



# Our pursuit of continuous improvement

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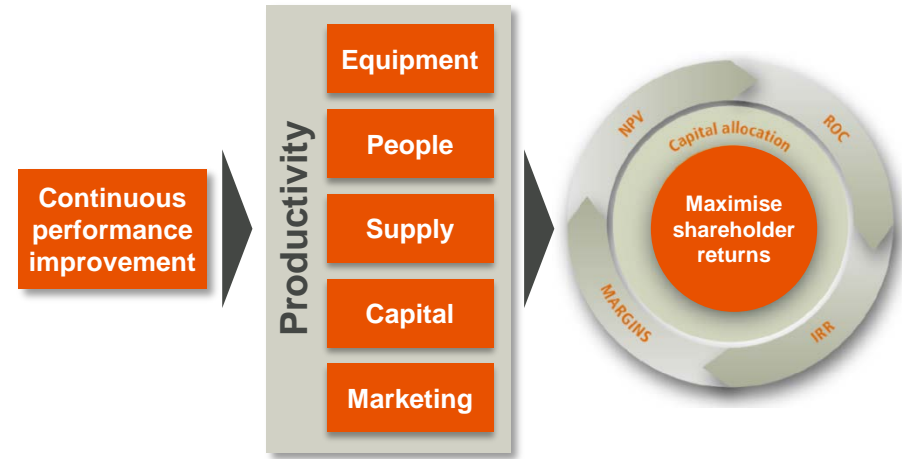
# Key themes

- Our culture underpins safe and productive operations
- The BHP Billiton Operating Model supports continuous performance improvement
- Our common systems and processes allow us to accelerate the replication of best practice
- We have a structured approach to productivity
  - **Equipment:** improving availability, utilisation and rate
  - **People:** optimising the size of our workforce and building the right capability and culture
  - **Supply:** reducing total cost of ownership
  - **Capital:** lifting portfolio returns through increased competition for capital and improved processes
  - **Marketing:** realising full value, reducing supply chain costs and enabling upstream productivity
- Targeting at least US\$3.5 billion of productivity-led gains from our core portfolio

# Our productivity agenda is delivering strong results and will maximise value for shareholders

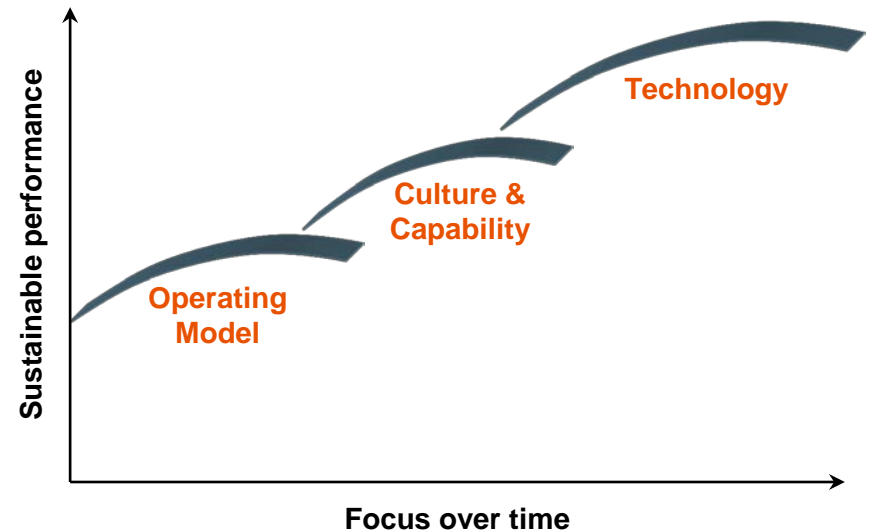
## Our performance focus

- We aim to sustainably realise the full potential of our assets for maximum value creation
- We have a structured approach to productivity
  - we focus on five core areas: Equipment, People, Supply, Capital and Marketing
  - we measure performance using simple, granular, integrated operational metrics



## The BHP Billiton way

- Our unique Operating Model, complemented by our culture and capability, allows us to drive sustainable performance improvement across the entire organisation
- Technology development and deployment will be enhanced by the Operating Model, further enabling differentiated performance



# Our culture underpins safe and productive operations

## Our culture and capability

- Our people strategy complements our Operating Model
  - senior leaders are committed to all aspects that drive our culture
  - guided by half-yearly employee surveys and leadership assessments
  - strong correlation observed between inclusive leadership and better productivity

## Keeping our people and operations safe

- Safety and productivity are closely linked
  - planned work helps drive safe and productive outcomes
  - record low TRIF<sup>1</sup> of 4.2 per million hours worked in FY14

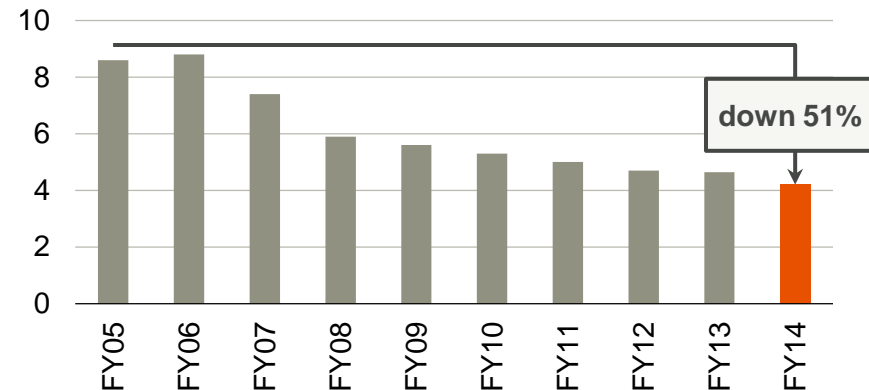
1. Total Recordable Injury Frequency for BHP Billiton managed and operated sites.

## Key aspects of our culture



## Total Recordable Injury Frequency

(number of recordable injuries per million hours worked)



# Our Operating Model supports continuous improvement

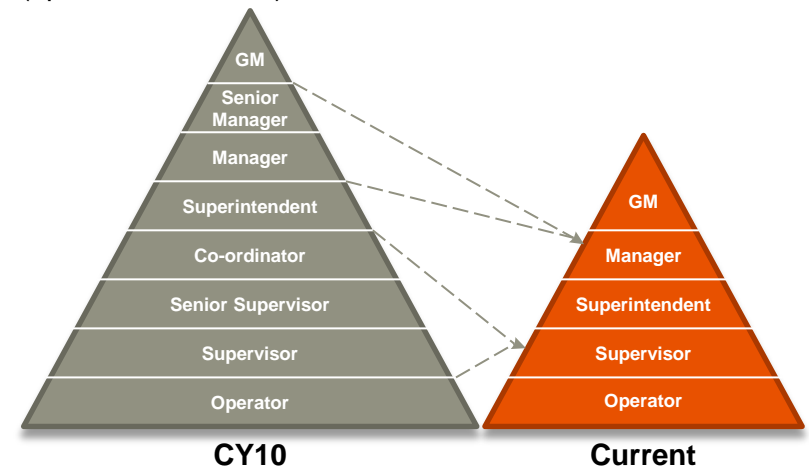
## Our Operating Model

- A simple and scalable organisational design to deliver sustainable performance
- Defines how we work, how we are organised and how we measure performance

## Critical success factors

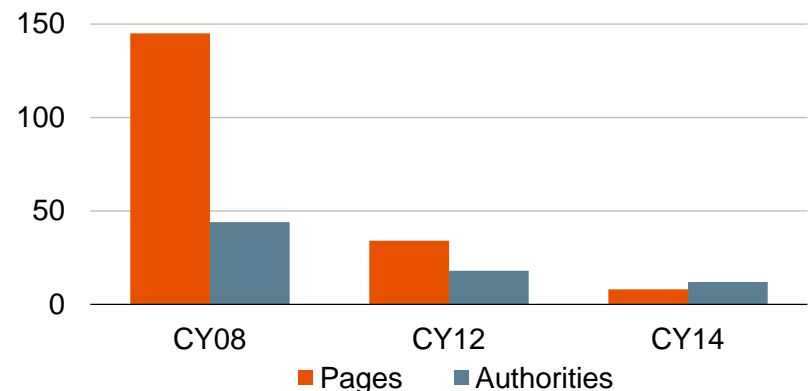
- Standardised organisational design, systems, processes, planning and reporting
  - common structures, roles and accountabilities
  - a dedicated analysis and improvement function in all areas
  - rapid identification and execution of improvement opportunities
- We are simplifying our processes and performance requirements

## We are structured for maximum efficiency (operation structure)



## We are simplifying our processes

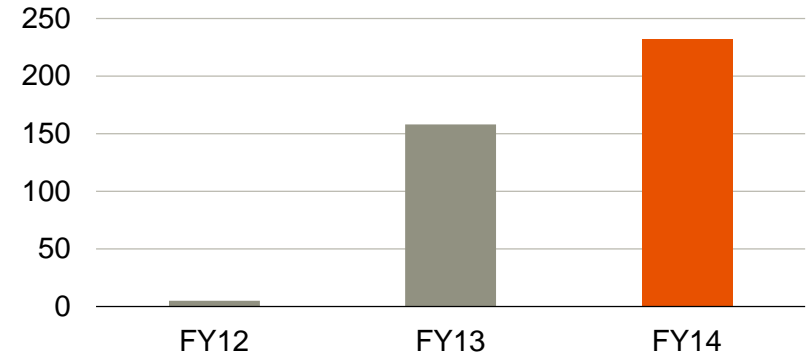
(number of planning policy pages and required approvals)



# Our common systems and processes allow us to accelerate replication of best practice

- Our integrated management systems provide a rich data source
  - we measure, track and benchmark performance down to single components
- Using common systems and processes allows us to accelerate replication of best practice
- The benefits of our Operating Model are clearly evident in the optimisation of our maintenance activities
  - standardised task lists have been created and are now consolidated and replicated
  - allows us to codify best practice
  - reduces equipment down time and increases component life

## We are standardising our maintenance activities... (maintenance work orders<sup>1</sup> with standardised task lists<sup>2</sup>, '000s)



## ...and extending the life of our equipment (variation in component replacement intervals of 793F trucks, '000 hours)



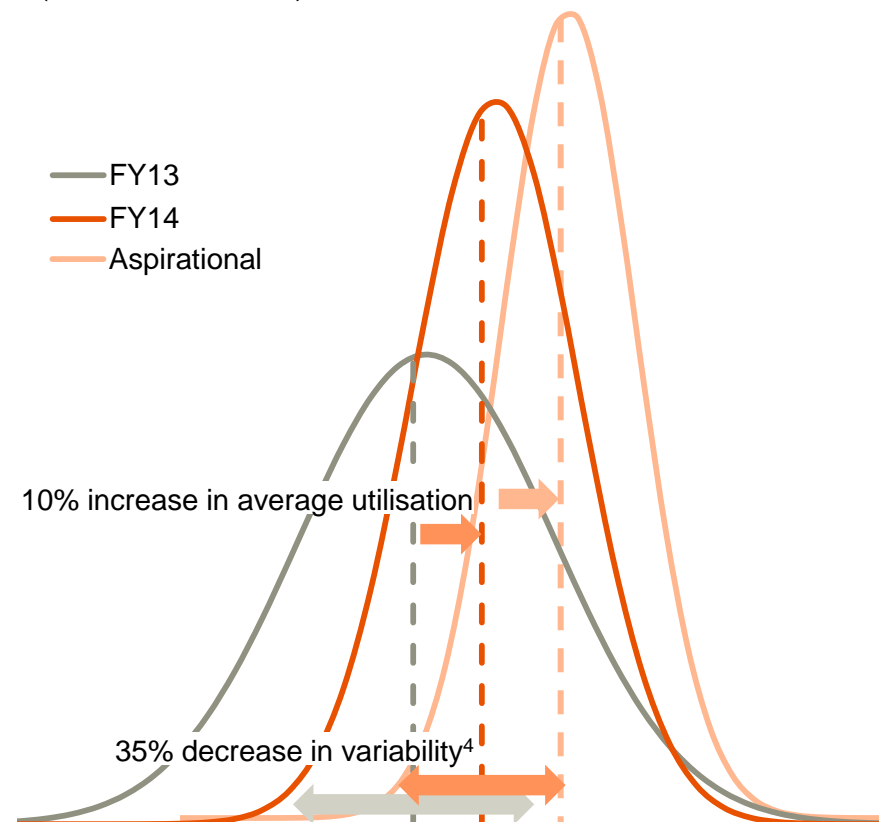
1. Orders generated by maintenance planning process informing maintenance personnel of corrective or preventive maintenance work required.  
2. Detailed instructions related to work orders informing maintenance personnel on how to successfully execute required tasks, and resource requirements from completion of the task.

# Equipment: availability, utilisation and rate

- We relentlessly target our bottlenecks
  - a 6% increase in total asset utilisation<sup>1</sup> underpinned a 9% increase in Group production<sup>2</sup> in FY14
- We benchmark the performance of our equipment internally and externally
- Transparency underpins the pursuit of 'best-in-class' performance
- The value of this approach is exemplified by the performance of our trucking fleet in FY14
  - availability increased by 3%
  - utilisation increased by 10%
  - rate of hauling increased by 10%
  - as a result our trucking fleet moved 22% more tonnes

## Utilising the power of data

(truck utilisation<sup>3</sup>, %)



1. Supply chain from mine to final product at WAIO, Escondida, Pampa Norte, BMA and BMC.

2. Copper equivalent production based on FY13 average realised product prices.

3. Data approximated to fit normal distribution. Overall mean represents the underlying performance of approximately 800 trucks across the BHP Billiton portfolio.

4. Variability arrows represent the standard deviation for FY13 and FY14 respectively.



# People: building the right capability and culture

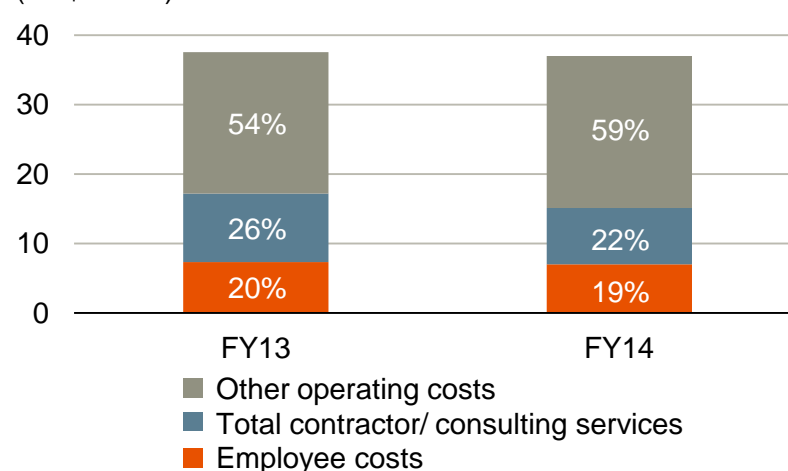
- People productivity is a key value driver
  - labour<sup>1</sup> represented 41% of our operating cost base in FY14
  - we reduced our total labour spend by 10% in FY14
- We have increased people productivity by 38% since FY12<sup>2</sup>
  - strategic insourcing to build the right capability and culture has achieved a ‘fit for purpose’ employee to contractor ratio
- We anticipate a continued increase in people productivity
  - supporting our people in developing their capability
  - utilisation of technology to automate and simplify labour-intensive operations
  - focusing our people on the highest value adding activities

1. Labour comprises employee benefits expense, and external contractor and consulting services.

2. Copper equivalent unit production per full-time equivalent. Based on major operated assets.

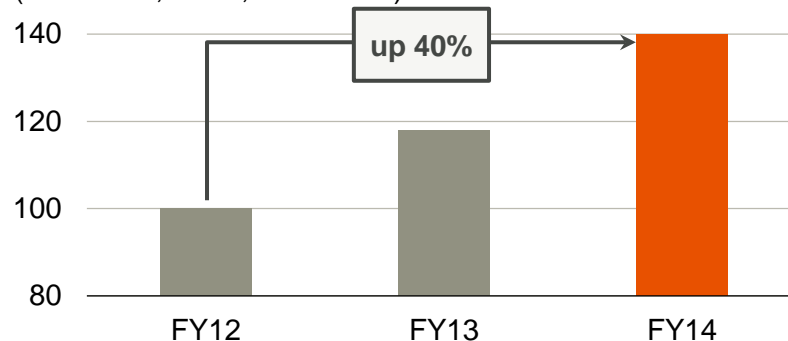
## We have significantly reduced our labour cost...

(US\$ billion)



## ...and our people are becoming more productive

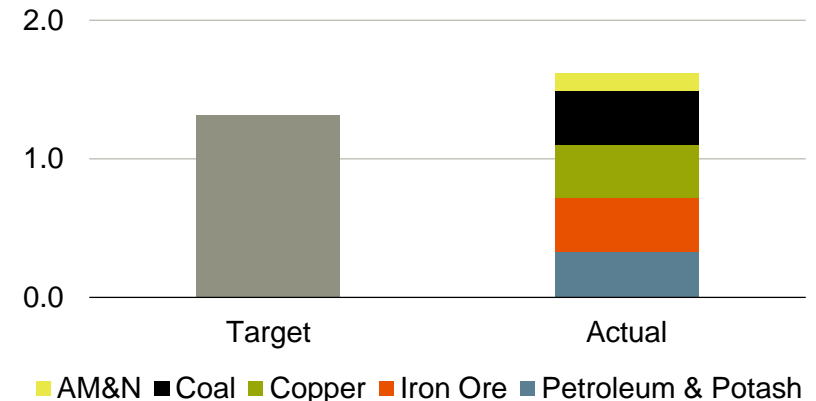
(CuE/FTE<sup>1</sup>, index, FY12=100)



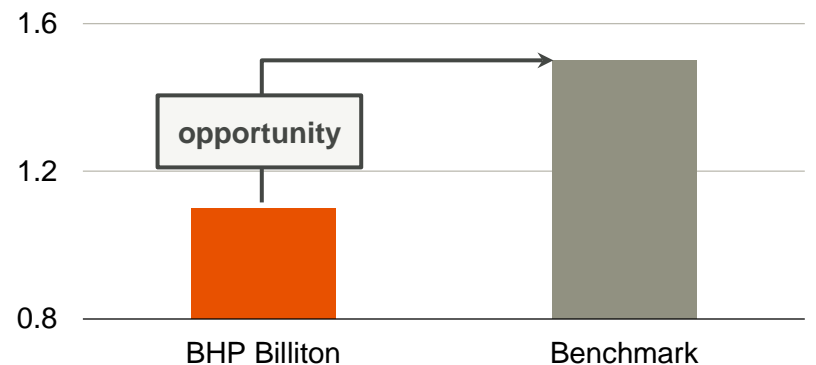
# Supply: reducing total cost of ownership

- We are extending the life of consumables and pursuing opportunities identified through benchmarking to reduce overall supply costs
  - procurement cost savings of US\$1.6 billion achieved over FY13 and FY14
- We are pursuing multiple opportunities to reduce our working capital balances
  - a four-day improvement in average payables performance in H2 FY14 improved cash utilisation by US\$0.6 billion
  - we are targeting a reduction in operating spares and consumables inventory to achieve benchmark stock turn performance

## Supply cost savings have exceeded targets (US\$ billion)



## Pursuing further opportunities in inventories (stock turn ratio<sup>1</sup>)



1. Cumulative consumption over average inventory holding in preceding 12 month period.

# Capital: competition for capital and improved processes have increased project returns

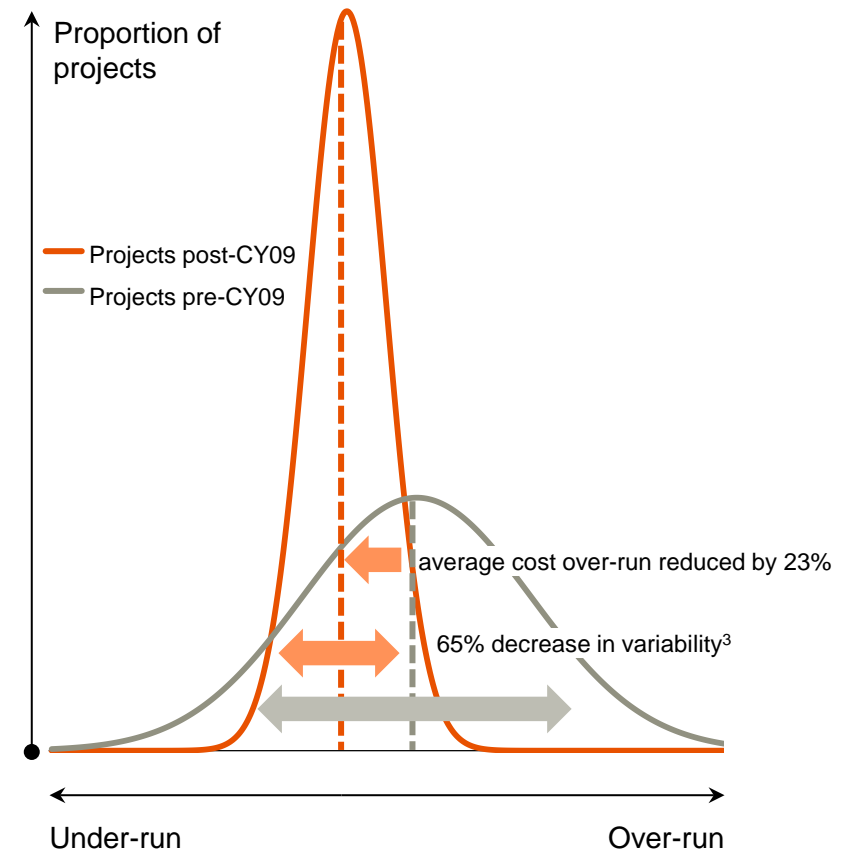
- Our opportunity-rich portfolio is a key differentiator and underpins an internal focus
- We have improved our processes and execution capability resulting in less budget over-runs and lower cost variability
- Competition for capital has driven a strong sense of capital stewardship
  - project teams are incentivised to do more for less
  - modular execution approaches are tailored for market conditions
  - we continue to forecast an average investment return of >20%<sup>1</sup> for our portfolio of high-quality development options
- As we improve capital productivity we may invest at the same rate to create even more value or invest less and increase cash returns to shareholders

1. Ungeared, post tax, nominal rate of return for our major project options considered in the five year plan.

2. Data sample includes 25 projects that were approved after end of CY09 and 30 projects before that. Data approximated to fit normal distribution.

3. Variability arrows represent the standard deviation for pre-CY09 and post-CY09 respectively.

## Major capital cost predictability<sup>2</sup>



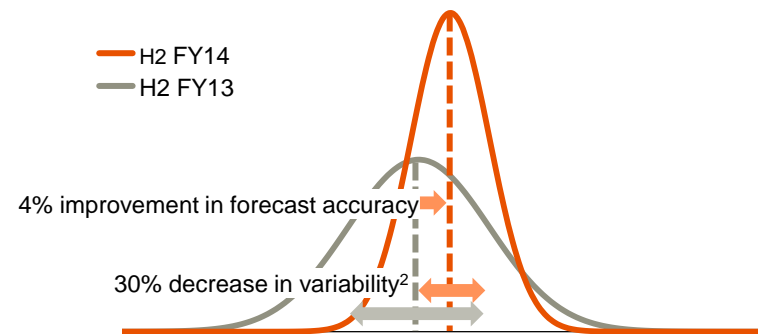
# Marketing: realising full value for our products

- Our marketing team is a major contributor to the Group's productivity agenda
  - we are increasing volumes through supply chain optimisation
  - changes to quality specifications are enhancing the value of our resource
  - better forecasting underpins predictable supply chain management, yielding higher volumes at lower cost
  - deep technical capability supports our ability to maximise the full value of our products
- At Port Hedland we have enhanced vessel mix, increasing iron ore throughput and reducing turnaround times
  - over 40% of voyages now use larger >200,000 DWT<sup>1</sup> vessels
  - over US\$12 million in costs saved from a ~650 day reduction in demurrage in FY14

1. Deadweight tonnage.

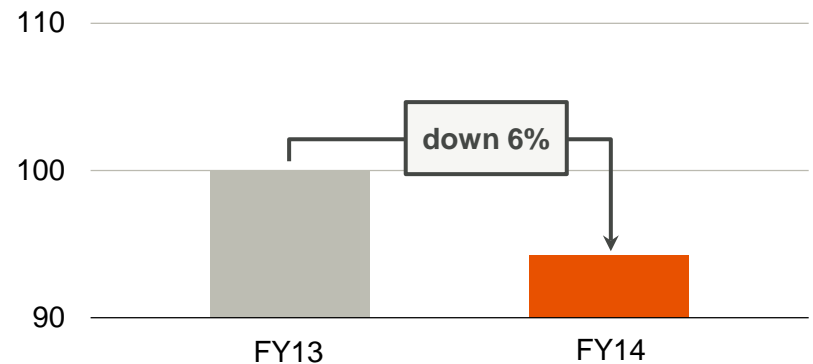
2. Variability arrows represent the standard deviation for H2 FY13 and H2 FY14 respectively.

## Improved sales forecast accuracy with lower variability (% actual vs forecast, sales volumes for all commodities)



## Port Hedland vessel turnaround time

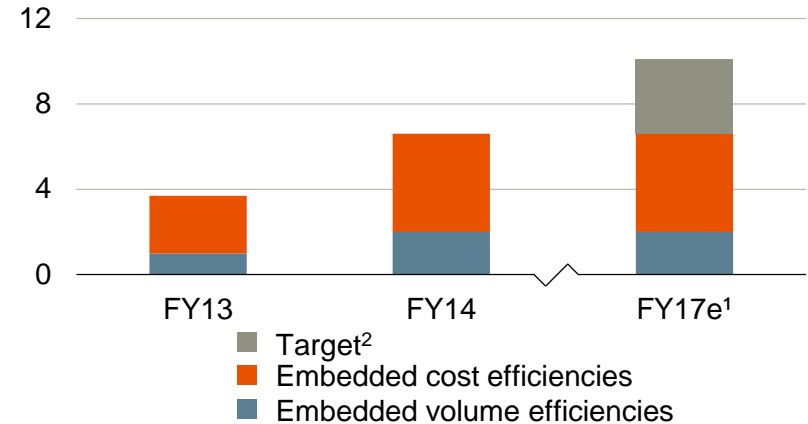
(average days, index, FY13=100)



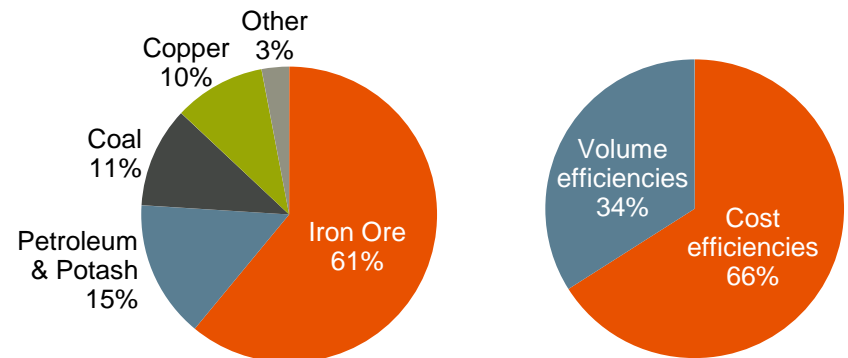
# Our pursuit of continuous improvement

- Our structured approach to performance improvement is creating value
  - productivity-led volume and cost efficiencies of US\$2.9 billion achieved in FY14, exceeding target by 61%
  - more than US\$6.6 billion of sustainable productivity gains<sup>1</sup> embedded since FY12
- Targeting additional gains of at least US\$3.5 billion<sup>2</sup> by the end of FY17
  - US\$2.3 billion reduction in cash costs
  - US\$1.2 billion volume-related productivity gains
- Our foundation will enable more confident deployment of select technologies to underpin further productivity improvement

## Over US\$6.6bn of productivity gains embedded... (relative to FY12 baseline, US\$ billion)



## ...with a further US\$3.5 billion expected by FY17 (US\$3.5 billion target, %)



1. US\$2.9 billion of productivity gains were achieved in FY14 in addition to US\$3.7 billion of productivity gains reported in FY13 (subsequently restated to US\$4.3 billion due to an increase of US\$0.8 billion on adoption of IFRS 10 and IFRS 11, and a decrease of US\$0.2 billion due to the inclusion of previously classified one-off items).

2. Represents planned annualised volume and cash cost productivity gains to be delivered from our core assets only, relative to our FY14 baseline.

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resourcing the future