Rio Tinto Iron Ore Investor Site Visit

18 June 2018

Rio Tinto is hosting a site visit to its Pilbara iron ore operations from 18-21 June 2018.

The presentation slides are attached and will also be made available at www.riotinto.com/presentations.

The Day 1 presentations will be webcast live starting at 3.00 pm (AEST) and can be accessed at www.riotinto.com/webcast.

A replay of the webcast will be available on the Rio Tinto website following the event at www.riotinto.com/webcast.

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Iron Ore – Delivering value from flexibility and optionality

Chris Salisbury

Iron Ore chief executive

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Supporting statements

Mineral Resources and Ore Reserves

The Mineral Resource and Ore Reserve estimates which appear on slide 36 are reported on a 100% basis. Mineral Resources are reported as additional to Ore Reserves. 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 2013 to 2017 Rio Tinto annual reports to shareholders released to the market on 14 March 2014, 6 March 2015, 3 March 2016, 2 March 2017 and 2 March 2018 respectively. The Competent Persons responsible for reporting of those Mineral Resources and Ore Reserves were B Sommerville (Resources 2013-2017), P Savory (Resources 2013 - 2017) and A Bertram (2017), L Fouche (Reserves 2013-2014), A Do (Reserves 2015), C Tabb (Reserve 2013 - 2017) and R Verma (Reserves 2017).

Rio Tinto is not aware of any new information or data that materially affects the above estimates for 2017 as reported in the 2017 Annual Report and confirms that all material assumptions and technical parameters underpinning these estimates continue to apply and have not materially changed. The form and context in which each Competent Person's findings are presented have not been materially modified.

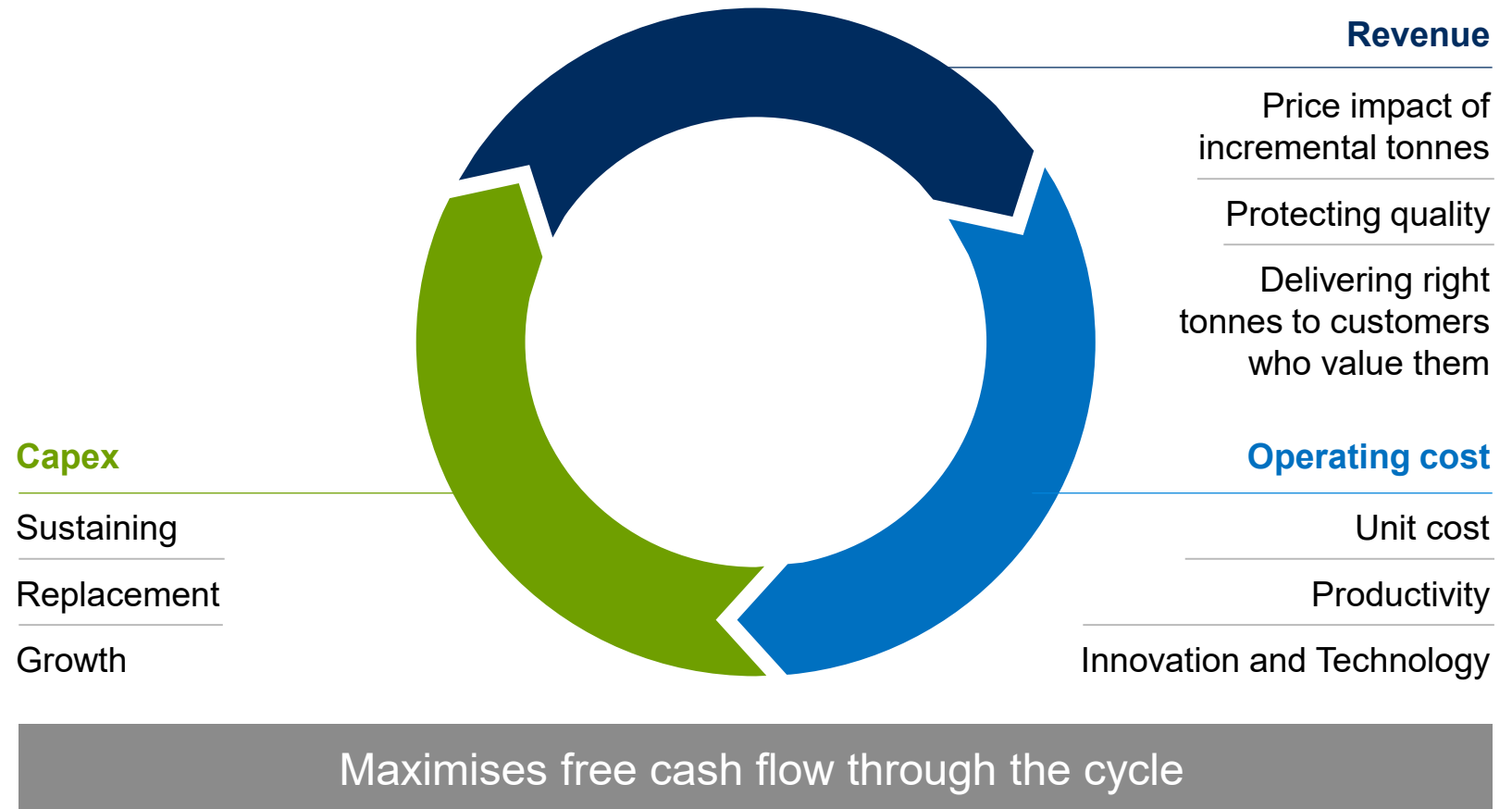# Our value over volume strategy maximises free cash flow

Foundations

Exclusive fully integrated system

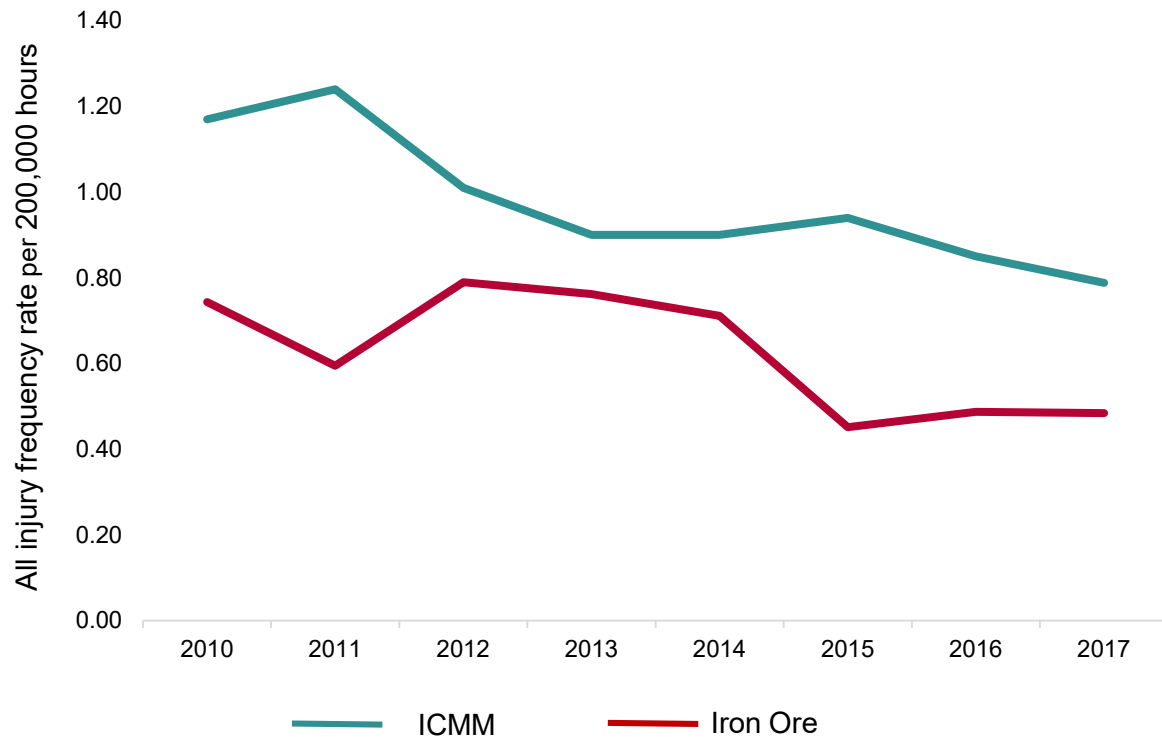Highly valued product suite and significant resources

Quality people and partners driving innovation

Value over Volume Strategy

Revenue

Price impact of incremental tonnes

Protecting quality

Delivering right tonnes to customers who value them

Operating cost

Unit cost

Productivity

Innovation and Technology

Capex

Sustaining

Replacement

Growth

Maximises free cash flow through the cycle

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Health and safety come first

Strong safety performance

Focusing on fatality elimination – 265,000 CRM verifications completed in Iron Ore in 2017
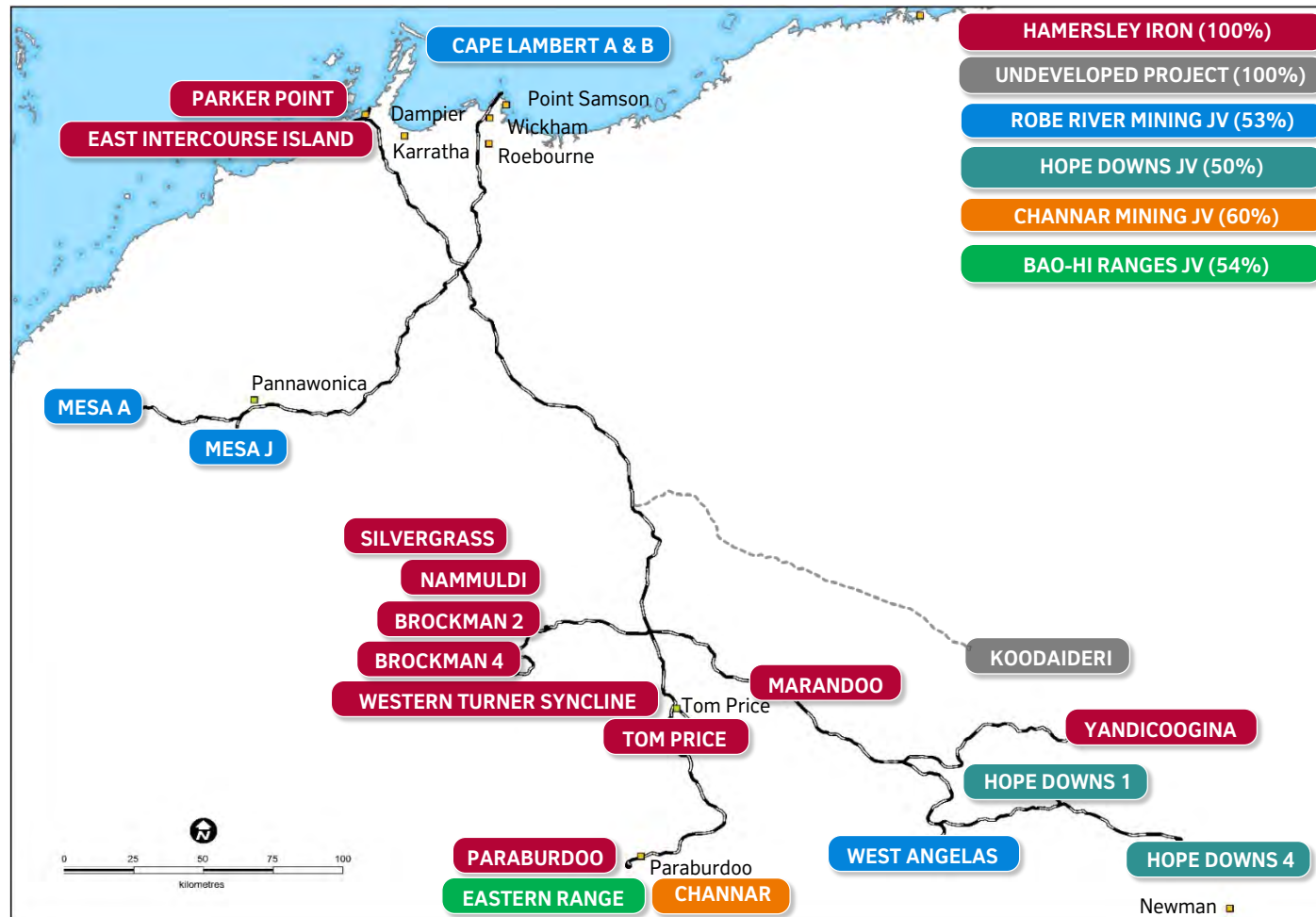
Reducing injuries – targeted hazard elimination

Catastrophic event prevention through control of major hazards

Mental health, well being and fatigue management

Underpinned by engagement, leadership and productivity initiatives

Source: International Council on Mining and Metals

Priority remains to optimise infrastructure capacity and build flexibility

Current system capacity

~360*   ~330-340   ~360

Mt/a   Mt/a   Mt/a
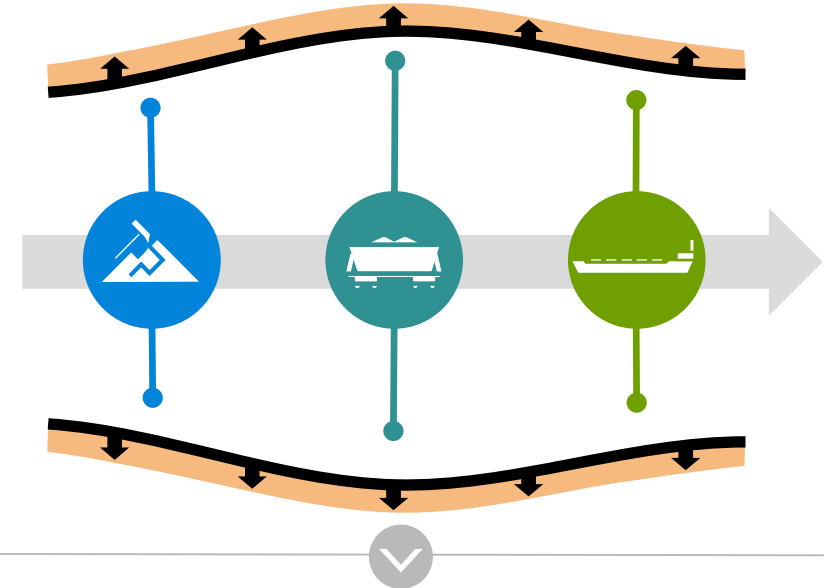
Future system capacity
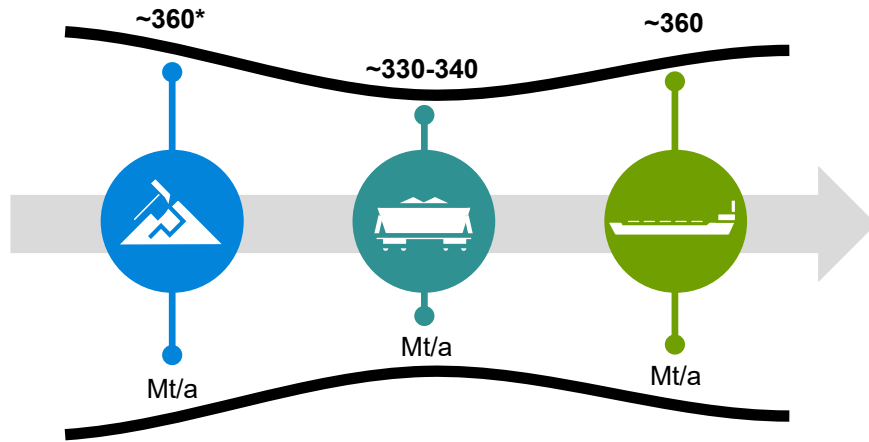
Building rail capacity to provide dynamic flexibility

Mine capacity of ~360Mtpa, with Silvergrass fully ramped up and productivity gains

2018 shipments guidance is in a range of 330 – 340Mt

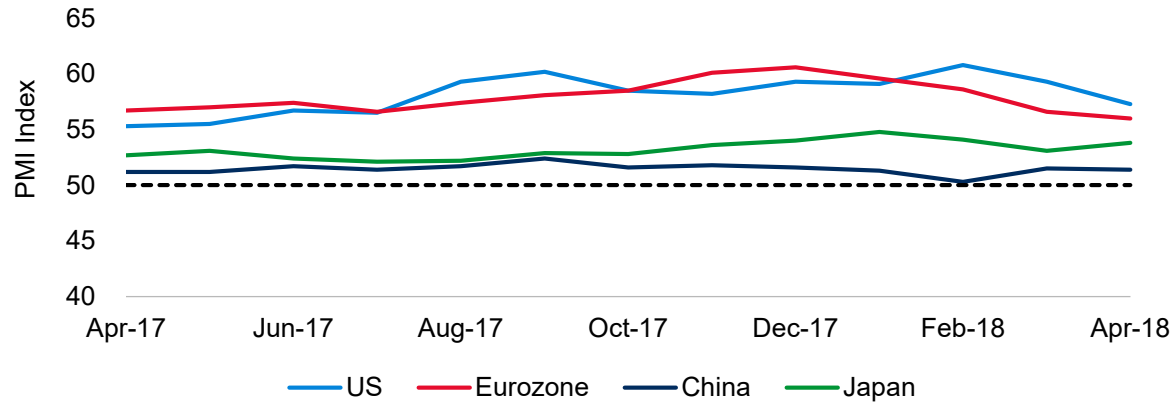Rail and mine capacity expected to match nameplate port capacity by the end of 2019

Market driven to meet customer demand

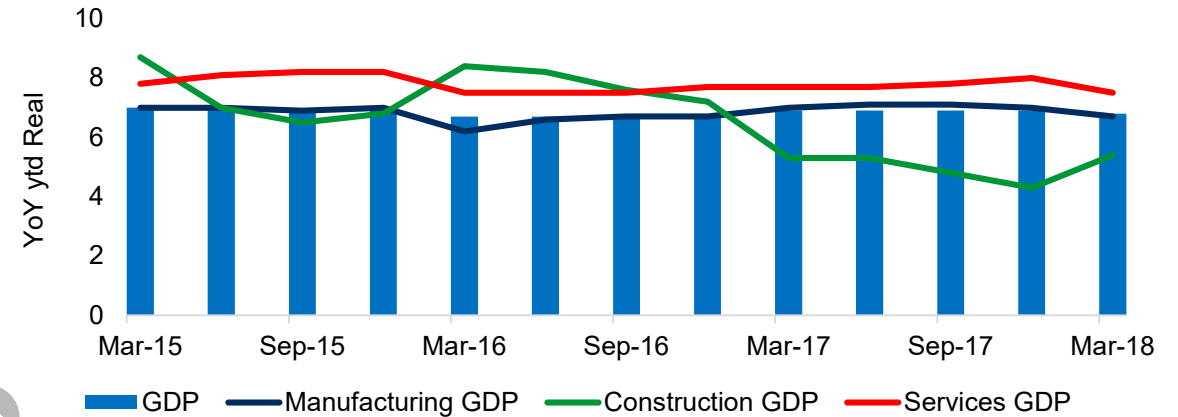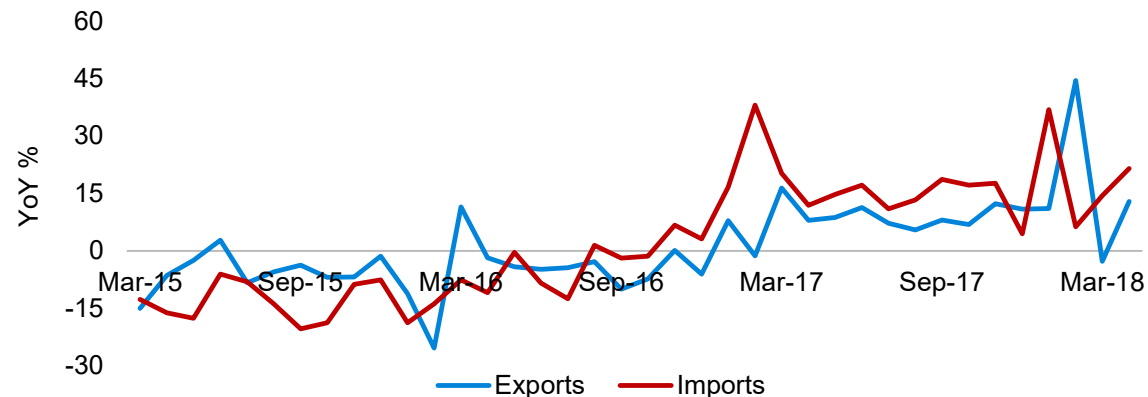Optimise and test port capacity

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Note (*) once Silvergrass fully ramped up

Global macro indicators remain supportive

Global PMIs have eased but remain in expansion

US — Eurozone — China — Japan

Chinese growth slowing very gradually

GDP — Manufacturing GDP — Construction GDP — Services GDP

Recovery in global demand positive for China's exports

Exports — Imports

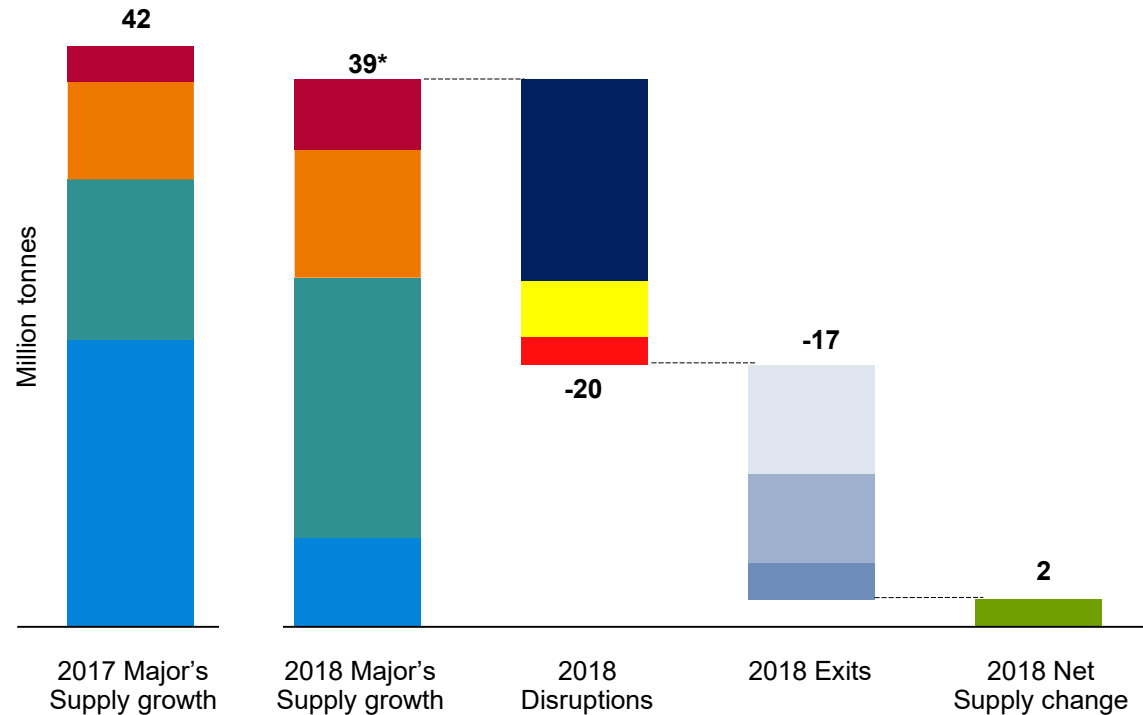Trade tensions unlikely to materially affect steel demand

Controlled deceleration in Chinese growth from high rates in 2017

Chinese environmental policies and productivity measures supporting demand for higher grade iron ore

Strong external demand for Chinese exports despite increase in trade tensions

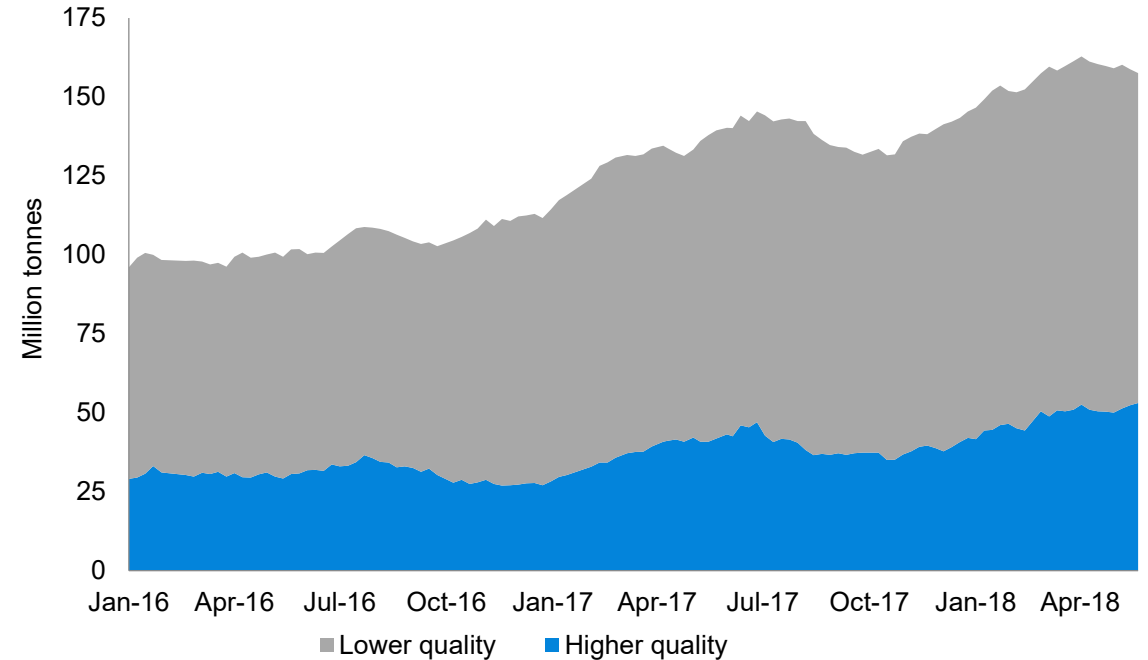Source: CEIC, Rio Tinto

Seaborne supply response remains muted…

2018 seaborne supply additions offset by disruptions and exits

* Rio Tinto 2018 additions assumes midpoint of full year guidance at 335 Mt

Legend:
- Rio Tinto
- BHP
- Minas Rio
- Cliffs
- Atlas
- IOC
- Vale
- Roy Hill
- Tonkolili
- India

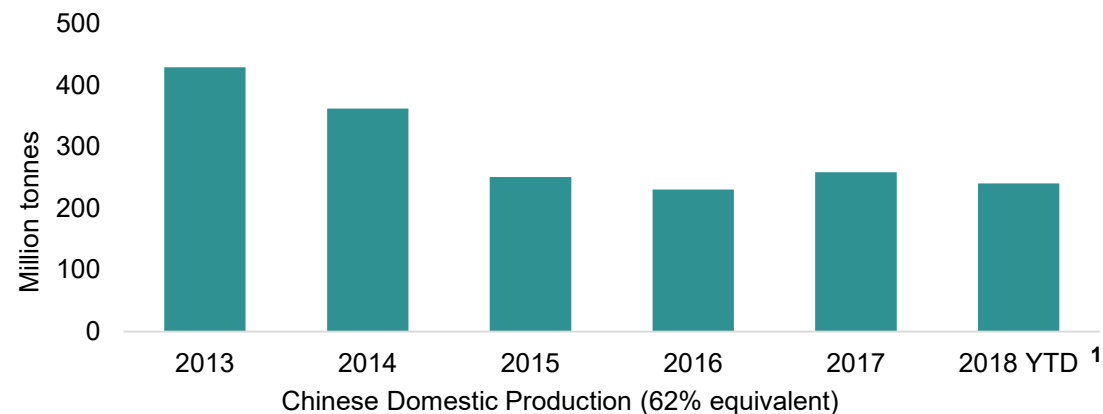## Rise in inventories driven by lower quality iron ore

Lower quality | Higher quality

…and Chinese domestic production remains steady

Most Chinese domestic capacity is geographically removed from the steel mills…

Regional Capacity
Million Tonnes

- <5
- 6-10
- 11-20
- 21-30
- 31-40
- 41-50
- 51-100
- 101-150
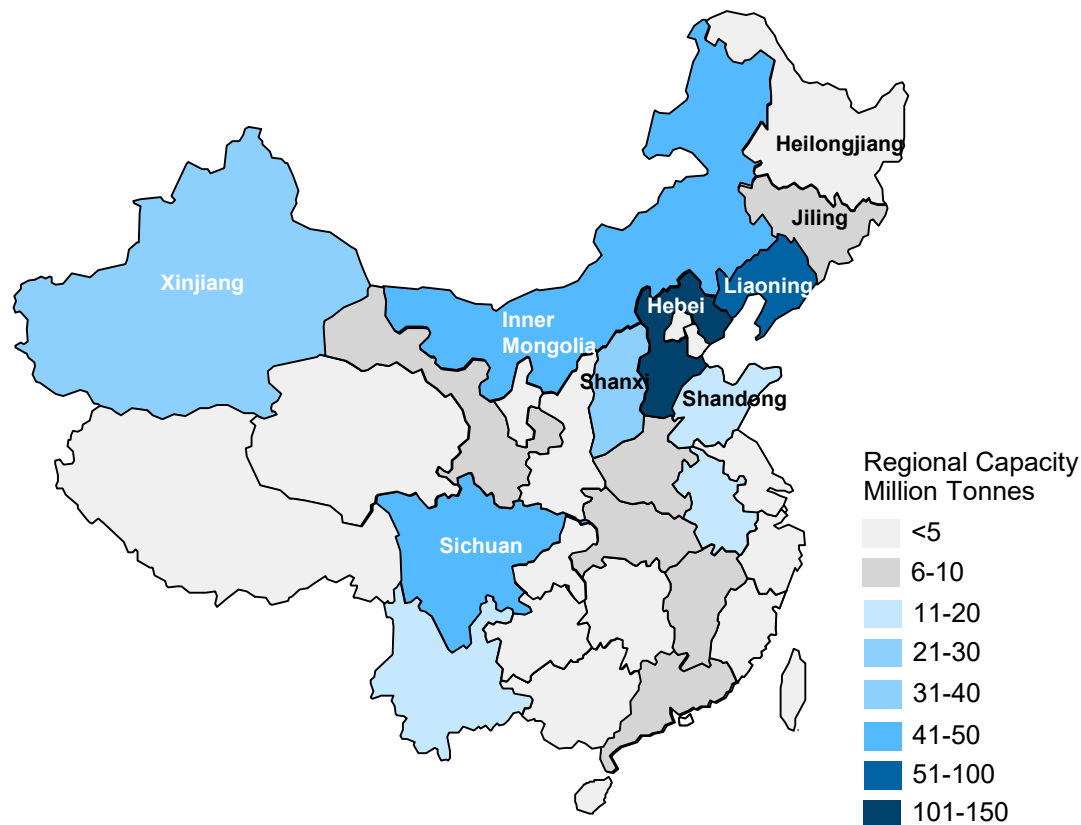
…Chinese domestic production has remained steady…

Chinese Domestic Production (62% equivalent)

[1] YTD annualised January – April 2018
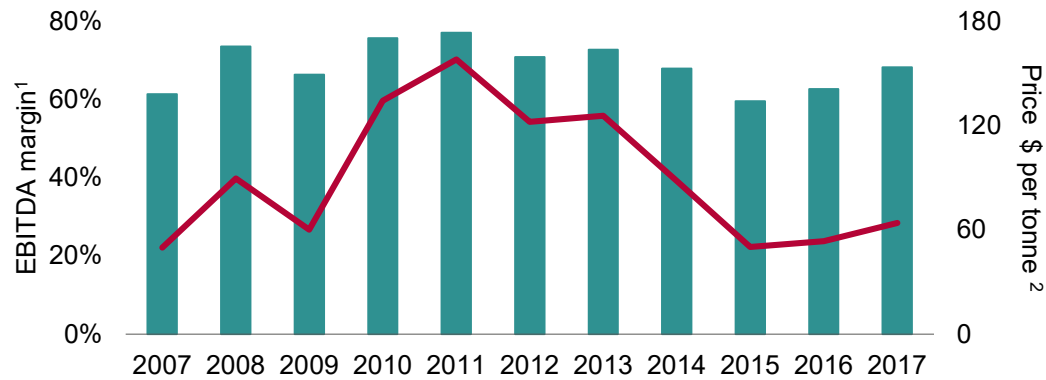
…and its elasticity to price is reducing

Domestic supply mine operating rate — Price
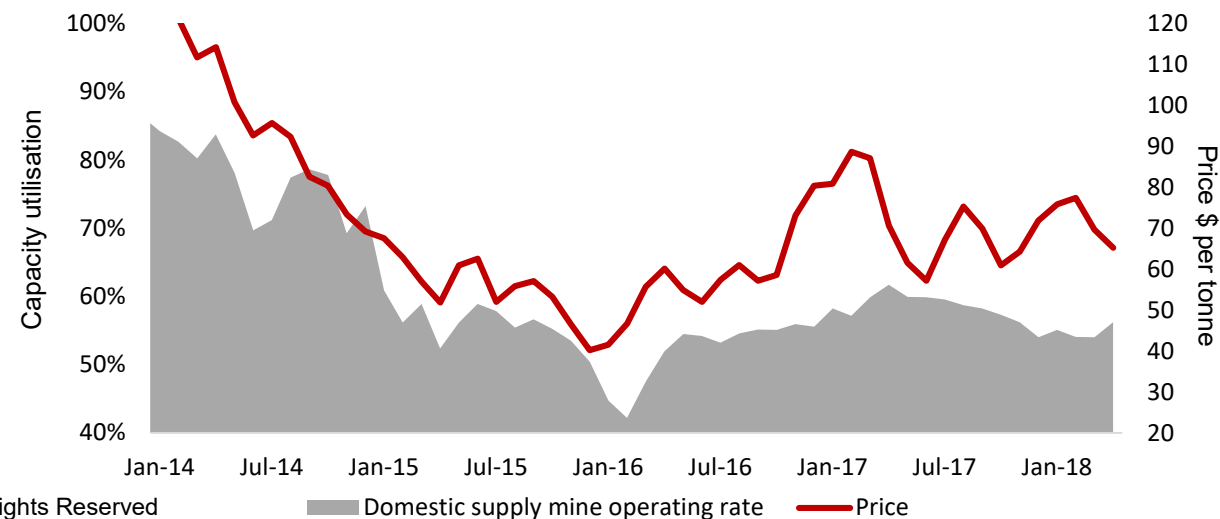
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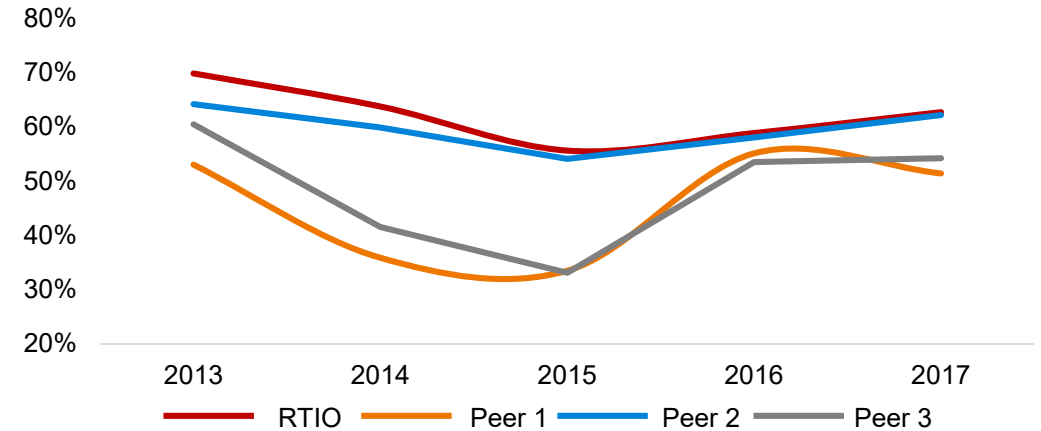# Our Iron Ore business consistently generates superior margins

Rio Tinto Iron Ore EBITDA performance

EBITDA Margin v Peers

RTIO — Peer 1 — Peer 2 — Peer 3

2018 Seaborne iron ore cash costs by operator
CFR China, 62% Fe fines equivalent

Rio Tinto Pilbara Operations

Source: Wood Mackenzie
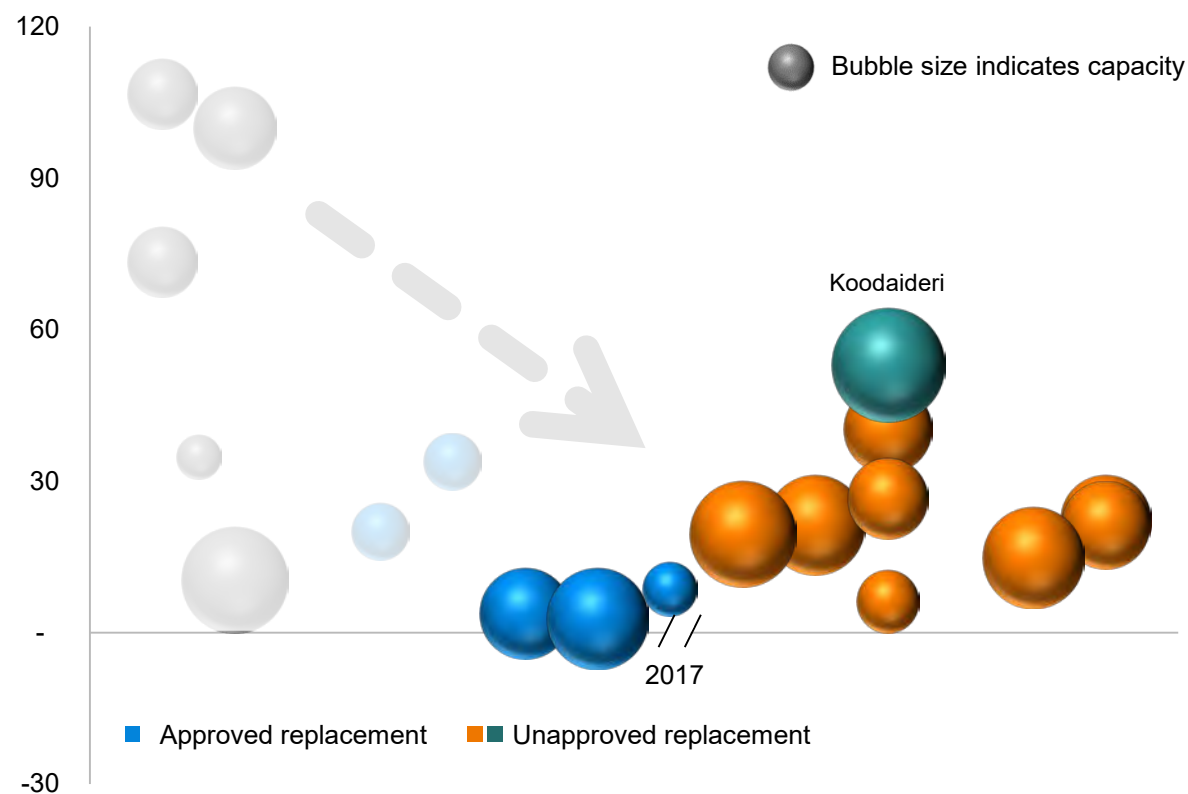[1] EBITDA defined as sales margin excluding freight revenues
[2] Nominal FOB WA iron ore price.
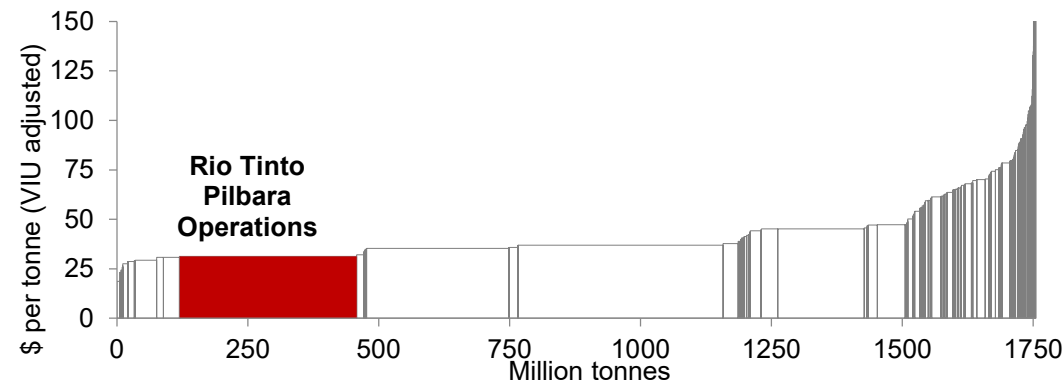
Multiple low cost, value accretive capital options

Pilbara development options

$ per tonne installed capital intensity

Koodaideri

Bubble size indicates capacity

2017

■ Approved replacement   ■ Unapproved replacement

Sustaining capex of ~$1 billion per year for the next three years

Pilbara replacement mines capital 2018 – 2020 of ~$2.2 billion includes West Angelas, Robe Valley and Koodaideri development from 2019

Koodaideri underpins Pilbara Blend, low cost operations and capacity optionality

Post-Koodaideri replacement options are expected to be lower capital intensity and will leverage off existing infrastructure

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Sustainable long term, low cost position underpinned by our world class assets

Pilbara cash unit cost
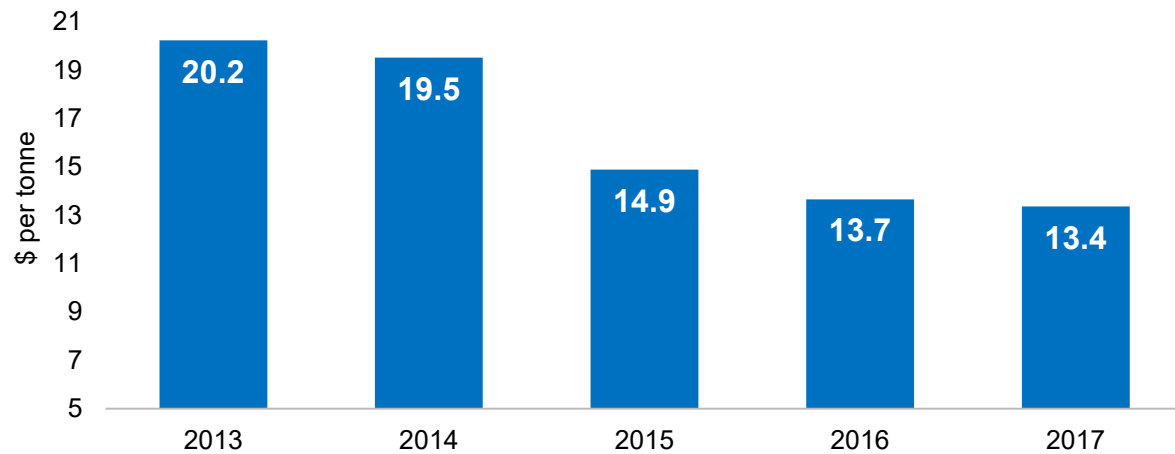
Breakdown of 2017 Pilbara costs

- Employee Costs
- Materials
- Contractors
- Energy
- Other
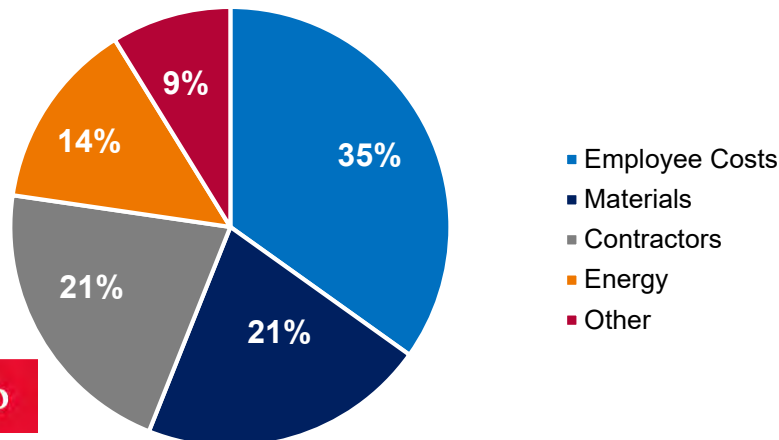
Headwinds in 2018:

Haul distance

Bulk materials

Labour costs

Contractor costs

Cyclical maintenance costs

Cyclical maintenance costs, partly offset by new tactics

>4,500 productivity improvement initiatives

Productivity options to continue to deliver cash benefits

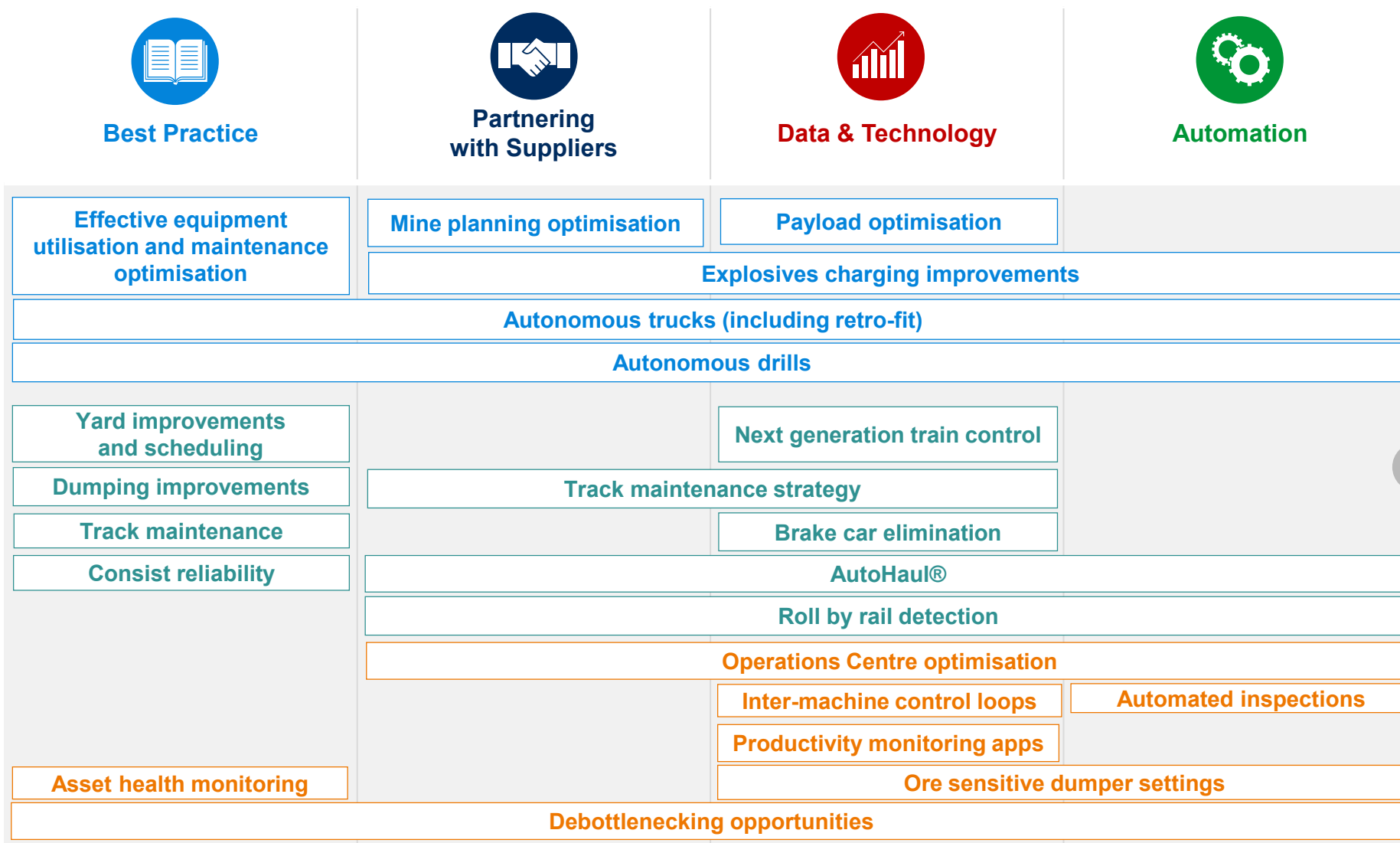|	Best Practice	Partnering with Suppliers	Data & Technology	Automation
	Effective equipment utilisation and maintenance optimisation	Mine planning optimisation	Payload optimisation	
		Explosives charging improvements		
	Autonomous trucks (including retro-fit)			
	Autonomous drills			
	Yard improvements and scheduling		Next generation train control	
	Dumping improvements	Track maintenance strategy		
	Track maintenance		Brake car elimination	
	Consist reliability	AutoHaul®		
		Roll by rail detection		
		Operations Centre optimisation		
			Inter-machine control loops	Automated inspections
			Productivity monitoring apps	
	Asset health monitoring		Ore sensitive dumper settings	
	Debottlenecking opportunities			

Iron Ore to deliver additional free cash flow of ~$0.5 billion per year from 2021

Supported by our people and partners

Valued customer relationships built on technical knowledge and product quality

11,500 employees driving sustainable productivity and cost improvements

Local procurement

Over 1,000 WA suppliers provided with business

Rio Tinto paid $1.3 billion of royalties in Western Australia in 2017

Strong community, joint venture partners and technology partners

Iron Ore is consistently generating superior shareholder returns

Market led strategy

Clear strategy of value over volume - focused on delivering value for decades to come

Productivity and value focused

Disciplined embedded process for delivery of improvement in volume and productivity

Low capital developments

Attractive low capital intensity for sustaining mine developments

Sector leading returns

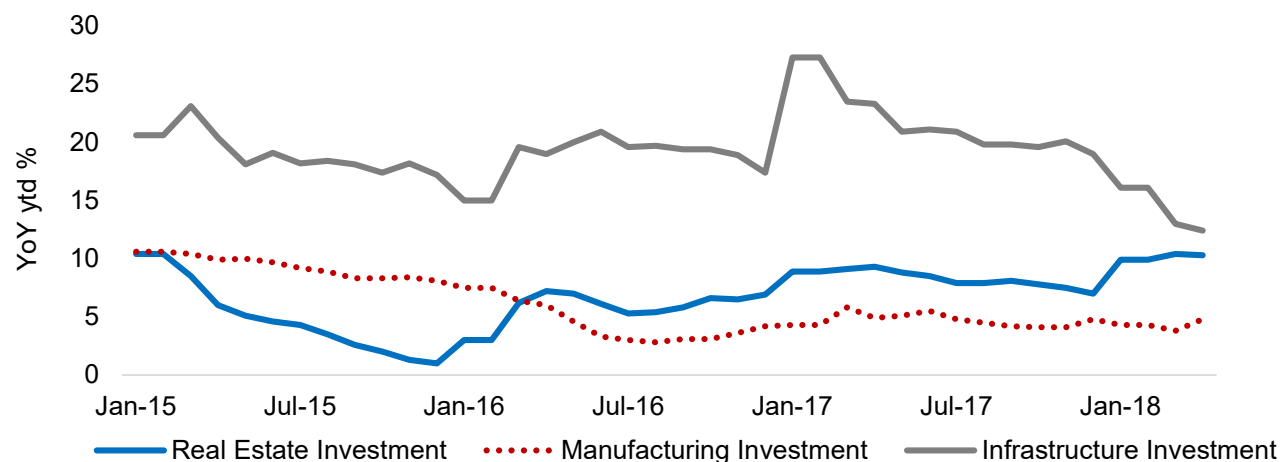A world class asset base generating sector leading returns
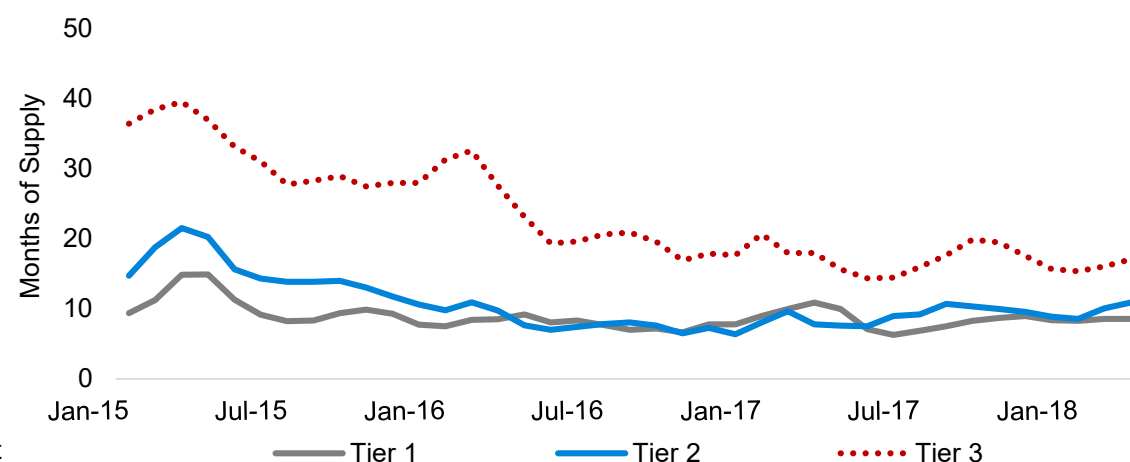
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Sales and Marketing

Simon Farry

Vice President, Sales and Marketing

Controlled deceleration in Chinese growth

Infrastructure investment slowing but remains robust

YoY ytd %

Legend: Real Estate Investment, Manufacturing Investment, Infrastructure Investment

Housing inventories are very low…

Months of Supply

Legend: Tier 1, Tier 2, Tier 3

…leading to strong growth in housing starts

YoY ytd %

Legend: Floor Space Under Construction, Floor Space Sold, Floor Space Started
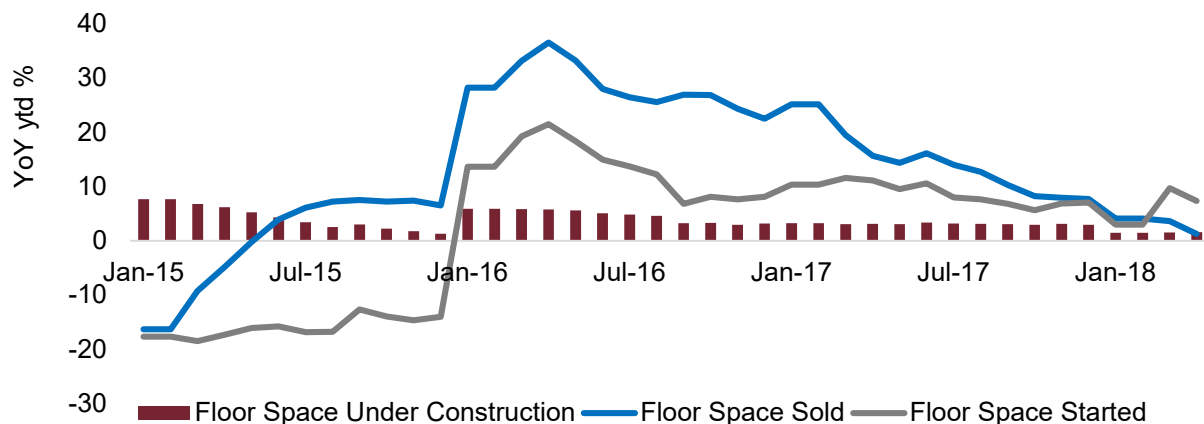
Heavy machinery sales remain strong

YoY ytd %

Legend: Excavators, Buldozers, Forklift Trucks

RioTinto Source: CEIC

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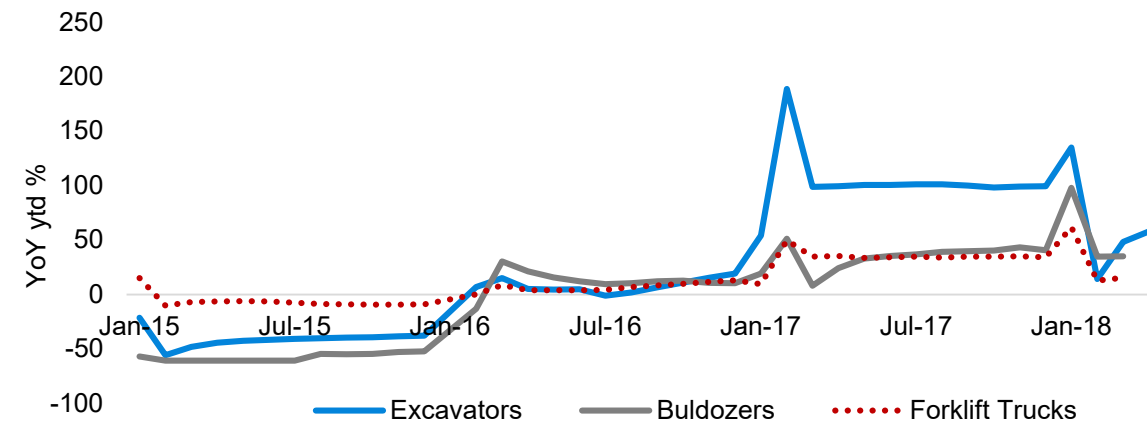
Supply-side reform and tightening environmental policy have driven structural changes

Supply-side reforms

Policies focused on restoring industry profitability and reducing debt

Steel capacity reduction on this scale/timeframe unprecedented in the international steel market

Policies limiting future growth in steel capacity

Environmental policy

Environmental restrictions are the new normal

Environmental protection marked as a top three domestic policy priority

Additional ultra-low emissions standards to apply to China's steel industry by 2025

Higher steel capacity utilisation rates

Higher steel mill margins

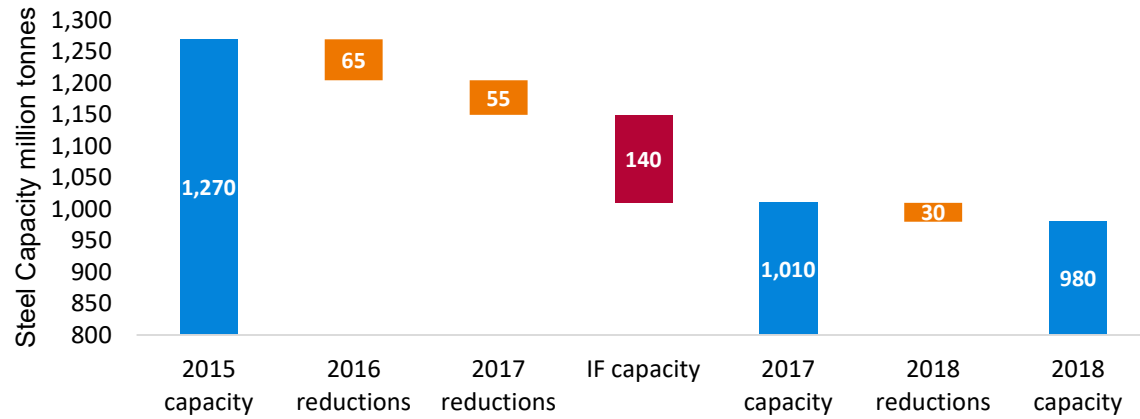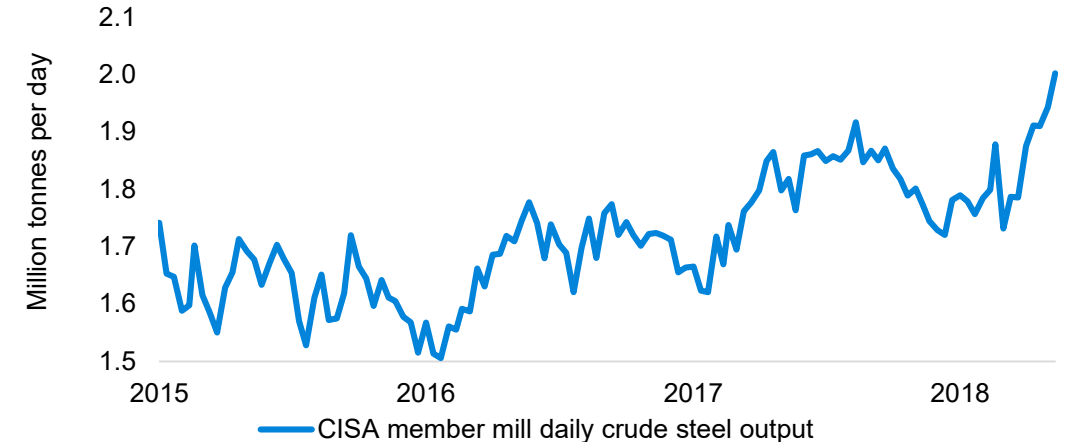**Productivity focus and preference for higher grade iron ore**

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China's supply-side reform and environmental policies have created a more efficient industry…

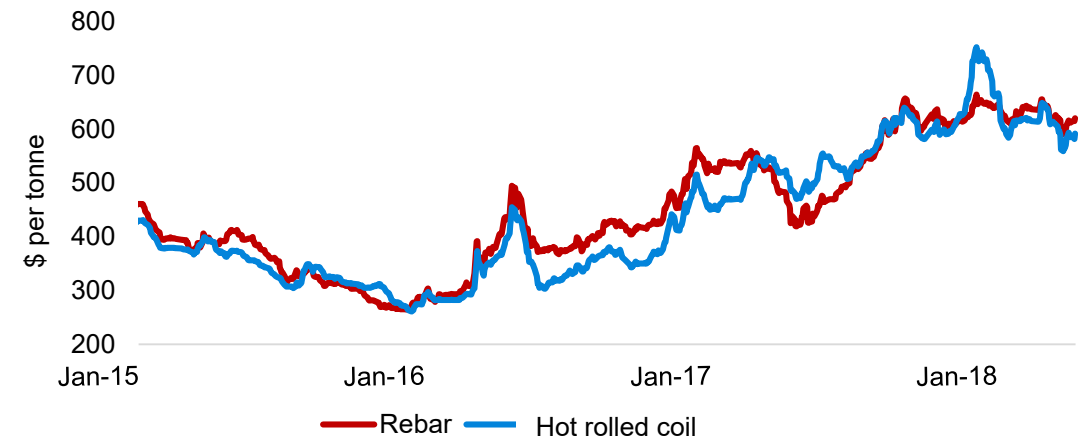**Steel mill rationalisation programme has removed significant capacity...**

Steel Capacity million tonnes

2015 capacity	1,270
2016 reductions	65
2017 reductions	55
IF capacity	140
2017 capacity	1,010
2018 reductions	30
2018 capacity	980

…while steel production has remained robust...

Million tonnes per day

— CISA member mill daily crude steel output

…driving record steel mill utilisation rates...

Steel Capacity million tonnes / Capacity Utilisation %

(2015, 2016, 2017, 2018)

…and higher steel prices

$ per tonne

— Rebar — Hot rolled coil

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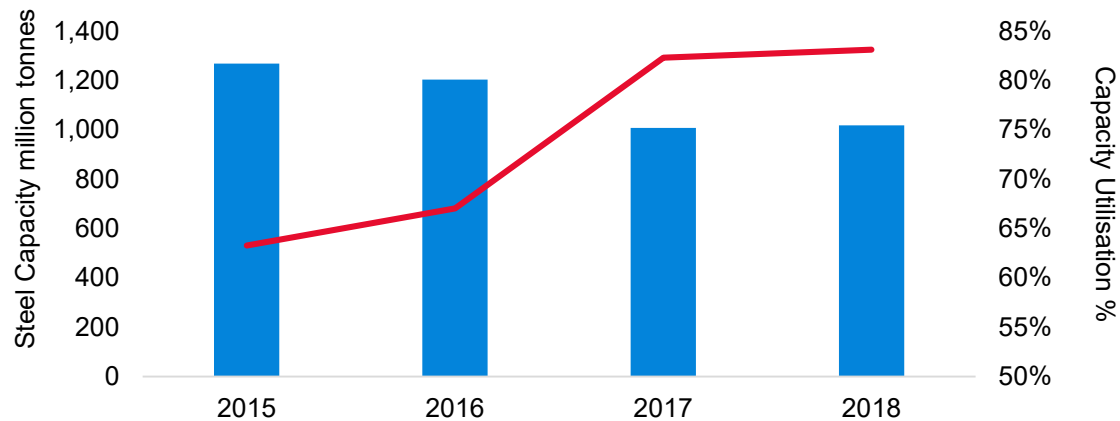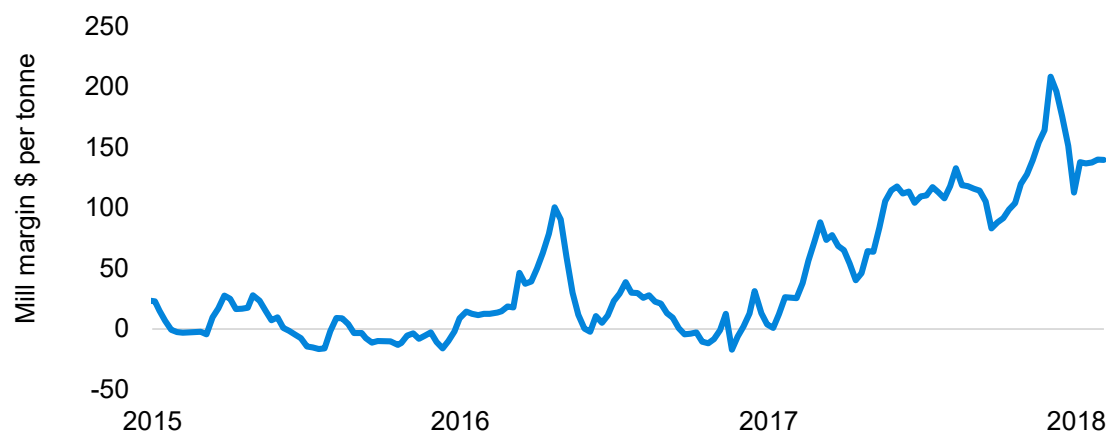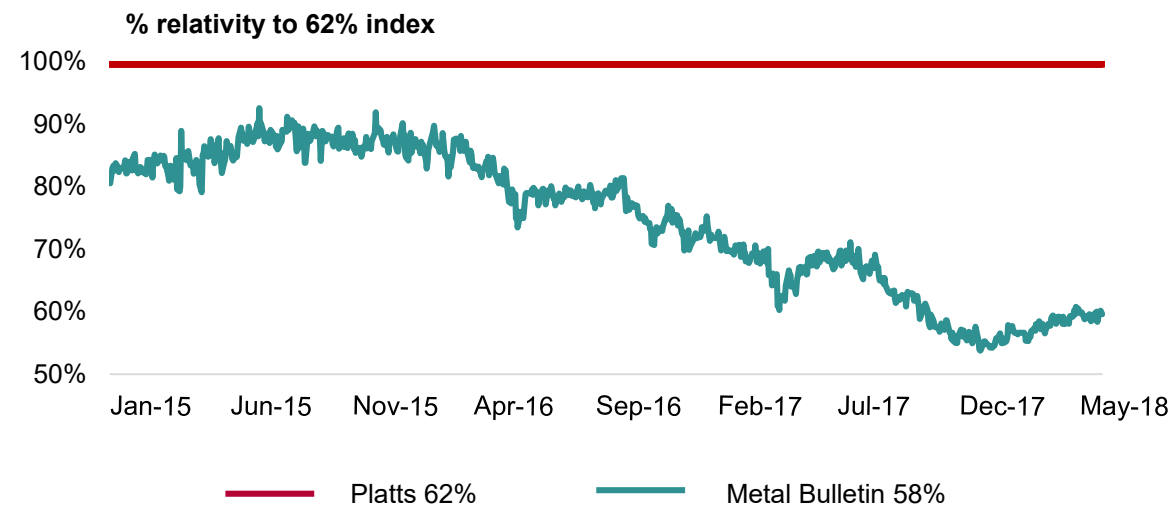
...causing a structural shift towards productivity

Improvement in Chinese steel industry profitability...

... and the focus on productivity has caused structural widening in iron ore premiums
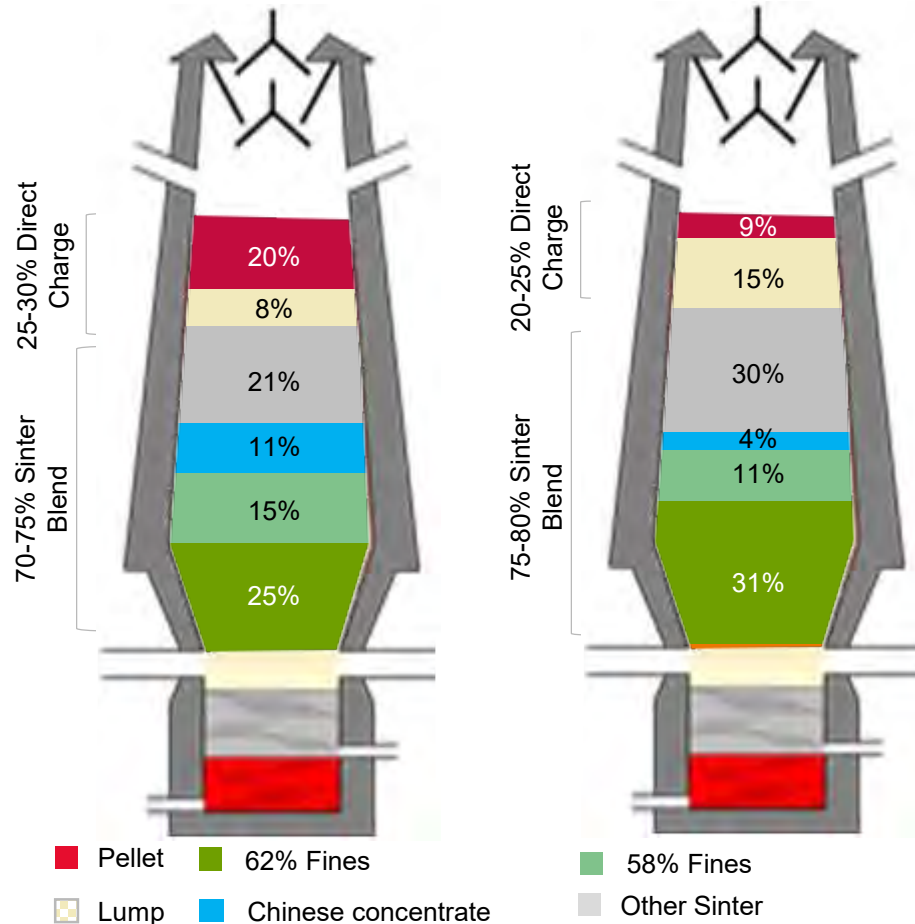
# Northern China is driving structural change to iron ore pricing

Typical North China

25-30% Direct Charge
- 20%
- 8%

70-75% Sinter Blend
- 21%
- 11%
- 15%
- 25%

Typical South China

20-25% Direct Charge
- 9%
- 15%

75-80% Sinter Blend
- 30%
- 4%
- 11%
- 31%

Legend:
- ■ Pellet
- □ Lump
- ■ 62% Fines
- ■ Chinese concentrate
- ■ 58% Fines
- ■ Other Sinter

Northern Chinese mills are most sensitive to changes in Fe grade

Blast furnace productivity increase for a 1% increase in iron burden
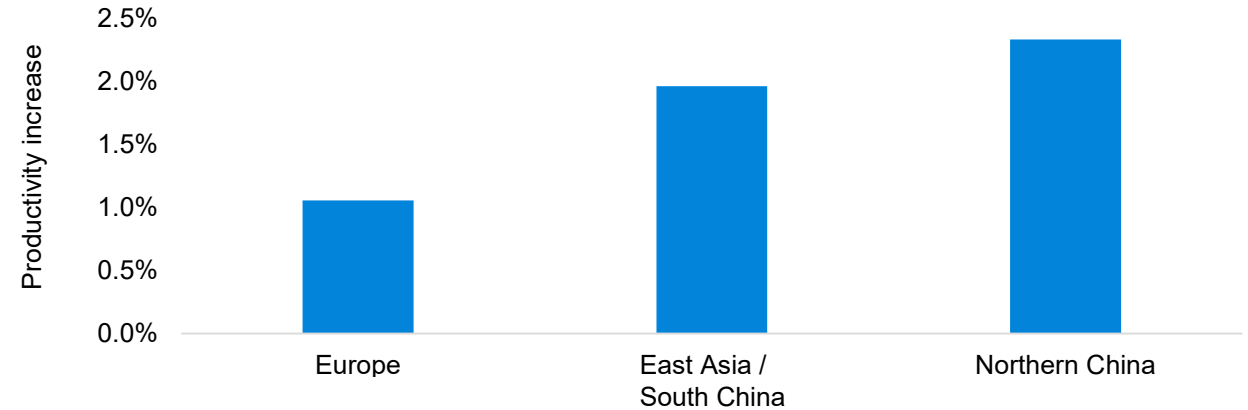
~2/3 of Chinese capacity is in the north and is key for price formation

Access to higher quality domestic concentrates and pellets allows North China mills to consume more lower grade seaborne iron ore

Recent environmental restrictions have reduced North China sinter capacity and enhanced the value of higher grade iron ore
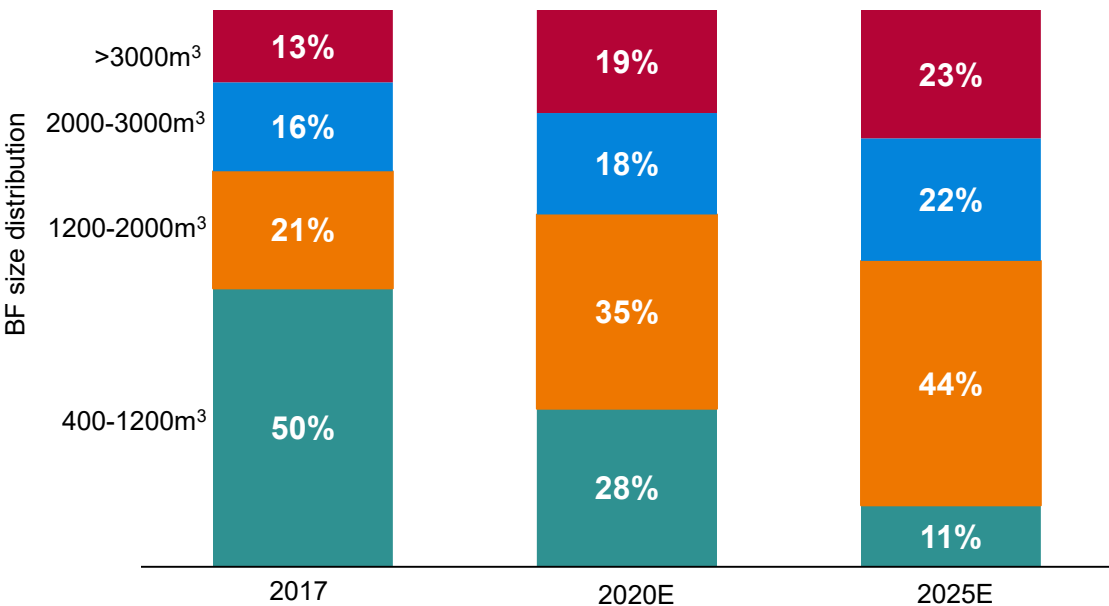
RioTinto Source: Rio Tinto

China's supply-side reforms are here to stay and will continue to be driven by tightening environmental policy

Southern and Coastal regions destination for replacement steel capacity – well located for seaborne iron ore …

… and replacement capacity will be larger and cleaner blast furnaces

Environmentally sensitive areas (ESA), where steel capacity required to decline

Capacity new and replacement area

- Provincial BF capacity > 30Mt
- 15Mt < Provincial BF capacity < 30Mt
- Provincial BF capacity < 15Mt
- Share of small BF capacity (<1200M^3) >50%

BF size distribution

Size	2017	2020E	2025E
>3000m^3	13%	19%	23%
2000-3000m^3	16%	18%	22%
1200-2000m^3	21%	35%	44%
400-1200m^3	50%	28%	11%

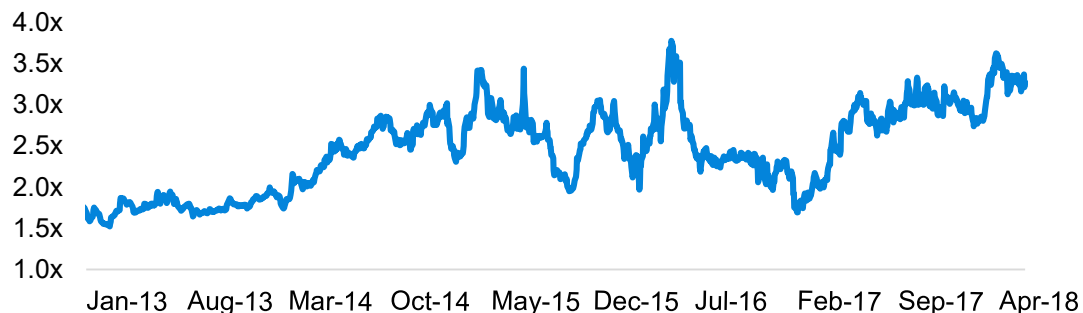Source: China Metallurgical Industry Planning and Research Institute (MPI), Rio Tinto

Scrap usage in China gradually increasing from a low base, but will face headwinds

China's scrap supply growing slowly from a low base

Pig Iron Production — Obsolete Scrap Supply
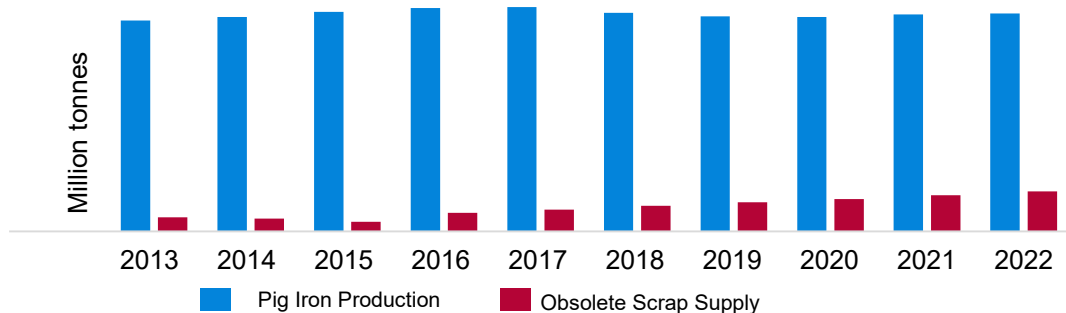
Increased scrap usage in BOF has increased scrap to iron ore price ratio

Headwinds limiting scrap consumption:

Scrap to iron ore price ratio has risen to historic highs

Scrap quality is low

Scrap handling and transport bottlenecks

Higher electricity costs

Rio Tinto Commercial bridges our customers and our assets

Rio Tinto's commercial hub now established in Singapore, combining sales and marketing, procurement, and marine and logistics

Iron Ore Sales & Marketing team strategically located to provide deep customer and market insights:
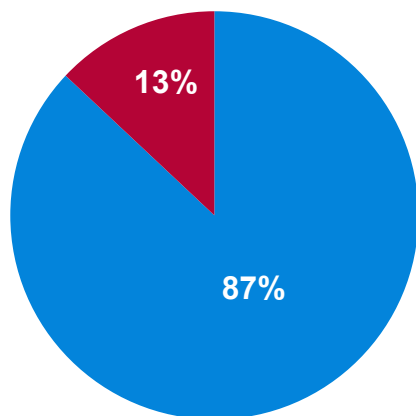
- Headquarters in Singapore

- Customer-facing teams in our regional offices in China, Japan, Korea and Europe

- Technical marketing teams located close to our customers (regional offices) and close to our assets (Perth)

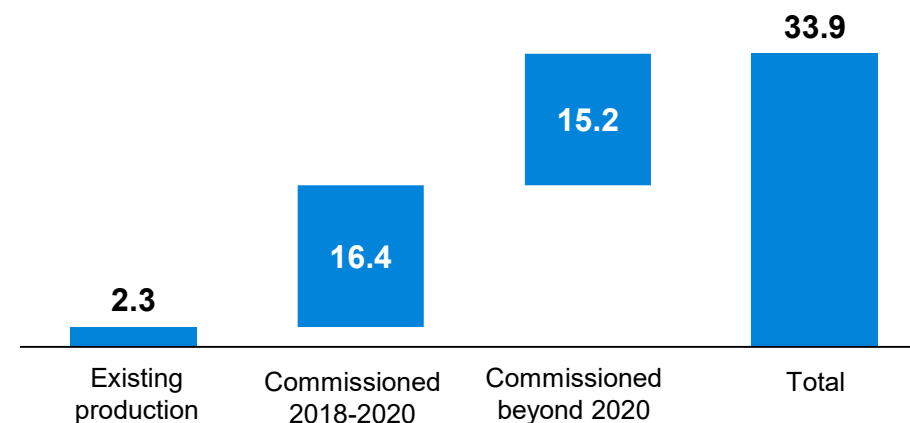# We have a Tier 1 customer base

2017 shipments by country/region

China	Japan	Korea	Taiwan	South East Asia	Europe
76%	16%	4%	3%		

- China
- Japan
- Korea
- Taiwan
- South East Asia
- Europe

30 largest steel mills in Asia

- 13%
- 87%

- Rio Tinto supplied
- Non-Rio Tinto supplied

Well positioned to supply emerging iron ore demand in South East Asia

Upcoming Blast Furnace capacity in ASEAN (Million tonnes)

Existing production	Commissioned 2018-2020	Commissioned beyond 2020	Total
2.3	16.4	15.2	33.9

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We understand every customer is different

Technical

Operations and technical constraints and process efficiency

Stockyard and screening capacity

Sinter and pellet capacity

Coke production and quality

PCI and operating practices

Geographical

Logistics and supply chain

Proximity to deep water ports

Costs and quality of fluxes

Seasonal factors

Regulatory

Environmental exposure and restrictions

Energy caps / limitations

By-products value, recycle or disposal costs

Strategic
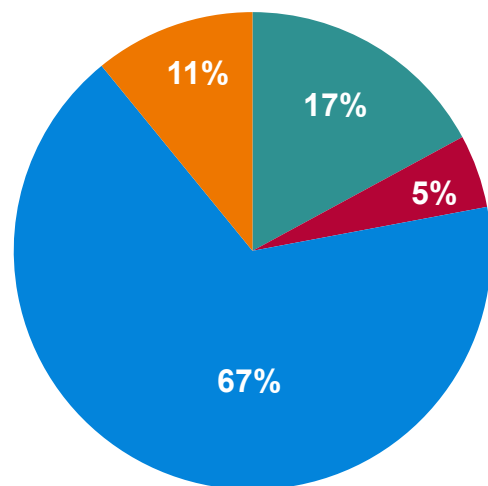
Steel market sector

Production flexibility

Commercial approach
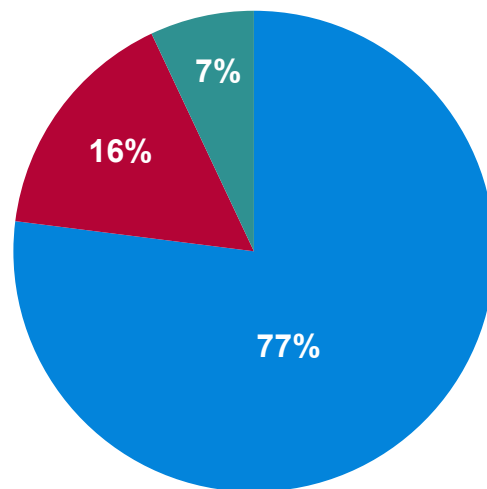
Supply integration

Pricing and contract periods

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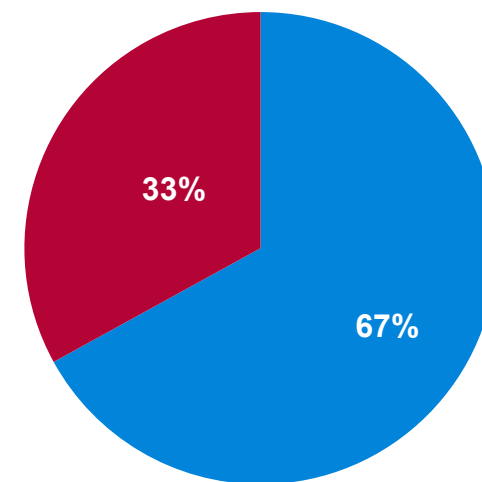# And we sell our product on different contracts ...

2017 sales by pricing type

- Fixed price (spot)
- Month actual
- Quarter lag
- Quarter actual

11%
17%
5%
67%

2017 sales by contract type

- Long term contract
- Short term contract
- Spot

7%
16%
77%

2017 sales by delivery type

- Delivered
- FOB

33%
67%

… we produce five products in the Pilbara to meet their needs

| Pilbara Blend Fines | Pilbara Blend Lump | Yandicoogina Fines | Robe Valley Fines | Robe Valley Lump |

2017 shipments by product

Pilbara Blend Fines	Pilbara Blend Lump	Yandicoogina Fines	Robe Valley Fines	Robe Valley Lump
47%	26%	17%	7%	3%

Pilbara Blend is the world's most recognised brand of iron ore

Pilbara Blend Fines

Pricing

Reference product for the 62% indices

Most traded physical iron ore product

Strengths

Valued for its liquidity, reliability

Market position

Base load sinter blend in China

Pilbara Blend Lump

Pricing

Aligned to 62% fines index plus lump premium
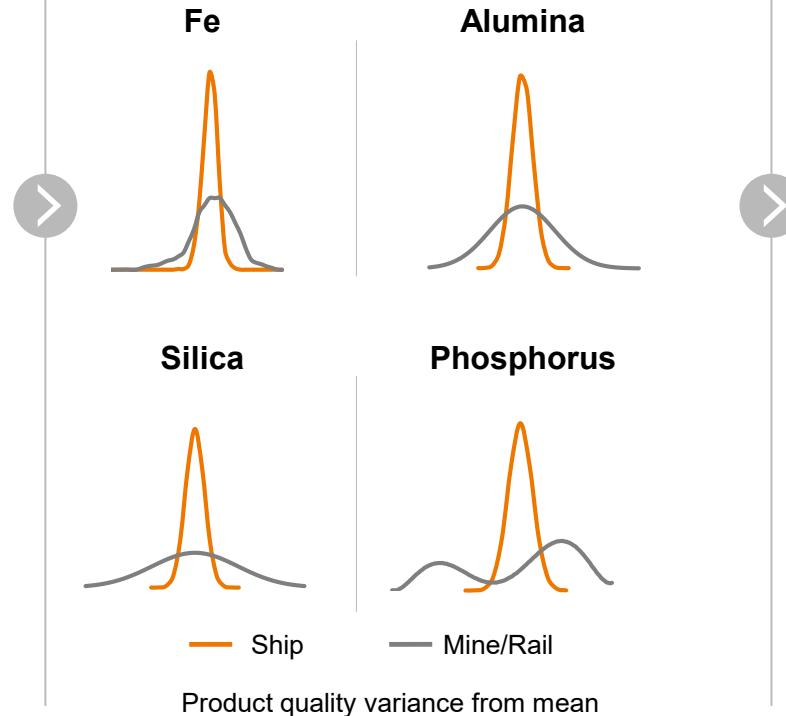
Strengths

Avoids the costs of sintering which will increase with emissions legislation
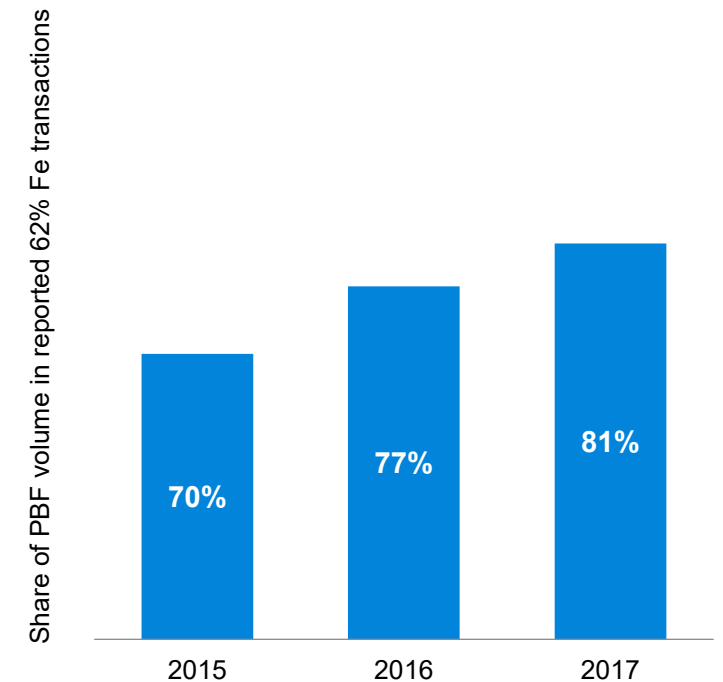
Market position

Most widely available lump product

In demand across most markets and emerging South East Asia

We remove variability for our customers through our blending process

Fe

Alumina

Silica

Phosphorus

— Ship   — Mine/Rail

Product quality variance from mean

Pilbara Blend Fines is main reference product for the 62% indices

Share of PBF volume in reported 62% Fe transactions

70% (2015)
77% (2016)
81% (2017)

Yandicoogina, Robe Valley products are placed with customers who value them most

Yandicoogina Fines

Pricing

Priced very closely to the 62% index

Strengths

58% Fe but calcines to high Fe Sinter

Low in phosphorus and alumina

Market position

Base load in blends in East Asia and Southern China

Robe Valley Fines

Pricing

Priced against 62% index based on negotiated relativities

Strengths

Coarse sizing aids sinter granulation
Low phosphorus

Market position

Coastal China mills and producers of niche steel in North China

Suitable for steel mills whose basic oxygen furnace (BOF) is the bottleneck

Robe Valley Lump

Pricing

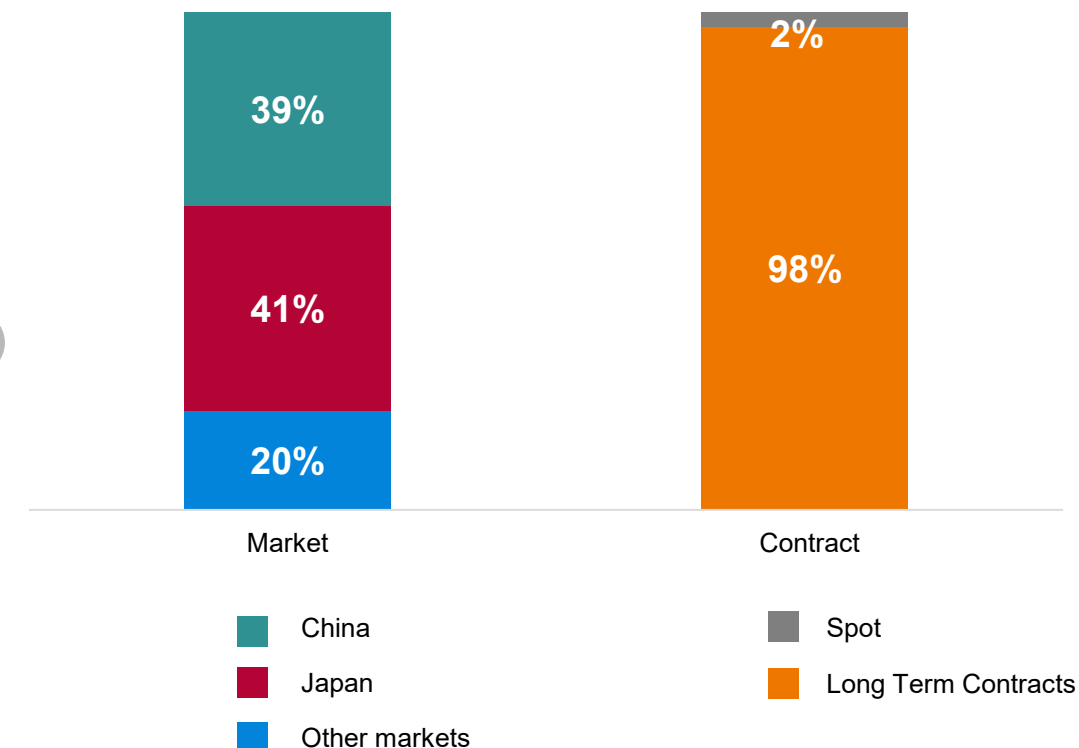Priced against 62% index based on negotiated relativities

Strengths

Low phosphorus

Market position

Producers of niche steel in Japan and Coastal China

Suitable for steel mills whose BOF is the bottleneck

Total tonnes of Yandicoogina Fines, Robe Valley Fines and Robe Valley lump

Market: China 39%, Japan 41%, Other markets 20%

Contract: Spot 2%, Long Term Contracts 98%

Creating a flexible supply chain allows agility to respond to customer needs and market conditions

Future system capacity
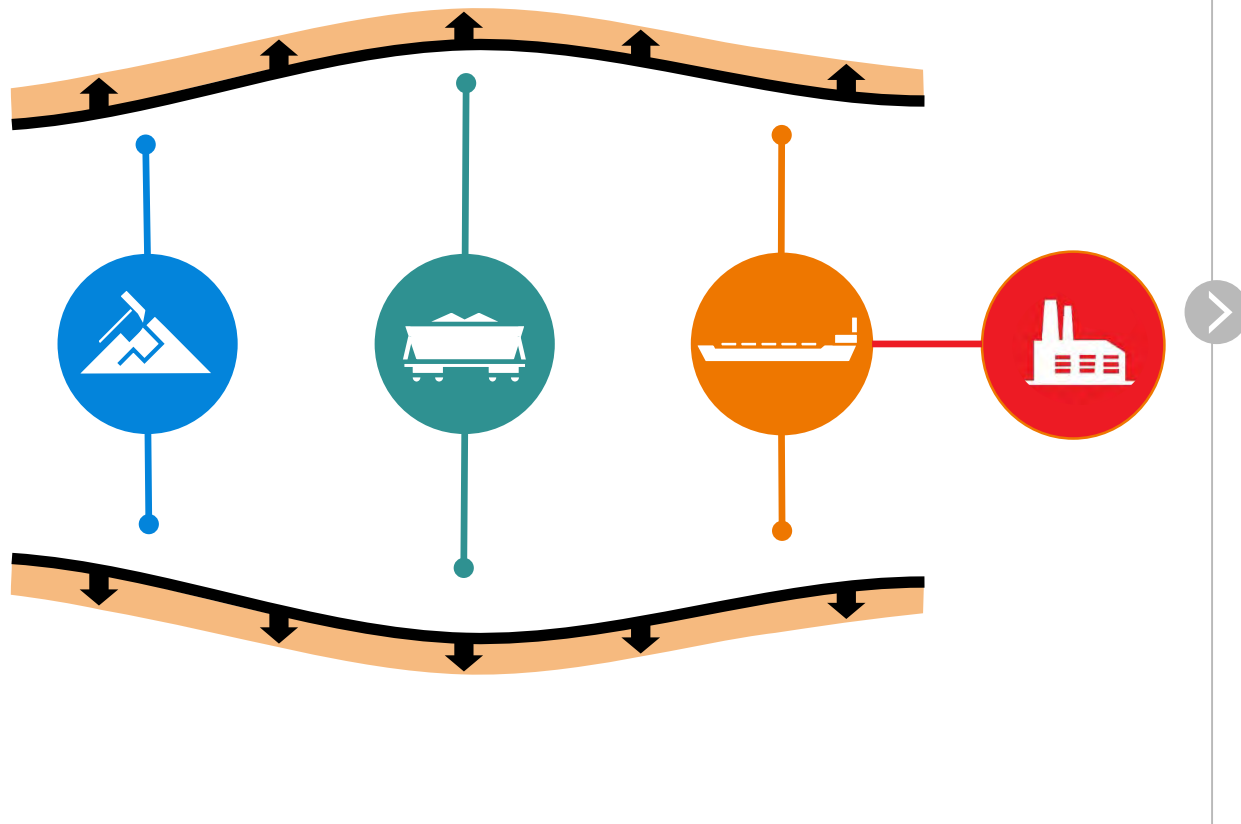
Flexing Pilbara Blend Lump shipments in line with market demand and premium cycle

Aligning Yandicoogina fines shipments in line with customer demand

Flexing volume and product mix in line with seasonal demand

RioTinto

Technology will improve the customer experience and generate market insights

Live visual interface between Sales & Marketing in Singapore and the Operations Centre enabling a customer-led supply chain

Robotic technologies to eliminate manual tasks and enhance customer experience

Artificial intelligence and predictive analytics to generate market insights and drive better decisions

Our commercial approach maximises the value of our products

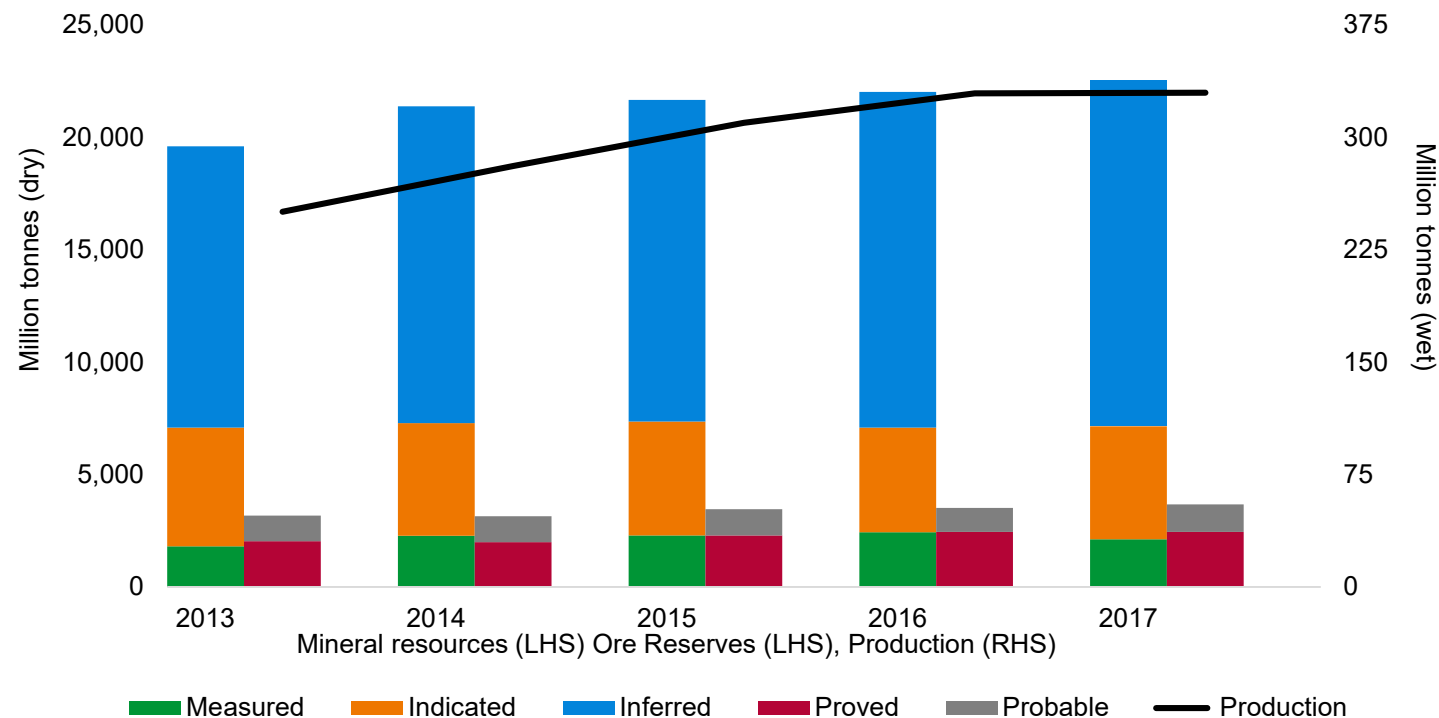|	
Customer centric organisation	Focused on growing value for all through deep understanding of our customers and the industry
Product portfolio	A suite of highly valued, consistent products
Supply chain optimisation	Right customer, right product, right time
Commercial acumen	Value over volume underpinned by strategic product placement

RioTinto

Planning, integration and assets

Kellie Parker

Managing Director, Planning, Integration and Assets

Highly valued product suite, sustained by significant resources

Pilbara resources, reserves[1] and production

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

Legend: Measured — Indicated — Inferred — Proved — Probable — Production

Large mineral resources support system optionality

Ore reserves maintained in line with depletion

Maintaining evaluation drilling and resource development programmes

[1] Refer to the statements supporting these resource and reserve estimates set out on Slide 3

Continuing to grow the pipeline of future resources and exploration options

2018 drilling plan by hub regions
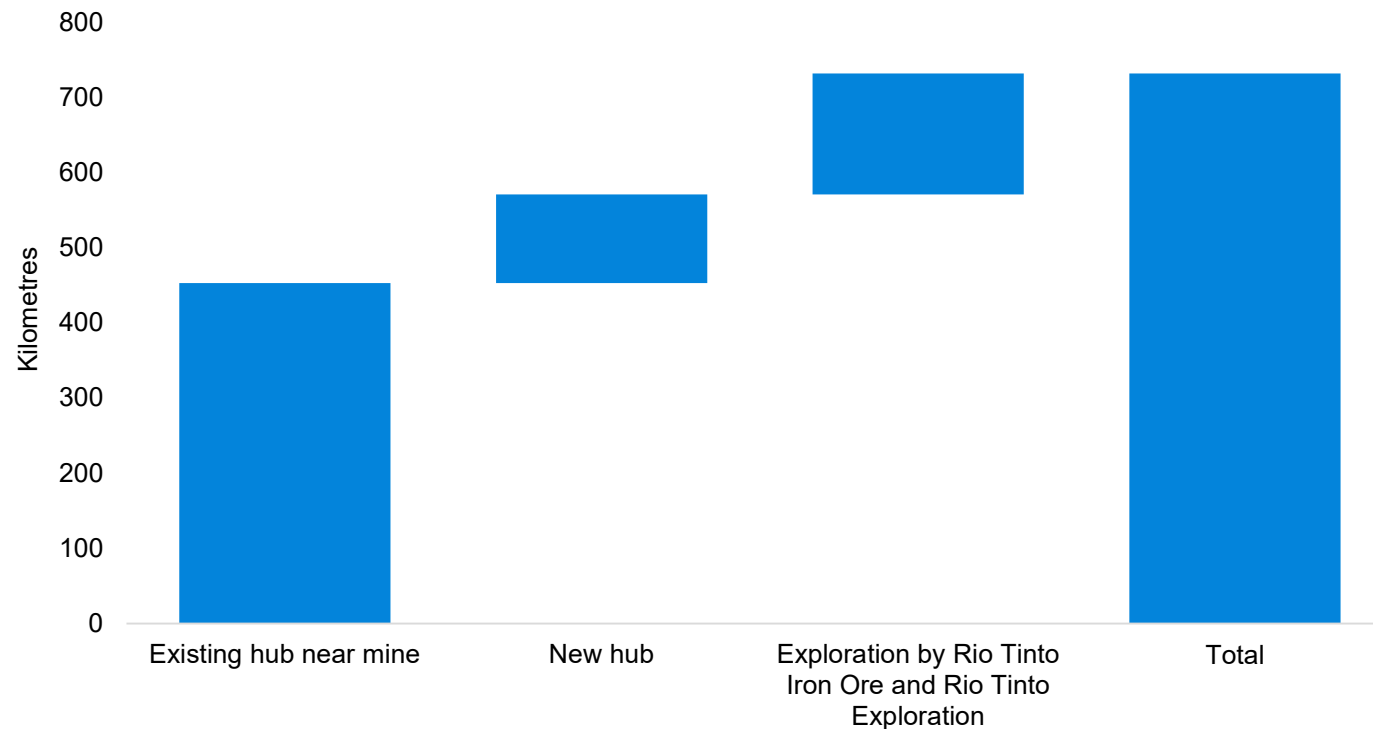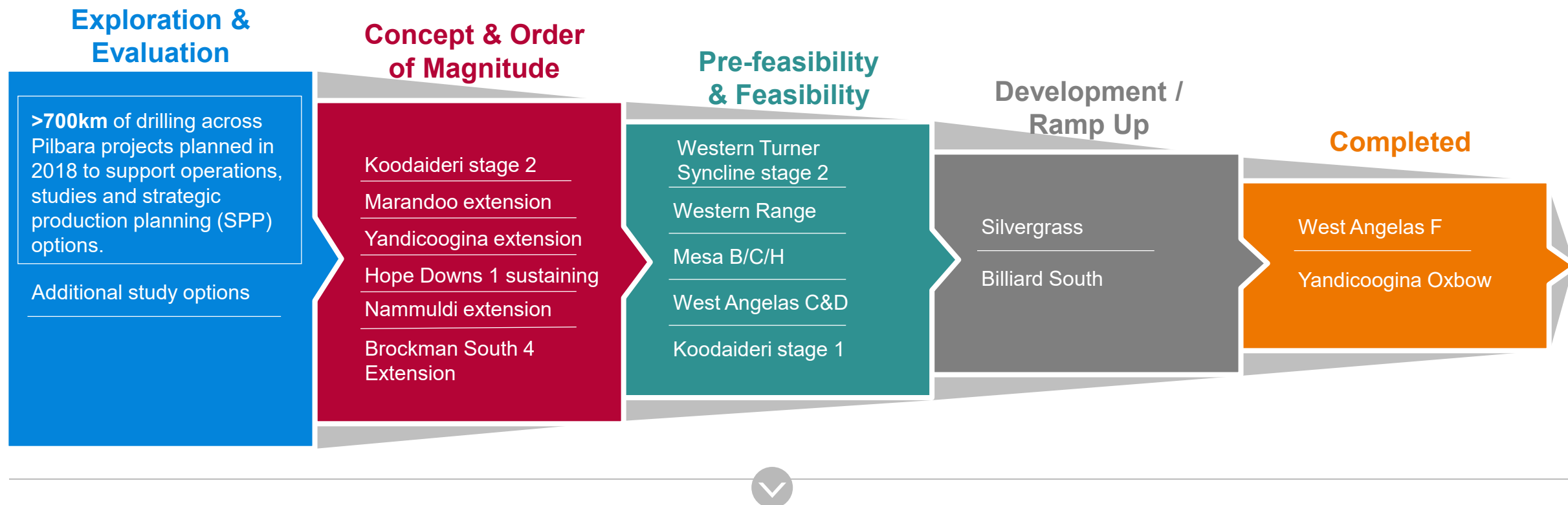

Extensive existing resource base

Drilling focused on evaluating mineralised inventory or conversion to resource

Extensive tenures beyond existing mines

Active exploration to provide future optionality

Extensive pipeline of options

Exploration & Evaluation

>**700km** of drilling across Pilbara projects planned in 2018 to support operations, studies and strategic production planning (SPP) options.

Additional study options

Concept & Order of Magnitude

Koodaideri stage 2

Marandoo extension

Yandicoogina extension

Hope Downs 1 sustaining

Nammuldi extension

Brockman South 4 Extension

Pre-feasibility & Feasibility

Western Turner Syncline stage 2

Western Range

Mesa B/C/H

West Angelas C&D

Koodaideri stage 1

Development / Ramp Up

Silvergrass

Billiard South

Completed

West Angelas F

Yandicoogina Oxbow

Strategic Production Planning underpins the pipeline:
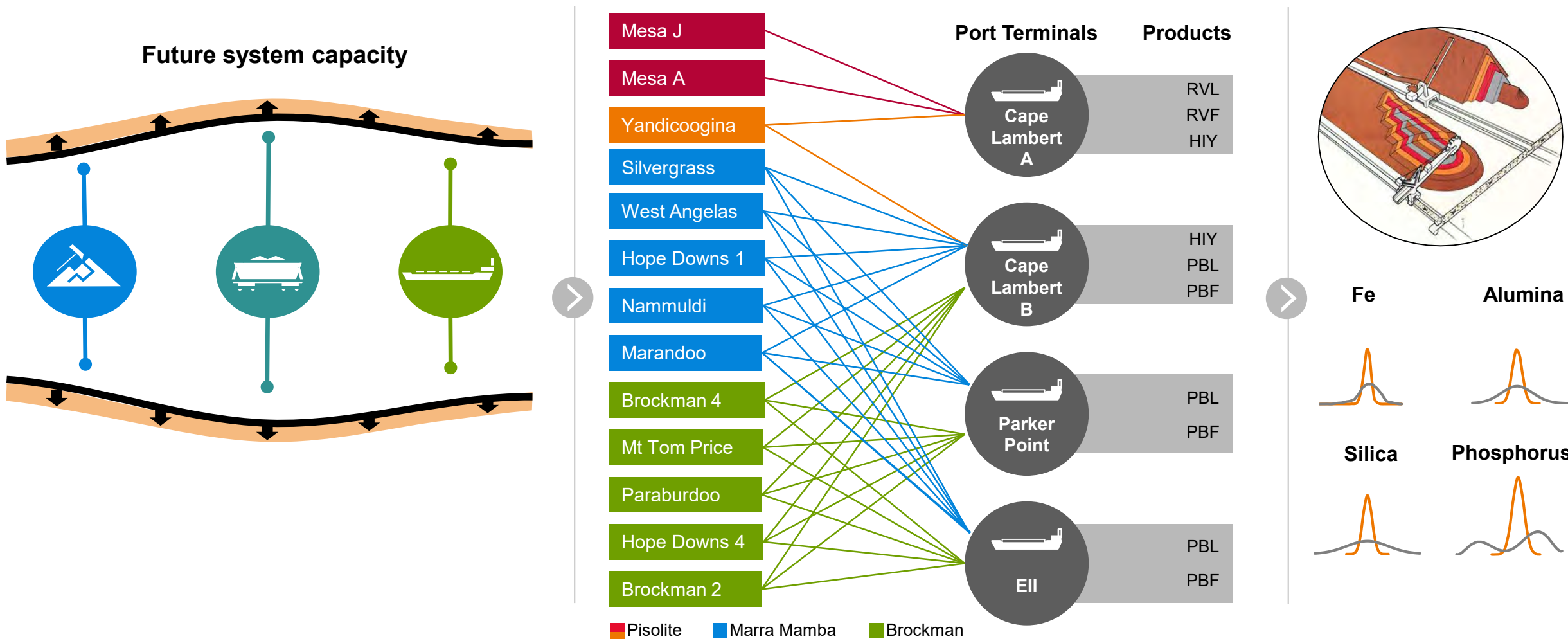
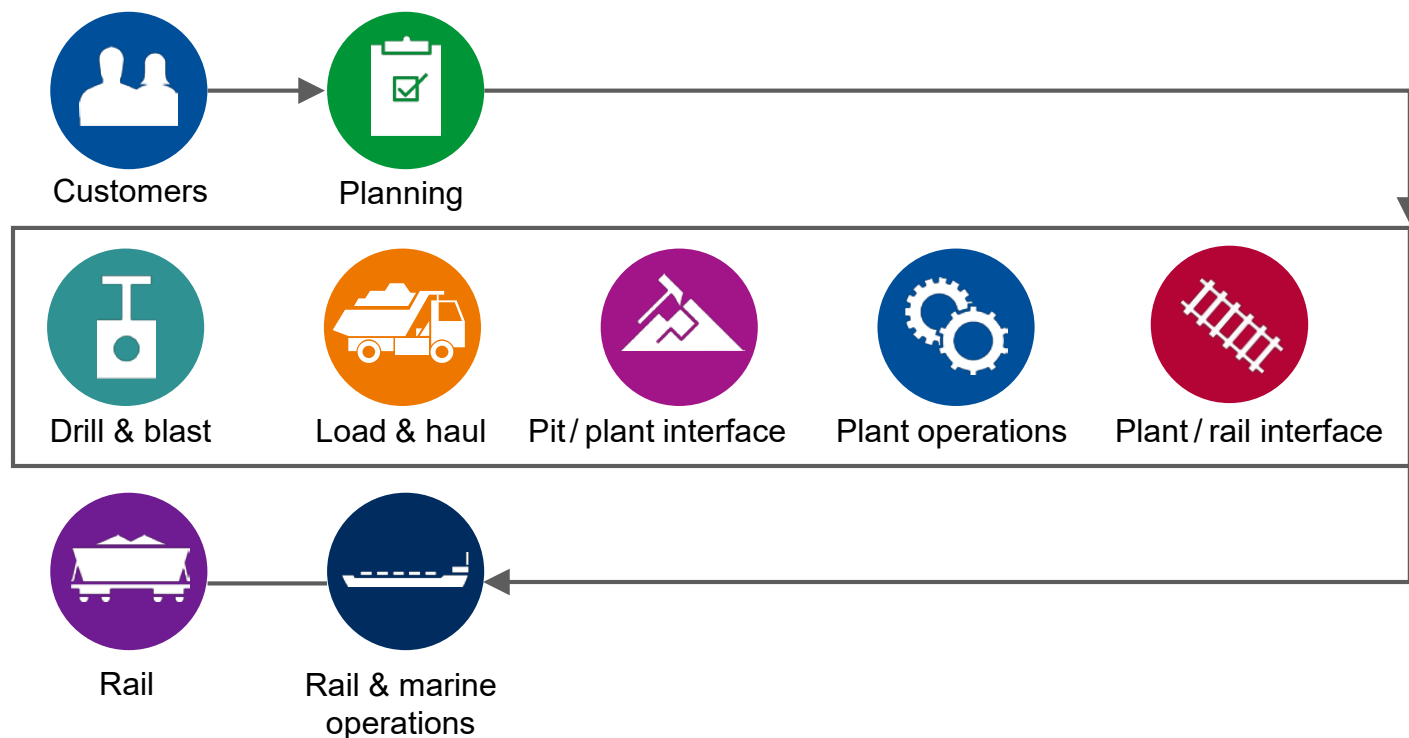Full resource optimisation | Assess product strategy | Inform study options | Sequence optimisation

RioTinto

Best in class quality delivered through system blending

Future system capacity

Mines	Port Terminals	Products
Mesa J	Cape Lambert A	RVL, RVF, HIY
Mesa A	Cape Lambert B	HIY, PBL, PBF
Yandicoogina	Parker Point	PBL, PBF
Silvergrass	Ell	PBL, PBF
West Angelas		
Hope Downs 1		
Nammuldi		
Marandoo		
Brockman 4		
Mt Tom Price		
Paraburdoo		
Hope Downs 4		
Brockman 2		

Legend: Pisolite, Marra Mamba, Brockman

Fe, Alumina, Silica, Phosphorus

RioTinto

Dynamic market driven integrated planning system...

Customers → Planning

Drill & blast | Load & haul | Pit / plant interface | Plant operations | Plant / rail interface

Rail | Rail & marine operations

The system optimises reserves and fixed mobile assets for right quality and value

Right quality, at the right time, delivered through system

Whole of system optimisation through integrated planning:

- Short, medium and long term planning
- Integrated rail and port schedule

Operating management system | Reliability of systems | System optimisation | Technology and automation

RioTinto

…supported by three improvement streams

People

Connected teams

Skills requirement for job of the future

Process

Ore body to customer – an integrated decision system

Augmented asset health

Technology
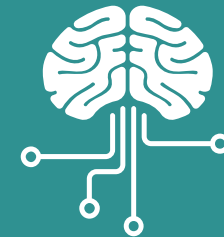
Integrated automation

Big data infrastructure

RioTinto

Industry leading technology driving productivity...

Machine / Asset Automation

Improved safety and productivity

Autonomous drills (ADS)

Explosives charging improvements

Autonomous haulage system (AHS)

AutoHaul®

Networked machines

Control systems connected at all interfaces

Mine Automation System (MAS)

Visualisation tools (RTVIS™)

Control Loops

Customer to ore body knowledge

End-to-end value optimisation

Artificial Intelligence across the entire system

Dynamic system optimisation

A fully automated system, mine to customer, integrated system delivering maximum value

RioTinto

... with Koodaideri being our first intelligent mine
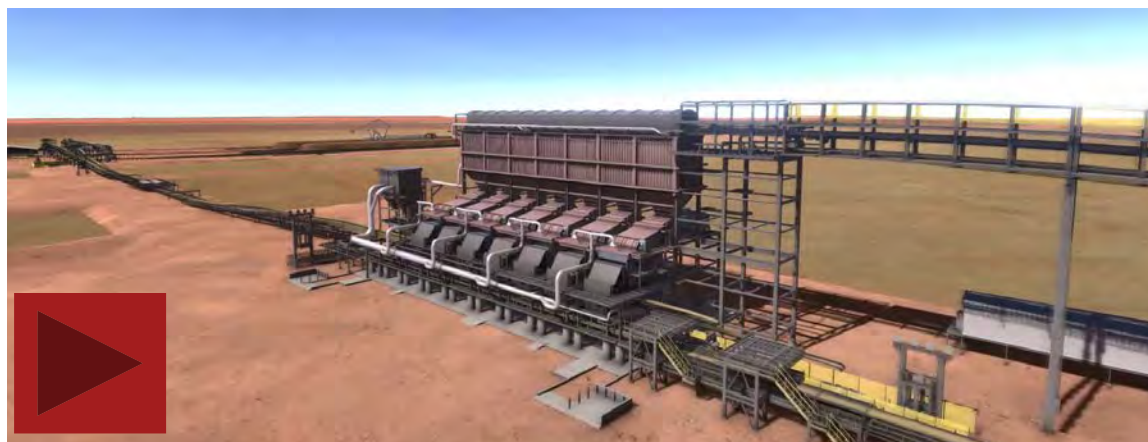
Sustaining Pilbara Blend - 40Mtpa throughput coarse ore capacity plant
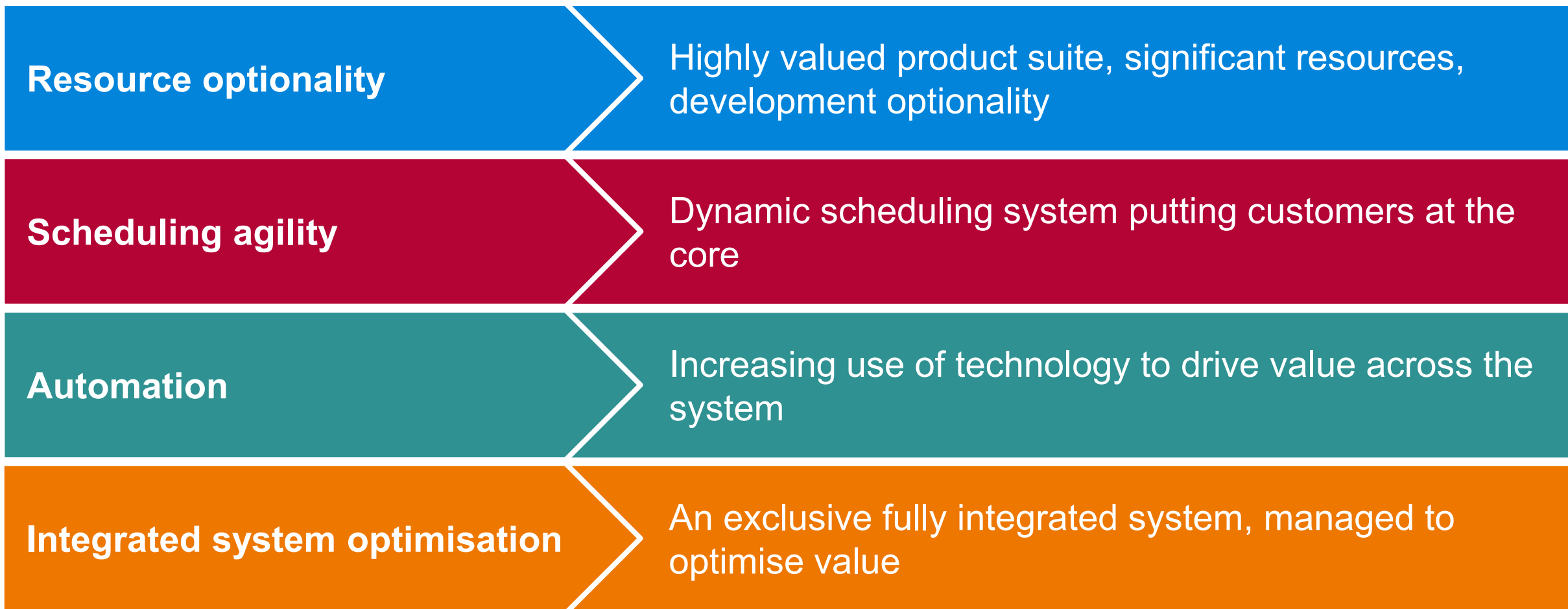
>170 kilometres of new AutoHaul® rail

World class project delivery - utilising data centric and advanced digital engineering to produce a digital twin of the asset

Over 100 innovation opportunities within the feasibility study

Enabling technologies - combining best practice technologies with new process and production loops

Optimised system maximising value

Resource optionality	Highly valued product suite, significant resources, development optionality
Scheduling agility	Dynamic scheduling system putting customers at the core
Automation	Increasing use of technology to drive value across the system
Integrated system optimisation	An exclusive fully integrated system, managed to optimise value

RioTinto

RioTinto

Pilbara Mine Operations

Matthew Holcz

Acting Managing Director, Pilbara Mines

World class assets, fully integrated and agile network
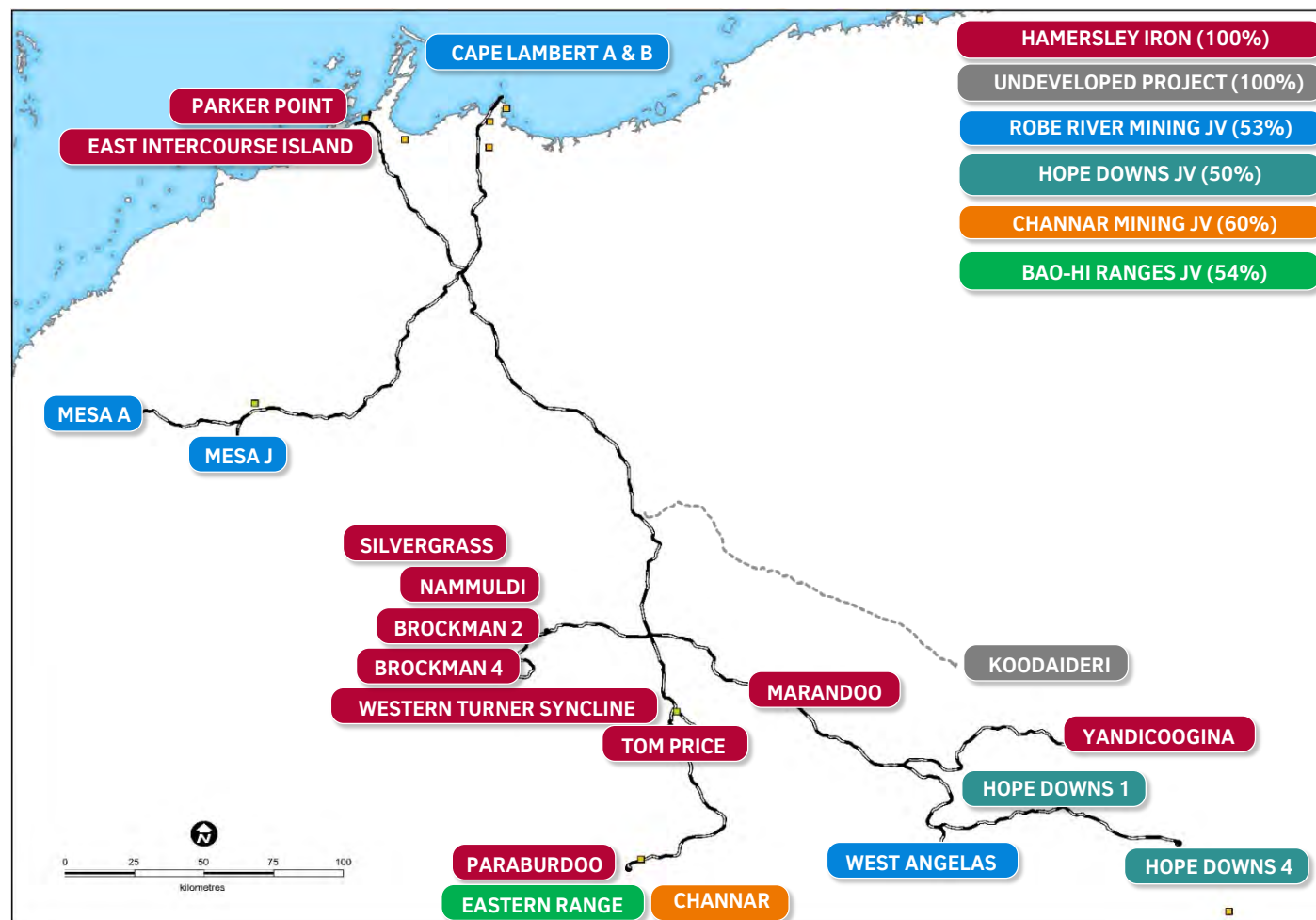
16	Mines
15	Train load outs
17	Plants (including ports CLA, B and Dampier)
11	Dry processing plants
6	Wet processing plants
>370	Haul trucks
95	Autonomous haul trucks
55	Production drills
11	Autonomous drills

2014 Nammuldi BWT

2013 Hope Downs 4

2010 Brockman 4

1990 Channar

1966 Mt Tom Price

Map legend:
- HAMERSLEY IRON (100%)
- UNDEVELOPED PROJECT (100%)
- ROBE RIVER MINING JV (53%)
- HOPE DOWNS JV (50%)
- CHANNAR MINING JV (60%)
- BAO-HI RANGES JV (54%)

Map locations: CAPE LAMBERT A & B, PARKER POINT, EAST INTERCOURSE ISLAND, MESA A, MESA J, SILVERGRASS, NAMMULDI, BROCKMAN 2, BROCKMAN 4, WESTERN TURNER SYNCLINE, TOM PRICE, MARANDOO, KOODAIDERI, YANDICOOGINA, HOPE DOWNS 1, PARABURDOO, EASTERN RANGE, CHANNAR, WEST ANGELAS, HOPE DOWNS 4

RioTinto

Further opportunity exists to optimise mines

Mines

Mine & Haul

Equipment Reliability
(Mean time between failure, availability)

Equipment Productivity
(Effective utilisation, payload, truck speed)

Technology and automation
(AHS, ADS, MAS)

Plant
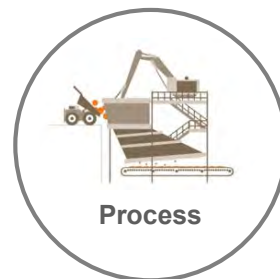
Process

Asset Reliability
(Scheduled loss, unscheduled loss)

Asset Productivity
(Effective utilisation, rates, yield)

Technology and automation
(Process control loops)

Train Load Out

Stockpile & Load out

Tonnes per car
(Dynamic tuning for mass and volume)

Train load time
(Reclaimer efficiency, stockpile management, control system improvements)

Technology and automation
(Automated train loading, expert control systems)

RioTinto

More productive and engaged workforce

Increasing gains in workforce productivity

SOP[1] per employee[2]
(kt / person, Index: 2014 = 1.00)

	2014	2015	2016	2017
	1.00	1.19	1.36	1.37

37%
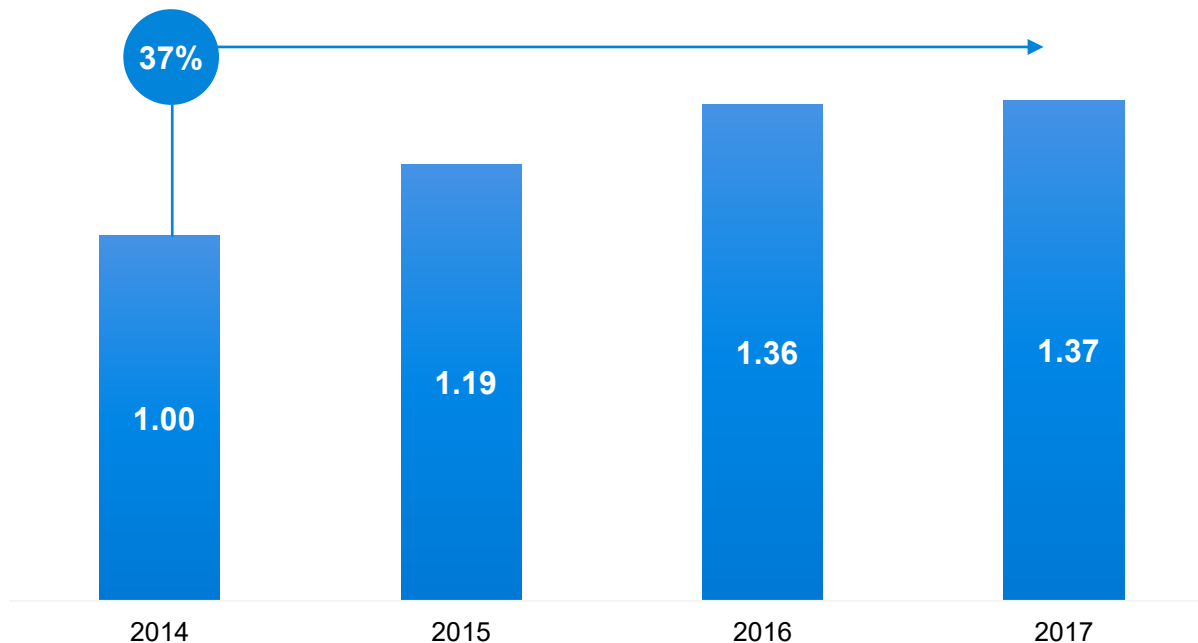
Productivity improvements in fixed and mobile equipment

Mutually beneficial partnerships with key local suppliers

Sustained focus on continuous improvement

Continued deployment of autonomous technology

[1] Saleable ore produced
[2] Pilbara Mines employees and fixed contractor roles

RioTinto

Significant improvement achieved across our mines...

Productivity increases are supporting our volume growth . . .

Haul truck effective utilisation
(%, Index: 2015 = 1.00)

8%		1.08
1.00	1.02	
2015	2016	2017
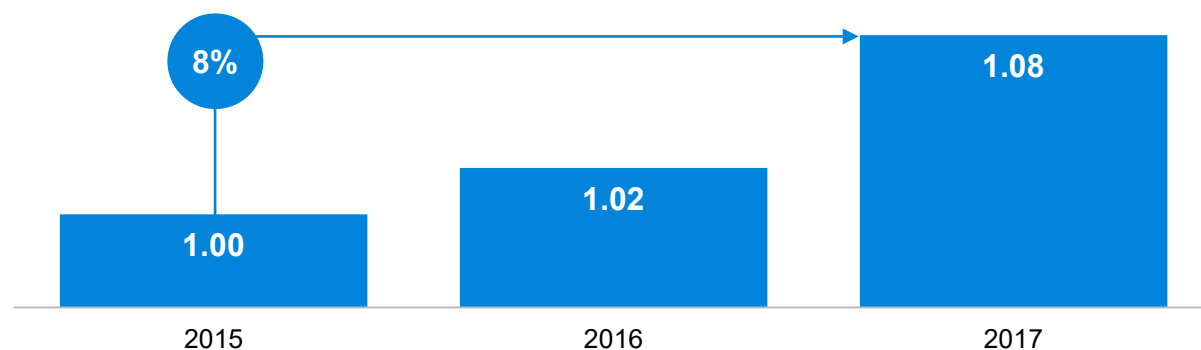
Haul truck payload
(kt, Index: 2015 = 1.00)

8%		1.08
1.00	1.03	
2015	2016	2017
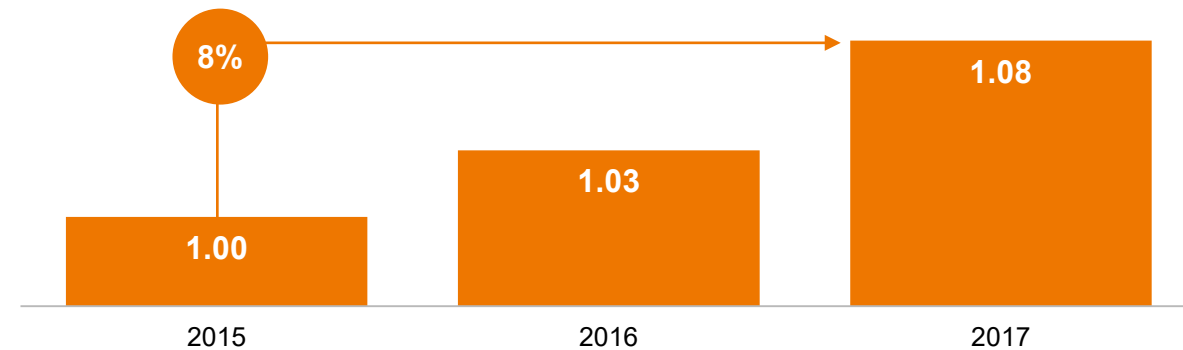
. . . while improving reliability will drive efficiency on maintenance costs

Haul truck mean time between failure
(hrs, Index: 2015 = 1.00)

31%		1.31
1.00	1.07	
2015	2016	2017
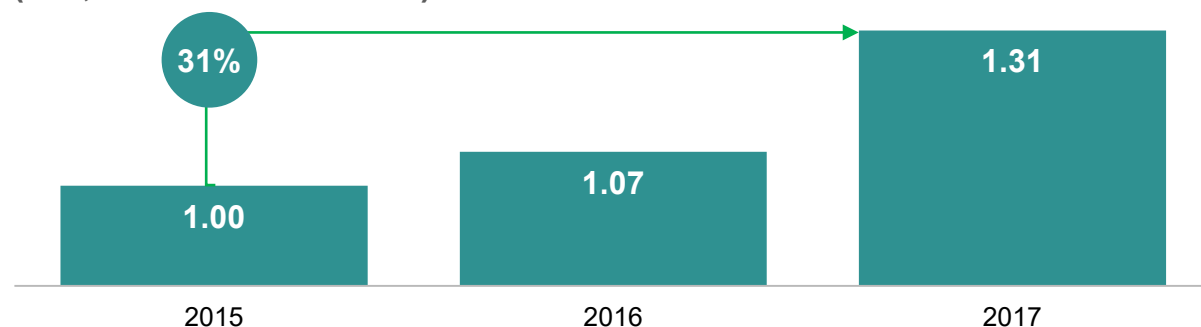
793F truck engine replacements
($ / truck, Index: 2015 = 1.00)

1.00	28%
	0.72
Previous Strategy	Updated Strategy

RioTinto
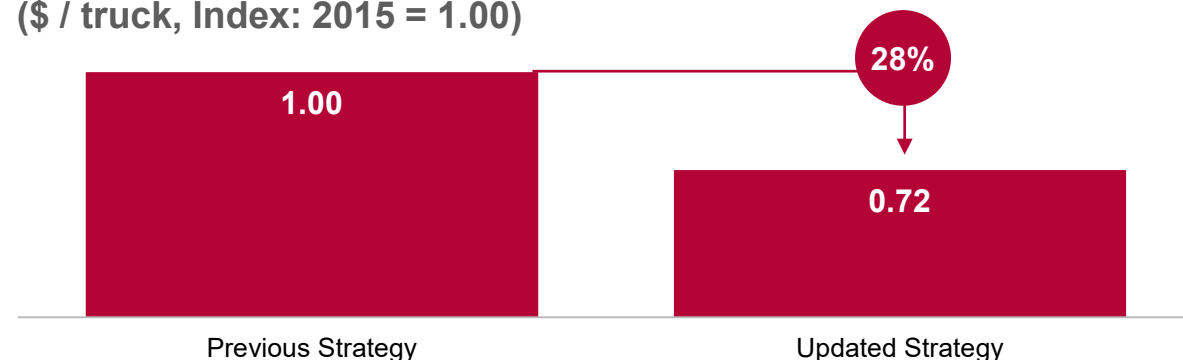
...with automation delivering significant advantages

Haul truck automation is delivering clear benefits with further upside to be realised as the technology matures

2017 haul truck effective utilisation
(%, Index: Manned = 1.00)
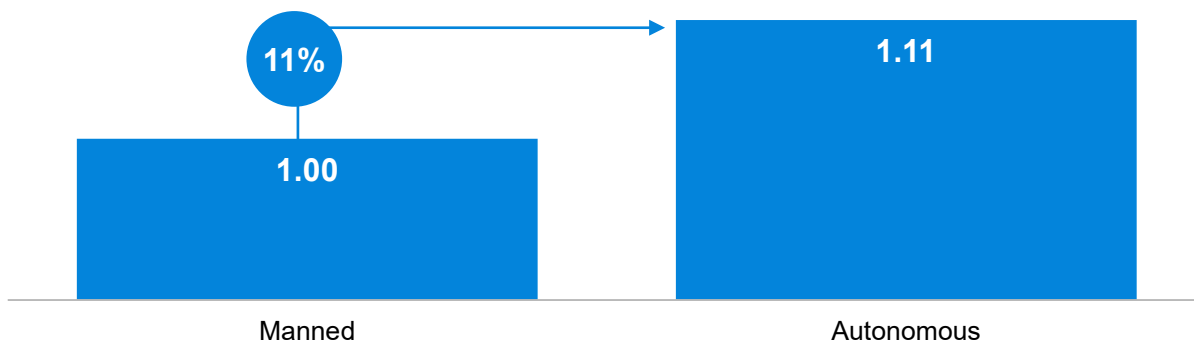
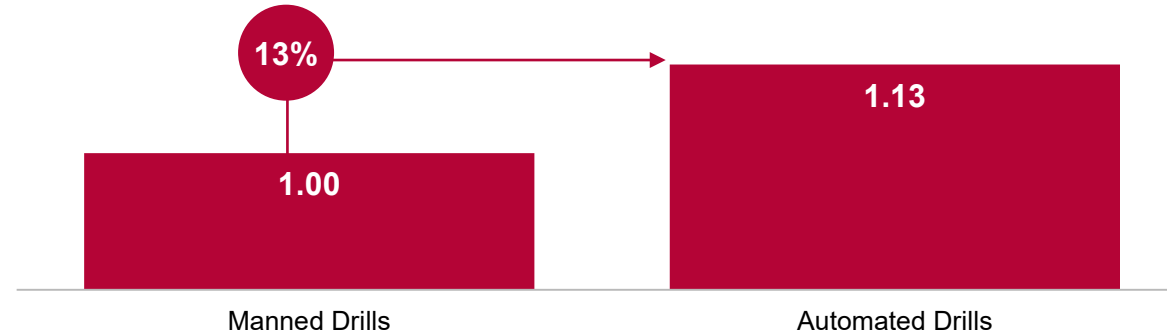**Yandicoogina AHS effective utilisation[1]**
(%, Index: 2016 = 1.00)
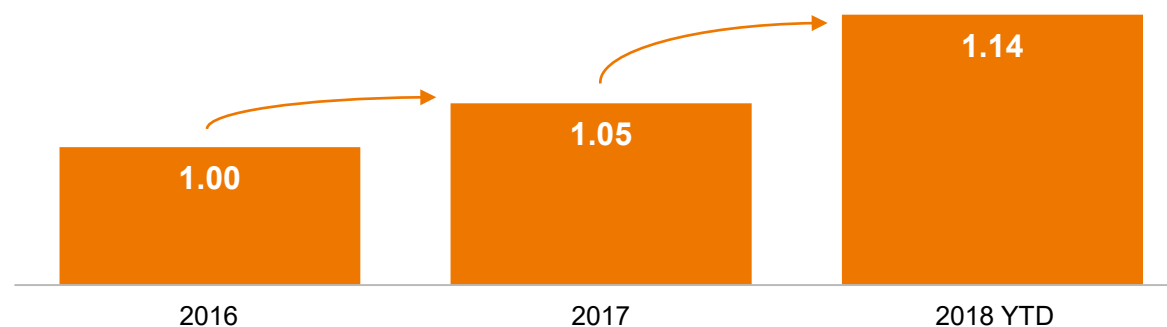
Our automated drills are running for longer and achieving more metres per hour

2017 drill fleet effective utilisation
(%, Index: Manned = 1.00)
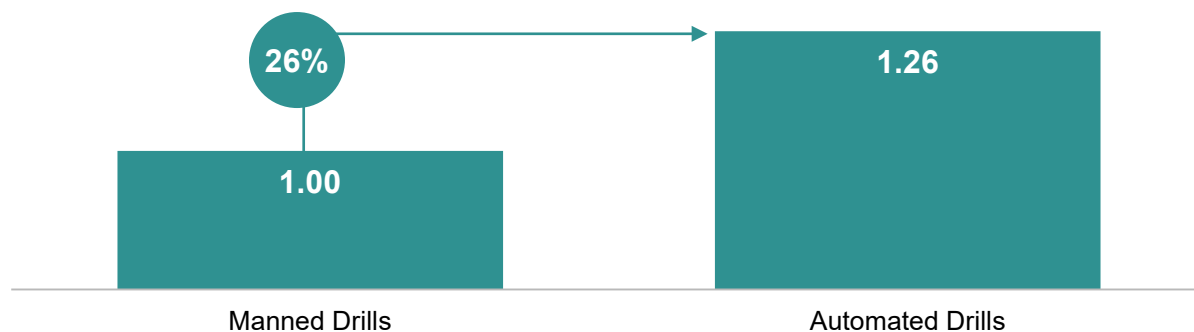
2017 drill fleet penetration rate
(m / hr, Index: Manned = 1.00)

[1] Fully autonomous from mid-2015

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Fixed plant reliability and productivity

Focus on maintenance efficiency and asset reliability is driving up availability

Scheduled loss
(%, Index: 2016 = 1.00)

1.00 — 2016
0.92 — 2017
8%
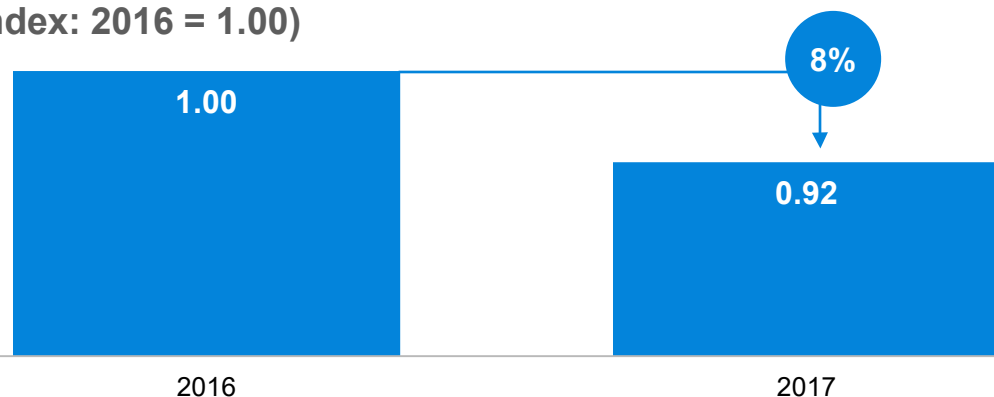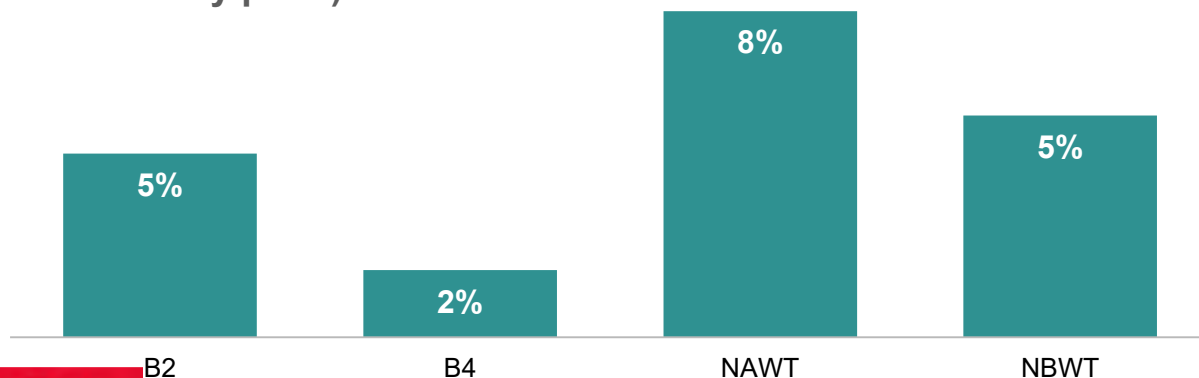
Unscheduled loss
(%, Index: 2016 = 1.00)

1.00 — 2016
0.90 — 2017
10%
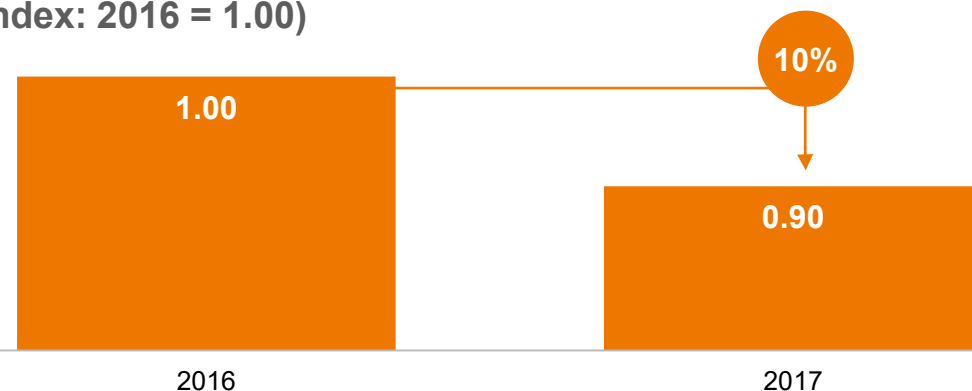
Plant performance supporting growth at Greater Brockman: our largest operation

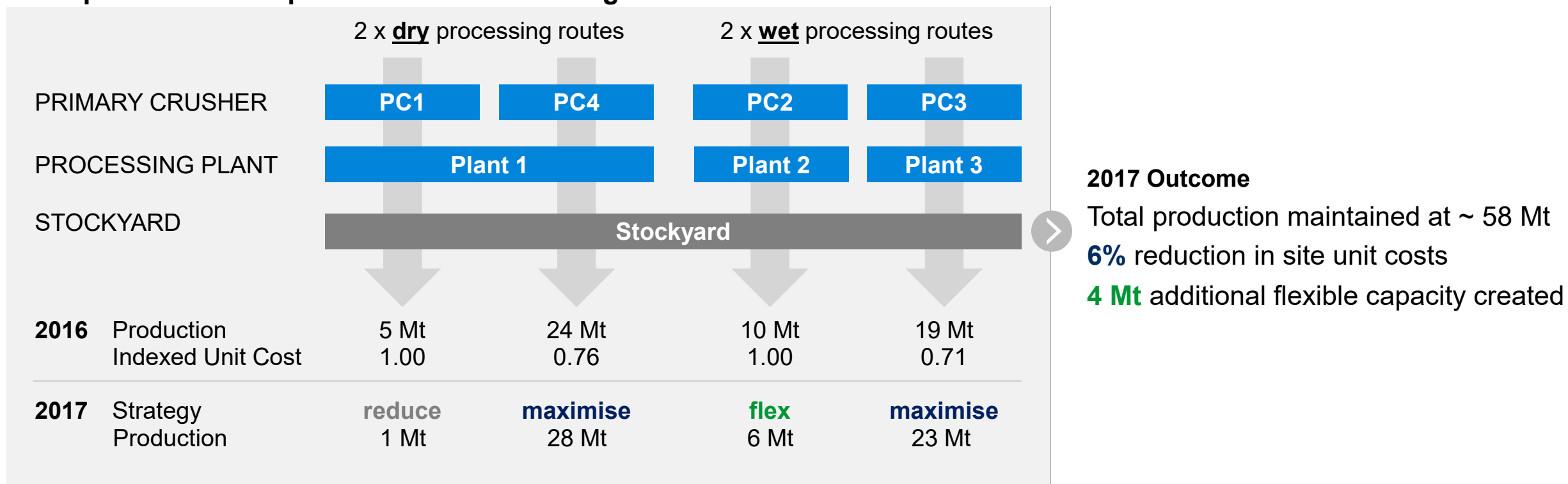**2017 Improvement in Asset Utilisation Ratio**
(%, Index YoY by plant)

- B2: 5%
- B4: 2%
- NAWT: 8%
- NBWT: 5%

Targeting both operating time and rates

Improvements across all four plants

Supported increased production from Greater Brockman of 5.1 million tonnes in 2017

RioTinto

Creating a flexible value driven mine production system

Plant performance improvements at Yandicoogina

		2 x **dry** processing routes		2 x **wet** processing routes	
PRIMARY CRUSHER		PC1	PC4	PC2	PC3
PROCESSING PLANT		Plant 1		Plant 2	Plant 3
STOCKYARD		Stockyard			
2016	Production Indexed Unit Cost	5 Mt 1.00	24 Mt 0.76	10 Mt 1.00	19 Mt 0.71
2017	Strategy Production	reduce 1 Mt	maximise 28 Mt	flex 6 Mt	maximise 23 Mt

2017 Outcome

Total production maintained at ~ 58 Mt

6% reduction in site unit costs

4 Mt additional flexible capacity created

Improved baseload — **Leverage flexibility**

| Productivity | Reliability | Rail capacity | Market demand |

Mines supporting rail to unlock capacity

Incremental improvements at significant scale can deliver substantial benefits

Tonnes per car
(kt, Index: 2016 = 1.00)

Train load time
(min, Index: 2016 = 1.00)

2% — 1.00 (2016) → 1.02 (2017)

1% — 1.00 (2016) → 0.99 (2017)

↑ **580 tonnes per train** ✕ ↓ **2 minutes load time** = ↑ **6Mtpa rail capacity**
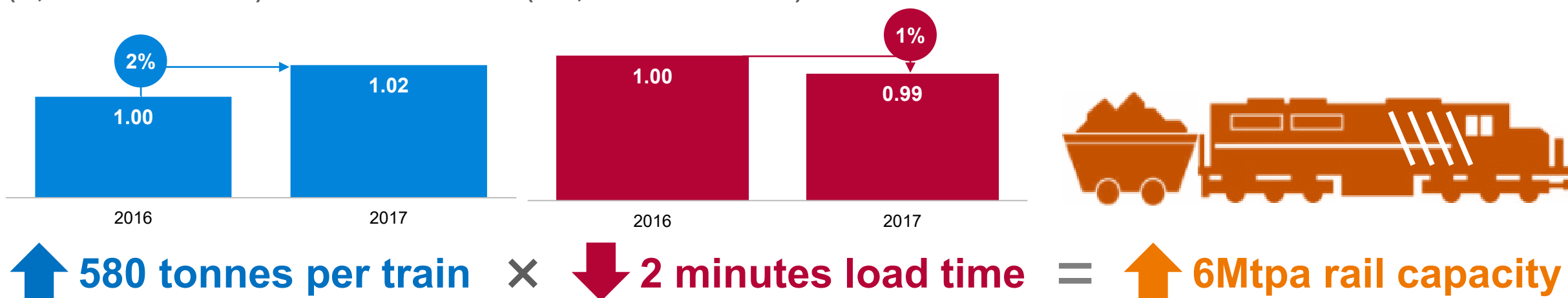
The progressive rollout of automation in train loading delivers improvements in payload

Expert control systems enable dynamic tuning for mass or volume constrained sites

Improvements to rolling stock capacity at mines allow full system utilisation

RioTinto

Silvergrass delivered on time and on budget

Silvergrass ramp up commenced in Q2 2017

Silvergrass and Nammuldi incremental production tonnes
(Annualised million tonnes)

2017 Q2	2017 Q3	2017 Q4	2018 Q1
2.1	3.5	10.5	15.3
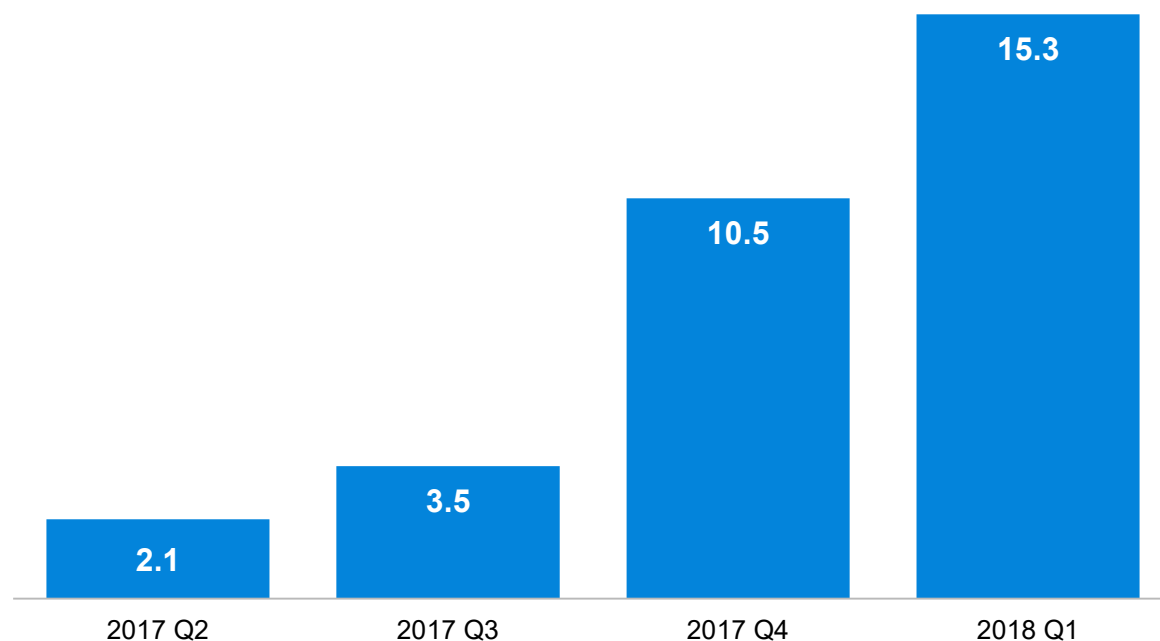
Increased production capacity up to 21Mtpa

High grade Marra Mamba ore supporting Pilbara Blend

All construction contracts awarded to Western Australian companies

RioTinto

Pilbara mines continuing to deliver productivity improvements
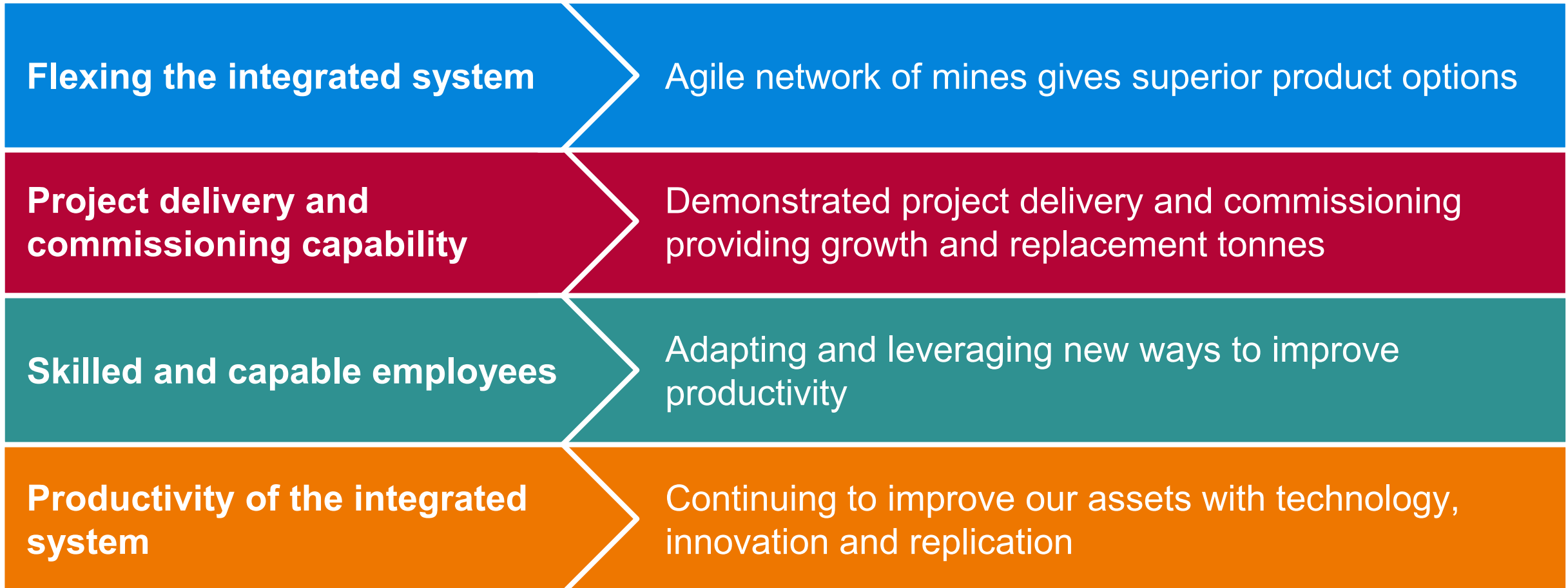
Flexing the integrated system	Agile network of mines gives superior product options
Project delivery and commissioning capability	Demonstrated project delivery and commissioning providing growth and replacement tonnes
Skilled and capable employees	Adapting and leveraging new ways to improve productivity
Productivity of the integrated system	Continuing to improve our assets with technology, innovation and replication

RioTinto

Rail & Port Operations

Ivan Vella

Managing Director Rail, Port & Core Services

World class assets, fully integrated and agile network
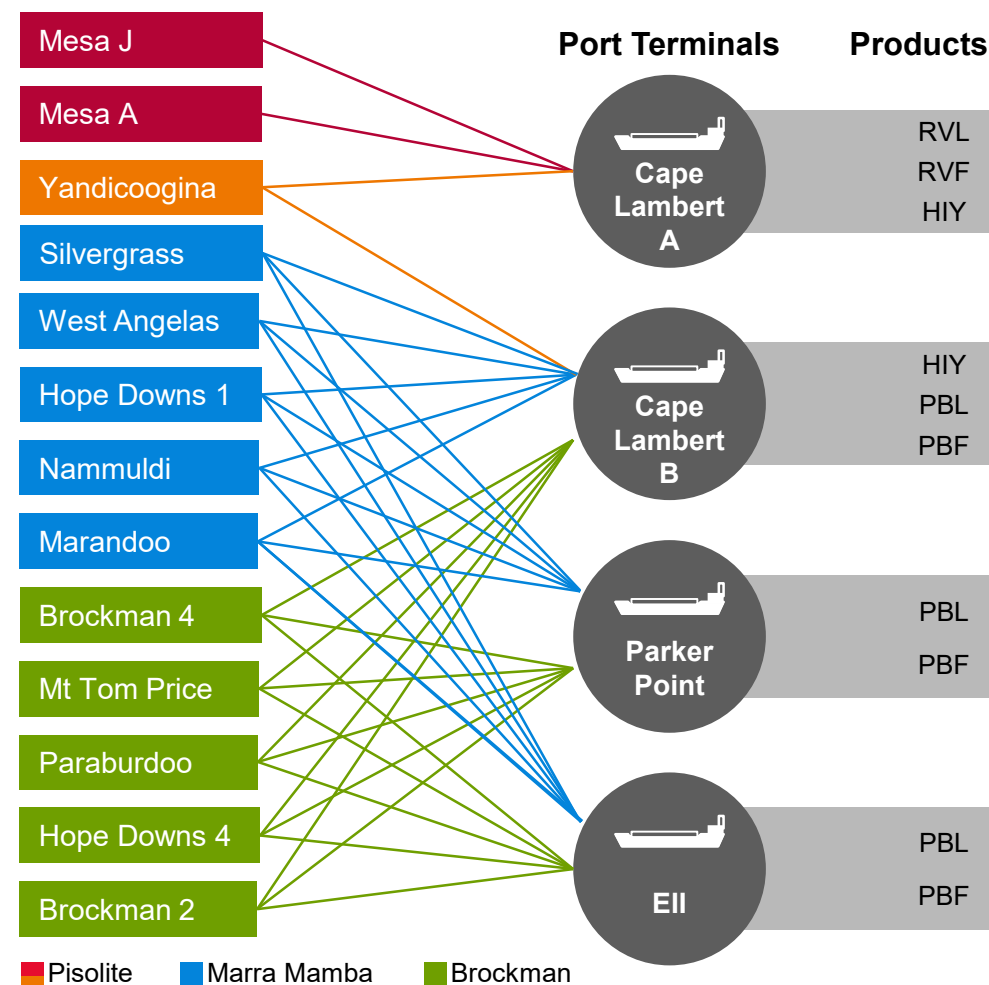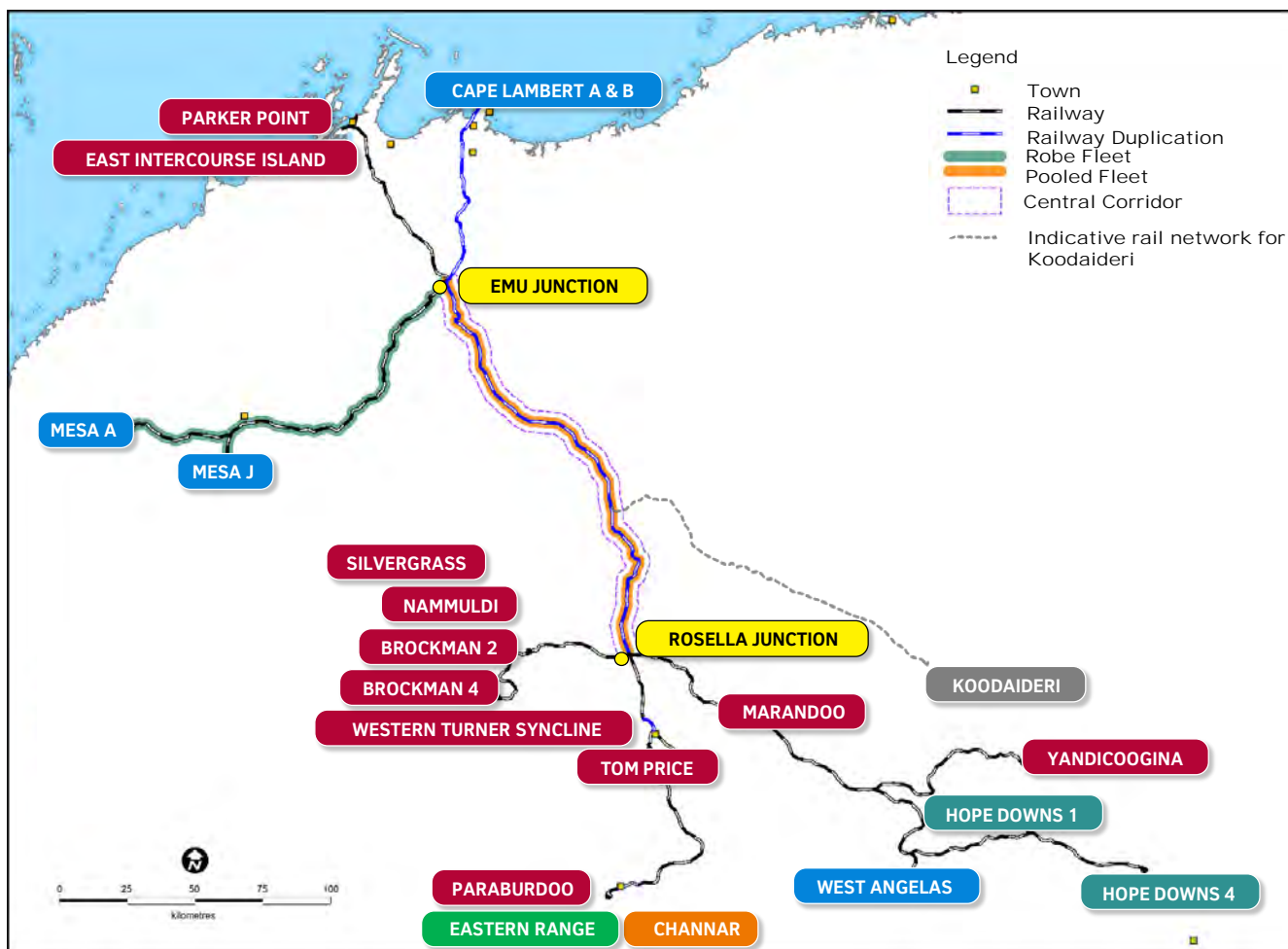
Our integrated system allows us to achieve unparalleled levels of utilisation

Number of loaded axles per hour*

Increasing demand on formation and ballast

- Rio Tinto Iron Ore
- BHP
- Powder River Basin**
- Hunter Valley
- VALE Carajas
- Aurizon Coal***
- FMG
- CN/CP directional run zone
- Sishen-Saldanha
- Roy Hill
- LKAB

Axle load
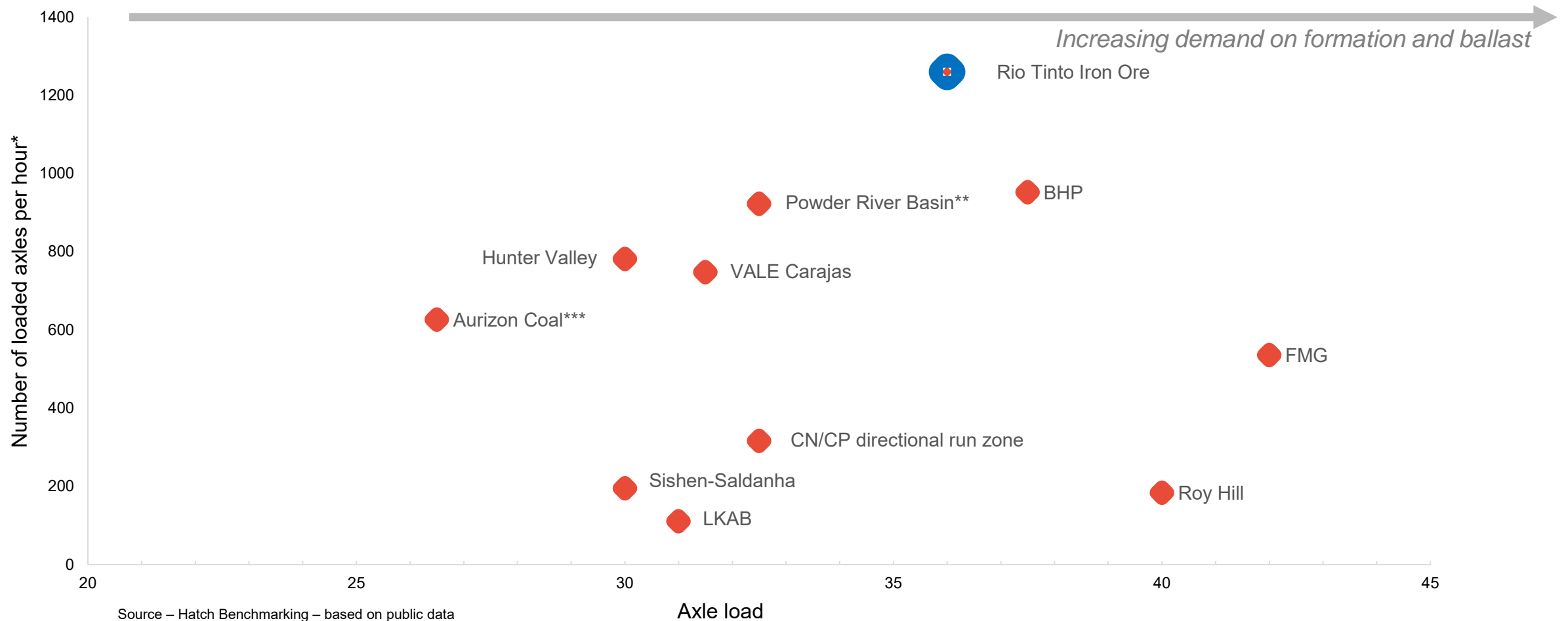
Source – Hatch Benchmarking – based on public data

(*) Number of loaded axles refers to main spine of networks, excludes RTIO Robe River and BHP Goldsworthy
(**) Powder River Basin factored from triple track to double track
(***) Aurizon Goonyella tonnages are "below rail", including all operators

RioTinto

Increased flexibility in our supply chain creates additional competitive advantage

Future system capacity
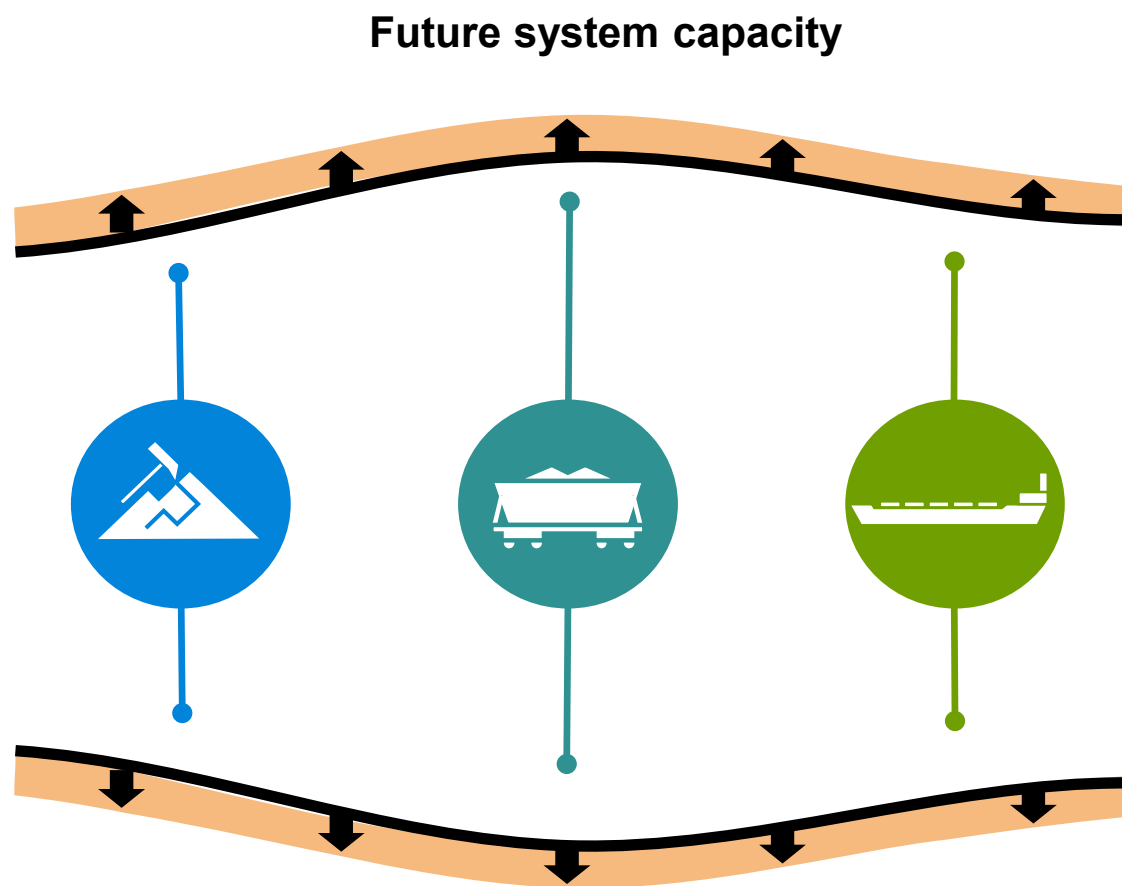
Delivering rail capacity provides dynamic flexibility to respond to customer demands

System designed to ensure rail does not limit the full potential of the port and mine assets

Continue to optimise and challenge overall port capacity

Q4 2017 shipments of 90Mt and December shipping rates of ~390Mtpa shows port potential

RioTinto

Optimising rail capacity and improving flexibility

Train Load Out

Stockpile & Load out

Tonnes per car
(Dynamic tuning for mass and volume)

Train load time
(Reclaimer efficiency, stockpile management, control system improvements)

Technology and automation
(Automated train loading, expert control systems)

Mainline
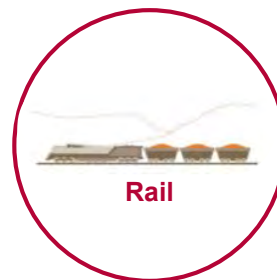
Rail

Mainline network operating strategy
(Network operation, common tactics, reduced delays and stoppages)

Rail track maintenance
(Optimum speed, productivity and reliability)

Autohaul®
(Optimised speed, advanced signalling, reducing variability)

Yard and Port (Dumper)

Ore car-dumping

Yard operations
(Optimised scheduling, mobility solution, RFID for rolling stock management)

Train maintenance
(Automated condition monitoring, further automation in workshops)

Reduced dump cycle times
(Control system machine learning and analytics, interface management)

Range of investment options being studied
(Eliminating brake cars, electronic braking to dumper, closer train spacing, LTE /4G network – real time monitoring and control across the network)

Building future system flexibility with AutoHaul®

Improved productivity, efficiency and safety

Greater flexibility in scheduling

Removal of driver changeover times
~3x stoppages for each round trip

Improved cycle time performance

Removing the need to transport drivers 1.5
million kilometres each year to and from trains

AutoHaul® to complete in 2018

World's first fully autonomous heavy haul mainline run completed in September 2017

~65%
production kilometres currently completed in autonomous mode[1]

>1million
kilometres completed in autonomous mode[1] this year

~6%
Speed improvement in autonomous mode[1]

AutoHaul® usage continues to be **expanded**

Regulator approval received in May

Full implementation of autonomous programme by **end of 2018**
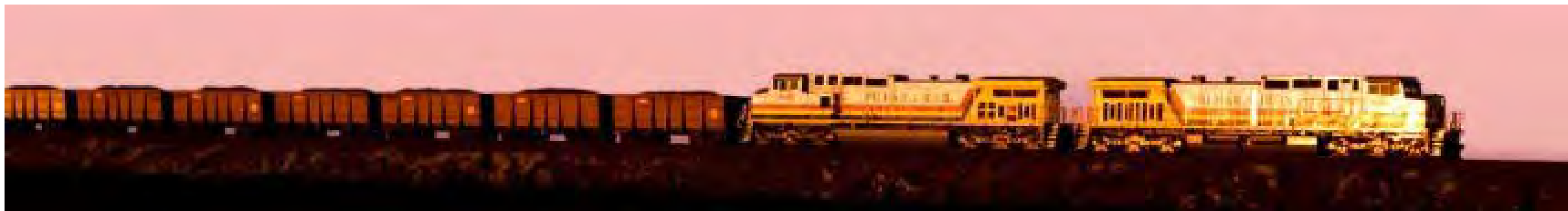
Advancements in technology are crucial to the network operating strategy
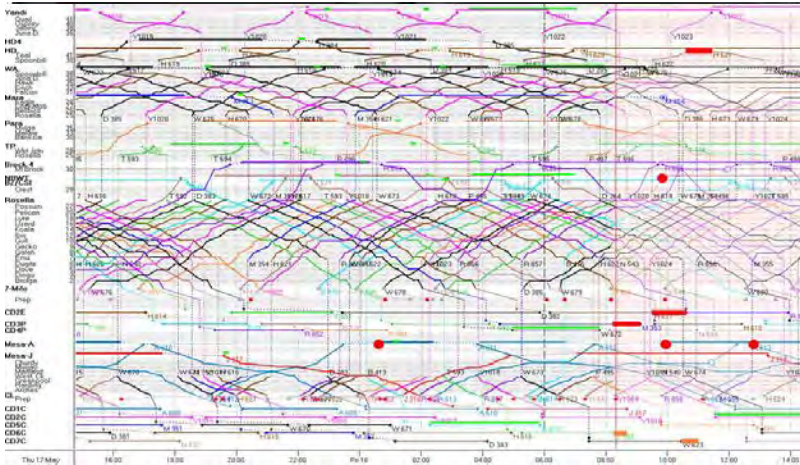
Technology-enabled best practice tactics covering the yard interface, mainline and mine interface

Analytics, decision support and automation tools for train control team
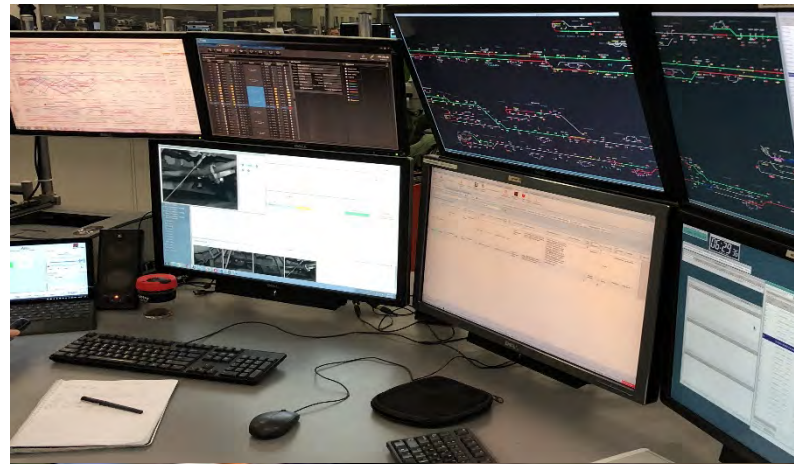
Real time visibility and optimisation of our network with predictive capabilities and scenario testing to illustrate implications of different tactics

RioTinto

Yard improvements and digital transformation

Automated roll-by (ARB)

Optical solution providing insight into the health of our fleet

Improved paperless information on the wagon and its history

Closing the feedback loop when faults are rectified

RFID tracking of assets

All locos and wagons tracked using RFID technology

Location available to yard optimisation engine and mobility solution

Improved utilisation of assets

Yard optimisation engine

Dynamically optimised yard movement plan

Closed loop feedback to yard operators and drivers

Comprehensive mobility solution to support operations and maintenance teams

RioTinto

Rail maintenance productivity can unlock new potential

RTIO cumulative tonnes railed

Million tonnes

25 Years to rail 1,000Mt

3 Years to rail 1,000Mt

Increased maintenance demand

Less track time available

Maintenance strategy and productivity critical

Rail capacity increase

Rail maintenance productivity can unlock new potential

More trains, heavier trains, more often

Increased wear and track impact, less time between trains
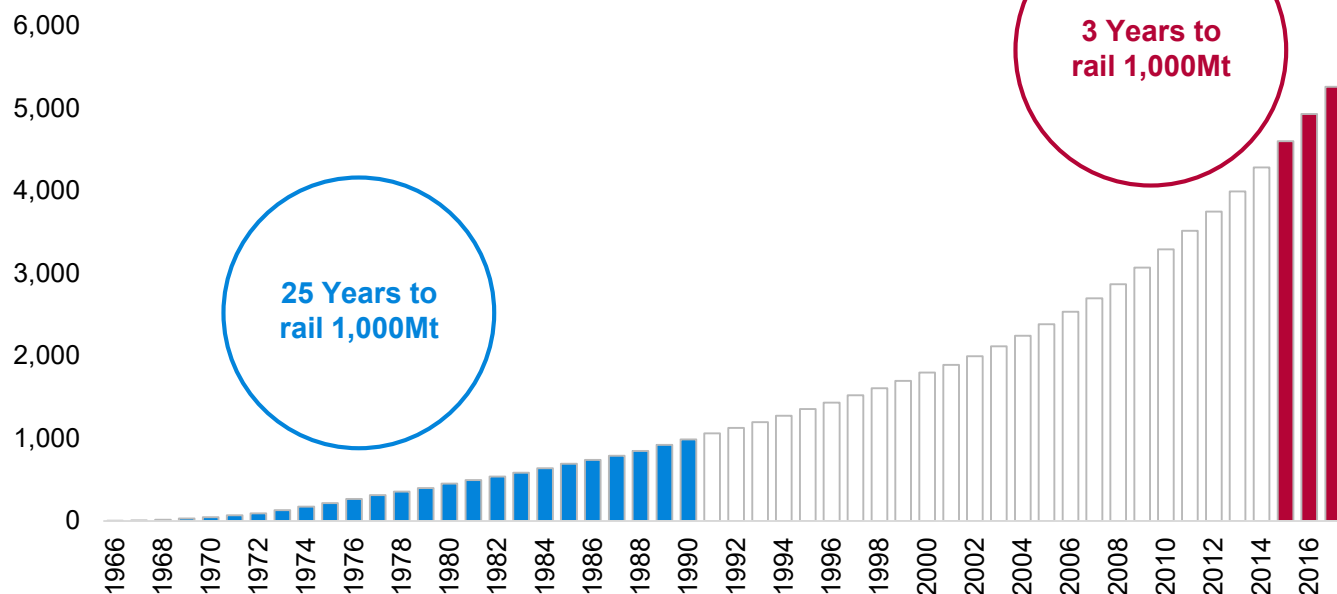
RioTinto

Our plan for rail productivity is strong and balanced

Network capacity
(Mtpa)

Number of trains

Payload per train

Cycle time

Yard improvement

Network operating strategy

Rail maintenance productivity
(network speed and reduced delays)

Chart size indicates relative capacity contribution

- In progress and future potential
- Completed by end 2017
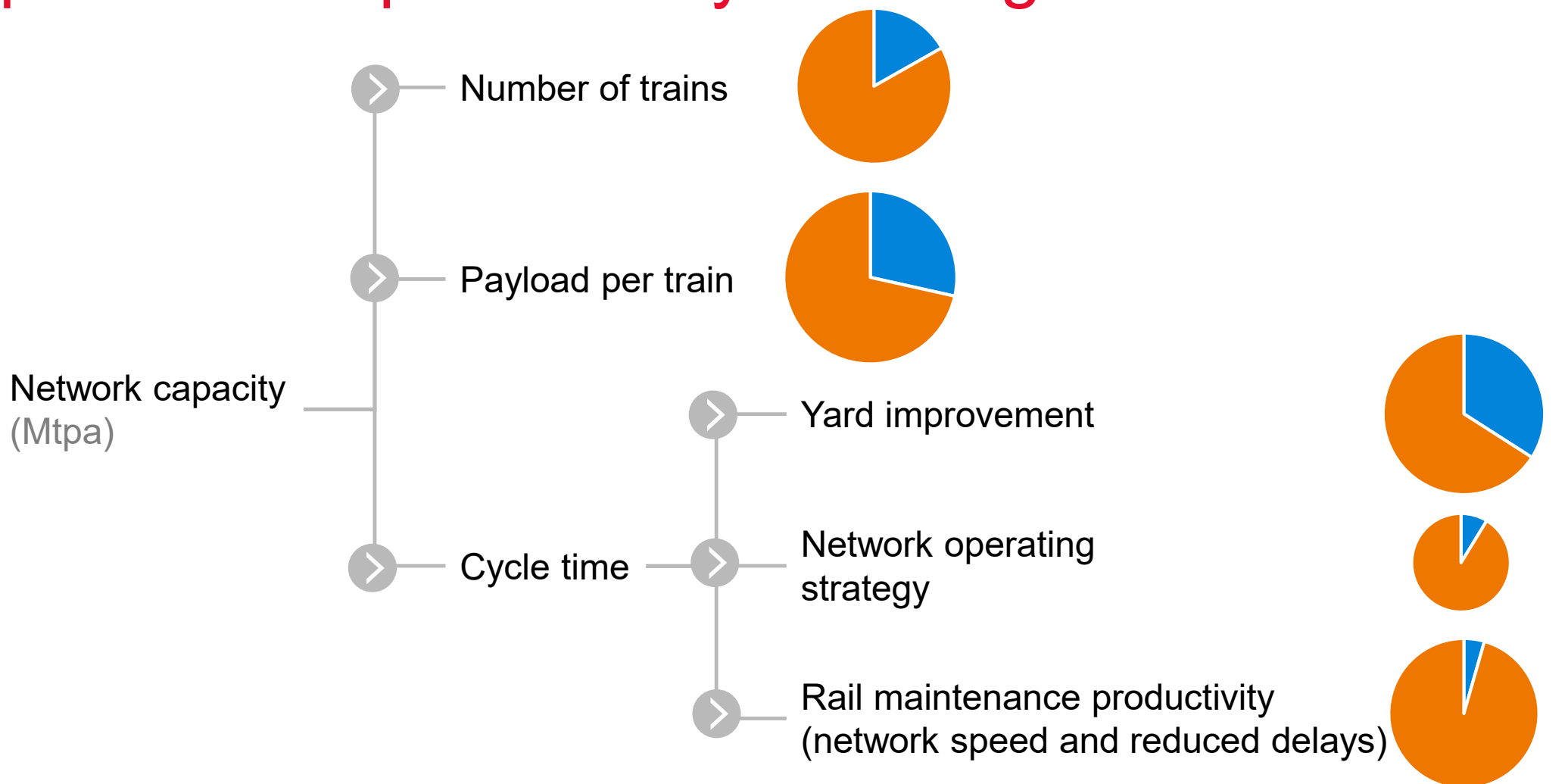
AutoHaul® platform enables further improvement

RioTinto

Productivity is key to unlocking further value

Yard and Dumping productivity benefits continue…

Yard-in improvements
Minutes (%, Index: 2015 = 1.00)

- 2015: 1.00
- 2016: 0.90
- 2017: 0.83 — 17%
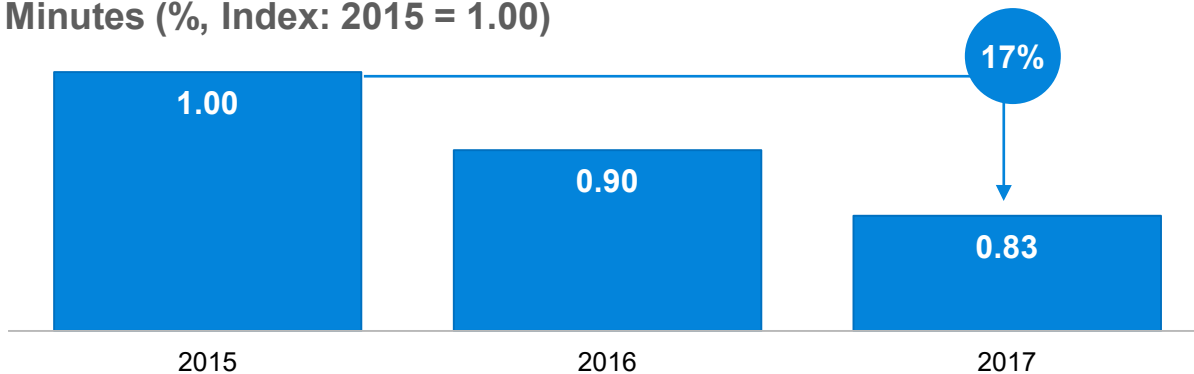
Dumping – placing train improvements
Minutes (%, Index: 2015 = 1.00)

- 2015: 1.00
- 2016: 0.91
- 2017: 0.74 — 26%
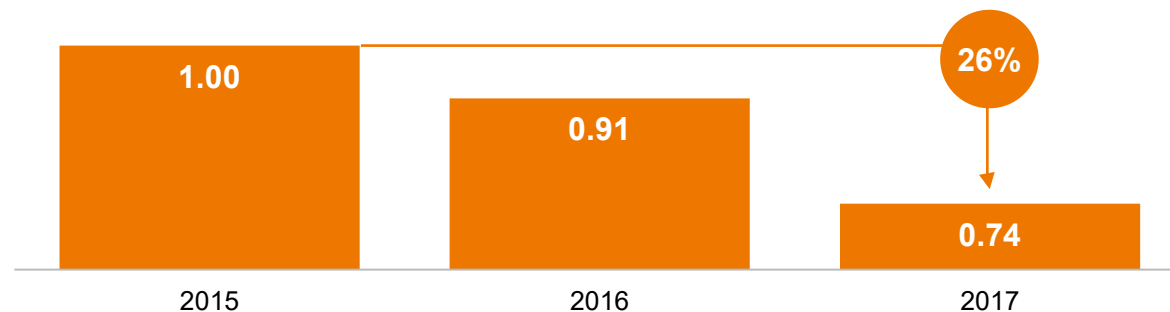
…with demonstrated volume upside for cycle time and payload

Yard-out improvements
Minutes (%, Index: 2015 = 1.00)

- 2015: 1.00
- 2016: 0.92
- 2017: 0.88 — 12%
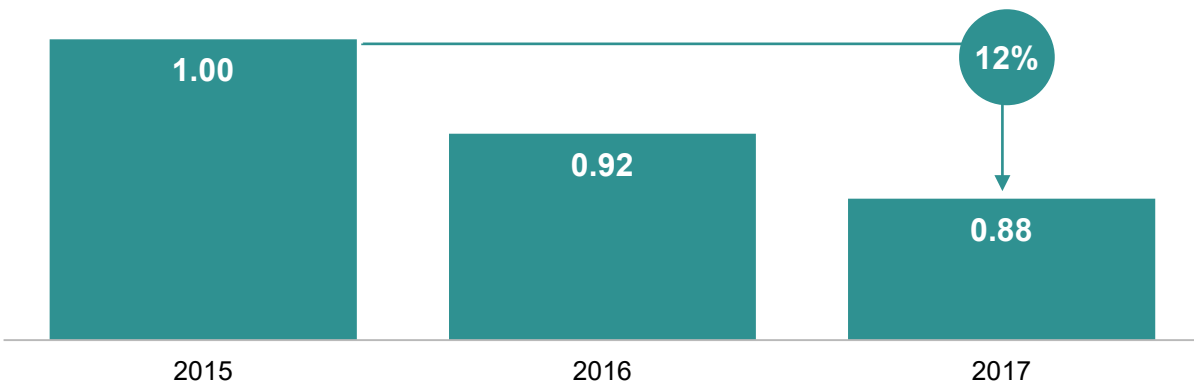
Payload – Tonnes per train
kt / Train (%, Index: 2015 = 1.00)

- 2015: 1.00 — 1.5%
- 2016: 0.993
- 2017: 1.015
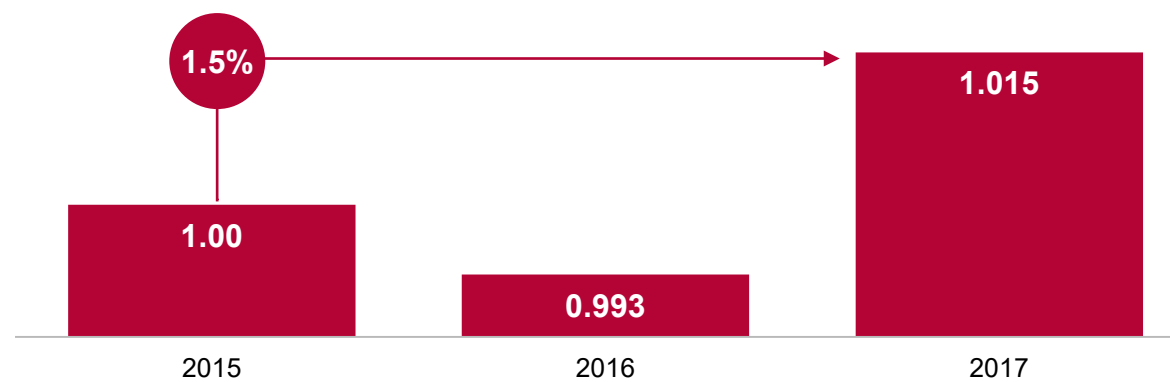
Unencumbered port facilities with built in optionality

Continued improvement in productivity and safety, with considerable potential for capacity uplift

Unparalleled flexibility for blending and customer centric operation

Four independent terminals that provide optionality and full utilisation of our ship loaders

RioTinto

Improving the capability of our port assets
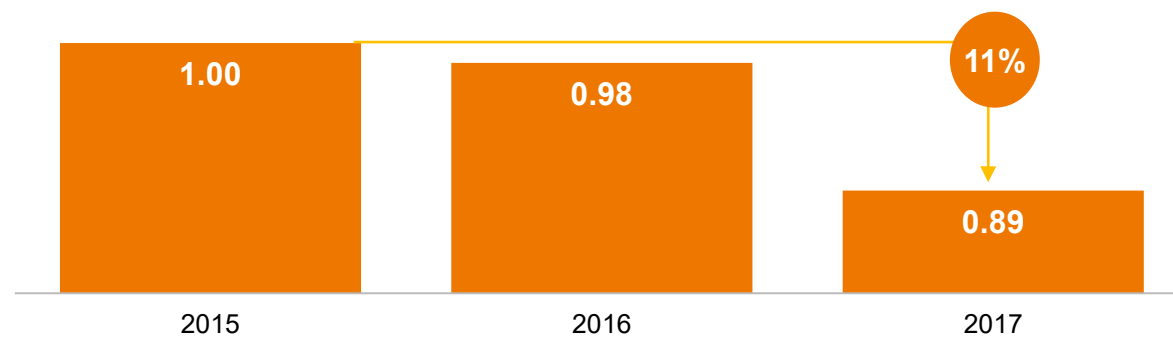
Port reliability continues….

Unscheduled downtime hours per million tonnes
Pooled fleet dumping circuits (%, Index: 2015 = 1.00)

- 2015: 1.00
- 2016: 0.56
- 2017: 0.46 (54%)
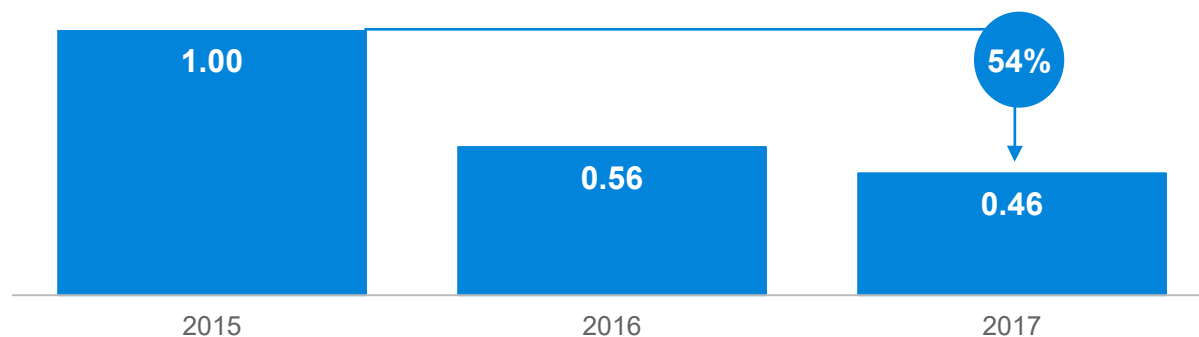
Dumper capacity - time between queuing trains
Cape Lambert yard / dumper interface (%, Index: 2015 = 1.00)

- 2015: 1.00
- 2016: 0.98
- 2017: 0.89 (11%)

With demonstrated volume improvements in loading capacity

Time lost from shutdown over-runs
All ports circuits (%, Index: 2015 = 1.00)

- 2015: 1.00
- 2016: 1.04
- 2017: 0.52 (48%)
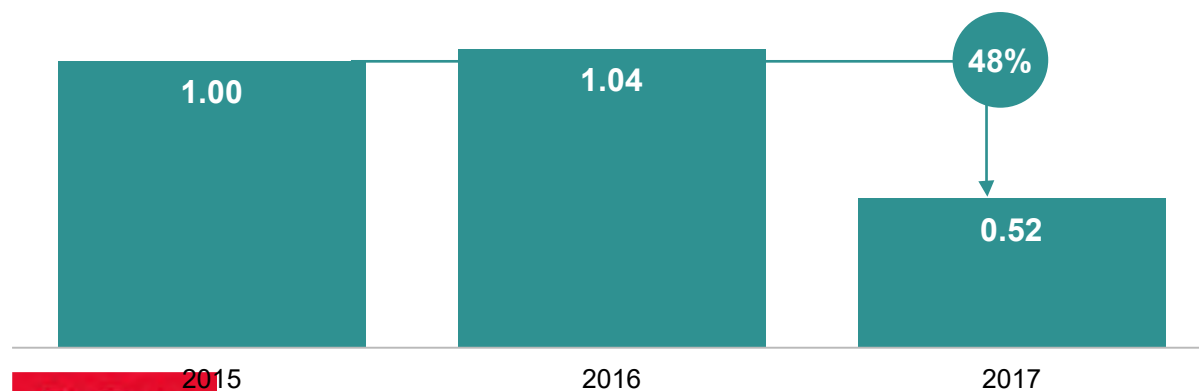
Ship loading capacity Cape Lambert
CLB performance (%, Index: 2015 = 1.00)

- 2015: 1.00
- 2016: 1.06
- 2017: 1.08 (8%)

RioTinto

Iron Ore continues to deliver optimal value
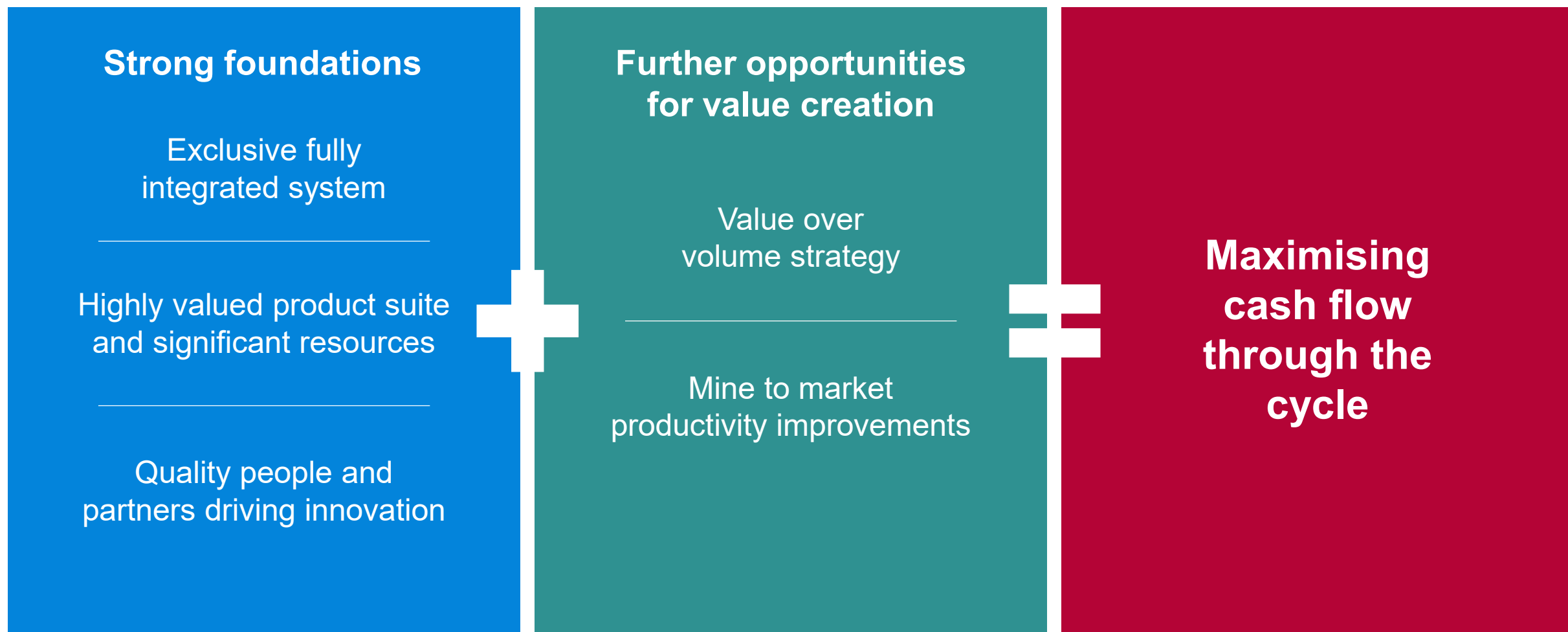
Strong foundations

Exclusive fully
integrated system

Highly valued product suite
and significant resources

Quality people and
partners driving innovation

**Further opportunities
for value creation**

Value over
volume strategy

Mine to market
productivity improvements

**Maximising
cash flow
through the
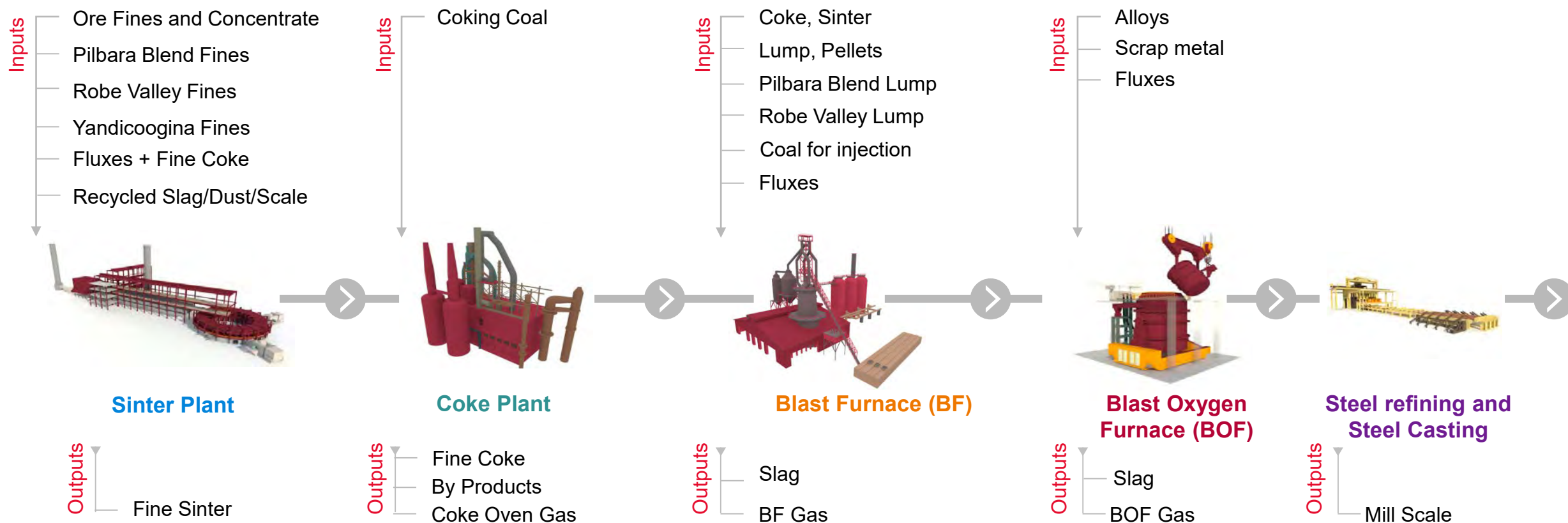cycle**

RioTinto

RioTinto

Q&A

RioTinto

Appendix

Iron and steelmaking process flow

Step 1: Sinter and Coke Making	Step 2 : Iron Making	Step 3 : Steel Making, Refining and Casting

Inputs
- Ore Fines and Concentrate
- Pilbara Blend Fines
- Robe Valley Fines
- Yandicoogina Fines
- Fluxes + Fine Coke
- Recycled Slag/Dust/Scale

Inputs
- Coking Coal

Inputs
- Coke, Sinter
- Lump, Pellets
- Pilbara Blend Lump
- Robe Valley Lump
- Coal for injection
- Fluxes

Inputs
- Alloys
- Scrap metal
- Fluxes

Sinter Plant

Coke Plant

Blast Furnace (BF)

Blast Oxygen Furnace (BOF)

Steel refining and Steel Casting

Outputs
- Fine Sinter

Outputs
- Fine Coke
- By Products
- Coke Oven Gas

Outputs
- Slag
- BF Gas

Outputs
- Slag
- BOF Gas

Outputs
- Mill Scale

RioTinto

Greater Brockman Operations (GBO)

Scott Wilkinson; General Manager GBO

Safety Share
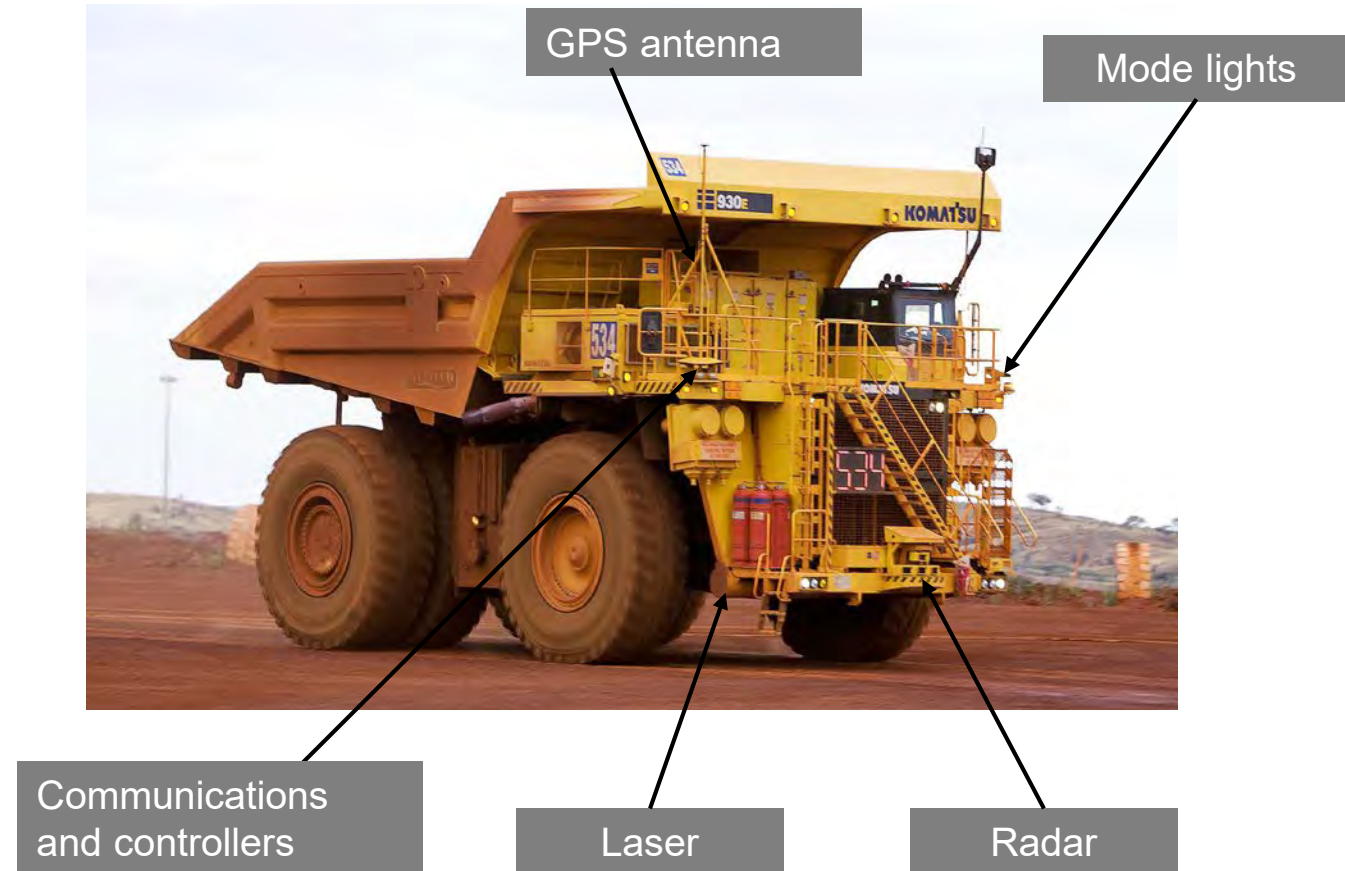# Automation introduces additional safety controls

Benefits;

- Reduces number of people exposed to hazards
- Reduces number of critical risk scenarios
- Improves level of control effectiveness (engineering controls)

Autonomous haulage system (AHS) setup

GPS antenna

Mode lights

Communications and controllers

Laser

Radar

Mines and Infrastructure of GBO

Greater Brockman Summary

- Traditional owners of the land are the Puutu Kunti Kurrama and Pinikura and the Eastern Guruma people.

- Open Pit ore commencement;
  - Brockman 2/Nammuldi – 1992
  - Brockman 4 – 2010
  - Silvergrass - 2017

- Approximately 1400 employees.

- FIFO workforce; regional WA and Perth.

- Marra Mamba and Brockman Ore types.
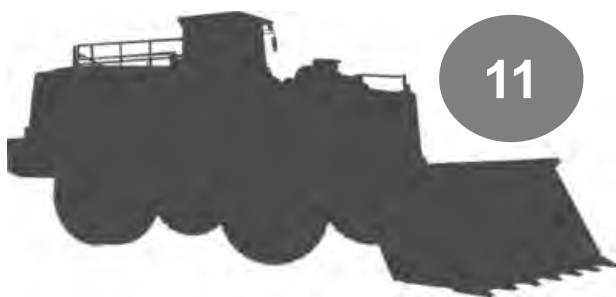
- 6 villages in operations.
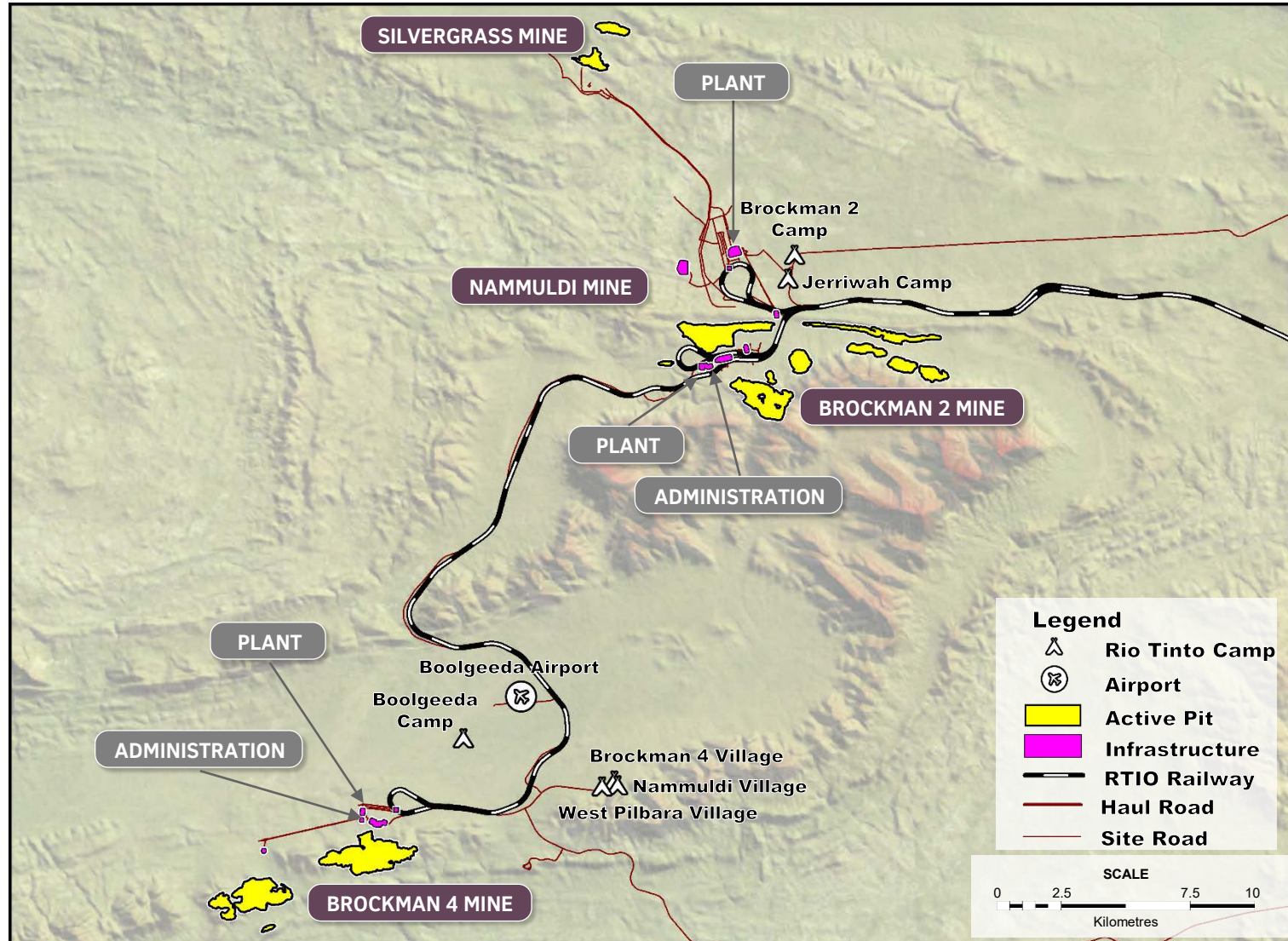
Four world class mines connected to an integrated system

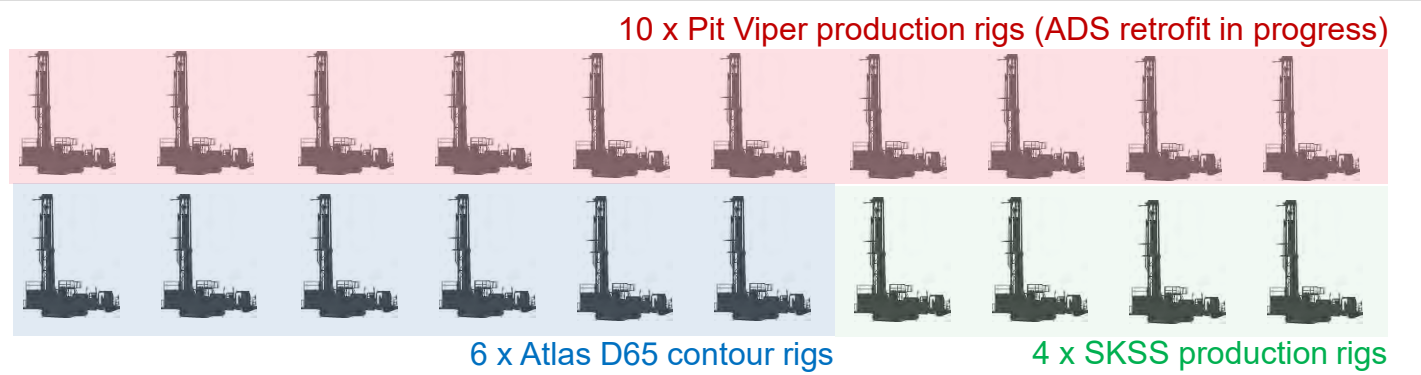# An extensive mining fleet of autonomous and manned equipment

18

Shovel configuration: 3 x Hitachi EX8000, 1 x Hitachi EX5600, 3 x Hitachi EX5500. Backhoe configuration: 4 x Hitachi EX5600, 5 x Hitachi EX3600 and 2 x Hitachi EX2500.
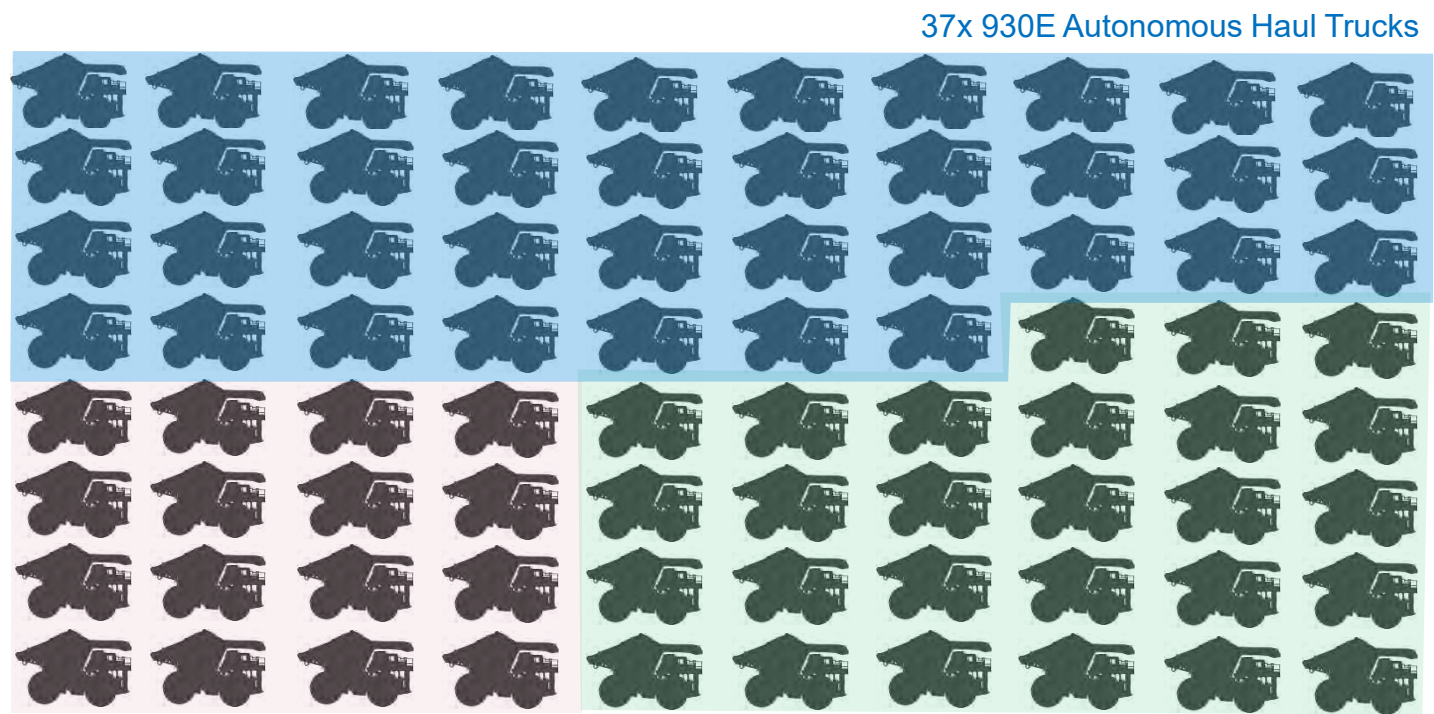
11

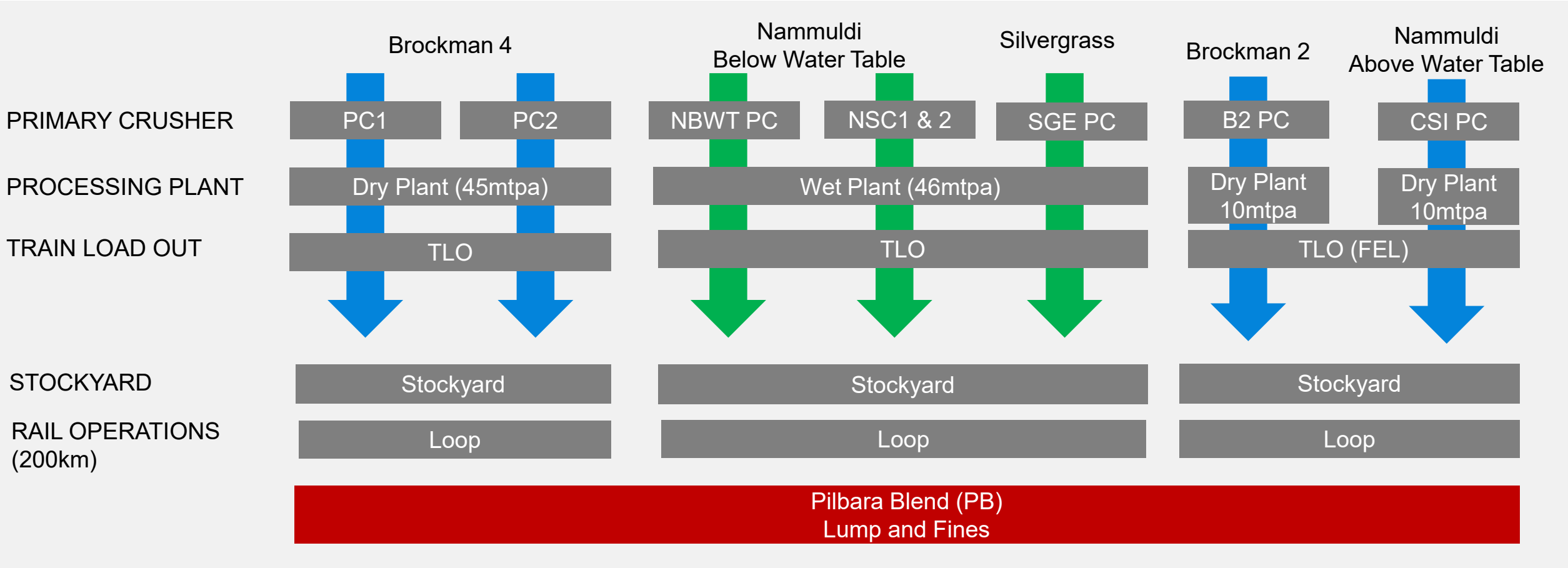Loaders - 2 x Letourneau L-2350, 2 x Letourneau L-1850, 2 x Komatsu WA1200 and 5 x CAT993.

20

10 x Pit Viper production rigs (ADS retrofit in progress)

6 x Atlas D65 contour rigs

4 x SKSS production rigs

80

37x 930E Autonomous Haul Trucks

16 x Komatsu 730E

27 x Komatsu 830E

RioTinto

GBO is instrumental in delivering our Pilbara Blend through our integrated production system

	Brockman 4		Nammuldi Below Water Table	Silvergrass	Brockman 2	Nammuldi Above Water Table
PRIMARY CRUSHER	PC1	PC2	NBWT PC	NSC1 & 2	SGE PC	B2 PC	CSI PC
PROCESSING PLANT	Dry Plant (45mtpa)		Wet Plant (46mtpa)			Dry Plant 10mtpa	Dry Plant 10mtpa
TRAIN LOAD OUT	TLO		TLO			TLO (FEL)	
STOCKYARD	Stockyard		Stockyard			Stockyard	
RAIL OPERATIONS (200km)	Loop		Loop			Loop	

Pilbara Blend (PB) Lump and Fines

Ore Types: Brockman | Marra Mamba

RioTinto

Silvergrass our newest mine

- First low-phosphorus ore 5 Nov 2017.
- Primary crusher with 9km conveyor connecting existing infrastructure at NBWT Plant.
- Extension of Nammuldi workshop (4 bays, tyre change and storage facility and light vehicle workshop, fuel facility and wash bay).
- Other infrastructure - office and crib facilities, emergency services.
- Upgrade of Jerriwah Village.
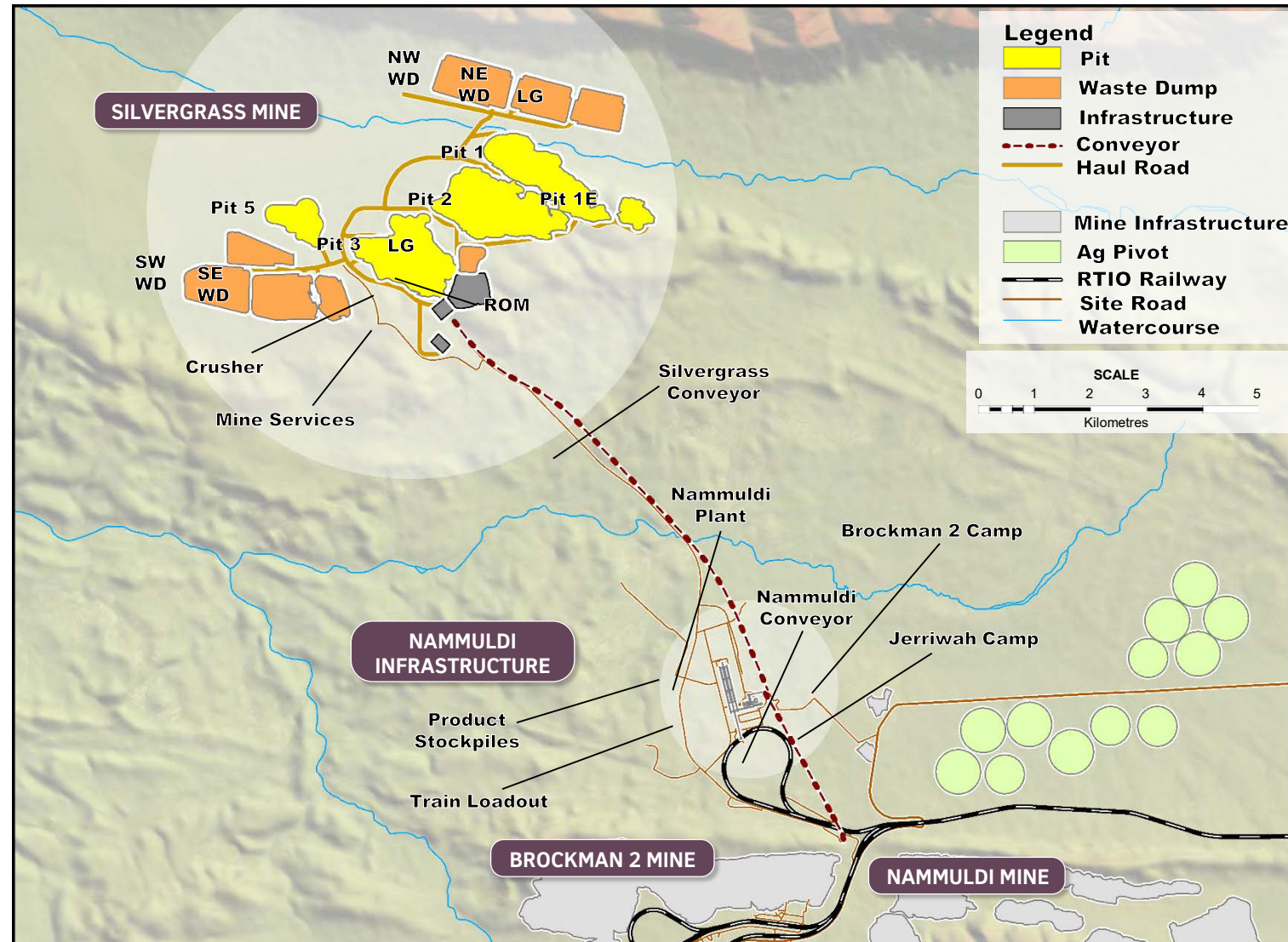
GBO are demonstrating cost and productivity wins....

Focused on;

- Delivering the tonnes and grade of ore to meet system requirements.

- Increasing plant performance and asset reliability.

- Continuous improvement of manned and autonomous fleet optimisation.

- Retrofitting drills to support autonomous drill technology.

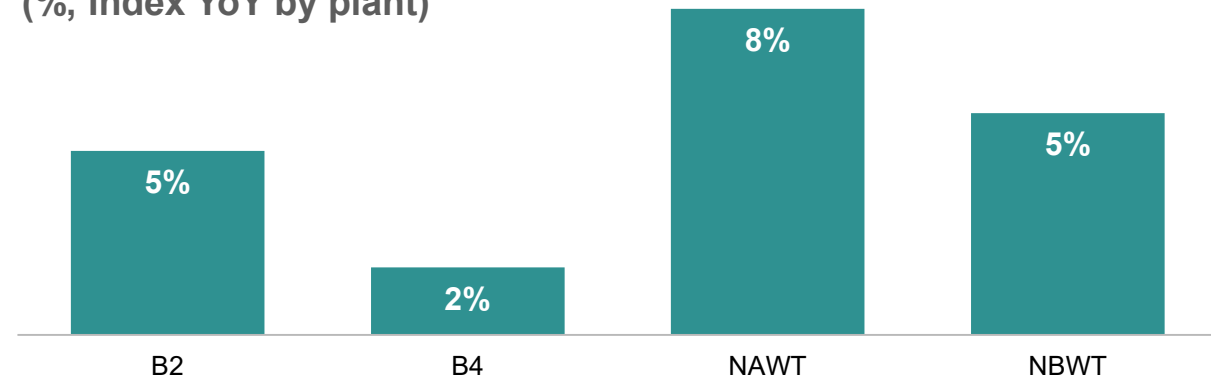- Improving train loading times to support debottlenecking rail.

Brockman 2 Plant Operating Time
Indexed, Hrs

28%

2015	2016	2017
1.00	1.09	1.28
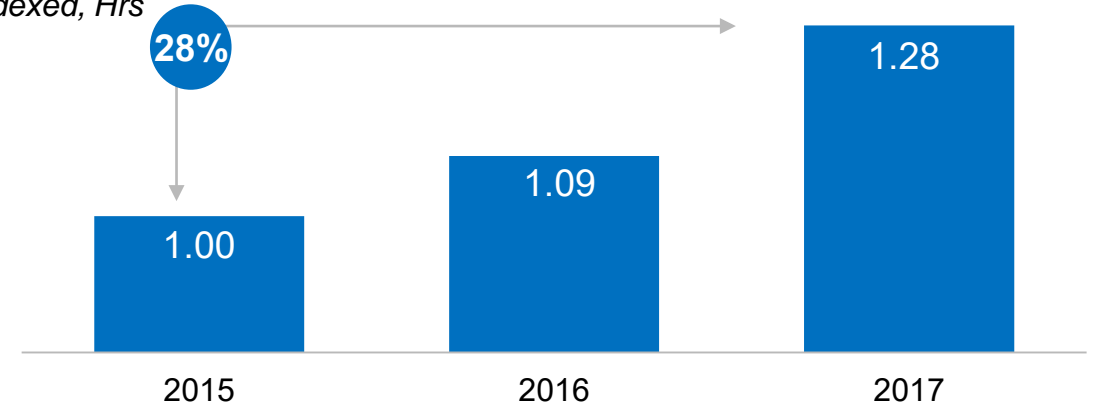
2017 Improvement in Asset Utilisation Rate
(%, Index YoY by plant)

B2	B4	NAWT	NBWT
5%	2%	8%	5%

RioTinto

And today you will see our progress

AHS in operation - Silvergrass

Production drill during ADS technology installation at NBWT MEM Workshop

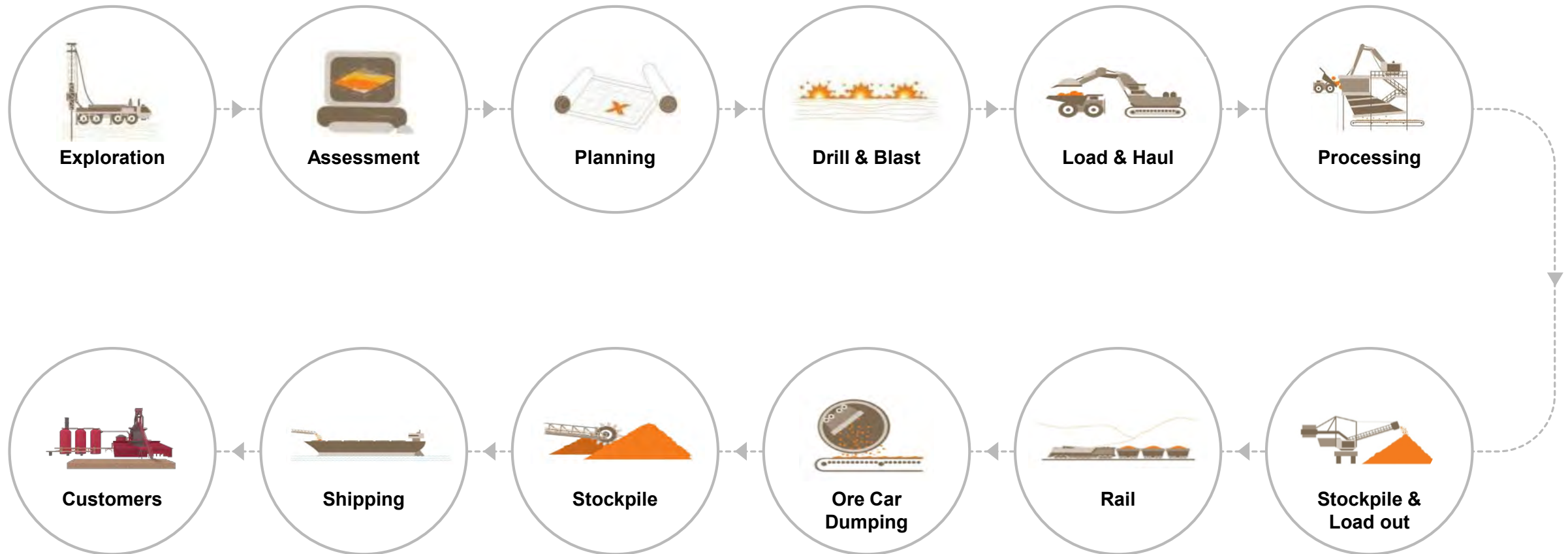Train Loadout Operations B4

RioTinto

The Operations Centre (OC)
The nerve centre of the integrated network

Kellie Parker

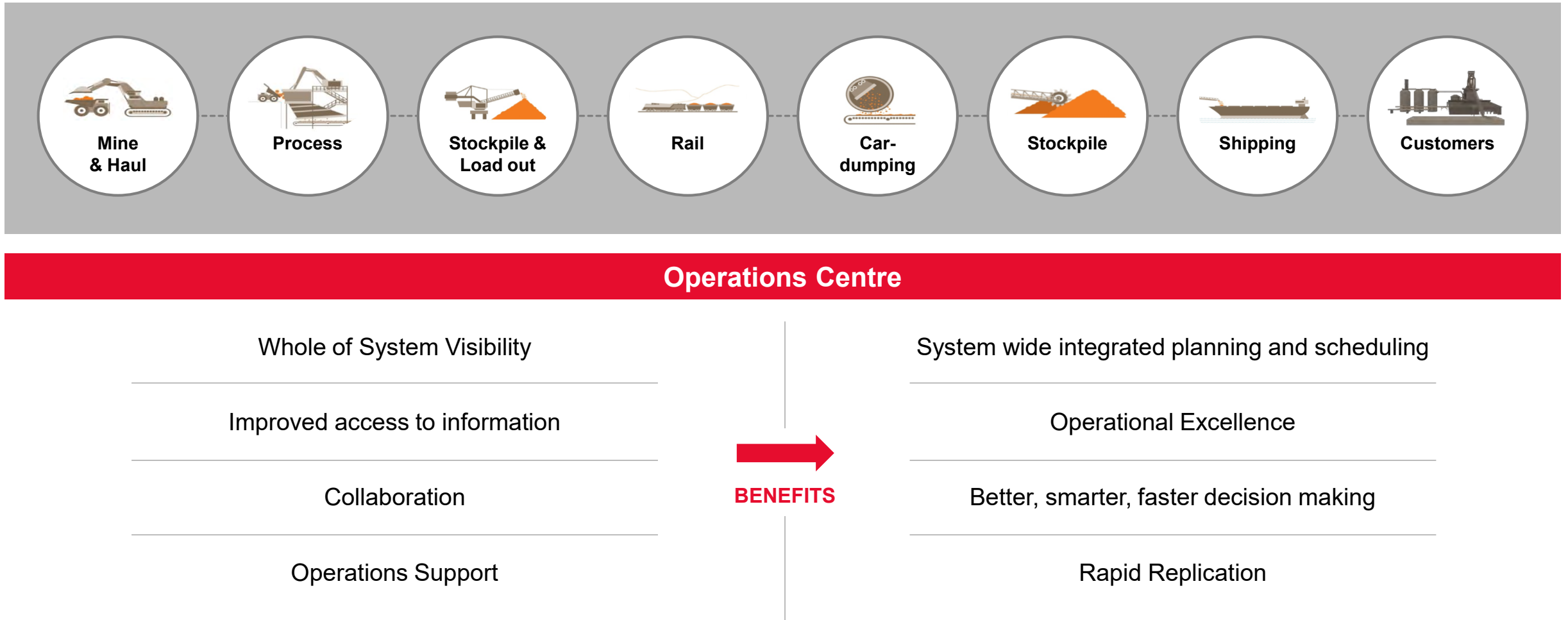Managing Director, Planning, Integration and Assets

Seamless integrated operations…..

| Exploration | Assessment | Planning | Drill & Blast | Load & Haul | Processing |

| Customers | Shipping | Stockpile | Ore Car Dumping | Rail | Stockpile & Load out |

...optimising schedule and performance of the system

Mine & Haul — Process — Stockpile & Load out — Rail — Car-dumping — Stockpile — Shipping — Customers

Operations Centre

Whole of System Visibility	System wide integrated planning and scheduling
Improved access to information	Operational Excellence
Collaboration	Better, smarter, faster decision making
Operations Support	Rapid Replication

BENEFITS

RioTinto

Managing an integrated system of .....

Operations Centre
Control, Monitor and Optimise the integrated system

Mine	Plant	Rail	Ports	Asset health

Mine

16 Mines

>370 Trucks Manned & AHS

Autonomous Haulage
95 Trucks
3 sites - HD4, NAM, YAN

Autonomous Drills
11 drills currently
WAN (7) & YAN (4)

Plant

10 sites with 12 Fixed Plants (Wet & Dry)

Remote TLO - B4, NBWT, Mesa A

Rail

1700 Km of rail network

>200 locomotives

>12,000 wagons

Ports

Operation **4** Ports: CLA, CLB, PPT, EII

Dumping & Stacking / Stockyard Management

Reclaiming & Ship Loading

Asset health

Real-time monitoring of fixed and mobile assets

AutoHaul® Locomotive Monitoring & Signals & Networks

Condition Monitoring & Oil Analysis

The OC of today is very different to the OC of 2007
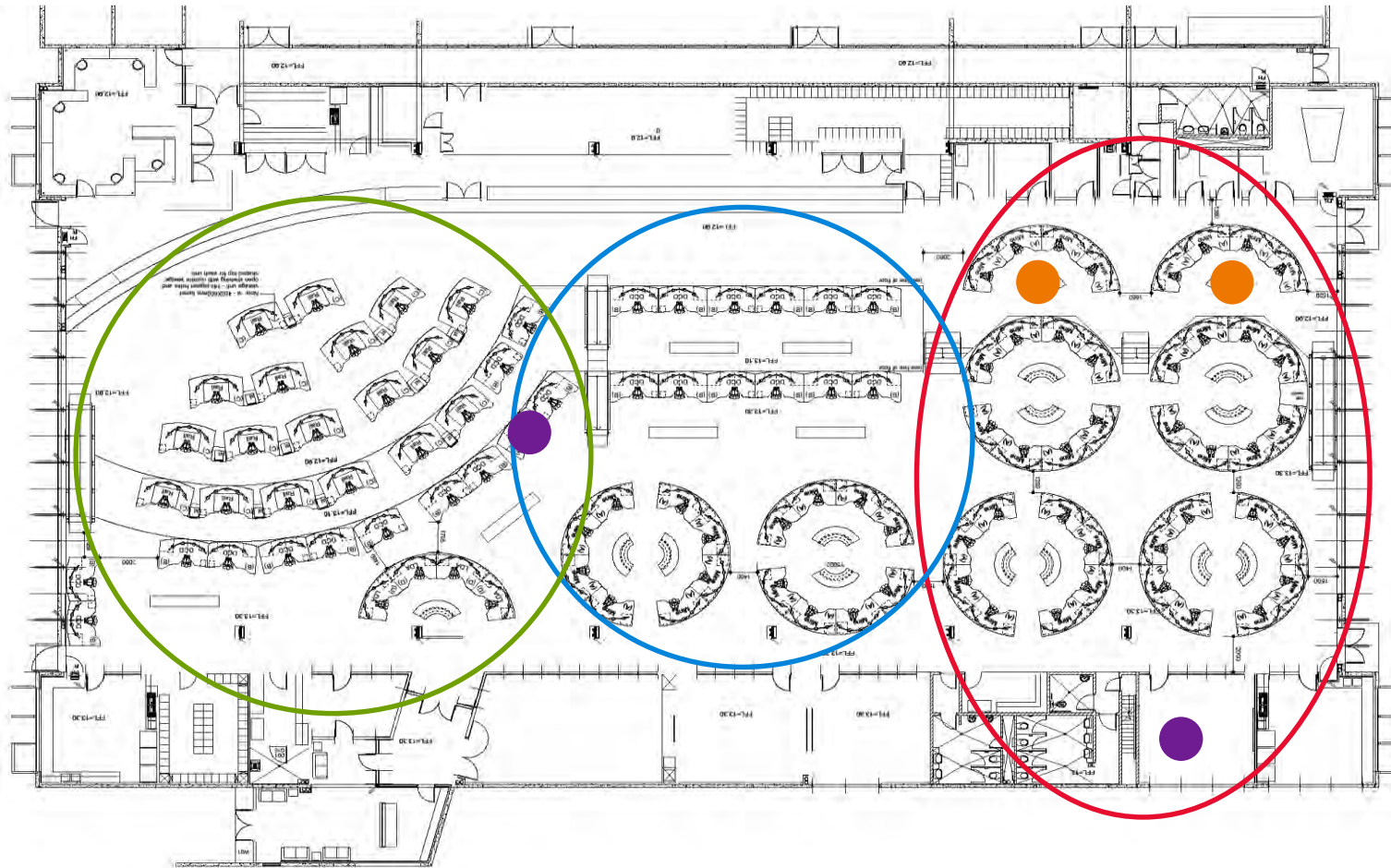
○ **Rail**

○ **Asset Health, Ports & Dynamic Scheduling**

○ **Mining & Plants**

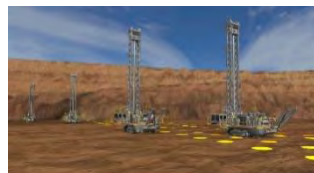● **Increased AHS presence**

● **Newest– Autonomous Drills**

We have been busy building our integrated system; underpinned by pioneering advancements in technology…
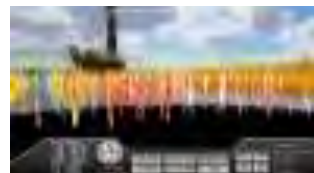

2007
Operations Centre and automated truck trials (AHS)

2009/10
Automated trucks Pilbara 'A Pit' trial

2010/11
Autonomous Drilling System (ADS) trial

2014
Deployment of ADS and RTVis™

2016
Mobile-device production reporting

2017/18
First Autonomous Drill deployment / retrofit commences
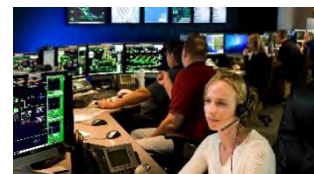

2008
Automated train trial (manned)

2010
Operations Centre commissioned

2012
Automated truck deployments

2015
Transition automated truck control to the Operations Centre

2017
First unmanned rail journey First AHS retrofit ADS to OC

2018
Regulator Approval AutoHaul® VET Skills Launch

RioTinto

… and we are the pioneers of autonomous technology

Autonomous haul trucks - AHS

Improved safety, productivity & operating costs

95 autonomous haul trucks

Av. 1,000 more hours

15% lower load and haul cost in 2016 than conventional haul trucks

Autonomous drills - ADS

11 autonomous drills across two sites – West Angelas & Yandicoogina

1,000 drill hours > conventional drills in 2017

Being deployed at Silvergrass

AutoHaul®

Full implementation – end 2018, regulator approval completed

6% speed improvement in autonomous mode

Step change in safety and productivity

Supporting the journey……

Pioneering technology

Advanced Decision Support

Integrated Automation

Big Data Infrastructure

Enhanced Data Capability

Innovative projects

AutoHaul®

Machine to machine control loops

Productivity monitoring apps

Skills of the future

Connected Teams

Skills for jobs of the future

RioTinto

Industry leading technology driving productivity...

Machine / Asset Automation	**Networked machines**	**Customer to ore body knowledge**
Improved safety and productivity	Control systems connected at all interfaces	End-to-end value optimisation
Autonomous drills (ADS)	Mine Automation System (MAS)	Artificial Intelligence across the entire system
Explosive charging improvements	Visualisation tools (RTVIS™)	Dynamic System Optimisation
Autonomous haulage system (AHS)	Control Loops	
AutoHaul®		

A fully automated system, mine to customer, integrated system delivering maximum value.

RioTinto

The operations centre will continue to extend our competitive advantage by…..

Integrating and managing the fully integrated system.

Maximising value from our operations, with value underpinning decision making.

Right quality at the right time delivered through the dynamic system.

Leading in technology and automation.

RioTinto