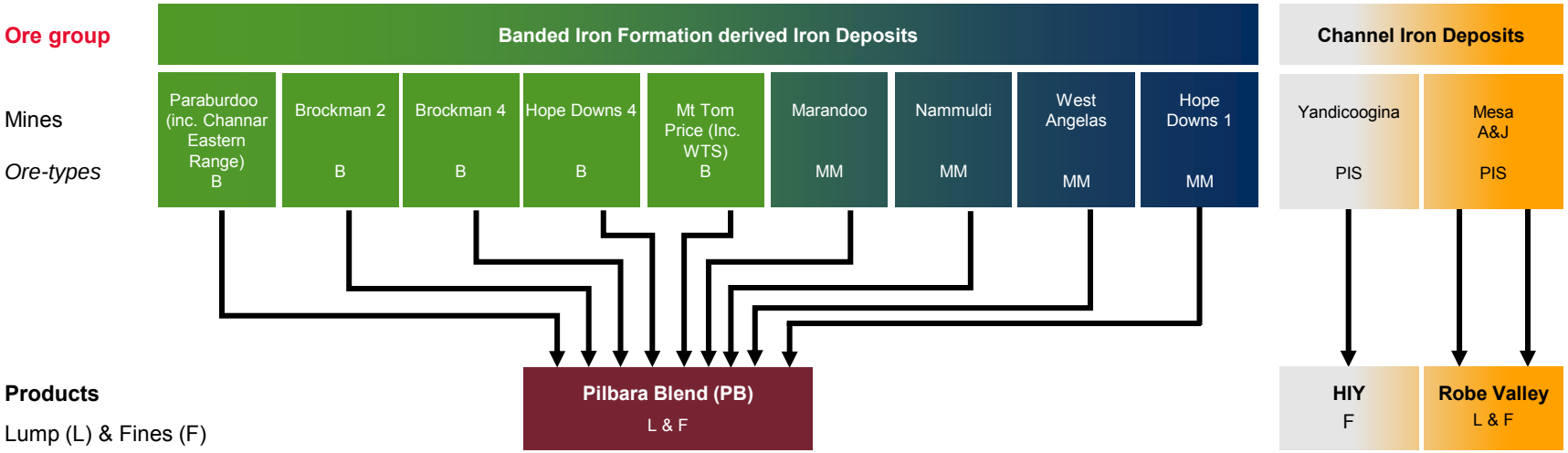
# …producing a suite of world-class iron ore products, including our flagship Pilbara Blend




**Ore-types**
- B = Brockman Iron Formation
- MM = Marra Mamba Iron Formation
- PIS = Yandicoogina pisolite
- PIS = Robe Valley pisolite

| Product | Fe (dry basis) | Moisture |
|---|---|---|
| Pilbara Blend Lump | 62.5% | 4.0% |
| Pilbara Blend Fines | 61.5% | 9.0% |
| Robe Valley Lump | 57.5% | 6.5% |
| Robe Valley Fines | 57.0% | 7.5% |
| Yandicoogina Fines (HIY) | 58.5% | 9.0% |

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# Growth infrastructure complete, with brownfields continuing to supply near-term volume

**Nammuldi feed bins**

**Nammuldi concentrator**

- 40 Mt of brownfields completed at average capital intensity of $9/t
- Debottlenecking and productivity improvements continue
- Pilbara integrated production system expected to deliver
  - 335 Mt in 2016
  - 350 Mt in 2017[1]
- Nammuldi incremental investment
  - 5 Mt/a, commencing 2015/16
  - 5 Mt/a, commencing in 2017[2]
  - Access low phosphorous ore for Pilbara Blend at ~US$19/t capital intensity

[1] This production target must be read in conjunction with the supporting information and cautionary statement that “there is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that the production target itself will be realised” set out on slide 4. [2] These 5 Mt are included in the 2017 production target of 350 Mt for the Pilbara referred to above.

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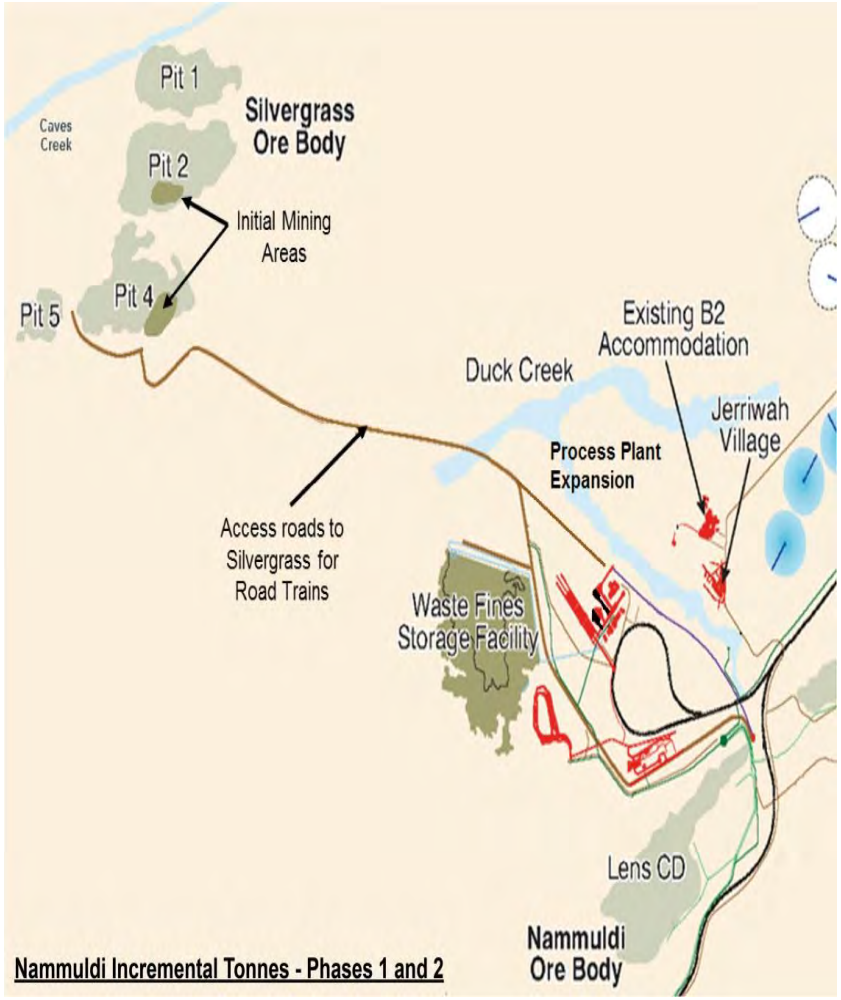
# Further high value tonnes from Silvergrass




- Nammuldi incremental investment also allows for:
  - Silvergrass dewatering infrastructure
  - Nammuldi below water table plant expansion from 21- 42 Mt/a
- Full Silvergrass mine development:
  - Remains subject to approval in 2016
  - Additional mining capacity
  - Crusher and overland conveyor
  - Associated support infrastructure
  - Operating costs significantly reduced

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# Unlocking value

| Releasing working capital | Reducing costs | Improving productivity |
|---|---|---|
| ✓ >20% reduction in mine stocks<br>Inventories at mines reduced by 4.5 Mt to 14.5 Mt, improving working capital | ✓ Renegotiation with key suppliers<br>Contract renegotiations delivering savings and improved payment terms | ✓ 12% increase in labour productivity<br>Lower head count and increased volumes improved productivity |
| ✓ 24% reduction in warehouse inventory<br>Warehouse spares reduced by managing lead times and reducing bulk stocks | ✓ 5% reduction in contractor and consultant spend<br>Reduction saved A$32m | ✓ Improved maintenance tactics<br>Resulted in higher asset availability delivering productivity improvements |

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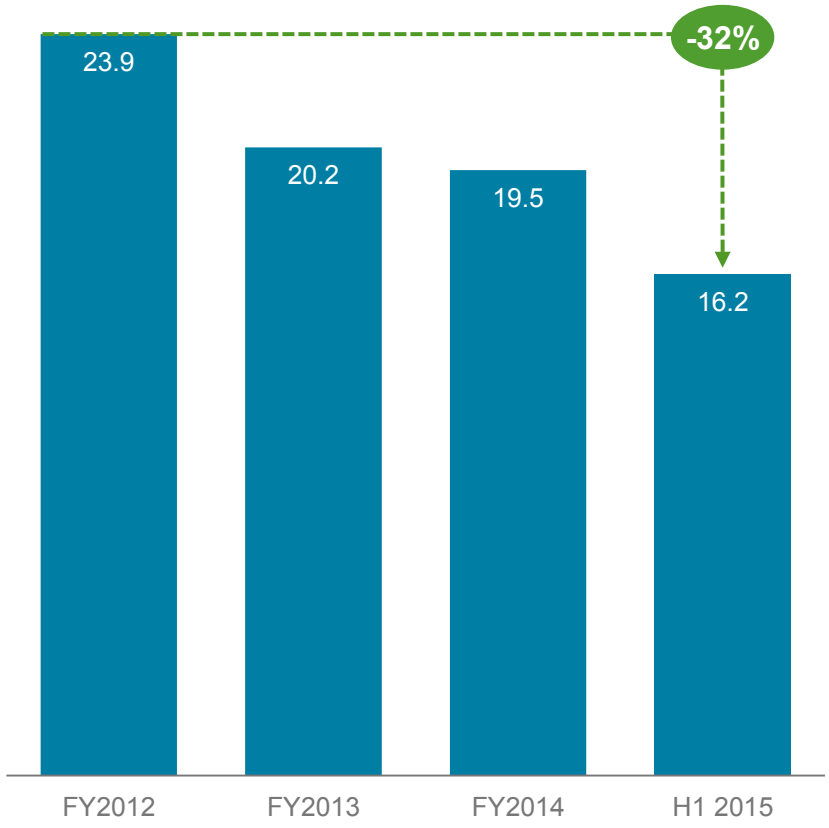
# Sustaining a competitive advantage

**Pilbara cash unit cost**
US$ per tonne




- H1 2015 cash unit cost of US$16.2/t (13% lower than $18.7/t in H2 2014)
- Attractive FOB EBITDA margin at 61% in H1 2015
- Iron ore has delivered almost $1 billion in cost savings since 2012

| **Pilbara results**<br>H1 2015 vs H1 2014 | | | |
|---|---|---|---|
| | **H1 2015** | **H1 2014** | **Change** |
| Shipments (Million tonnes, 100%) | 146.5 | 136.1 | 8% |
| FOB EBITDA margin (%) | 61% | 70% | -9% |
| Underlying earnings (US$ million) | 2,158 | 4,570 | -53% |

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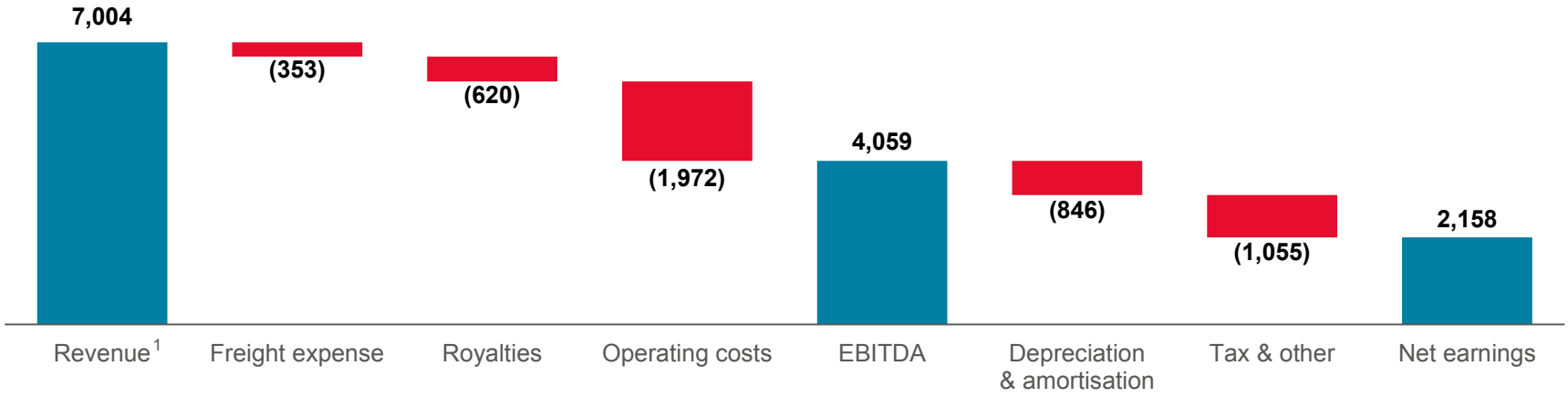
# Pilbara – H1 2015 financial summary

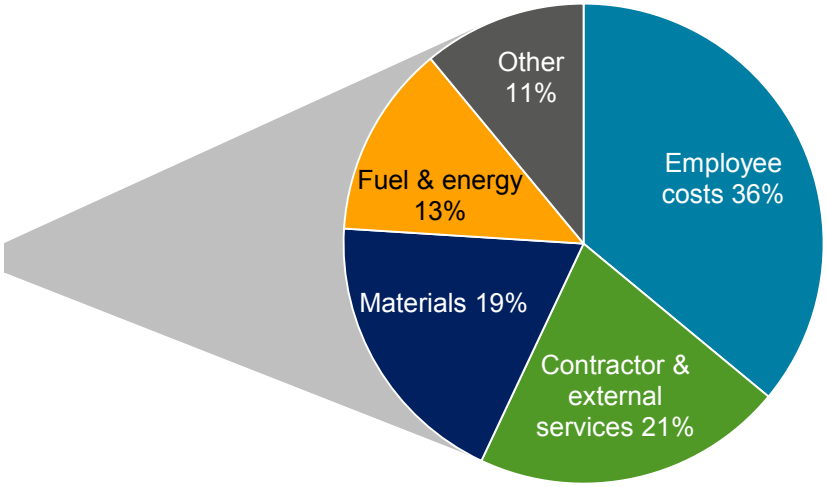
## Pilbara net earnings reconciliation

US$ million




## Pilbara unit cash costs

| | |
|---|---|
| Operating costs (US$ million) | 1,972 |
| Tonnes shipped[2] (million tonnes) | 122.0 |
| **Pilbara unit cash costs** (US$/t) | 16.2 |

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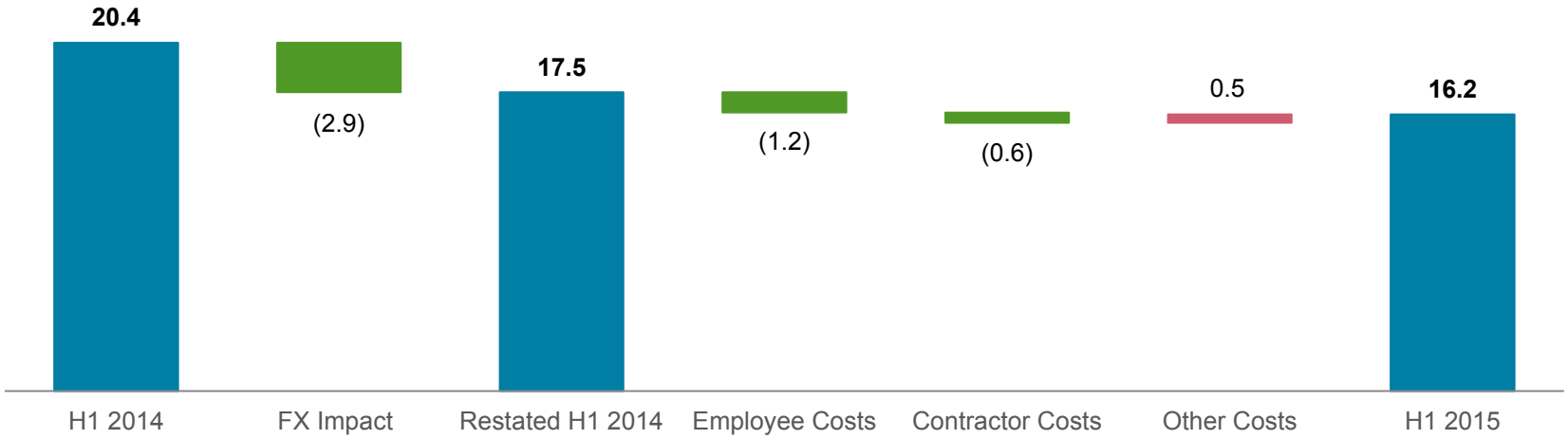
[1] Sales revenue of $7,004 million includes freight revenue of $372 million.
[2] Pilbara unit cash costs $/tonne calculation is based on the equity share of tonnages of 122 Mt. Please see appendix for reconciliation to 100% production data.

# Reducing contractor and employee costs has delivered significant benefits in unit costs

**Pilbara cash unit cost**
US$ per tonne




Pilbara unit cost of $16.2/tonne shipped benefitted from:

- Favourable exchange movement
- Improved labour productivity by 12% in H1 2015 (shipped tonnes/FTE)
- 5% reduction in contractor and consultant spend

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# Our Operations Centre enables us to optimise for tonnes, quality and value

Capability enables real-time visibility of entire value chain and powerful forward planning

**Ensuring a consistently high-quality product**

**Real time analytics reducing system variability**

**Debottlenecking and rapid response to events and disruptions**

Maximising the value of our assets

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# Operational and commercial excellence is embedded across the business

**Iron ore material**
Rehandle reduced by 16 Mt in 2014

**Heavy Equipment Life Extension**
$200 million in capital deferrals

**FasTrack 35**
35 hrs cycle time target
Cycle time improvement to date ~11.0% & aiming for ~20%


**HME contracts consolidation**

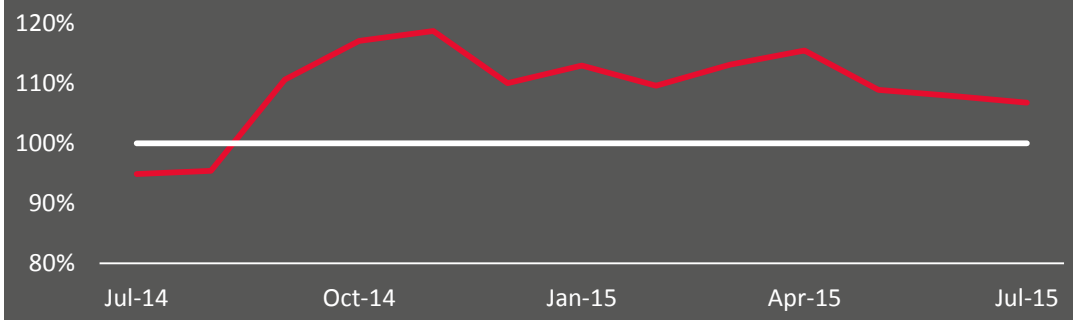
$55 million in rebates

**Tyre management**
- $16 million tyre inventory reduction
- $10 million supply volume reduction

**Brockman train loading**
100 minute reduction in train loading time at Brockman 2

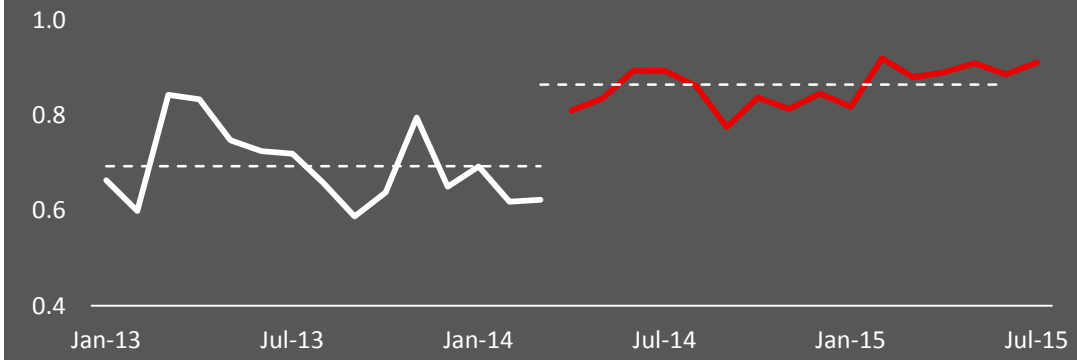
# Autonomous fleet continues to expand bringing significant productivity improvements

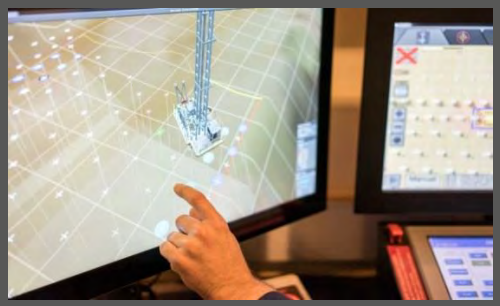
**Autonomous Haul Trucks Performance**
Effective utilisation indexed to all manned sites




Yandicoogina primary haul fleet now entirely autonomous (22 trucks across 2 pits)

**Autonomous Drills Performance**
Use of availability versus manned fleet



West Angelas first fully autonomous drilling site

RioTinto

# Nearly 400 improvement initiatives underway

## Mindful spending and improvement culture

"Production at the right cost" – Improving the work place

- Operations centre upskilled themselves to enable 'in-housing' support of two radio platforms, avoiding a contractor cost of $365,000
- Paraburdoo employees challenged vendor tool allowance, realising a credit of $25,000 for Paraburdoo and $145,000 across the Pilbara

## Work simplification

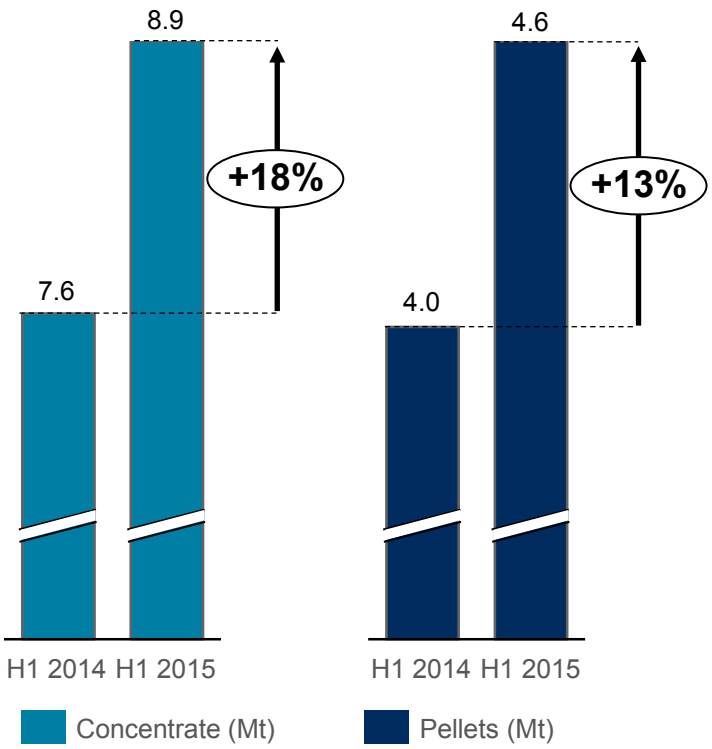
"Making it count" – Ensuring all work adds value through waste elimination

- Tom Price haul truck service kaizen reduced the 5.5 hour truck service time by 2 hours
- Rail track portable web grinders – 75% task time reduction reducing re-handling risk

RioTinto

# Iron Ore Company of Canada continues to improve performance

**Iron Ore Company of Canada production**
Million tonnes




- Monthly production record in July 2015, with 21.5 Mt/a concentrate run-rate
- Nameplate capacity of 23 Mt/a concentrate to be achieved in 2017[1]
- Concentrate unit cash cost:
  - $39.2/t in H1 2015
  - Down by 26% (H1 2015 vs. H1 2014)
  - 2016 target is $30/t
- Forecast to be cash positive in 2015
- IOC price premiums remained robust despite the decline in the fines price

[1] This production target must be read in conjunction with the supporting information set out on slide 4.

RioTinto

# Making a positive and lasting difference in our local communities

- An unfaltering commitment to the local communities that host our operations
- Key initiatives in education, health, environment, culture and regional sustainability
- Partnering with State and local/ provincial government to enhance community infrastructure and services
- Direct employment of over 1,000 Indigenous Australians
- Sourcing a 1,000 strong regional workforce through fly-in/fly-out

RioTinto

# Summary

**The safety and wellbeing and development of our people is paramount**

**Operational excellence continuing to drive productivity improvements**

**Maintaining a low cost industry position is embedded at all levels**

**Technology and automation continue to increase value**

**Sales and marketing excellence captures full value from our product suite**

**Word-class integrated system of mining, logistics and marketing**

RioTinto

RioTinto

# Maximising value

Bold Baatar, managing director, Iron Ore Sales & Marketing and Marine

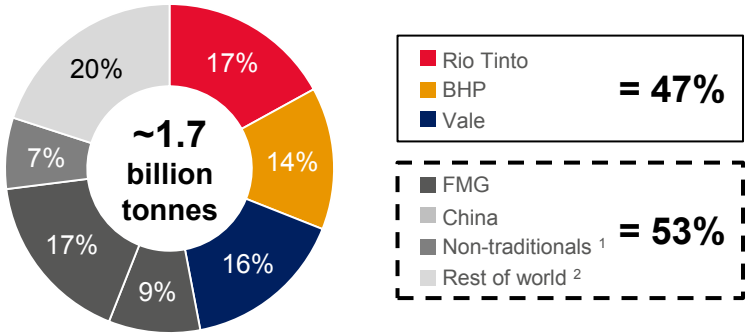
# Our sales and marketing capabilities maximise the value of our products

| | |
|---|---|
| **Industry knowledge** | • A deep understanding of markets and the steel industry |
| **Product alignment** | • Aligning our resource base with customer needs over the long term to maximise product value |
| **Strategic agility** | • Continuous development of marketing strategy, competencies and excellence in tactical execution |
| **Supply chain optimisation** | • Maximising supply chain capacity utilisation and value |

# Steel production has been resilient in 2015

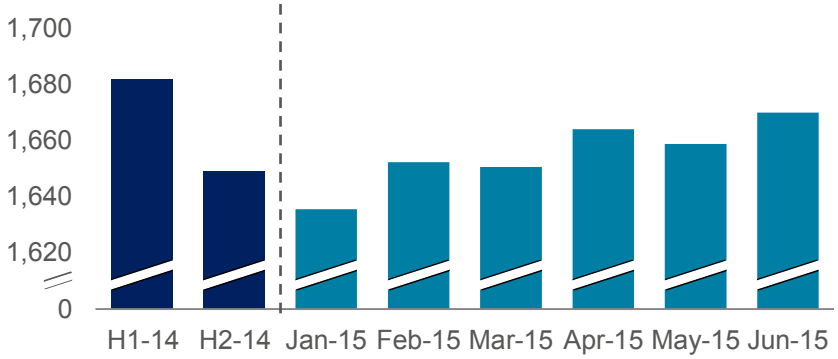
## Majors accounted for ~47% of 2014 supply

Percentage of contestable iron ore market



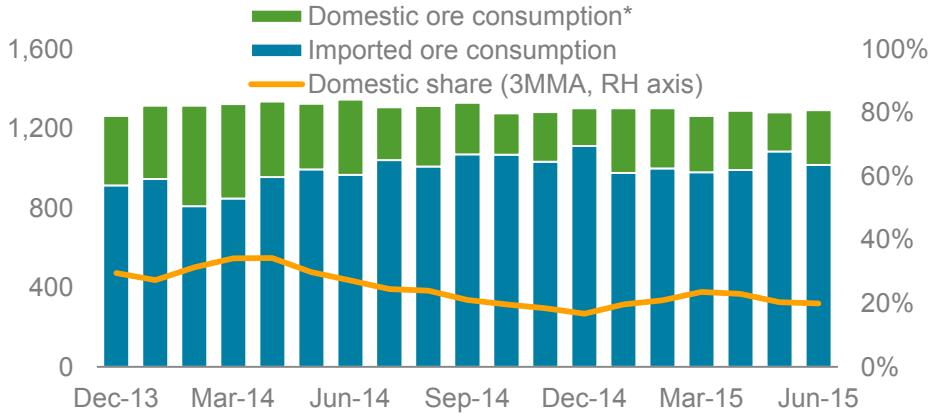

## Global steel production is broadly flat

Million tonnes annualised




## China's imported ore has remained steady

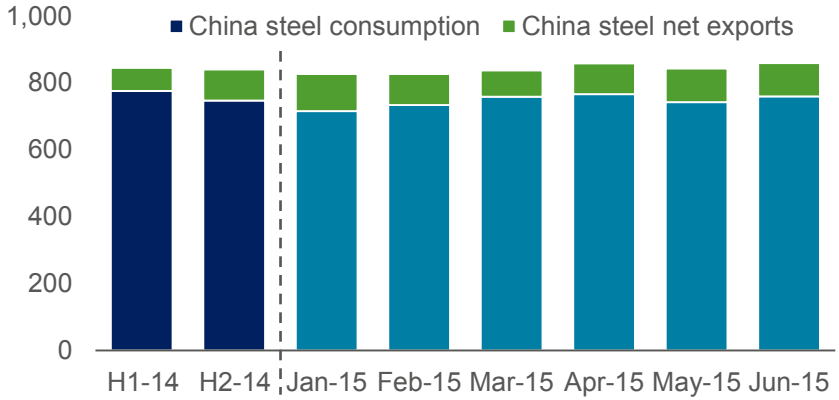
Million tonnes annualised




* Total Iron ore requirements – imported ore consumption

## China's steel exports offsets domestic consumption

Million tonnes annualised

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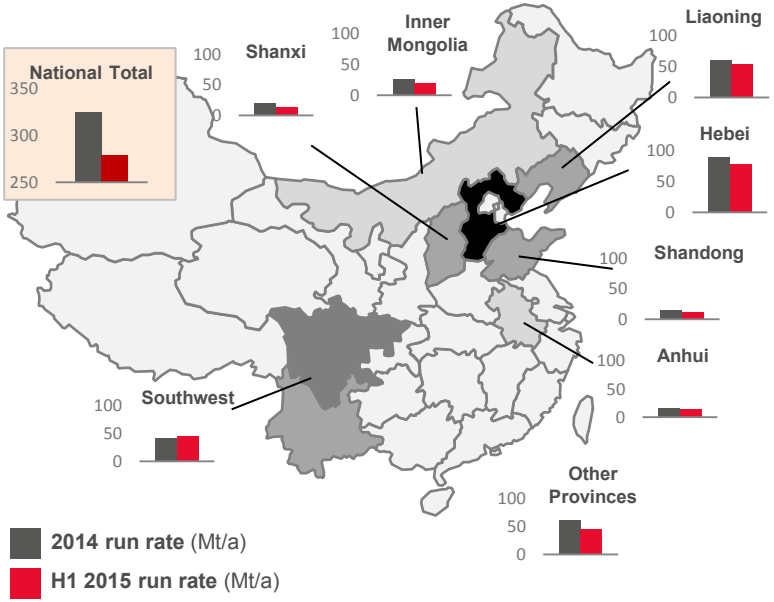
Source: Company reports, GTA, WSA, Mysteel and Rio Tinto analysis.
[1] Non-traditionals include Russia, Malaysia, Iran, Mexico and Indonesia.
[2] RoW includes Africa, South America, Europe, Canada and India.

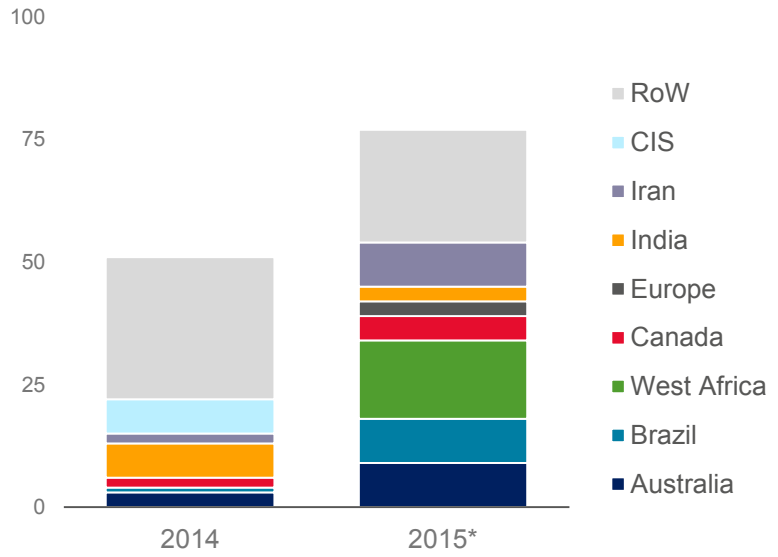
# We expect ~120 Mt/a of marginal iron ore supply to exit the market in 2015

**China domestic supply down ~45 Mt/a YoY**
Average annualised run rates (Mt/a)




Source: RTIO S&M Analysis, SMM, Mysteel, Company Reports

**High-cost seaborne supply down ~75 Mt/a YoY**
Exits annualised by region




*2015 reflects seasonally adjusted H1-2015 delivered supply (annualised)

~110 Mt of low-cost supply expected to enter in 2015, offset by stock movements and exits:

- ~45 Mt/a of exits from China: H1 2015 iron ore production ~280 Mt/a (325 Mt in 2014)
- ~75 Mt/a of exits from high-cost seaborne supply
- ~45 Mt/a of additional seaborne supply at risk

RioTinto

# Customers value products differently

## Technical

- Type of steel product produced
- Size of blast furnace or sinter plant
- Quality of metallurgical coal
- Stockpile and blending capacity
- Mill flexibility to vary sinter, pellet and lump charge

## Geographical

- Delivered costs and availability of fuels and fluxes
- Seasonal factors
- Availability, cost and quality of alternatives ores

## Commercial

Purchasing strategies including:

- Security of supply (contract duration, spot purchases)
- Flexibility within quality, credit or logistics constraints
- Own iron ore investments

## Regulatory

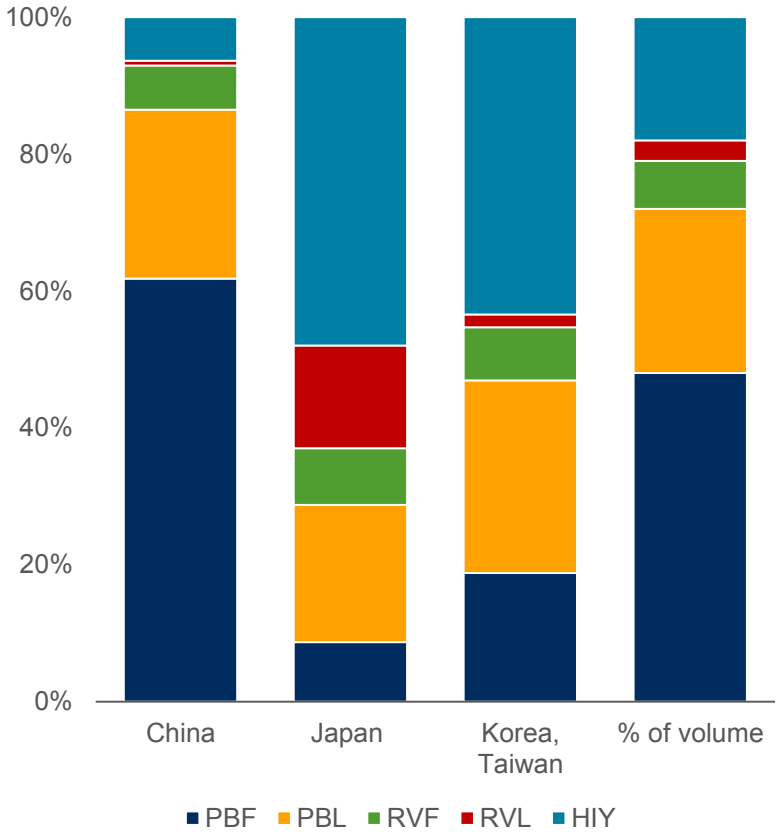
- Environmental exposure
- Energy caps/limitations
- By-products value or disposal costs

# Our Pilbara products are aligned to our resource base and customer needs

| Product | Strengths |
|---|---|
| **Pilbara Blend Fines** | • The most traded iron ore product globally<br>• Base load sinter blend in Asian markets |
| **Pilbara Blend Lump** | • Avoids the costs of sintering which will increase with increasing emissions legislation |
| **HIY Fines** | • Ideal chemical composition for the Asian sinter blends, with low alumina and phosphorus<br>• Coarse sizing aids sinter granulation |
| **Robe Valley Fines** | • Coarse sizing aids sinter granulation<br>• Low phosphorus |
| **Robe Valley Lump** | • Low phosphorus<br>• Avoids the costs of sintering which will increase with increasing emissions legislation |

**H1 2015 shipments by product**

Percentage

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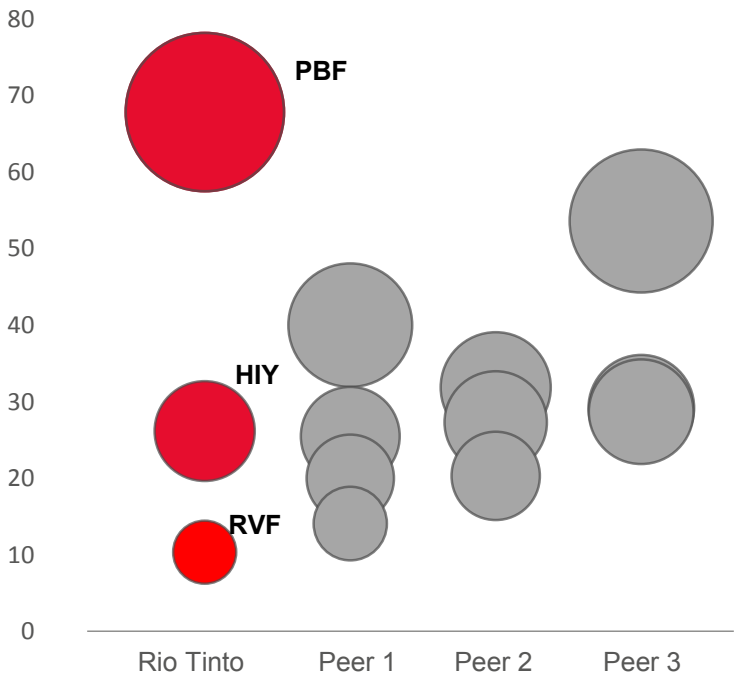
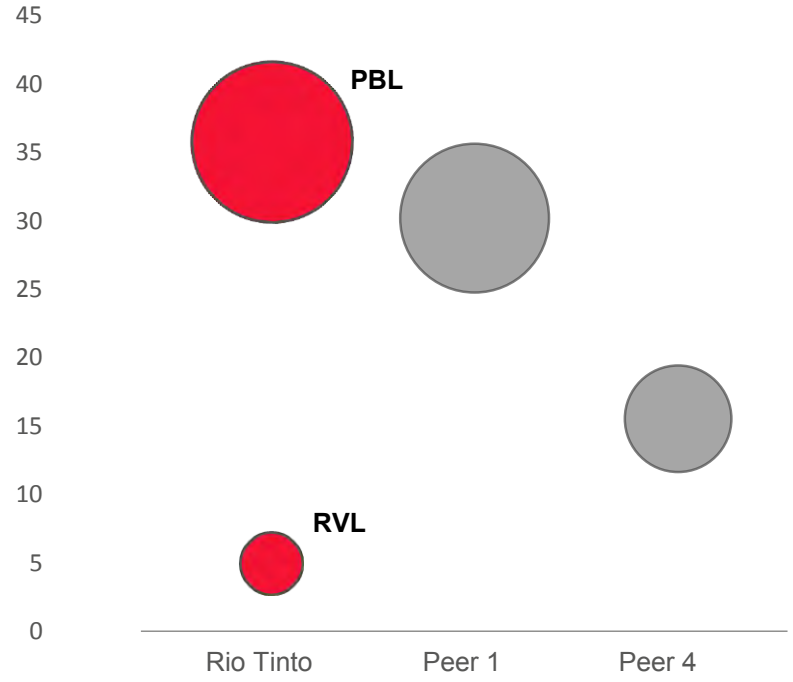
# Pilbara Blend is the industry reference iron ore

**Major iron ore fines products**
H1 2015 (million tonnes)




**Major iron ore lump products**
H1 2015 (million tonnes)




Source: RTIO S&M Analysis, Company Reports

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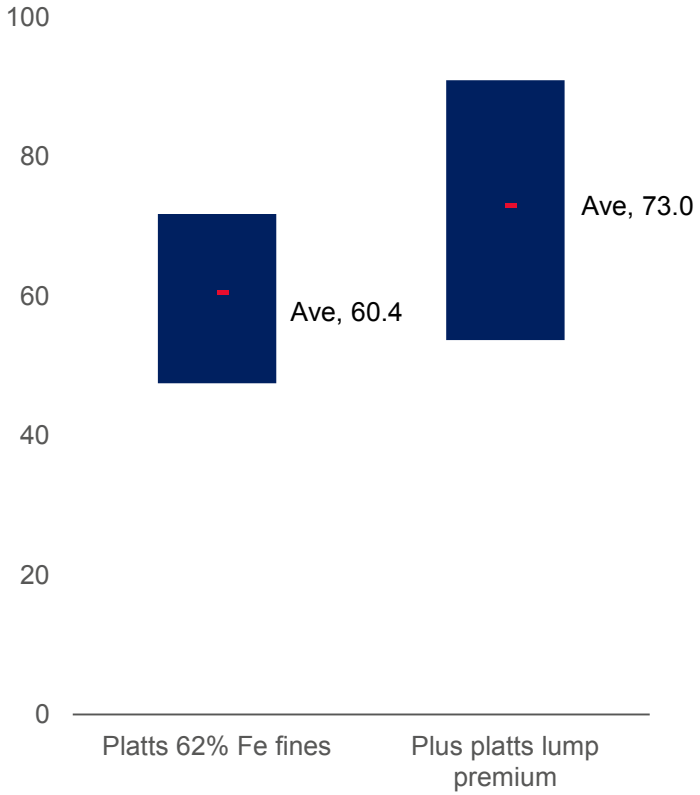
# Lump is an important value driver for Rio Tinto

**Lump is a higher value product**
US$ per dry metric tonne (CFR)




Source: Platts - H1 2015 averages

- Premium lump products remain in scarce supply
- Rio Tinto is the largest supplier of lump with 40 Mt of Pilbara Blend lump and Robe Valley lump shipped in H1 2015
- The Platts lump premium averaged ~$13/dmt above the 62% Fe index over H1 2015
- Lump demand in China should outperform iron ore growth due to:
  - Exit of domestic concentrate
  - Evolving burden practises
  - Increased environmental regulation

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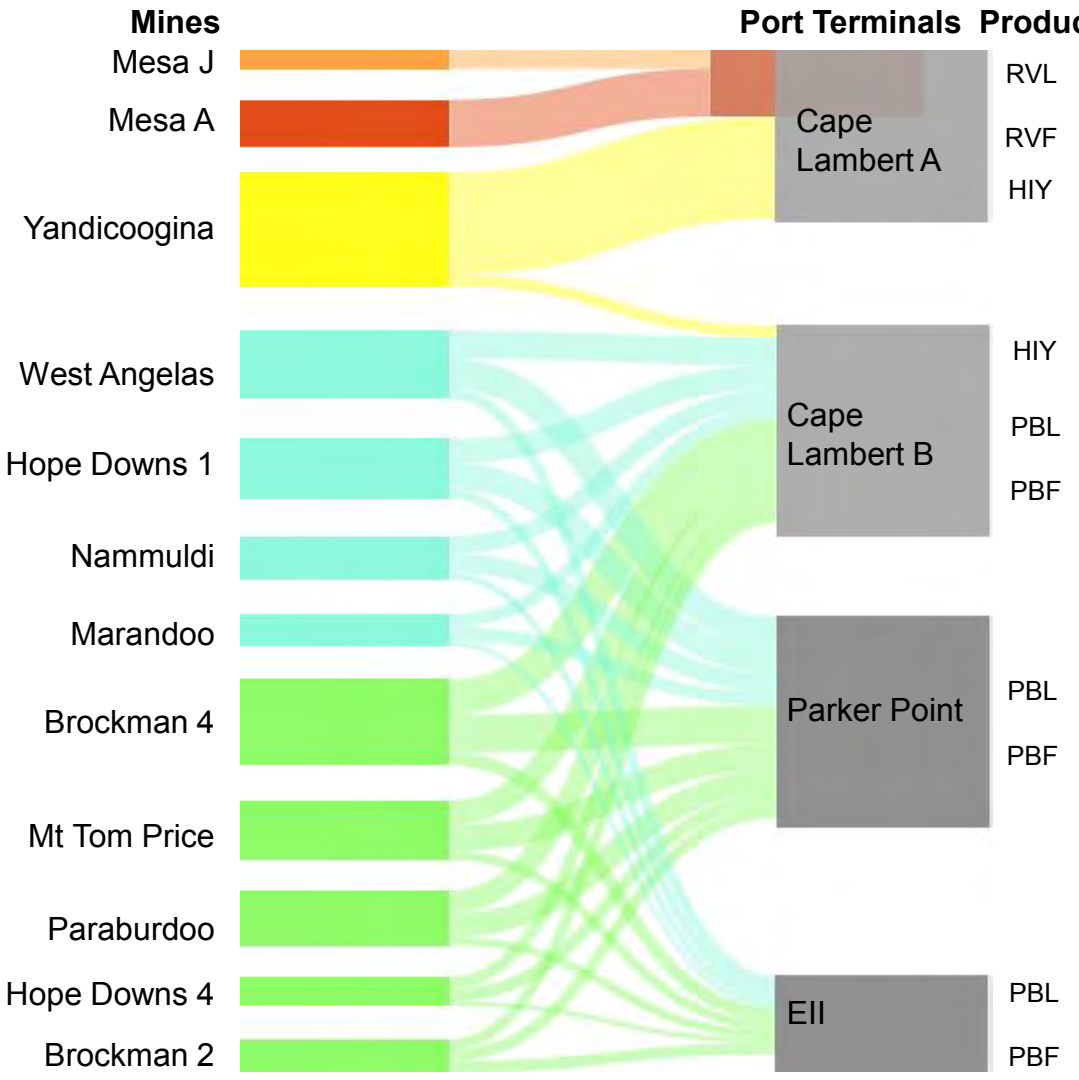
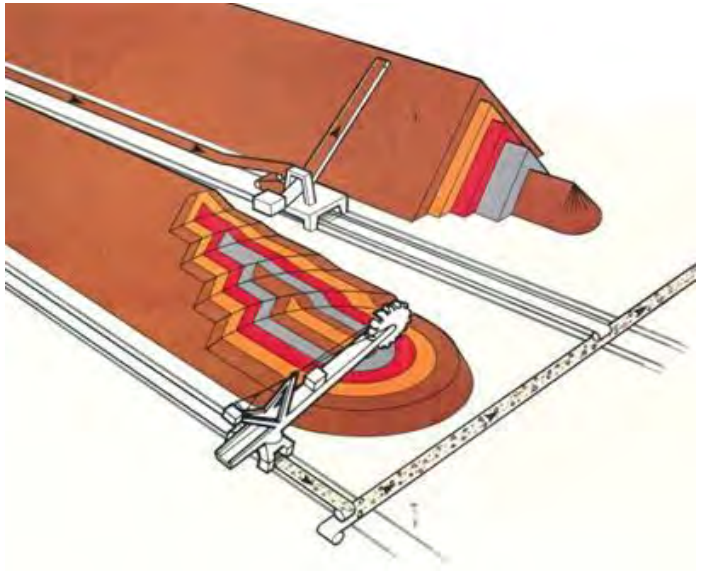
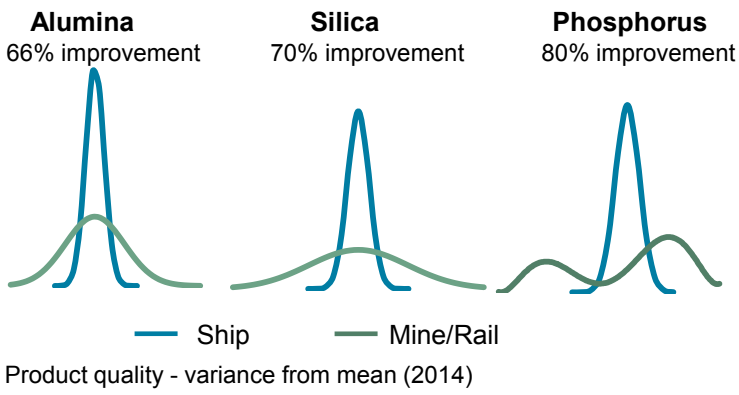
# Blending significantly reduces variability




**Stockpile stacking and reclaiming**



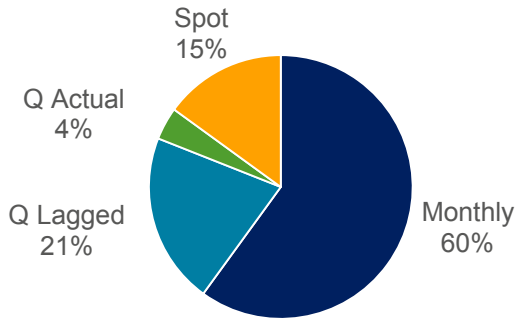



Product quality - variance from mean (2014)

RioTinto Pisolite Marra Mamba Brockman

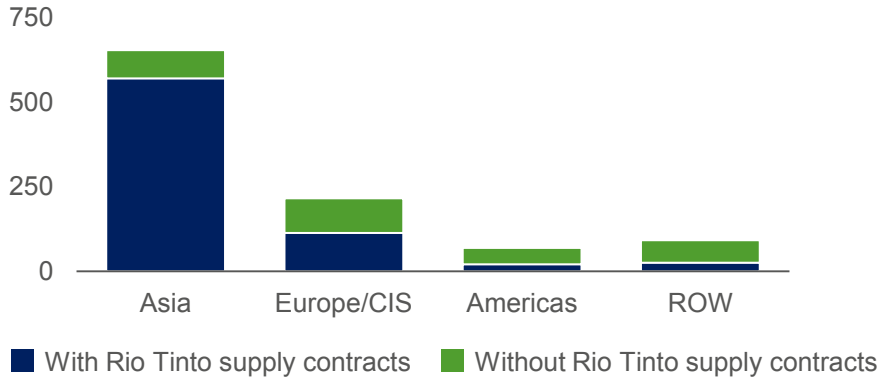
# Consistent supply and quality supports our marketing strategy

**2015 Pilbara off-take by pricing mechanism**
Percentage of total sales

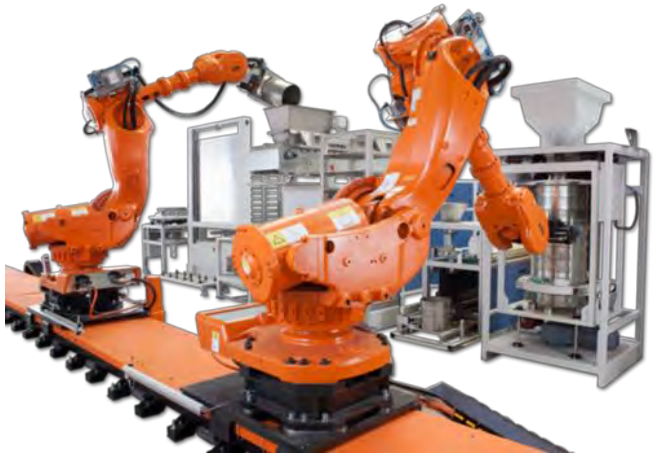



- Portfolio focused on long-term contracts with the world's top 50 steel companies
- Of our 2015 volume:
  - ~85% sold under term contracts
  - ~15% sold into the spot market, in support of robust and transparent indices

**Steel production - world's top 50 steel mills**
Million tonnes




Source: World Steel, Rio Tinto



Fully automated iron ore port laboratory at Cape Lambert B ensures world class analysis and sampling

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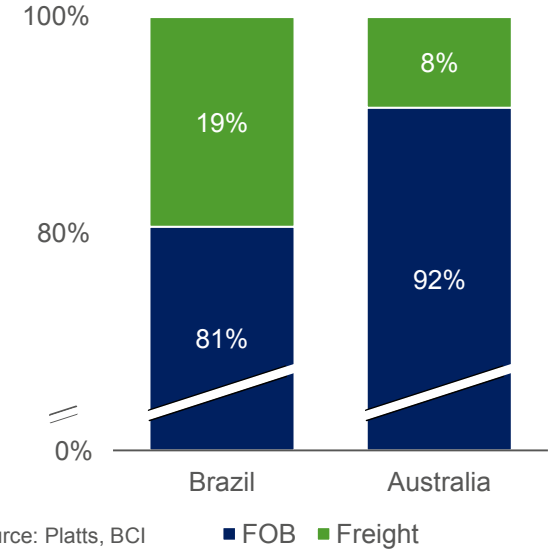
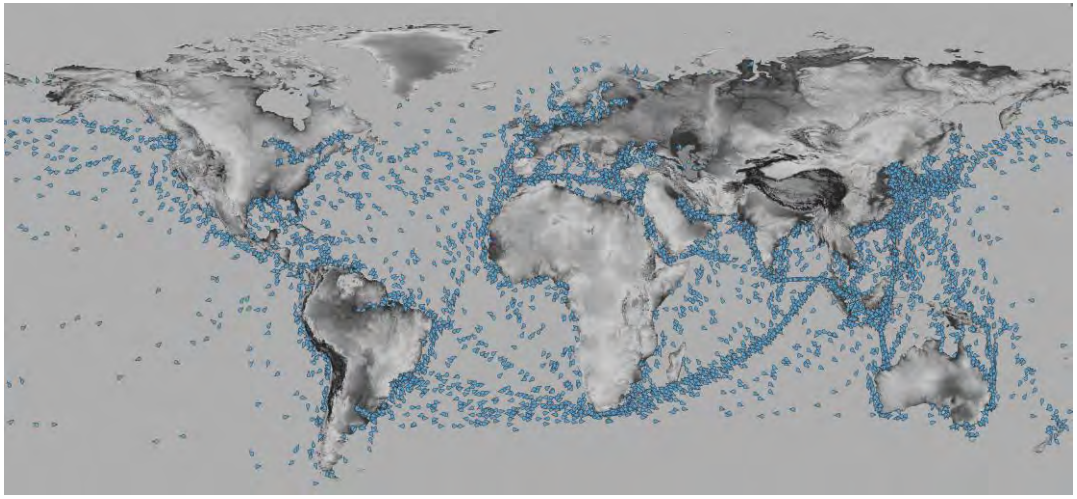
# Australia's delivered cost advantage to China

**H1 2015 freight component of the Platts 62% Fe price**




Source: Platts, BCI

**Dry bulk shipments**



- A standard vessel round trip of load port, to China, and back to load port is ~3 x longer for Brazil compared to Australia (~90 days compared ~30 days)
- Australia's proximity advantage will be more significant as oil prices recover
- Capesize bulkers continue to be the preferred vessel size by the industry with 20% of Pilbara-suited vessels now with a capacity of >200,000 tonnes

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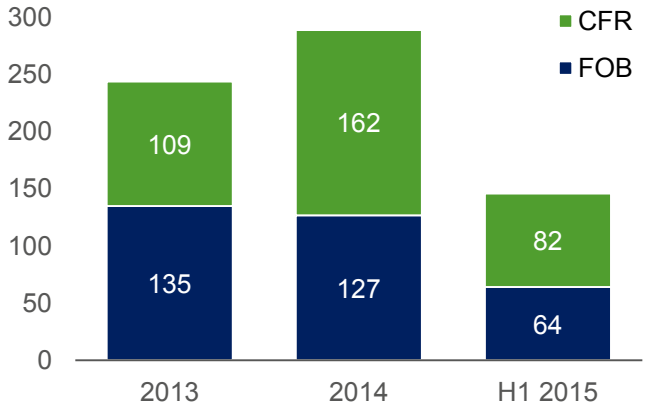
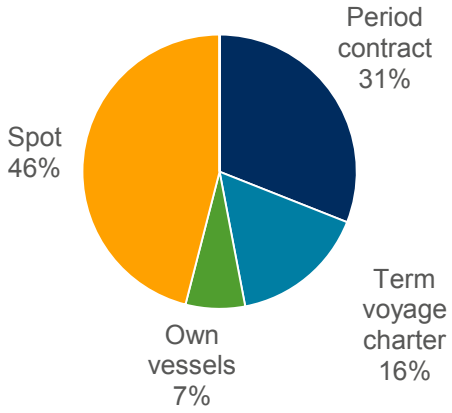
# Delivering value through management of the port to customer supply chain

**Rio Tinto Pilbara – Shipments**
Million tonnes




**Rio Tinto Pilbara – H1 2015 freight procurement**
Percentage of total




- Value created through
  - Price maximisation
  - Supply chain efficiency
  - Product placement flexibility
- Located in Singapore
  - Co-located with Rio Tinto marine and other product groups
  - Close to proximity to markets
  - World class logistics
- Close communications with:
  - Account management
  - Ship scheduling and chartering
  - Operations

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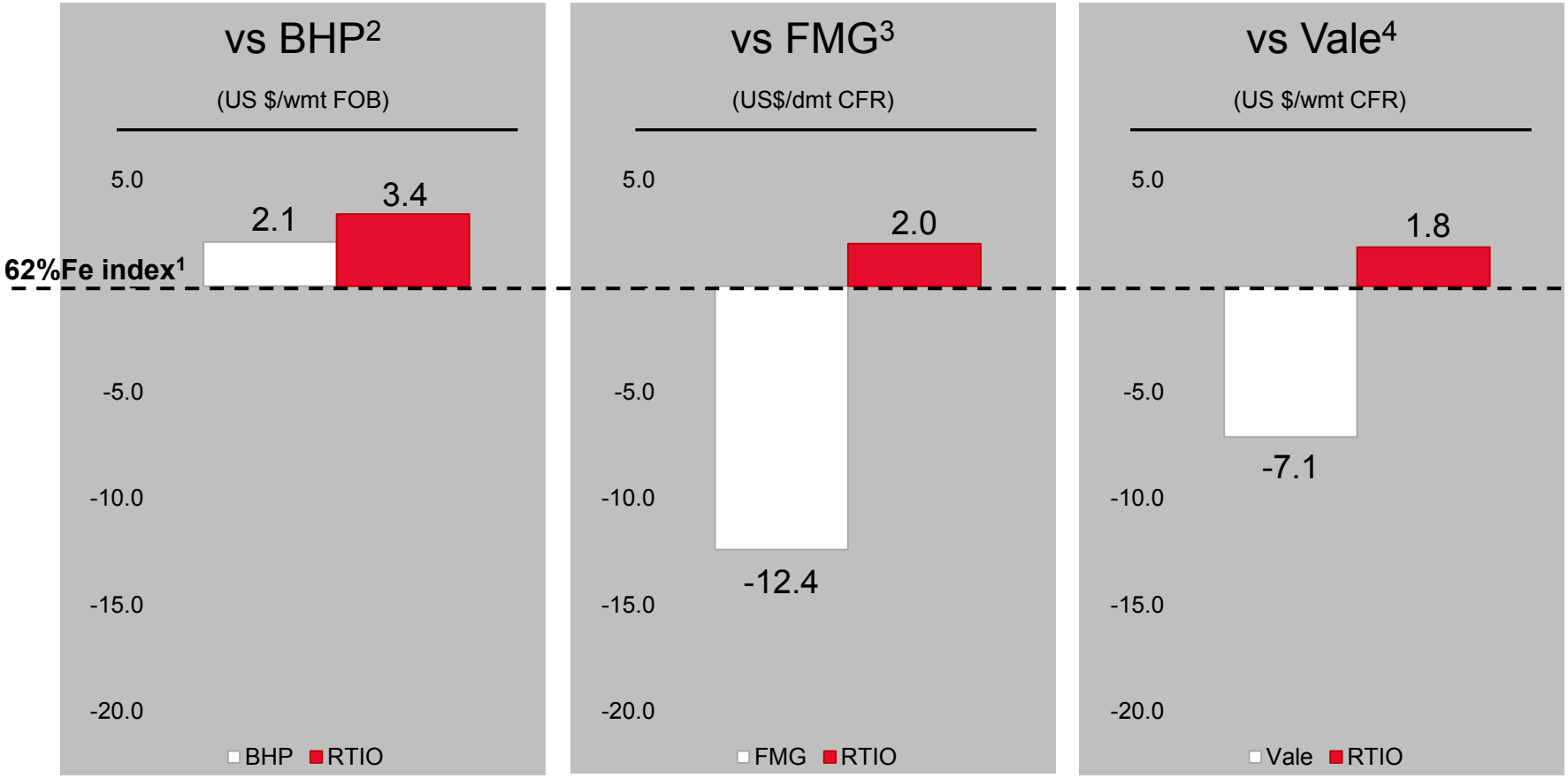
# Commercial excellence captures full value

**H1 2015 absolute price comparison:**




[1] Source: Platts, The Baltic Exchange. For the BHP comparison, the index has been adjusted to FOB basis by assuming BCI C5 (WA-Qingdao) and 8% free moisture.

[2] BHP Billiton Results For the Year ended June 30 2015, page 8.

[3] Implied weighted average of FMG half yearly results (Full Year (YEJ): $57/dmt CFR; First Half: $66/dmt CFR). FMG 2015 Annual Report, page 29. FMG Financial Report for half year ended 31 December 2014, page 5, 6.

[4] Weighted average of Vale Quarterly Financial Results. Iron Ore fines CFR/FOB realised price (ex-RoM & Pellets). Vale's Q2 2015 Earnings Release, page 25, 27.

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# Summary

**Supplier of choice to the Asian steel industry**

**Full offtake and close management of credit exposures**

**Value-maximising mix, aligned to customer needs and our resource base**

**Optimising our market placement through segmentation**

**Delivering value through alignment between Marine and Iron Ore**

**Higher average FOB price than other Pilbara producers**

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# Advancing productivity at Rio Tinto

Greg Lilleyman, group executive, Technology & Innovation

# T&I delivers world-class projects and step change productivity

## World-class projects

- **Project Shaping:** project shaping and strategic production planning
- **Major Project Delivery:** delivery of world class projects
- **Capital Effectiveness:** optimising portfolio and delivering best-in-class capital efficiency
- **Technical Assurance:** independent technical reviews

## World-class productivity

- **Productivity Generation:** productivity, innovation and analytics
- **Technical Discipline Leadership:** global processes and strategic technical risk management
- **Flagship Projects:** Asset Management, Energy Productivity, and Advanced Technology Deployment

# Rio Tinto Projects delivers major capital projects


Cape Lambert Port


Wickham Housing Estate


Paraburdoo


Kitimat, March 2015


Rail infrastructure


Nammuldi Below Water Table


Yandicoogina


Fume Treatment Centre


West Angelas Power Station


West Angelas Deposit B


Brockman 4


First hot metal – June 2015

**Iron ore infrastructure & mines $14.7bn**

**Kitimat $4.7bn**

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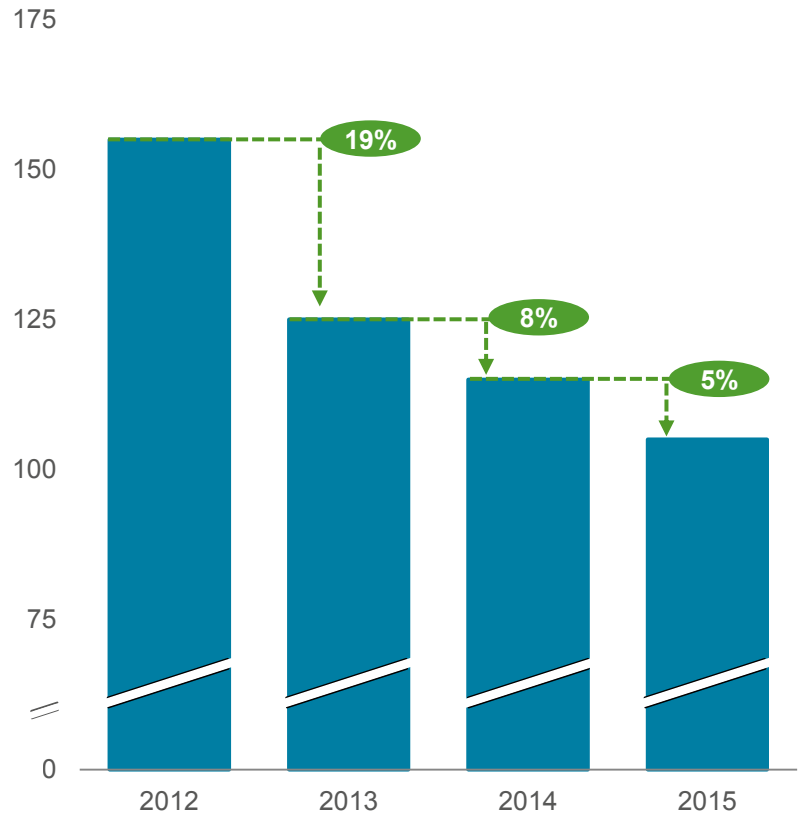
# Delivering value through optimising the Pilbara expansions

**Consistently improving capital efficiency**
(US$/t) Capital intensity of 220-360 Mt/a Pilbara expansion[1]




- Original 360 expansion included
  - Silvergrass
  - Koodaideri
- Optimised route relies on low-cost brownfield expansions
  - 40 Mt of brownfield mine expansions at capital intensity of $9/t completed in 2015
- Lower capex pathway for Silvergrass
  - Investment decision expected in 2016

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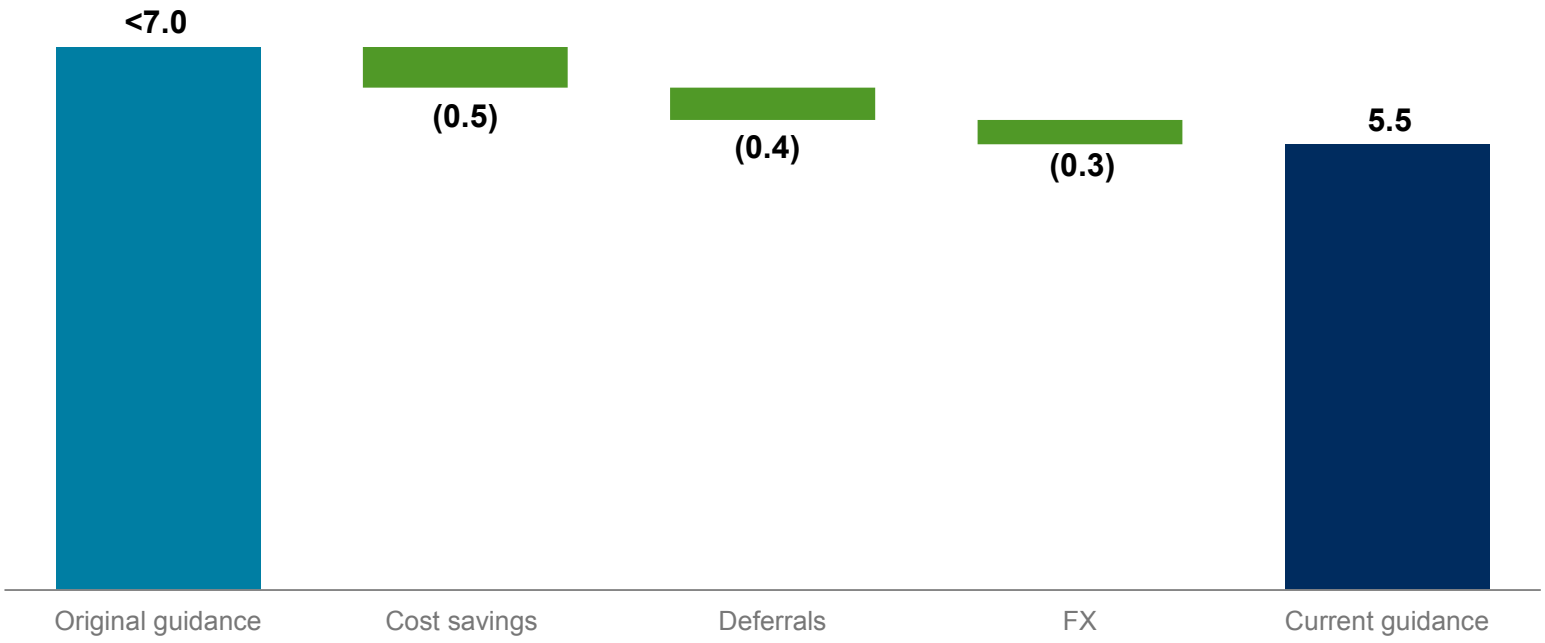
[1] Mid-points of guidance ranges shown in graph. 2012 guidance was mid $150s/t. 2013 guidance reduced to $120-130/t which was further reduced in 2014 to $110-120/t. The latest guidance is ~$105/t.

# Sustainable growth delivered for less

**2015 capital expenditure guidance**
US$ billion

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# Current focus is on three key growth projects

| Iron Ore | Aluminium | Copper |
|---|---|---|
| **Pilbara mines**<br><br>Push mine capacity through low-cost growth to fill expanded infrastructure | **South of Embley**<br><br>Feasibility study expected to complete towards end of 2015 | **OT Underground Mine**<br><br>Over 80% of the value lies in the underground development |
| **Current focus is**:<br>• Completing the 360 growth programme<br>• Progressing AutoHaul®<br>• Assessing Silvergrass timing | **Current focus is**:<br>• Capital savings opportunities<br>• Optimising construction schedule | **Current focus is:**<br>• Finalising the Feasibility Study<br>• Re-stablishing Project Financing<br>• Obtaining final permits |

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# Steady progress on AutoHaul® implementation

**Autohaul® operation**

**Wayside system & communications**

- World's first fully autonomous long distance heavy haul railway
- Improves productivity & safety
- Over 250 journeys completed in automated mode
- ~90% of locomotive modifications complete
- Wayside works are complete and being commissioned
- 86% software complete
- Forecast project completion mid-2016

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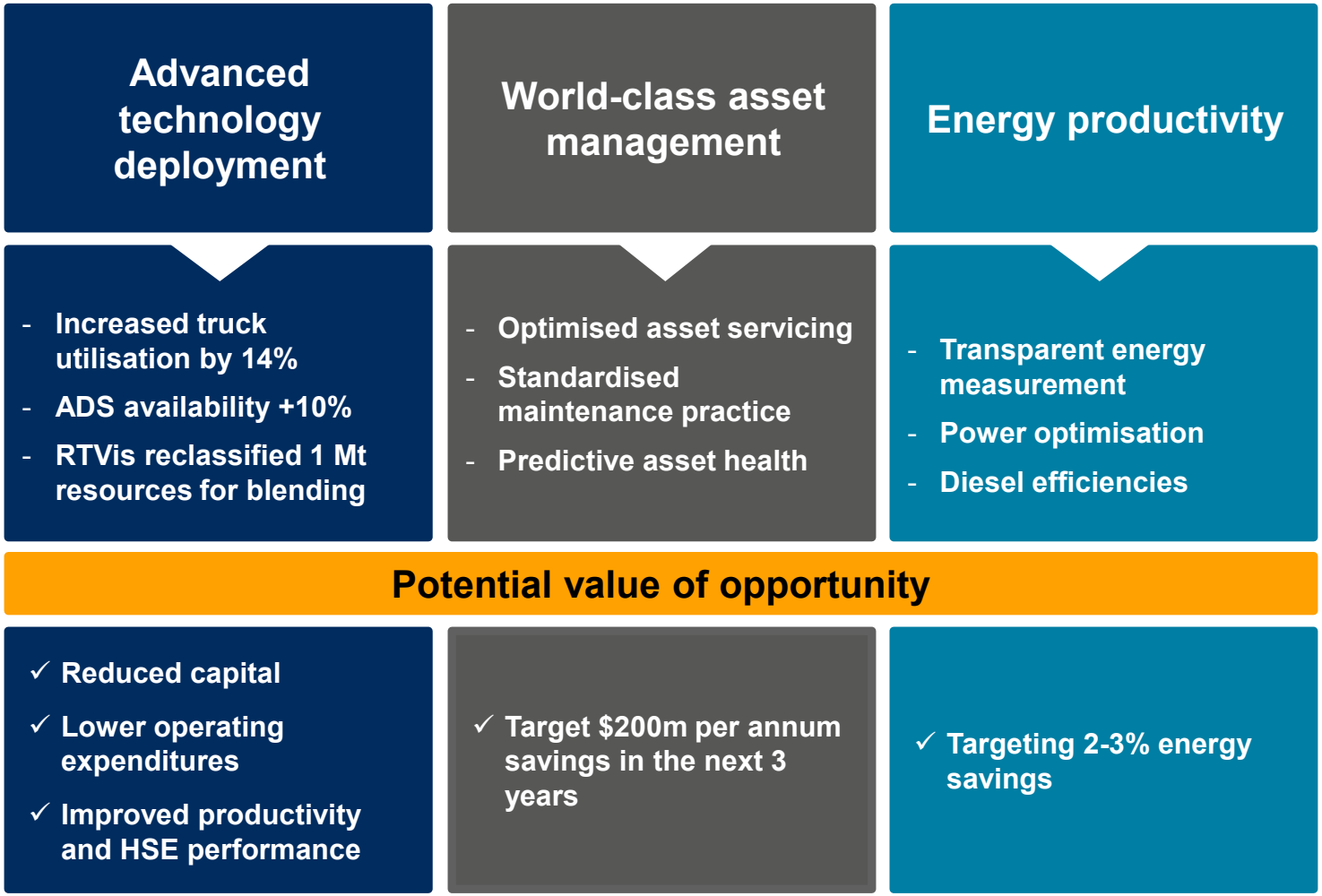
# Delivering productivity improvements across the Group

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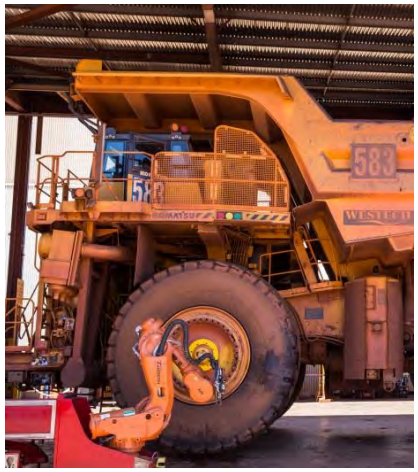
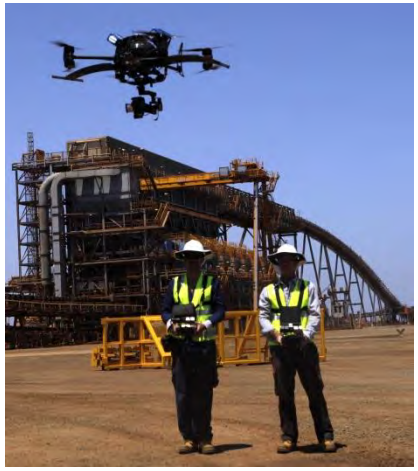
# Advancing productivity through the Mine of the Future™ programme

RTVis™



Haul Truck Wheel Changer


Autonomous Haulage Truck



Drone operation

Technologies developed include:

- Autonomous trucks
- AutoHaul®
- Advanced analytics
- Resistate indicator minerals
- RTVis™ / Mine Automation System
- Train load-out control system
- Remote draft survey
- Haul truck wheel changer
- Drone applications

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# Big data analytics manages risk and reduces costs


**900** haul trucks
**4.9** Tb data per day

**Cloud based**
advanced neural networks

| | Target run-time (hrs) | Actual Run-time (hrs) | Deferred spend |
|---|---|---|---|
| Engine 1 RTIO | 25,000 | 27,867 | **$61,927** |
| Engine 2 RTIO | 25,000 | 30,022 | **$108,475** |
| Engine 3 RTIO | 25,000 | 28,668 | **$79,228** |

**Predictive**
analytics

## Benefits to the business

- **Lower costs**
- **Detection of impending failure**
- **Extends useful life**
- **Risk-based maintenance**

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# T&I delivers significant value

## World-class projects

- Best-in-class project portfolio
- High-quality investment options
- Reduced capital intensity
- Strategic technical risk management

## World-class productivity

- Group-wide deployment of world class technologies and productivity platforms
- Leading the mining industry in step-change innovations
- Moving beyond industry norms

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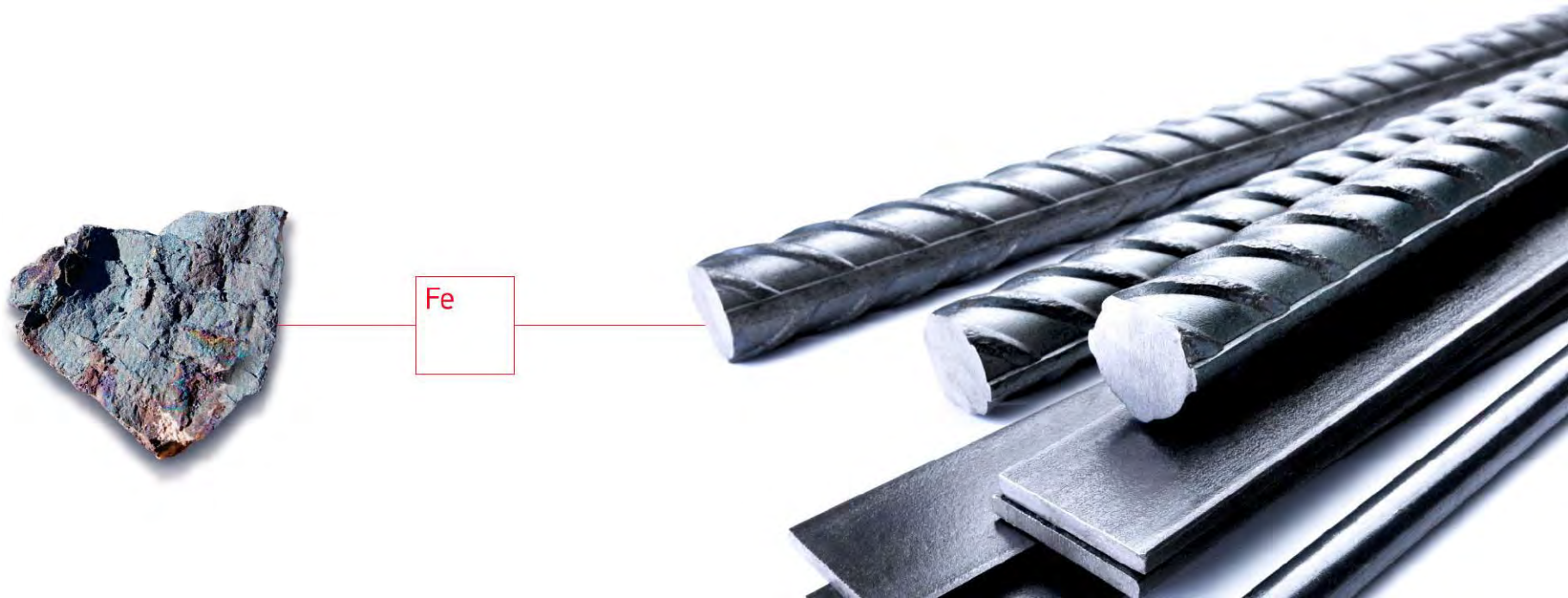
# Summary

Andrew Harding, chief executive, Iron Ore



# Best performing iron ore business

**Our priority is the safety and wellbeing of our people**

**Tier one assets and tier one people**

**Creating value through technology and innovation**

**Embedding a culture of constant improvement**

**Clear strategy that will deliver value through the cycle**

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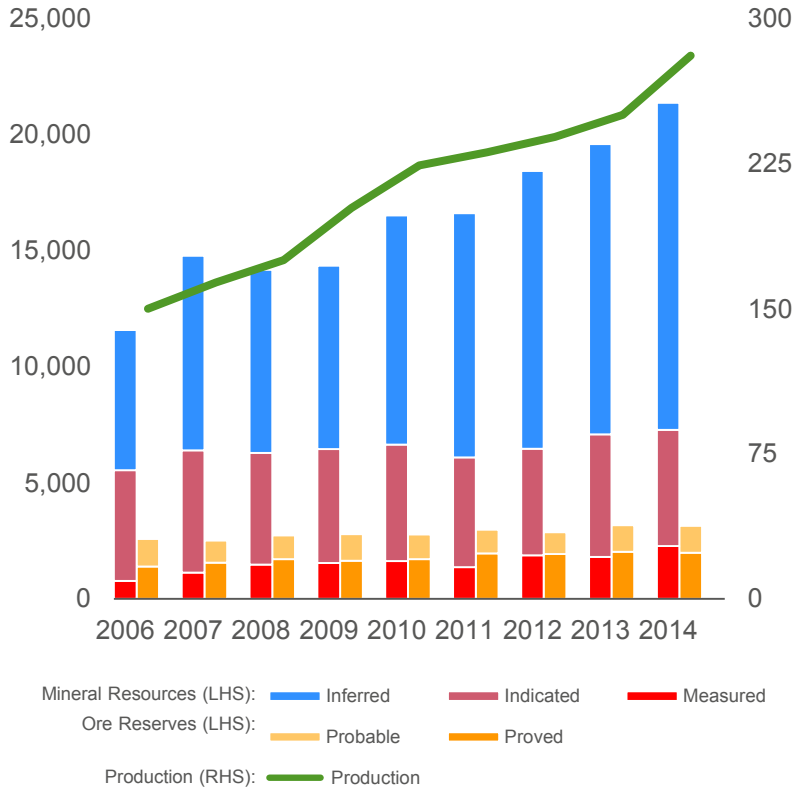
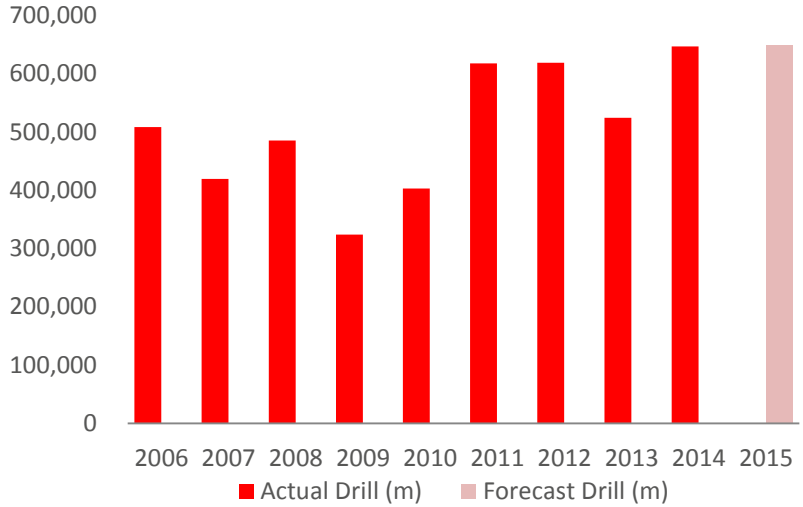
# Appendix

# Mineral Resources and Ore Reserves

**Pilbara resources, reserves and production**
Million tonnes (LHS, dry; RHS, wet)




**Drilling**
Metres

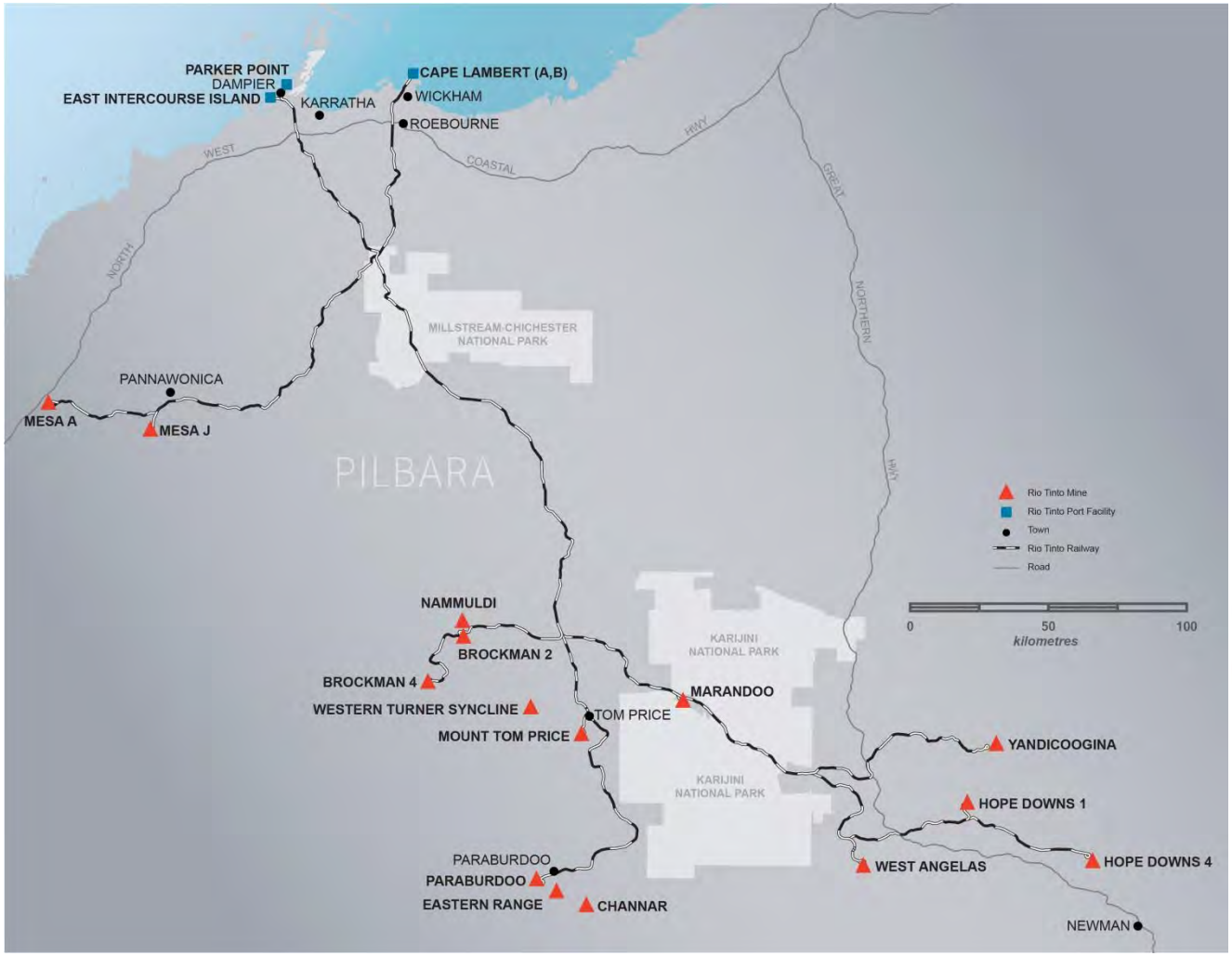



- Mineral Resources position continues to support production growth
- Maintaining evaluation drilling and resource development programs
- Ore Reserves are being maintained in line with actual mine production

Mineral Resources and Ore Reserves are reported in dry metric tonnes and are reported on a 100% basis. Ownership percentages for each joint venture are provided in the Mineral Resource and Ore Reserve statements on pages 199 and 204 of the Rio Tinto 2014 Annual Report.
Mineral Resources are reported exclusive of Ore Reserves. Ore Reserves are reported as product tonnes. Mineral Resources are reported on an in situ basis.
Refer to the statements supporting the above estimates and relevant Competent Person references set out on slide 3 of this presentation.

RioTinto

# The Pilbara - a fully integrated system




- +12,500 workforce
- 15 mines
- 1,700kms rail
- 4 port terminals
- 3 power stations
- 360 trucks
- 39 production drills
- 190 locomotives


RioTinto

# Rio Tinto share of shipments reconciliation

Calculation of Rio Tinto share of Pilbara shipments

| | kt |
|---|---|
| Rio Tinto Iron Ore Global Sales | 122,672 |
| Less: IOC Concentrate | (1,530) |
| Less: IOC Pellets | (2,806) |
| Rio Tinto Iron Ore Pilbara Sales | 118,336 |
| | |
| Adjustment to increase Robe River Mines from 53% to 65% basis | |
| Robe River Sales - Pannawonica (Mesas J & A) | 7,943 |
| Robe River Production - West Angelas | 8,272 |
| | 16,215 |
| | |
| Sales from Robe River mines (65% basis) | 19,886 |
| Adjustment to increase Robe River Mines from 53% to 65% basis | 3,671 |
| | |
| Rio Tinto Share of Pilbara Shipments (65% basis) | 122,007 |

*The Group recognises a 65 per cent share of the assets, liabilities, revenues and expenses of Robe River, with a 12 per cent non-controlling interest. The Group therefore has a 53 per cent beneficial interest in Robe River.*

*Robe River (and therefore West Angelas and Pannawonica) is owned through two holding companies. One holding company is 100% owned, and owns 35% of Robe. The other is 60% owned and owns 30% of Robe. Rio Tinto's effective ownership is therefore (100%*35%) + (60%*30%) or 53%. Each of the holding companies proportionally consolidates for the part of Robe that it owns, i.e. holding company one consolidates 35% of Robe's revenue and cost; holding company two consolidates 30% of Robe's revenue and cost. These holding companies are then fully consolidated in the Rio Tinto Group accounts, resulting in 65% of Robe's revenue, cost and assets being included in Rio Tinto's revenue, cost, assets, etc. The 12% that is not owned by Rio Tinto is removed in the line attributable to non-controlling interests to get back to Rio's true share of 53%.*

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