



RioTinto

# Investor Seminar

6 December 2016

London

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# Supporting statements

## Mineral Resources and Ore Reserves

The Pilbara Mineral Resource and Ore Reserve estimates which appear on slide 30 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 2015 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 A Do (Reserves 2015).

The Mineral Resource estimate for Resolution which appears on slide 53 was reported in Rio Tinto's 2015 Annual Report dated 2 March 2016 and released to the market on 3 March 2016. This resource estimate is reported on a 100% basis. The Competent Person responsible for that previous reporting was C Hehnke (AusIMM). affects these resources estimates, and confirms that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

The Mineral Resource estimates which appear on slide 65 are based on the Mineral Resource statements in the 2015 Rio Tinto Annual Report to shareholders released to the market on 3 March 2016. The Competent Person responsible for reporting of the Mineral Resources was J Garcia (Eurogeol) a full time employee of Rio Tinto. Mineral Resources were reported for Lithium at 117Mt @1.8% Li<sub>2</sub>O (equivalent to 2.1Mt Li<sub>2</sub>O) and Borates at 18Mt B<sub>2</sub>O<sub>3</sub> (representing 117Mt @15.53% B<sub>2</sub>O<sub>3</sub>).

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 2015 annual report. All material assumptions on which the estimates in the 2015 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 product tonnes. Mineral Resources are reported on an in situ basis.

## Production Targets

The production target for Amrun shown on slide 9 was disclosed in a release to the market dated 27 November 2015 ("Rio Tinto approves US\$1.9 billion Amrun (South of Embley) bauxite project").

The production target for Oyu Tolgoi shown on slide 9 is the average production 2025-2030, including open pit production. This production target was disclosed in a release to the market on 6 May 2016 ("Rio Tinto approves development of Oyu Tolgoi underground mine").

All material assumptions underpinning these production targets continue to apply and have not materially changed.

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# Investor Seminar

J-S Jacques  
Chief executive



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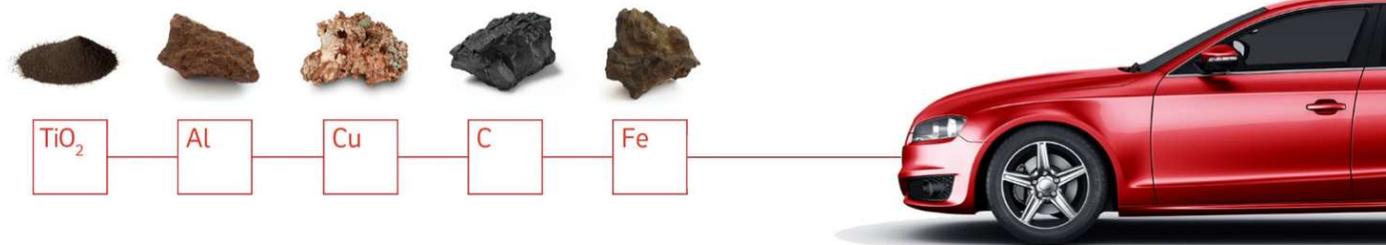
# Consistent delivery of value

Long-term strategy

Cash focus

Capital discipline and shareholder returns

Team and performance culture



# We are well positioned to deliver sustainable returns

<b>Industry themes</b>	<b>Productivity and margins</b>	<b>Maturing China</b>	<b>Resilience</b>	<b>Growth</b>
<b>Our opportunities</b>	Operating and commercial capability Culture of cost reduction and cash generation	Market-leading products Commercial capability	Tier 1 assets Strategic partnerships	Three major funded capital projects Exploration and project capability



# Strategy will deliver value through the cycle

## Superior cash generation



World-class assets  
**Portfolio**



Operating excellence  
**Performance**



Capabilities  
**People & Partners**

## Disciplined capital allocation

**Balance sheet strength**

**Superior shareholder returns**

**Compelling growth**

# 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 2016 margins	<b>58%</b> FOB EBITDA margin	<b>48%<sup>1</sup></b> FOB EBITDA margin	<b>21%<sup>1</sup></b> Operating EBITDA margin	<b>47%<sup>1</sup></b> Operating EBITDA margin

<sup>1</sup> Margins exclude product group overheads

# Industry-leading growth of >2%<sup>1</sup> ...



Silvergrass – delivering high-value iron ore with system benefits for the Pilbara Blend

20Mt/a capacity, H2 2017



Amrun – high-quality greenfield bauxite project

22.8 Mt/a<sup>2</sup> capacity, H1 2019



Oyu Tolgoi underground – large, high-grade, brownfield copper development

~560kt/a copper production (2025-2030)<sup>2</sup>

<sup>1</sup> Copper equivalent CAGR, 2015-2025. <sup>2</sup> Refer to the statements supporting these production targets set out on slide 3 of this presentation.

# ...with optionality of a broader portfolio

## Shaping our current portfolio

\$5.3 billion<sup>1</sup> of disposals since 2013

2016 disposals include:

- Bengalla
- Mount Pleasant
- Lochaber



<sup>1</sup> Based on amounts announced in Rio Tinto media releases, may vary from cash flow statement due to completion adjustments and exchange rates

## Expanding our future portfolio

Incubator for new minerals and projects

Leading exploration and project capability

Exploring for 8 commodities across 17 countries

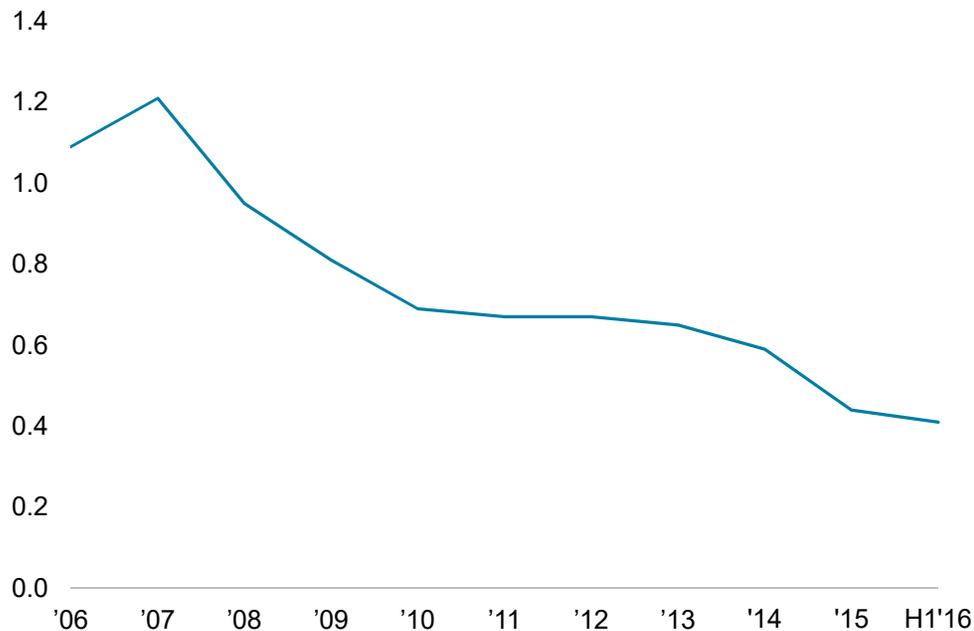
Jadar lithium project, Serbia



# Safety comes first

## A history of continual improvement in safety

AIFR per 200,000 hours worked



## Fatality at Paraburdoo in June

Continued focus on personal and process safety across all operations

Group-wide implementation of new Critical Risk Management (CRM) Programme

- What can kill me at work?
- What controls will stop that happening?
- Are those controls in place?

# We will deliver \$5 billion of free cash flow in productivity improvements over five years

## Value Chain



Exploration



Major projects



Mining



Asset  
management



Processing



Infrastructure



Marketing

## Broadening our cost saving programme to include productivity

Opportunity to  
improve by **30%**



Haul Truck  
Effective Utilisation<sup>1</sup>

Opportunity to  
improve up to **70%**



Maintenance Quality –  
Mean Time Between Failure<sup>2</sup>

Opportunity to  
improve by **30%**



Processing Utilisation  
– wet & dry<sup>3</sup>

All sources Rio Tinto. <sup>1</sup> All trucks best to worst performing, excluding autonomous trucks. <sup>2</sup> Across a range of key assets with utilised time representing one element of MTBF. <sup>3</sup> Across wet & dry mineral processing, excluding smelting

# Protecting our licence to operate

Exploration



Closure and rehabilitation



Operations

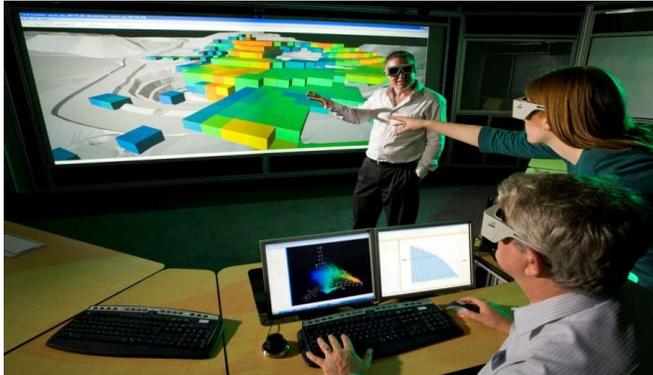


# Developing our people and capabilities

Building capabilities



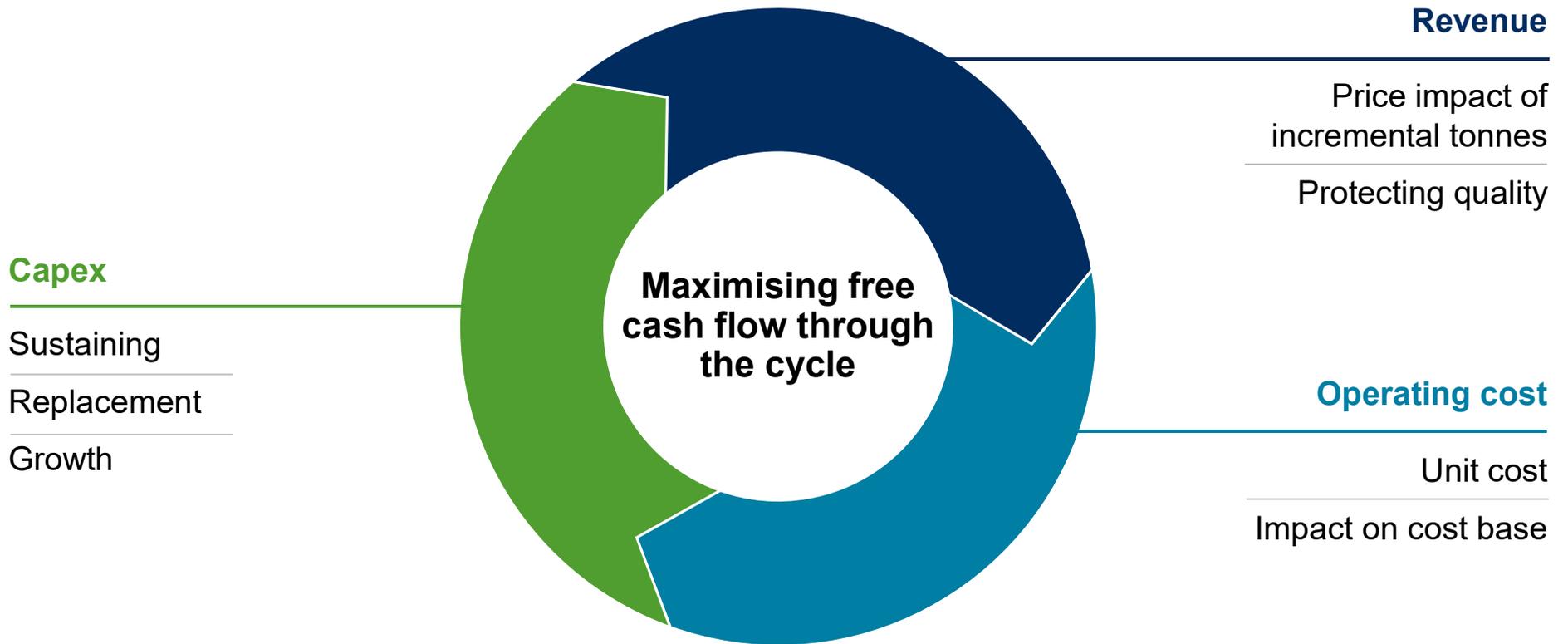
Technical excellence



Commercial  
excellence



# Focusing on value over volume



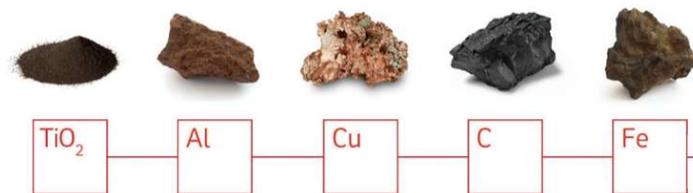
# Consistent delivery of value

Long-term strategy

Cash focus

Capital discipline and shareholder returns

Team and performance culture



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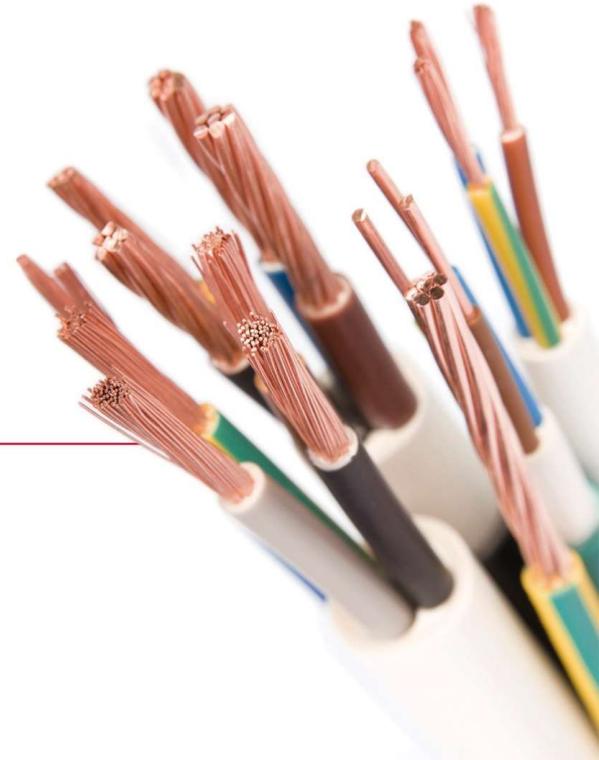
# Investor Seminar

Chris Lynch

Chief financial officer

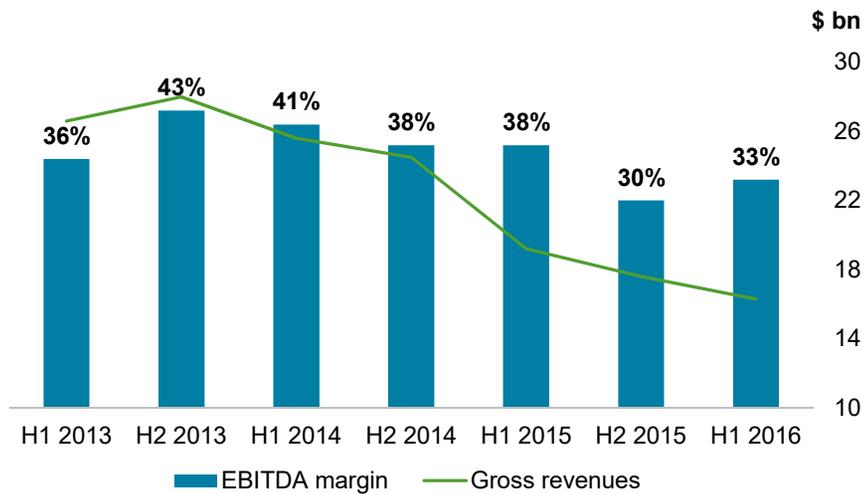


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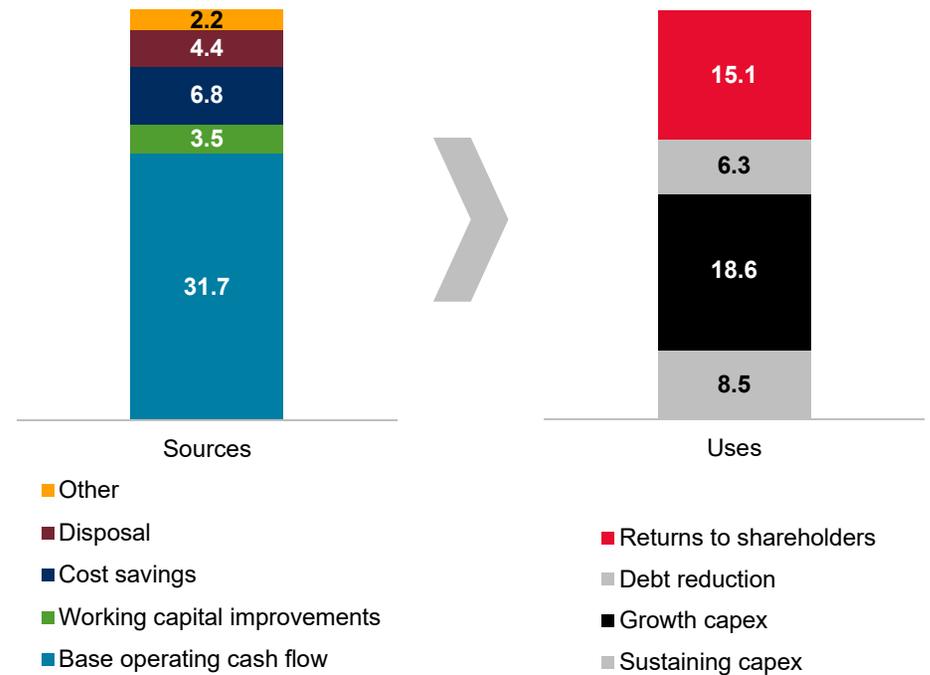


# Generating significant returns for shareholders

**Consistently high margins despite lower revenues**  
EBITDA margin and gross revenue 2013 – H1 2016



**Disciplined allocation of cash**  
Cash flows 2013 – H1 2016 (\$ billion)



# Our capital allocation framework

1 | Essential  
sustaining capex

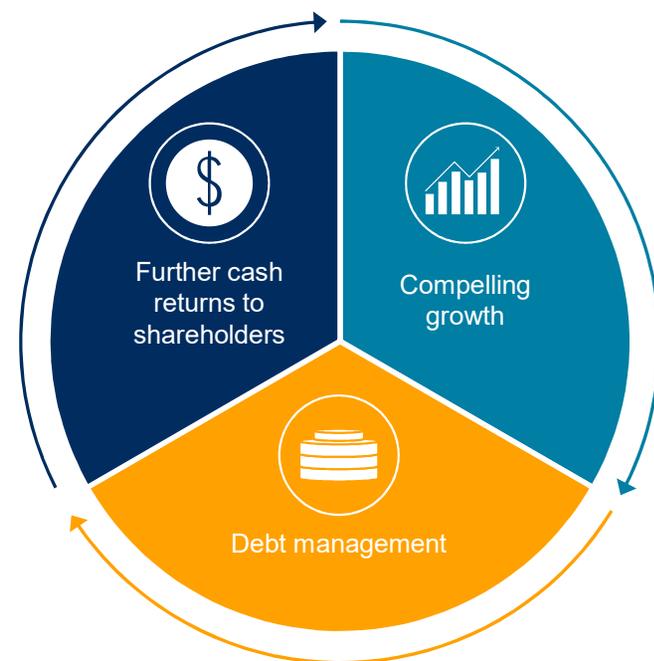
2 | Ordinary  
dividends

3 | Iterative  
cycle of >

**~\$10 billion**

2017 operating cash flow at Q3 average prices<sup>1</sup>

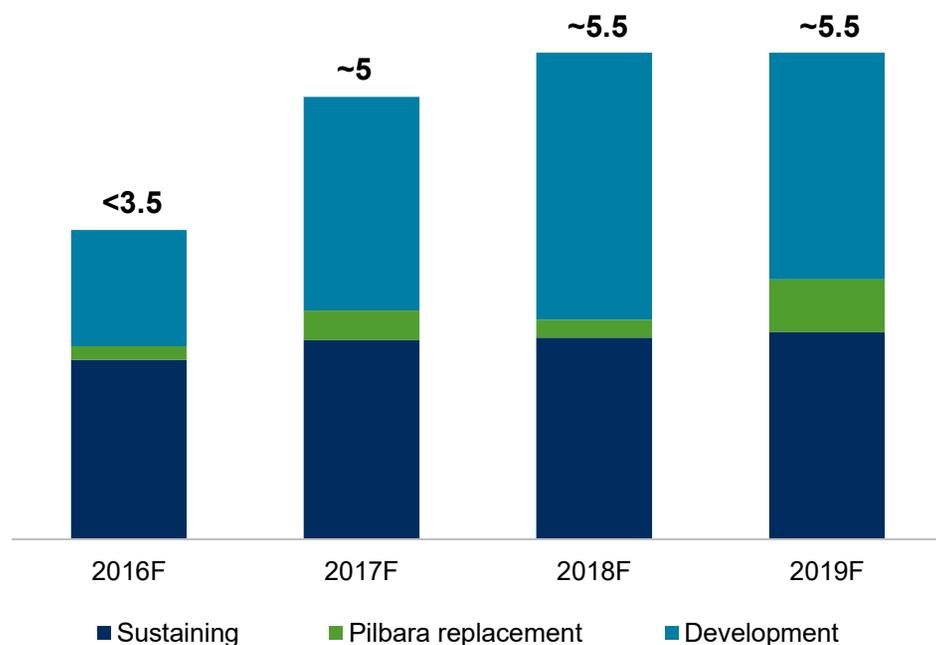
<sup>1</sup>Based on Q3 2016 average prices



# Disciplined capital allocation to the most compelling projects

## Capital expenditure profile

\$ billion<sup>1</sup>



Only major miner investing through the downturn

Capital allocation discipline requires project IRR >15%

Growth capital is focused around three key approved projects:

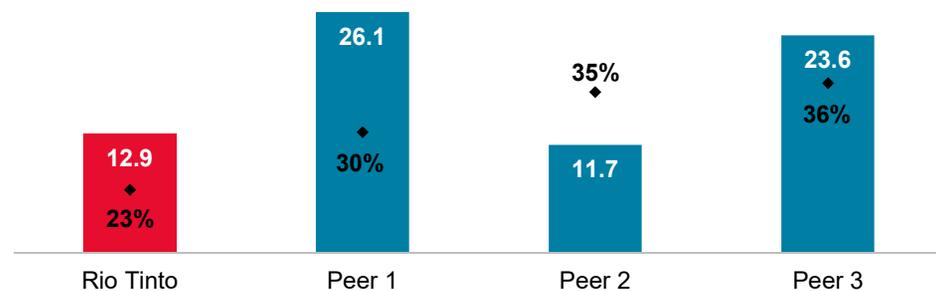
- Amrun bauxite
- Oyu Tolgoi Underground
- Silvergrass

Brownfields Pilbara mines replacement capital intensity of \$5 - \$20 / tonne

# Best in sector balance sheet is a competitive advantage

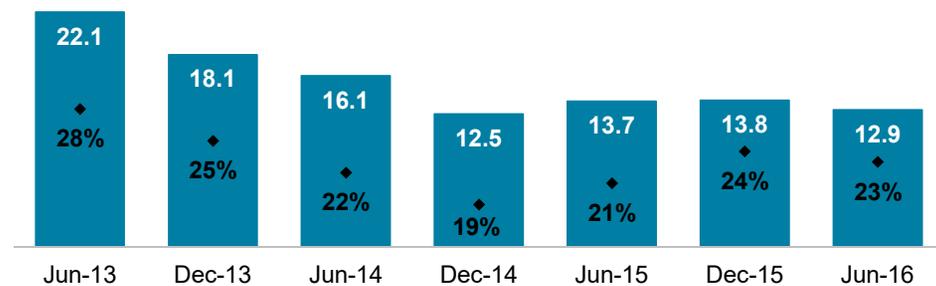
Net debt and gearing ratio<sup>1</sup> at 30 June 2016

\$ billion



Rio Tinto net debt and gearing ratio<sup>1</sup>

\$ billion



<sup>1</sup> Gearing ratio (♦) = net debt / (net debt + book equity)

Stable foundation during market volatility

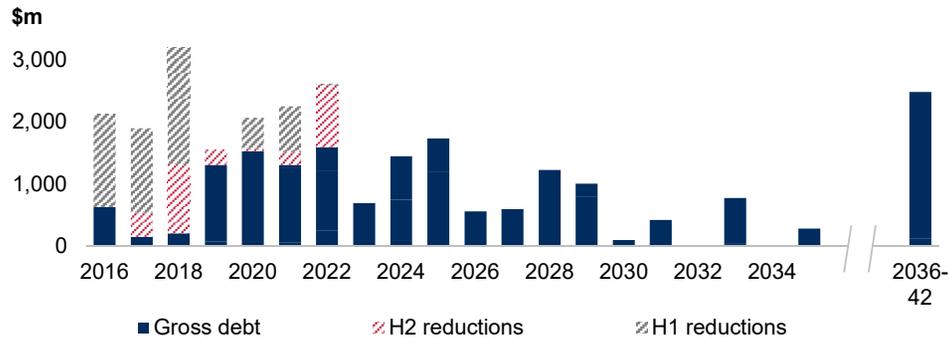
Enables counter-cyclical investment in compelling growth

Supports shareholder returns through the cycle

Guidance of 20-30% gearing ratio through the cycle  
 – Remains in lower half of gearing range

# Near-term maturities greatly reduced

## Proforma 31 October 2016 debt maturity profile<sup>1</sup>

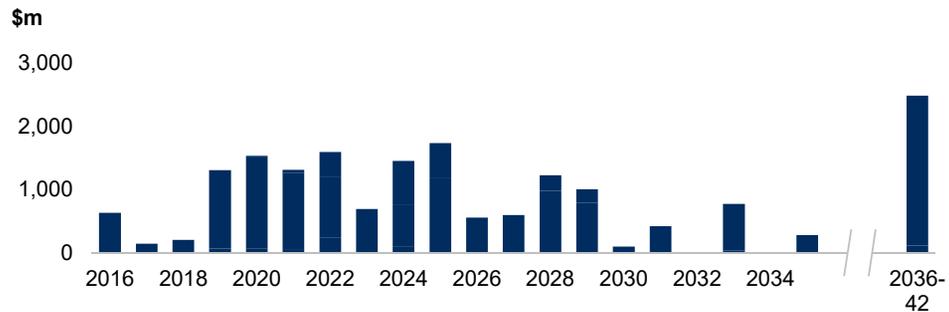


\$6.0 billion of debt purchased or repaid with cash in H1 2016

\$4.1 billion of Oyu Tolgoi Project Finance fully consolidated in H1 2016

Additional \$3 billion bond purchase completed in October 2016

– Average outstanding bond maturity now ~11.5 years



<sup>1</sup> Based on June 2016 debt carrying values, before and after H1 and H2 reductions

# Delivering superior shareholder returns

## Balanced capital allocation

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Maintain an appropriate balance between:

- Investment in compelling growth projects with IRR >15%; and
  - Total shareholder cash returns of 40-60% of underlying earnings through the cycle
- 

Supplement ordinary dividends with additional returns in periods of strong earnings and cash generation

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Remains the Board's intention for 2016 full year dividend of not less than 110 US cents per share

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Balance between interim and final to be weighted towards the final dividend

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Board to determine appropriate ordinary dividend per share, taking into account:

- Results for the financial year
- Outlook for our major commodities
- View on the long-term growth prospects
- Objective of maintaining a strong balance sheet

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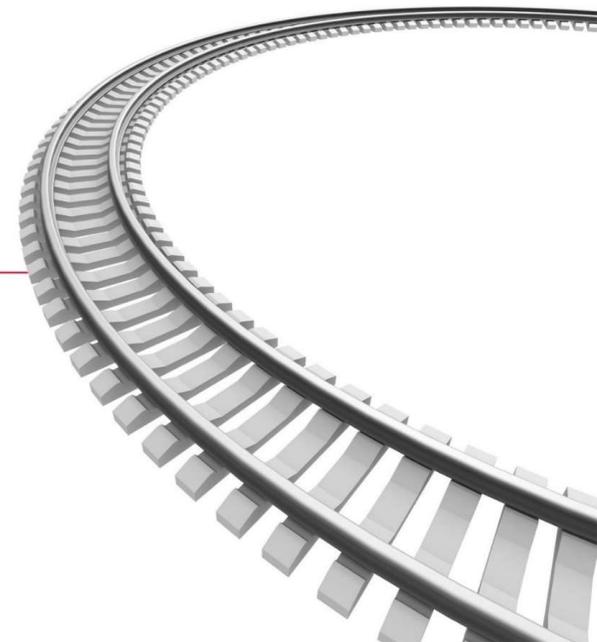
# Delivering optimal value

Chris Salisbury

Chief executive, Iron Ore



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

## Strong foundation

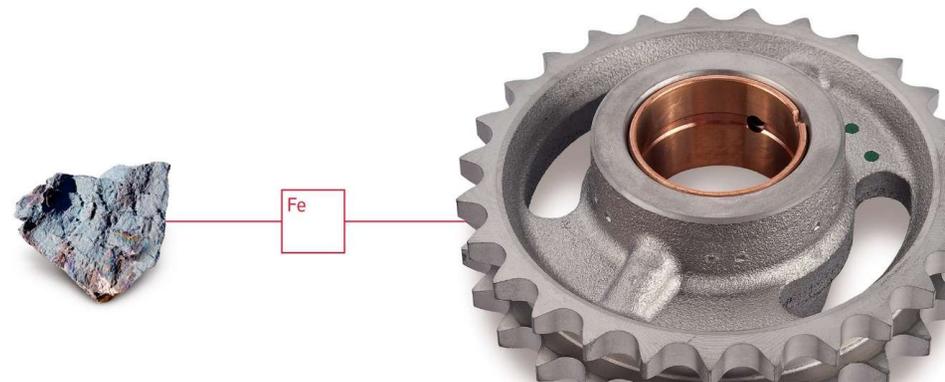
- Exclusive use of assets, fully integrated system, consistent returns through the cycle
- Highly-valued product suite, sustained by significant resources
- Quality people and partners

## 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

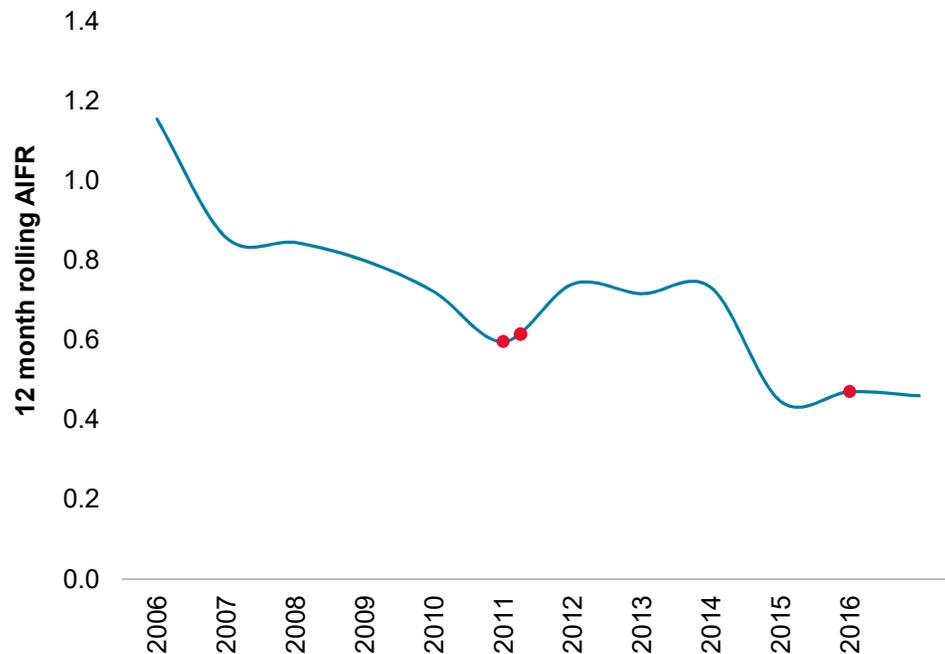
## Value over volume

- 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



Tragic loss of life at Paraburdoo – June 2016

Focus on fatality elimination and injury prevention

Critical Risk Management focus

- critical controls
- field verifications
- accountabilities
- use of data to focus on weak areas

# Major trends influencing the iron ore market

## Steel production resilient.....

Steel production has been resilient in 2016  
Replacement cycle a more significant driver of steel consumption  
Scrap increasingly important

## .....with continued high cost iron ore supply exits

Exits of higher cost producers  
Lower concentrate availability  
Impact of depletion  
Increased supply from low-cost producers and new entrants

## Changing nature of financial markets.....

Increased liquidity in iron ore paper markets influences sentiment  
Presence of non-physical players in market creates more price volatility

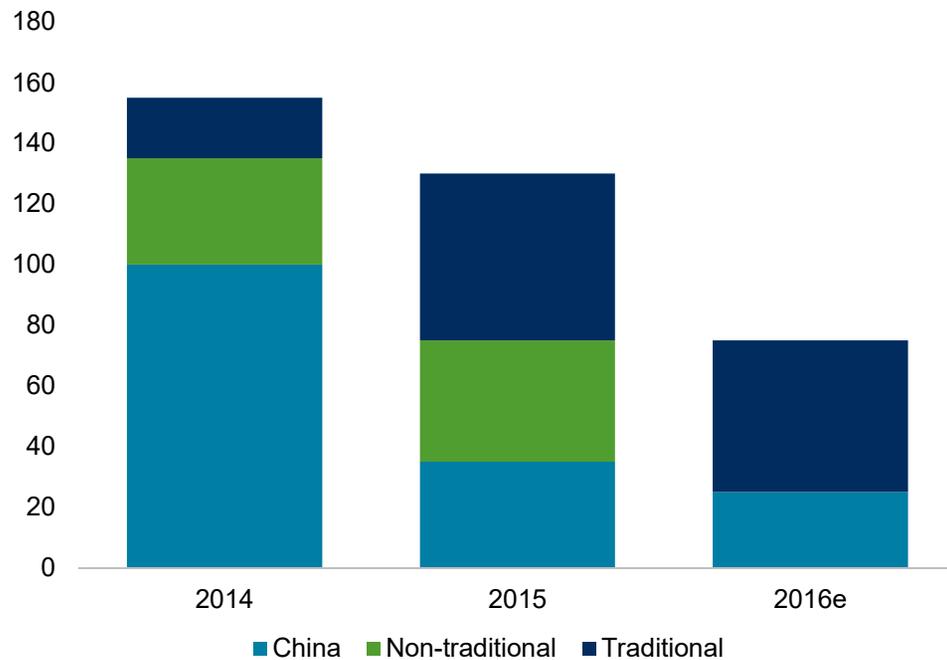
## ...and of regulatory frameworks

Environmental restrictions  
Steel capacity reductions / consolidation  
Energy caps  
By-product value / disposal costs

# Supply continues to moderate.....

## Iron ore supply exits

Million tonnes



Continue to anticipate further additions of low-cost supply out to end of decade but this is moderating

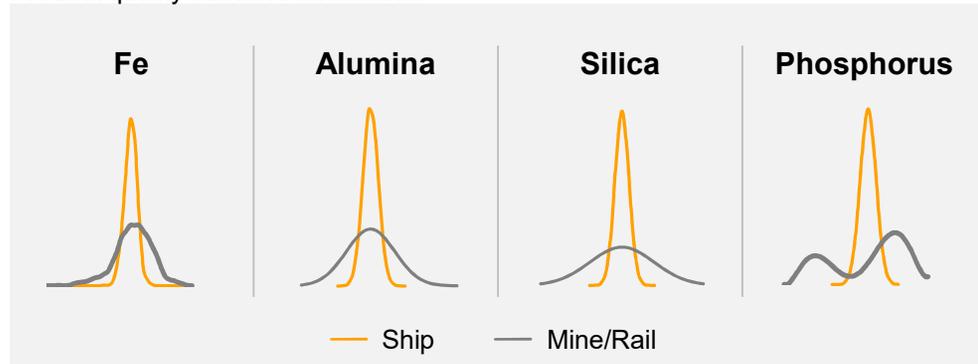
Expect exits to keep pace with entries over time to bring market into equilibrium

- Unsustainable cost reductions unwind
- Deteriorating balance sheets see reduced investment to sustain businesses / operations

# ...but we are well placed with our product suite, including the industry benchmark Pilbara Blend

## Blending reduces product variability

Product quality variance from mean



Customers value the consistency and liquidity of the Pilbara Blend

- Easier to manage blast furnace mix
- Technical expertise provided to maximise value in use
- Easily traded product
- Reduces inventory

PB fines is the only product with a Platts 'brand differential' in recognition it is worth more than the index

## Platts 62% Fe index and lump premium 2016 YTD\*

US\$/dry metric tonne



Lump is a significant value driver

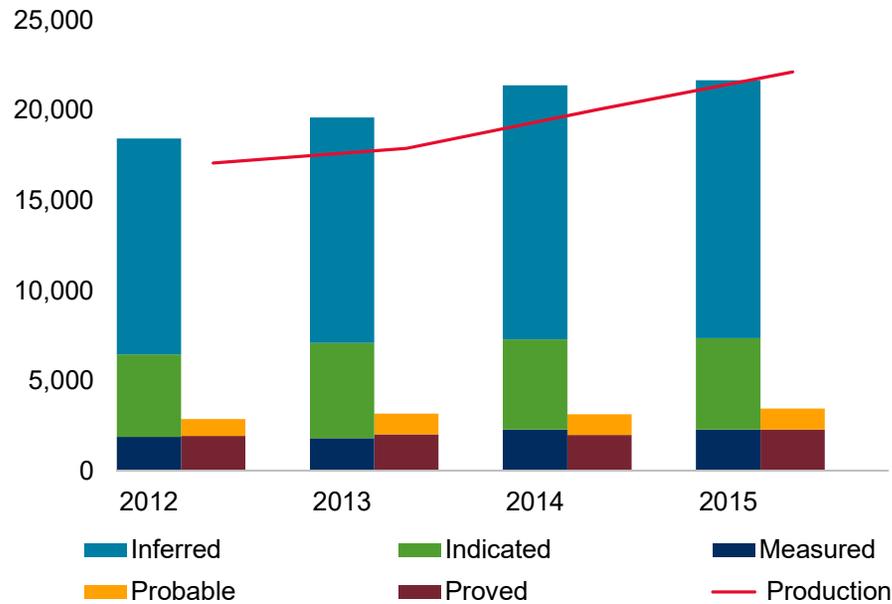
- Rio Tinto is the largest lump producer (~25% of our tonnes)
- Platts lump premium averaged ~\$10/dmt to the 62% fines index\*

\*Prices year-to-date as at end September 2016

# 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)

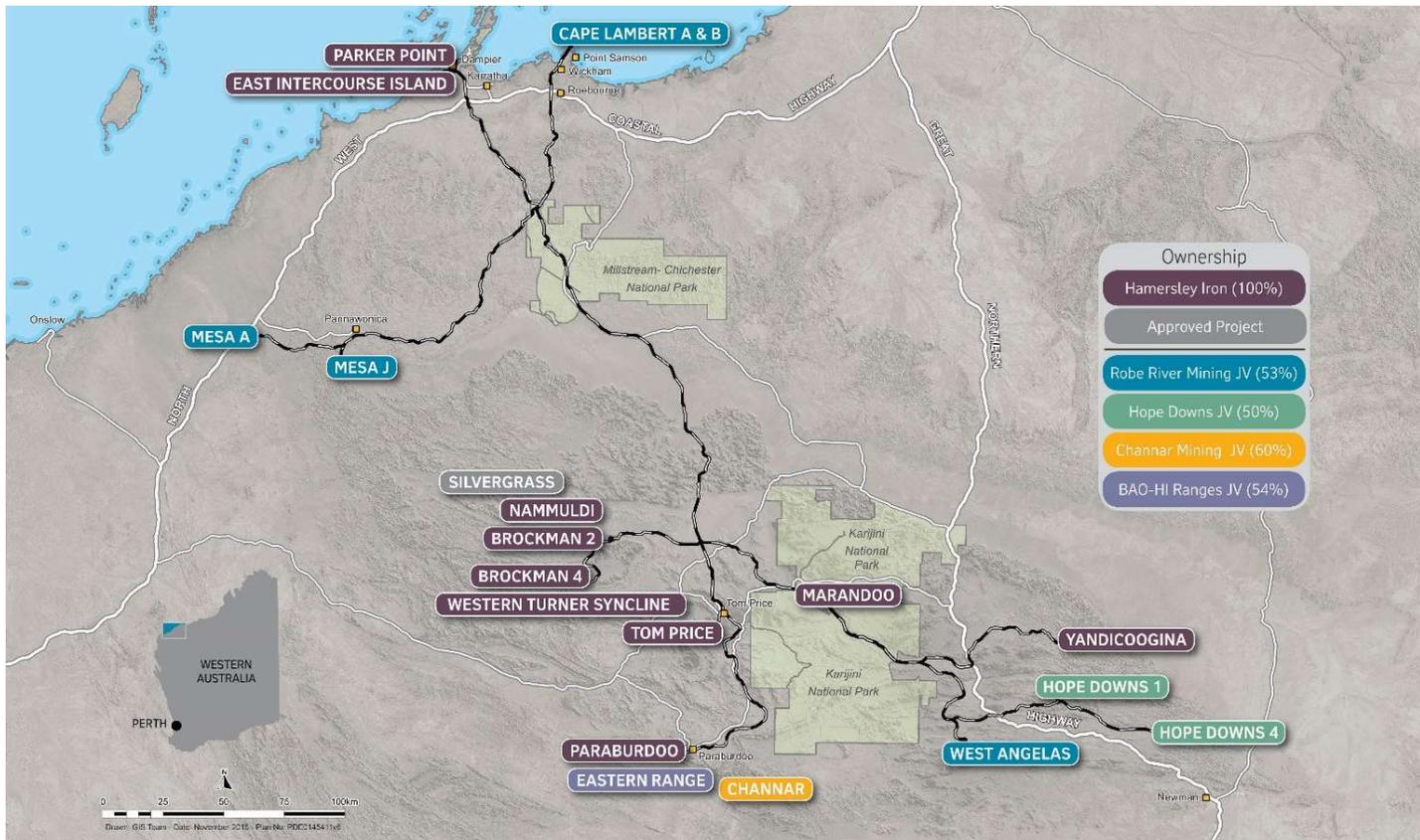
Large Mineral Resources support system optionality and sustain premium Pilbara Blend

Ore Reserves maintained in line with depletion

Maintaining evaluation drilling and resource development programmes

<sup>1</sup> Refer to the statements supporting these resource and reserve estimates set out on Slide 3 of this presentation

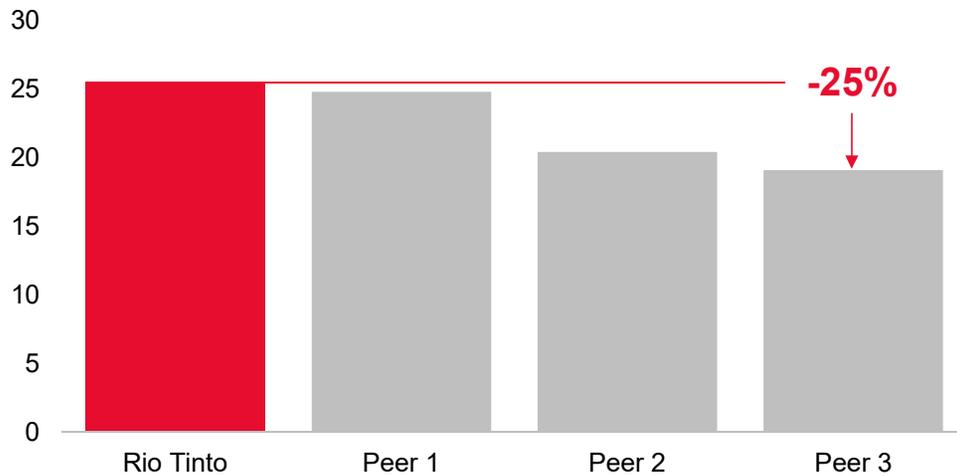
# .....and a fully integrated asset network



<b>12,000</b>	Workforce
<b>15</b>	Mines
<b>1,700km</b>	Rail
<b>4</b>	Port terminals
<b>3</b>	Power stations
<b>370</b>	Haul trucks
<b>51</b>	Production drills
<b>190</b>	Locomotives

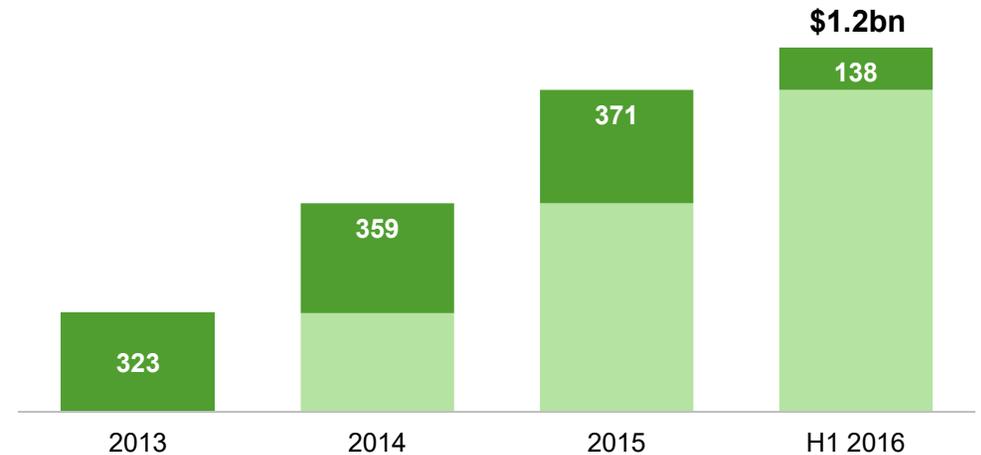
# Maximising cash flow and sustaining our competitive advantage

**EBITDA margin RTIO Pilbara vs Peers**  
US\$ per tonne (15/16 FY)



1H 2016 cash unit cost of \$14.30/t

**Pre-tax operating cash cost improvements**  
Reduction vs. 2012 US\$m



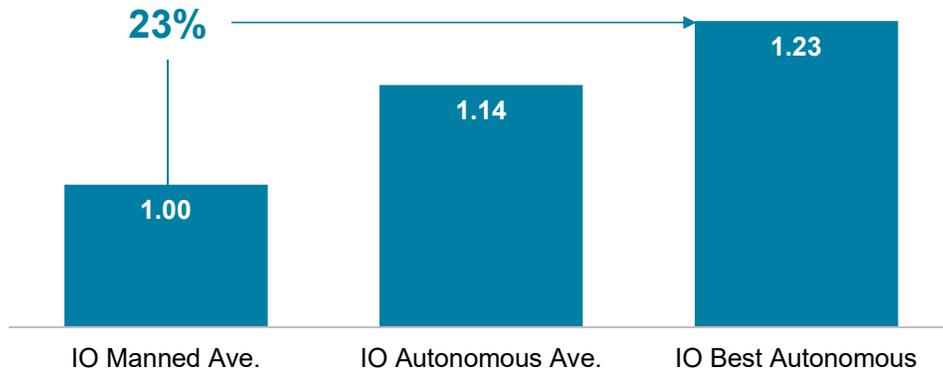
~ \$1.2 billion in pre-tax cost improvements since 2012

Pipeline of >1000 productivity and cost improvement initiatives

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

## Haul Truck Effective Utilisation

Time %, indexed, Sept YTD, site comparison



Collaboration and standardisation, with data analytics assisting rapid change

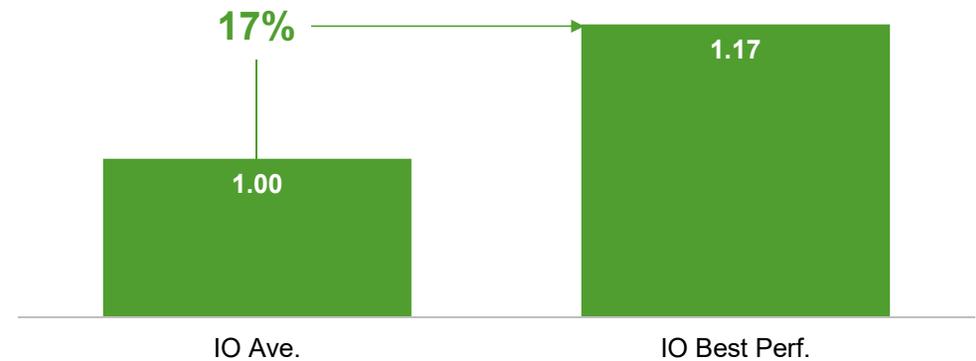
370 trucks operating, around 20% autonomous

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

Automation retrofit potential being explored

## Plant Effective Utilisation

Time %, indexed, Sep YTD, site comparison



Currently >30% volume beneficated

- Ore quality and product handleability

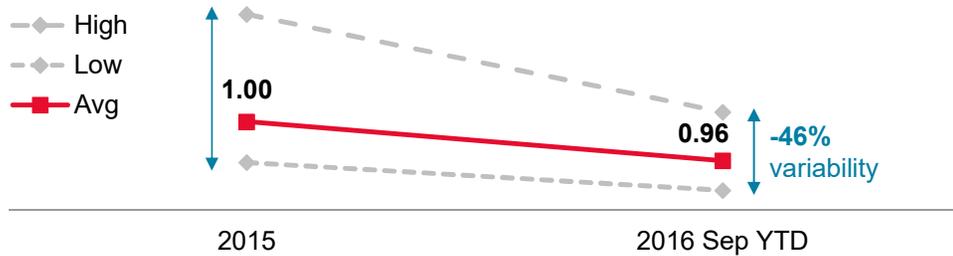
Replicating best practice across the system:

- Conveyor system availability

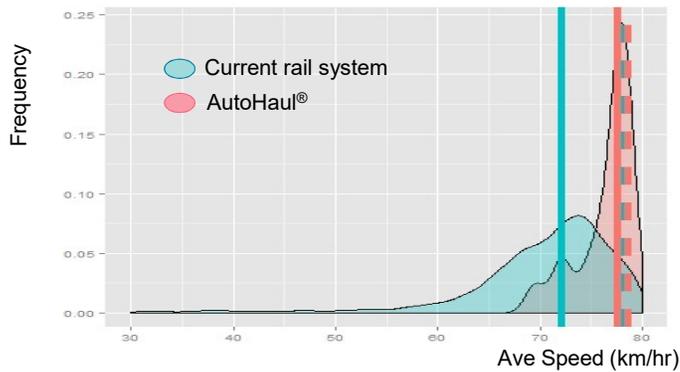
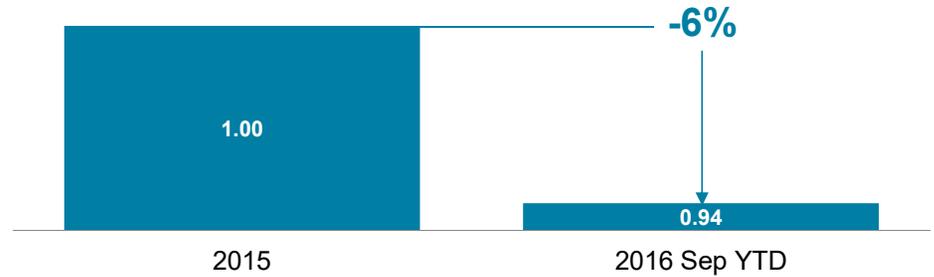
- Process control improvement

# ...as does productivity and technology

**Train dumping cycle time**  
Indexed to 2015 monthly average



**Train loading cycle time**  
Indexed to 2015 average



## AutoHaul®

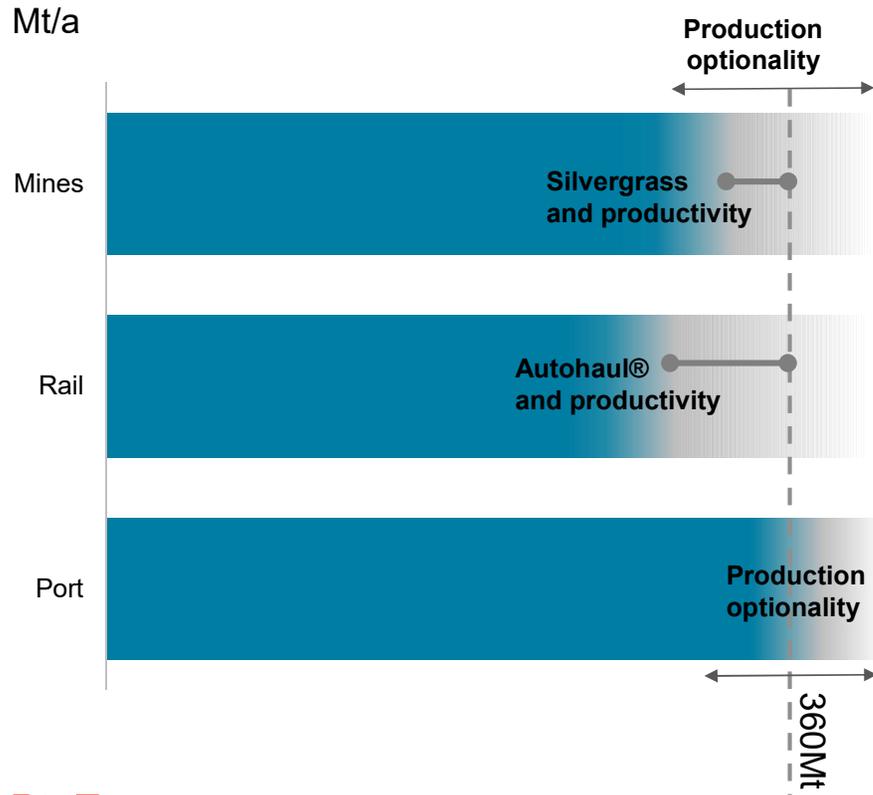
Improves safety controls and productivity

Improves driving strategy – with or without driver on train

Progressively expand in 2017; fully implemented by end 2018

# Installed infrastructure offers high-value optionality

## Optimising system capacity



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

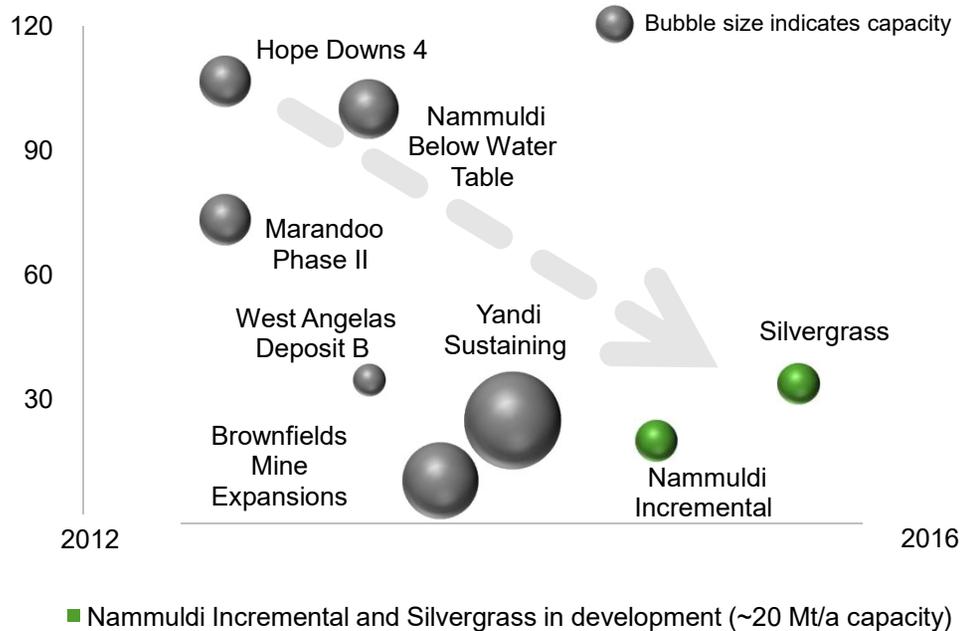
Rail capacity can be delivered through productivity, low capital investment and progressive implementation of Autohaul® from 2017

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

2017 guidance in range of 330-340Mt

# Sustaining best value production

**Low-cost brownfield mine expansions have dominated**  
Pilbara mine capital intensity US\$/t installed



Brownfield mine expansions have dominated production

- Initial brownfield expansions at \$9/t
- Focus on low phosphorus ores for Pilbara Blend

Focus on maintaining low capital intensity

- Nammuldi Incremental Tonnes (NIT) at \$19/t

# Silvergrass on track to deliver world-class investment returns

## Full Silvergrass mine development approved in July 2016

~20Mt/a at US\$29/t  
capital intensity (CI)

Mine sustains  
Pilbara Blend quality

Operating costs  
significantly reduced

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

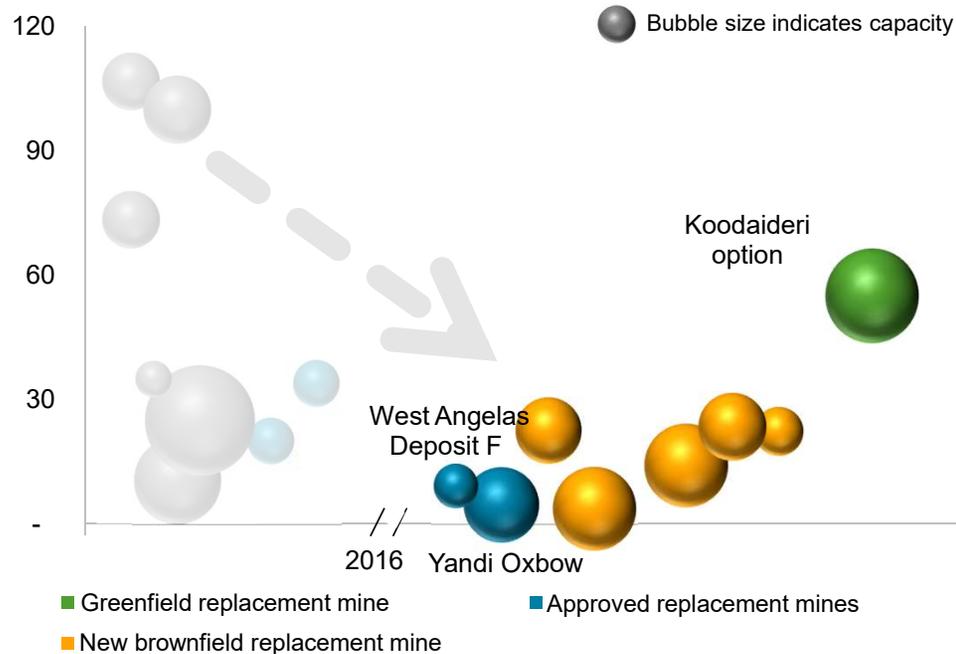
<sup>1</sup>IRR calculated using consensus iron ore prices at May 2016



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

## Pilbara mine development options

US\$/t Installed capital intensity



Multiple options leveraging existing infrastructure

- West Angelas Deposit F and Yandi Oxbow 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. Present view:

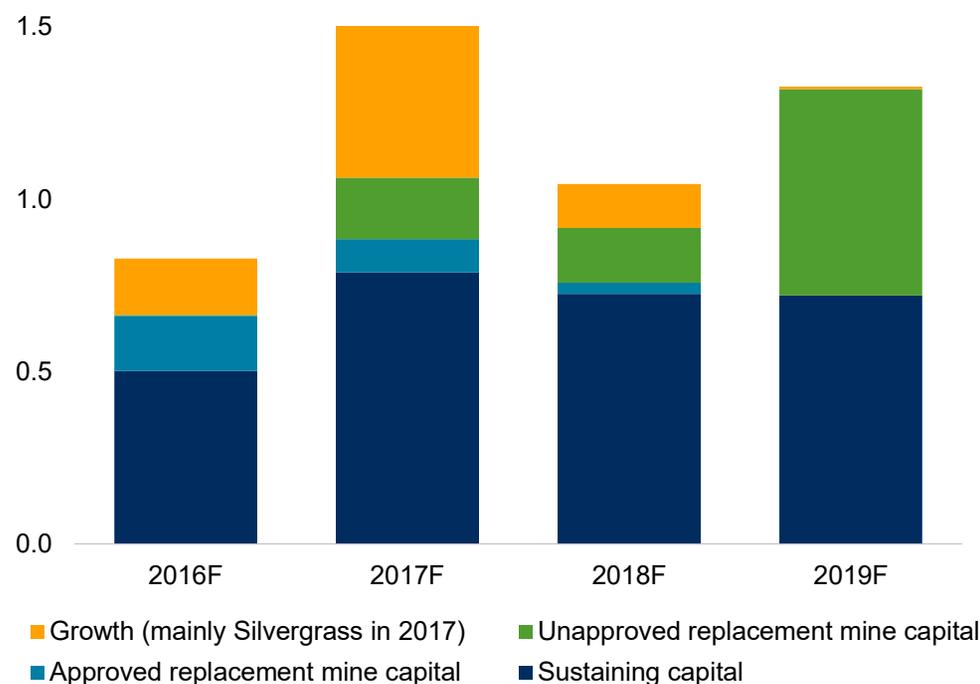
- Phase 1 ~40Mt/a plant capacity at \$55/t Capital Intensity (\$2.2bn)
- Potential capital spend from 2019
- Potential for first ore available around 2021

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

# 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

# A workforce of fully-engaged employees

Safety remains fundamental priority

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Working to increase engagement

- Removing obstacles
  - Greater inclusion and diversity
- 

Transforming business

- Seeking new skills and ideas in supply chain logistics, data analytics, automation
- 



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



## Regional and local commitment

- Local employment & procurement a priority
- Workforce of 12,000
- >1,000 fly-in/fly-out employees from six regional WA towns

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## In the last decade

- >\$13 billion State royalties
- ~\$700 million in payroll tax
- ~\$30 billion in company tax
- \$300 million in Pilbara community investment



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

Quality people and partners

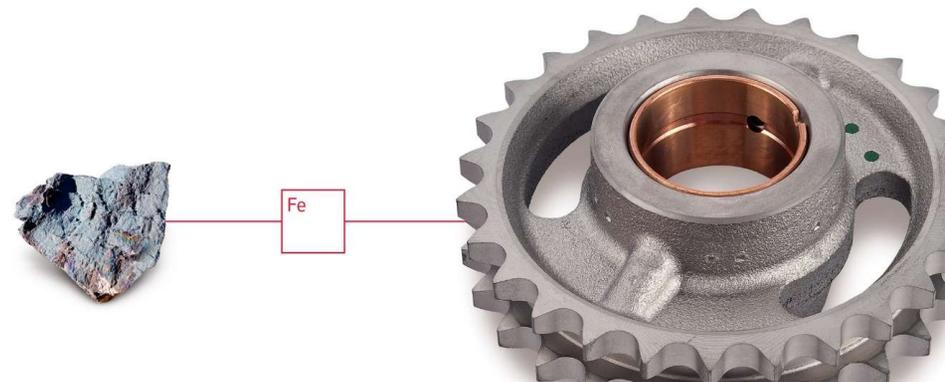
Exclusively operated integrated asset, significant resource base, highly-valued product suite

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



RioTinto

# Break

6 December 2016



AI



RioTinto

# Copper

Arnaud Soirat

Chief executive, Copper & Diamonds



Cu



# Safety is our first priority

## Continual improvement in safety

AIFR per 200,000 hours worked



## Copper

Continuous improvements in All Injury Frequency Rate

Focus on fatality and catastrophic event prevention

- Embedding Critical Risk Management
- Process and Underground safety

Balanced safety approach with high employee engagement across the group

Sharing best practice and lessons with our joint-venture partners

# Sector-leading attributes



Attractive industry fundamentals

Robust long-term demand  
Constrained supply  
Deficit expected towards end of decade



Large, high-quality resources

Long-life, low-cost, expandable assets  
Interest in three of the world's Tier 1 copper mines



Leading mine to market productivity

Productivity & processing optimisation at Kennecott  
Cost and productivity culture at Oyu Tolgoi  
Broad customer base for underground volumes at Oyu Tolgoi

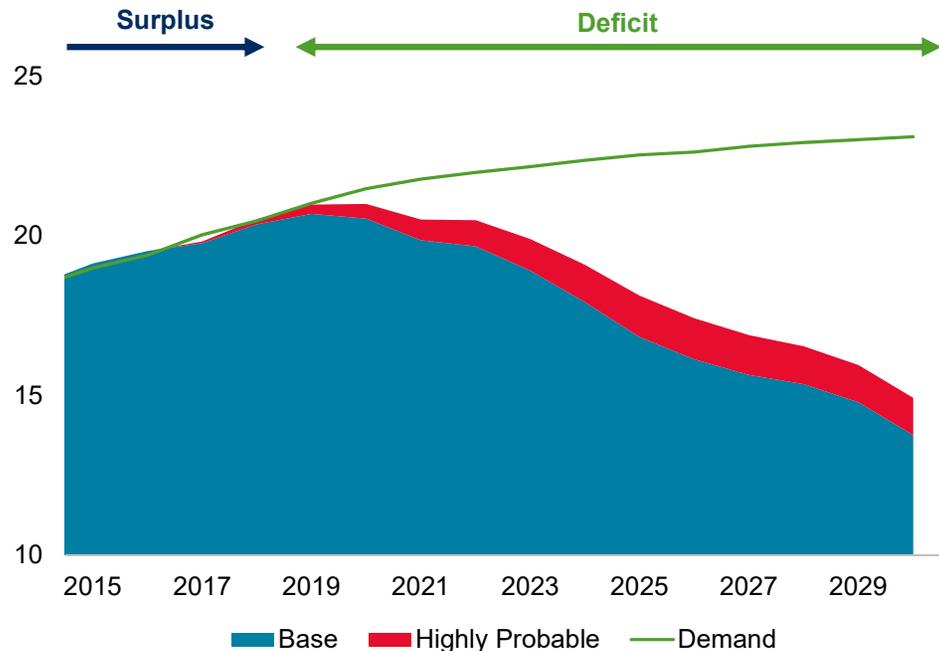


Multiple, strong growth options

Medium-term growth from Oyu Tolgoi and Grasberg  
Longer-dated optionality at Resolution  
Exploration pipeline

# Rio Tinto well placed to benefit from copper's attractive long-term fundamentals

**Copper supply/demand**  
(million tonnes)



Source: Wood Mackenzie Q3 2016. Rio Tinto.

New projects have moved market into oversupply driving short-term price volatility

Rio Tinto copper growth to be delivered into a supply deficient market

Further demand growth expected in China and other emerging markets

Consumer goods and new uses to provide upside

- renewable energy
- electric vehicles

# Strategy to deliver further value



Maximise value from existing operations



Deliver medium-term growth and progress long-term options



Develop our people & partnerships

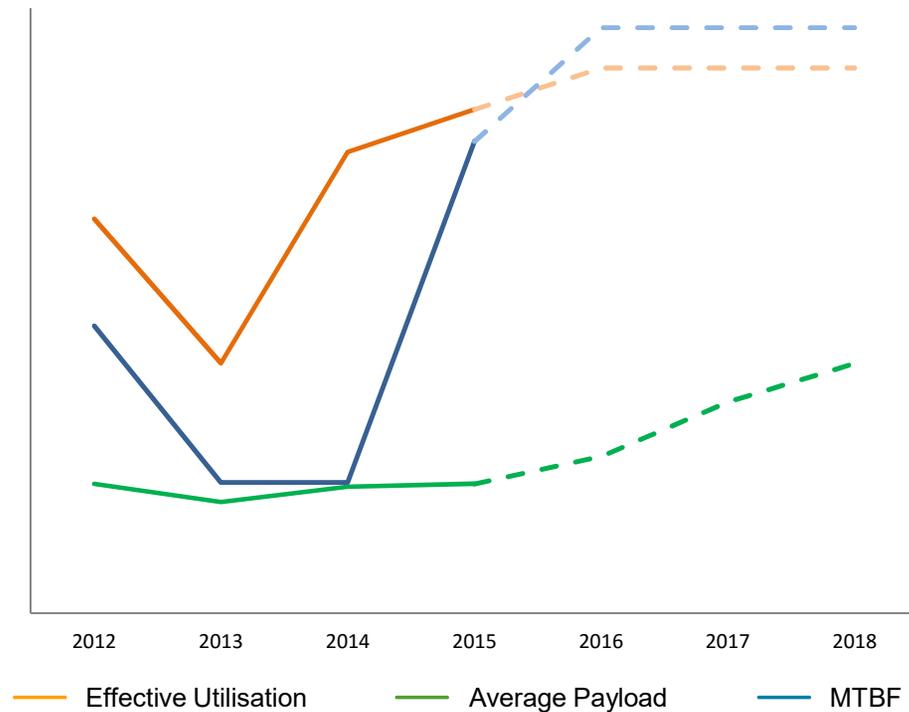


Unlock additional value through productivity initiatives



# Maximising value from existing operations

## Kennecott truck productivity trends



## Strong culture of cost improvements

\$1 billion of cost reductions delivered since 2013

Cost performance helped deliver a H1 2016 EBITDA margin of 30%

Further opportunities:

- Contractor management and external optimisation
- Moving to condition based maintenance

## Productivity unlocking additional value

Truck utilisation at OT is best in the group

Increase truck payload at Kennecott

Mean time between failures (MTBF) at Kennecott is highest in the group

Further opportunities identified:

- Increase concentrator throughput at OT
- Raise smelter utilisation further at Kennecott

# Kennecott – a simplified and reset business



## Asset optimisation

- Fully utilise excess smelter and refinery capacity with third party product

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South Wall push back underpins over a decade of high-quality cash flow

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Returns to higher grades from 2021

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## Operational excellence to maximise value

- Overall improvement of ~5% in truck productivity equates to ~12 mt additional material moved in 2017
-

# Oyu Tolgoi - the leading Tier 1 copper project



Underground development – unlocks the value of Oyu Tolgoi

The highest quality, major copper project in development

~3x higher production using existing infrastructure

Experienced project management team

Highly capable and motivated workforce

Long-life resource with multiple future options

Operational excellence to maximise value

# Non-managed interest in two of the world's best copper mines

## Escondida

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Strong cash flows underpin dividends

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No additional significant capex required for near future

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Los Colorados extension delivers incremental near-term capacity of 200ktpa<sup>1</sup>

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Desalination plant commissioning in H1 2017

## Grasberg

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Contract of Work is a priority for the business

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Rio Tinto participation steps up to 40% in 2021

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Transition to underground to occur in near-term

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Supporting our partners to improve safety and protect licence to operate

# Future optionality for the Copper business

## Resolution



Continue to advance permitting process

Strengthen licence to operate

Complete pre-feasibility study by 2020

Inferred mineral resource of 1,766Mt @ 1.51% Cu<sup>1</sup>

## Exploration



Continued focus on copper exploration, primarily the Americas

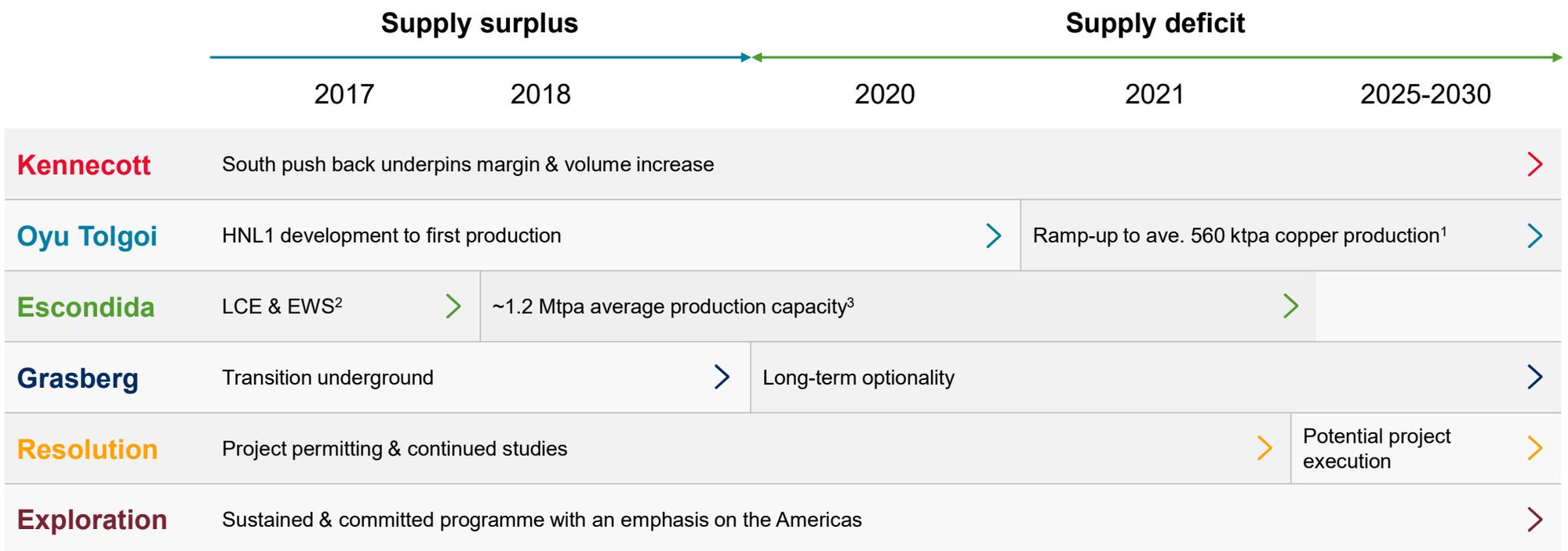
16 copper exploration projects ongoing

La Granja regional exploration

61% Rio Tinto exploration spend is focussed on copper

<sup>1</sup> Refer to the statements supporting this resource estimate set out on Slide 3 of this presentation

# Delivering medium-term growth and progressing long-term options



<sup>1</sup> Includes open pit. This production target was previously reported in a release to the market on 6 May 2016. All material assumptions underpinning the production target continue to apply and have not materially changed. <sup>2</sup> Los Colorados Concentrator Extension and Escondida Water Supply. <sup>3</sup> BHP Copper Briefing and Chilean Site Tour - <http://www.bhpbilliton.com/investors/reports/copper-briefing-and-chilean-site-tour>, released by BHP on 1 December 2015.

# Developing our people and our partnerships



Working with our partners to improve safety

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Strengthening indigenous relationships

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Consulting with communities

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Building long-term sustainable relationships at Oyu Tolgoi

- 93% local employment
- Best in class for water efficiency – 85% of water recycled
- 40% of key underground contracts awarded to local suppliers

# Takeaways

**Attractive industry fundamentals**

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**Sector-leading large, high-quality resources**

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**Maximising value from existing operations**

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**Delivering value-adding growth**

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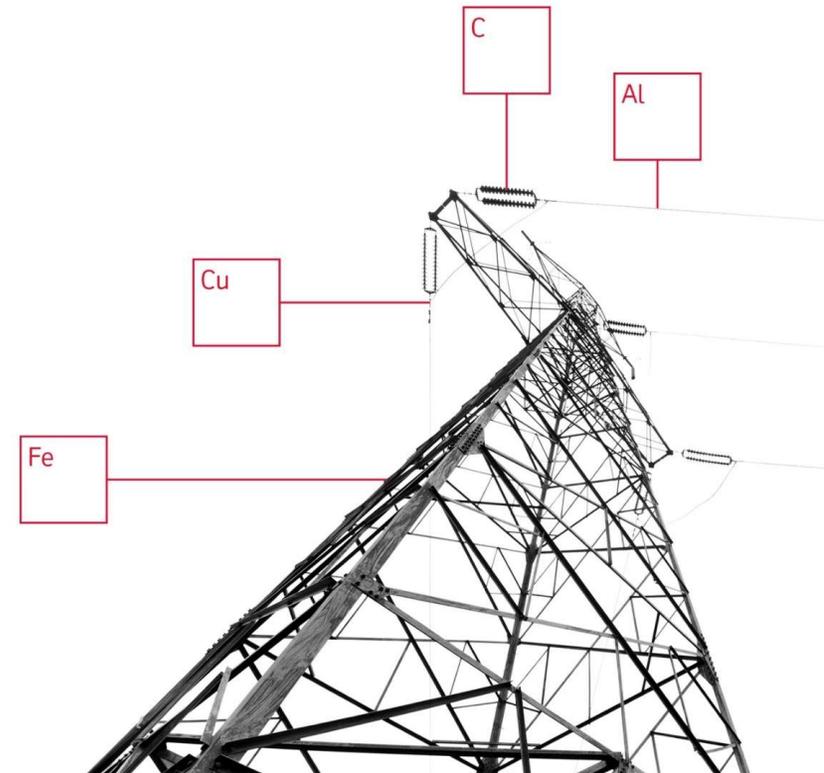
**Developing our people & partnerships**

RioTinto

# Growth & Innovation

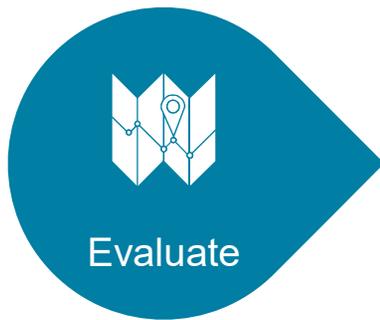
Steve McIntosh

Group executive, Growth & Innovation

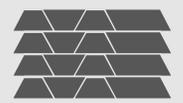


# Adding value through the asset lifecycle

## Technical excellence, assurance and support



Ore bodies to market



# Safety is our first priority

## Continual improvement in safety

AIFR per 200,000 hours worked



Exploration has achieved a four-fold reduction since 2011 (AIFR 0.41)

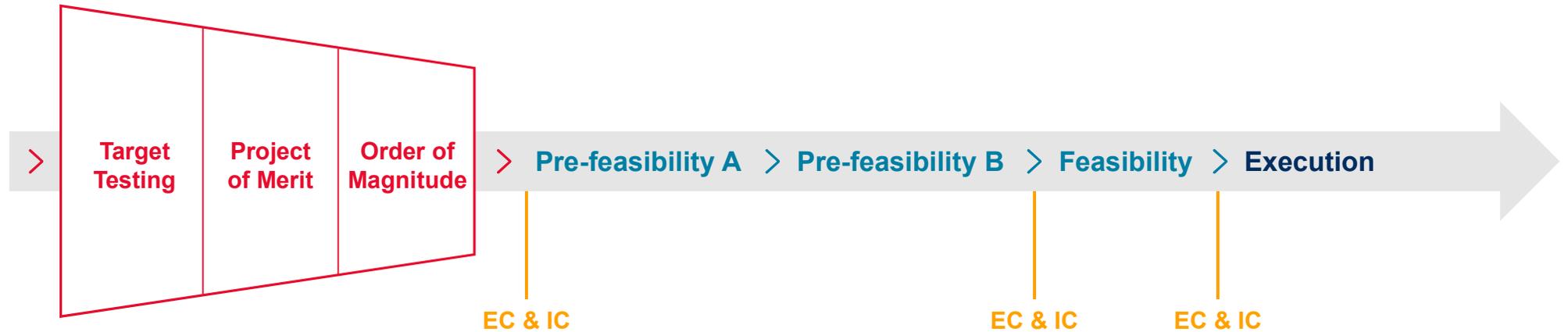
Oyu Tolgoi is one of the best performing operations (AIFR 0.11)

Projects safety focus driven through CRM implementation at Amrun and OT underground project

Fatality prevention driven through implementation of CRM framework in all of our activities

# Find, evaluate and develop assets

## Find > Evaluate > Develop >



Wide exploration remit, successful programme delivers discoveries

Standardised evaluation approach to ensure we “do the right projects”

Effective and efficient central execution for capex > \$250m

Evaluation Committee and Investment Committee provide strong governance to ensure we “do the project right”

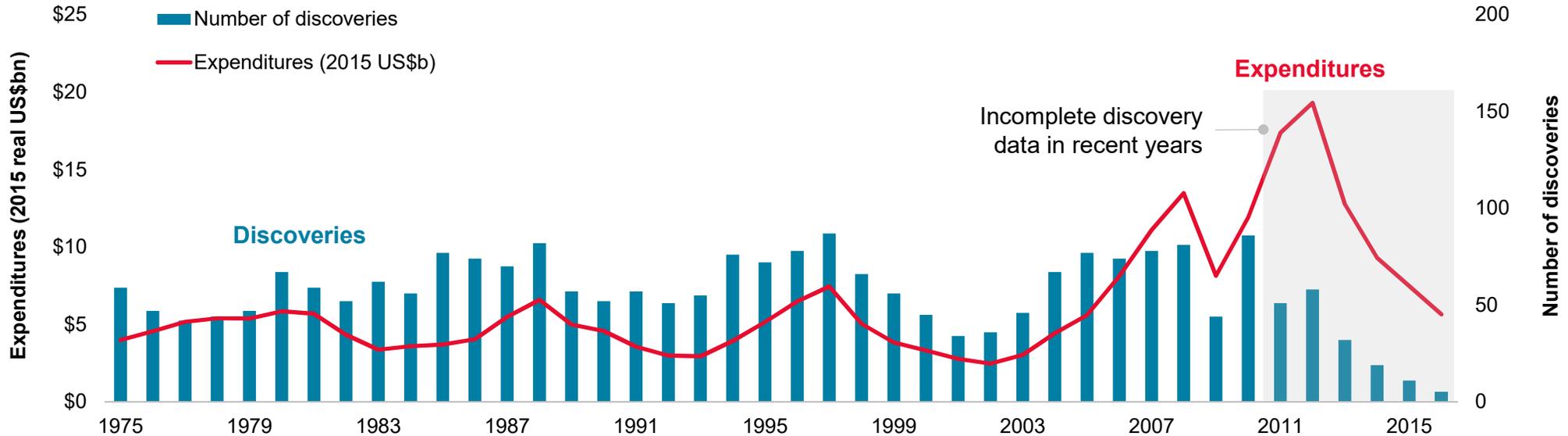
Technical assurance at each stage gate

# Declining industry investment and success



## Significant\* mineral discoveries (excluding bulk commodities)

Western World: 1975 - 2015 (excluding FSU + Eastern Europe + China 1995 - 2015)



\*Significant defined as >100koz Au, >10Kt Ni, >100Kt Cu equiv, 250Kt Zn+Pb, >5Moz Ag, >5kt U<sub>3</sub>O<sub>8</sub>

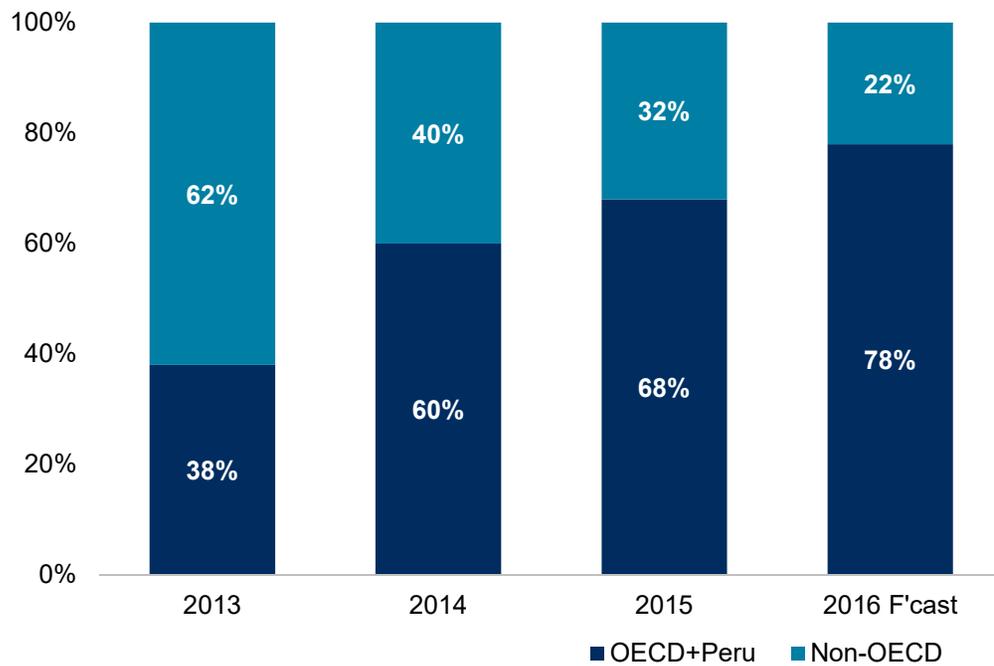
Source: MinEx Consulting March 2016; Expenditures – SNL Metals & Mining December 2015

Note: SNL expenditure data excludes Uranium prior to 2001.

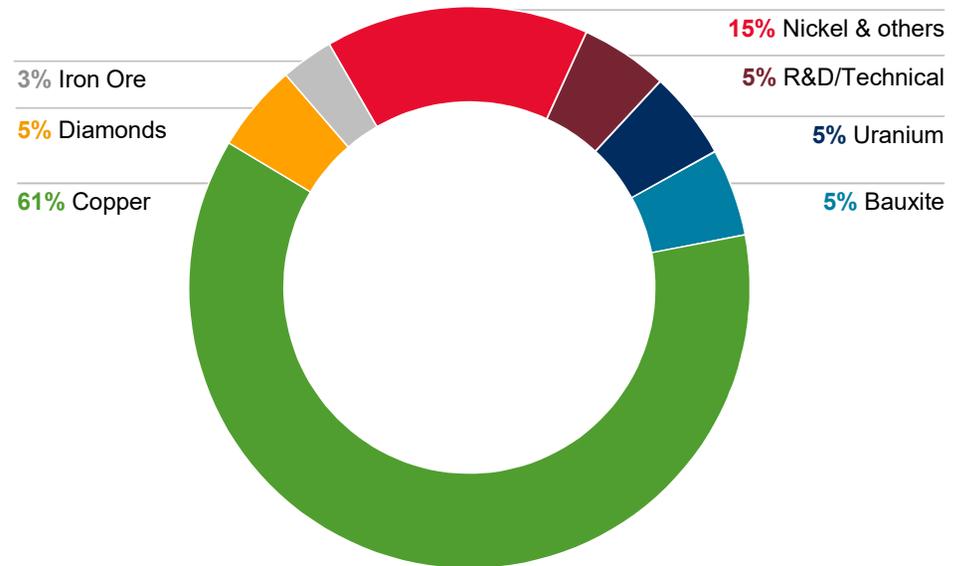
# Extensive and successful exploration programme



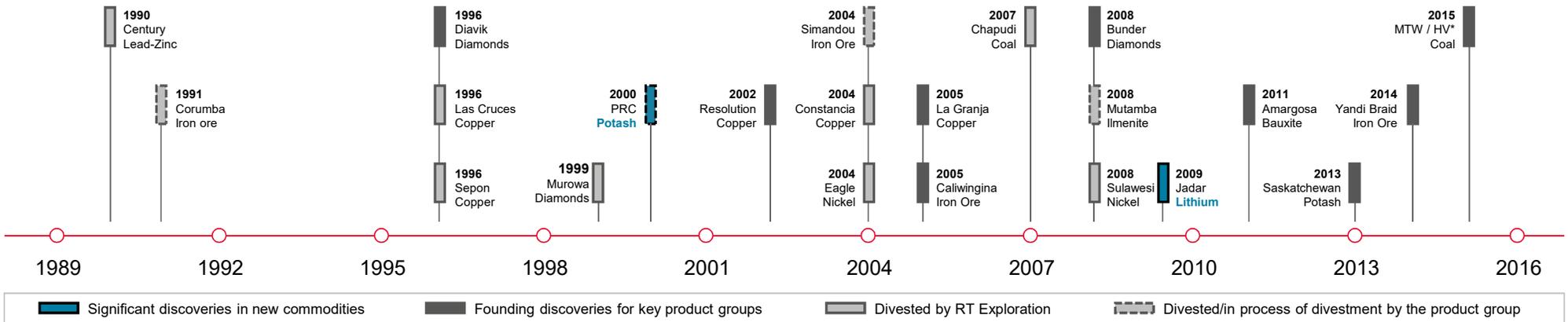
**Exploring across 17 different countries**  
Expenditure by region, 2013 to 2016 forecast



**Exploring for 8 different commodities**  
Expenditure by commodity, 2016 forecast



# Unique capability to make new discoveries



Exploration in Rio Tinto is a self-funded business

Over last decade: **US\$1.7bn** on greenfield exploration | **US\$2.2bn** generated from pre-decision to mine divestments



**Weipa Bauxite (1959)**  
Weipa, Queensland



**Tom Price (1962)**  
Pilbara, Western Australia



**Argyle Diamonds (1979)**  
The Kimberley, Western Australia



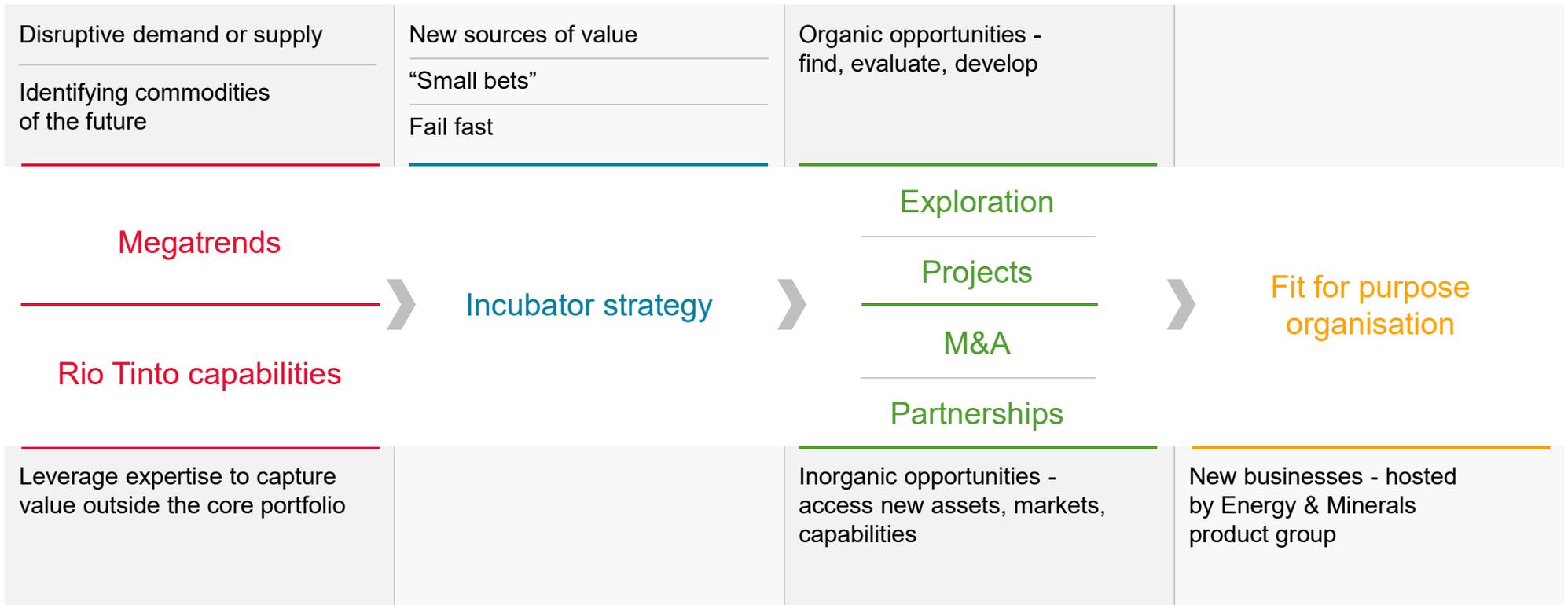
**Resolution Copper (2002)**  
Arizona, United States

\*Mt Thorley Warkworth / Hunter Valley  
Discovery: Resource estimate and Order of Magnitude study completed

**RioTinto**

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# Incubating new sources of value for the group



# Jadar is a significant lithium-borate resource discovered by Rio Tinto



Jadarite: Li-Na-borosilicate mineral comprising 47.2%  $B_2O_3$  and 7.3%  $Li_2O$

117Mt inferred resources containing 18Mt  $B_2O_3$  and 2.1Mt  $Li_2O$ <sup>1</sup>

Potential to support a long-life operation in the first quartile of the operating cost curve for boric acid and lithium

Initial studies suggest if developed, potential to be a top 3 producer

Presently advancing technical studies to complete pre-feasibility by end 2017

<sup>1</sup> Refer to the statements supporting these resource estimates set out on Slide 3 of this presentation

# Evaluating our projects



Investment return  
(IRR>15%)



Capital intensity  
reviews

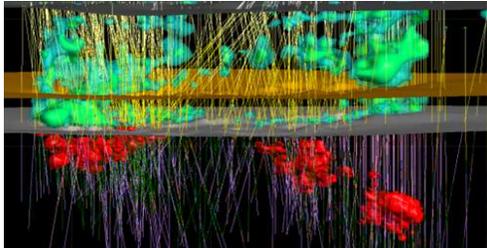


Stakeholders &  
Licence to Operate



Rigorous governance  
& technical assurance

Resource &  
technical risk



Technical  
innovation



# Track record for delivering high-quality assets



Central delivery team since 2015



Mobile talent pool



Technical & commercial excellence



Safe, efficient, on time & operationally ready

Standardised processes



LEAN in construction



# Delivering value through technical excellence

Technical  
excellence,  
assurance  
& support



Orebody visualisation with RTVis™

**RioTinto**

Our core disciplines;

- Geoscience & ore body knowledge
- Mining
- Processing
- Infrastructure
- Asset Management

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Strength in mining and processing

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Replication across large asset base

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Platforms to deliver automation

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End to end to fully utilise embedded capability

# Driving productivity across the value chain



**Effective Utilisation**  
(haul trucks, %)



**Payload**  
(haul trucks, average target %)



**Mean Time Between Failure**  
(haul trucks, hrs)



**Processing Utilisation**  
(average wet & dry, %)



# Closing our assets like we build our assets



**Holden Mine rehabilitation, Washington, USA**  
Winner of the AEMA 2015 Environmental Excellence Award

Increasing challenge for the sector

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Programme to rehabilitate, remediate and manage long-term liabilities

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Technical innovation;

- alternative processes for waste treatment
  - water quality remediation
  - geotechnical stabilisation
- 

Embedded learnings

# Conclusions

Safety is our first priority

Adding value through the asset lifecycle

Find, evaluate & develop assets

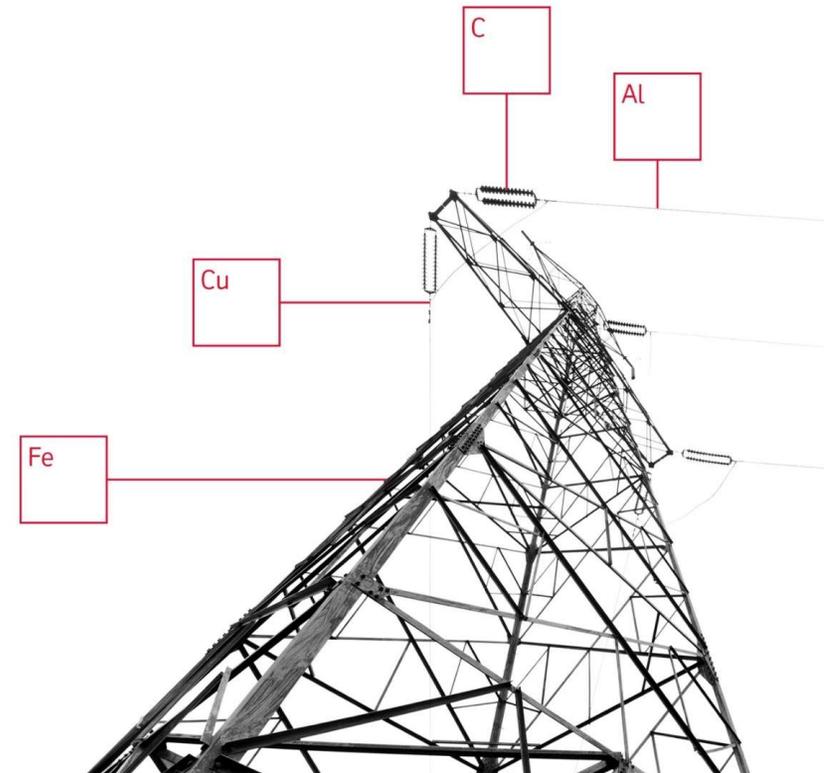
Incubating new sources of value for the group

Delivering value through technical excellence

Driving productivity across the value chain

Closing assets like we build our assets

RioTinto



RioTinto

J-S Jacques

Chief executive

6 December 2016



AI



# Value proposition

## Long-term strategy

Tier 1 assets

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

Licence to Operate

## Cash focus

Value over volume

\$2 billion cost savings over 2016/17

\$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



<sup>1</sup> Copper equivalent CAGR, 2015-2025.



RioTinto

# Investor Seminar

6 December 2016

London

RioTinto

# Appendix

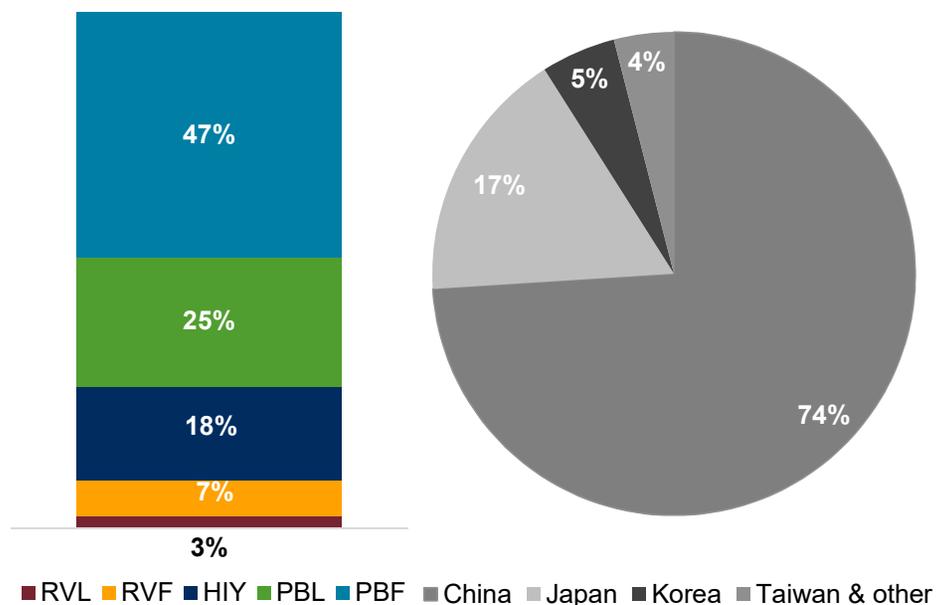


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# Our five highly-valued iron ore products

Shipments by product and market 2016 YTD\*



\* Year-to-date as at end September 2016

Product	Strengths
<b>Pilbara Blend Fines</b>	<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>
<b>Pilbara Blend Lump</b>	<ul style="list-style-type: none"> <li>– Avoids the costs of sintering</li> </ul>
<b>HIY Fines</b>	<ul style="list-style-type: none"> <li>– Ideal chemical composition for the Asian sinter blends and favourable coarse sizing.</li> </ul>
<b>Robe Valley Fines</b>	<ul style="list-style-type: none"> <li>– Favourable coarse sizing, low phosphorus</li> </ul>
<b>Robe Valley Lump</b>	<ul style="list-style-type: none"> <li>– Low phosphorus</li> <li>– Avoids the costs of sintering</li> </ul>

# 2017 guidance

**Iron Ore:** Pilbara shipments 330-340 Mt (100% basis)

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**Aluminium:** 48-50 Mt bauxite, 8.0-8.2 Mt alumina, 3.5-3.7 Mt aluminium

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**Copper & Diamonds:** 525-665 kt mined copper, 185-225 kt refined copper, 19-24 Mcts diamonds

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**Coal:** 17-18 Mt thermal, 3.3-3.9 Mt semi-soft coking, 7.8-8.4 Mt hard coking

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**IOC:** 11.4-12.4 Mt iron ore pellets and concentrate

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**TiO<sub>2</sub>, borates, uranium:** 1.1-1.2 Mt TiO<sub>2</sub> slag, 0.5 Mt boric acid equivalent, 6.5-7.5 Mlbs uranium