
RioTinto

2014 Half year results

Cost saving case studies

A decorative background pattern consisting of a grid of circles, with the circles becoming smaller and more densely packed as they recede into the distance, creating a sense of depth and perspective.

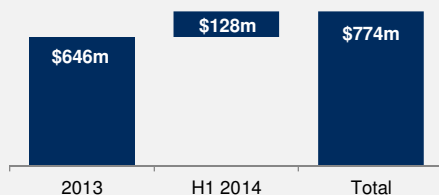


Emerging market suppliers


> **Rio Tinto Coal Australia (RTCA)** started a programme sourcing operating items from emerging markets in **2013**


> Savings to date: **US\$43m**

Energy product group – Total cost savings




Improvements since this time last year

 RTCA has built on Rio Tinto's experience in sourcing capital items for emerging markets and expanded this to include **high volume operating items** as well as **strategic products and services**.

 In addition to reduced costs, benefits include **improved security of supply**, **greater competitive pressure** on existing suppliers, **diversification of supply base** and **productivity improvements** through standardisation.

 Strong collaboration across **Rio Tinto** to drive next phase of this programme and **expand benefits across the Rio Tinto Group**.

Implementation approach

 **Long term commitment** to source from suppliers in emerging markets to **drive savings and security of supply**, while demonstrating **immediate savings**.

 Focus on **quality assurance** and **risk management**. Share learnings with other Rio Tinto businesses to **maximise emerging markets opportunities**.

From this time last year we have now achieved

\$5.5 million

saved on underground roof supports sourced from China

- > Average 60% decrease in price compared to previous supplier
- > Tailored specification (fit for purpose), more efficient installation

\$2 million

saved on hydraulic cylinders sourced from Indonesia

- > Average 40% decrease in price

\$2 million

saved on digitally cataloguing 30 years of ore body data to optimise mining effectiveness

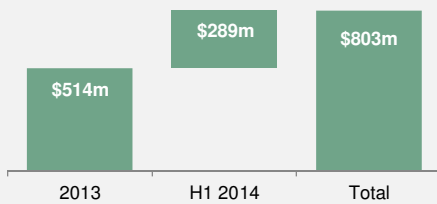
- > Sourced from India
- > More than 30% saving and rapid turnaround
- > Large resource pool were able to deliver this project in a tight timeframe



Rio Tinto Kennecott smelter value programme

- > Set a goal of reducing the unit cost of copper production per tonne smelted by 2018
- > Savings to date: **\$34m**

Copper product group – Total cost savings



Improvements since this time last year



Reduced operating costs by 12% in 2013 (\$24m) and by **\$10m in first half 2014** (compared to 2012).



Over a **1/3 reduction in production costs** per tonne smelted in the last two years.



Record **productivity** and **quality** at the smelter (tonnes per employee) in first half 2014.

Implementation approach



Fostering and maintaining a burning platform for change and a business mind-set amongst our employees – ‘protect the present but earn our future’.



Leadership in the field - daily coaching and mentoring of frontline leaders, setting clear expectations with our workforce, and then following up on these.

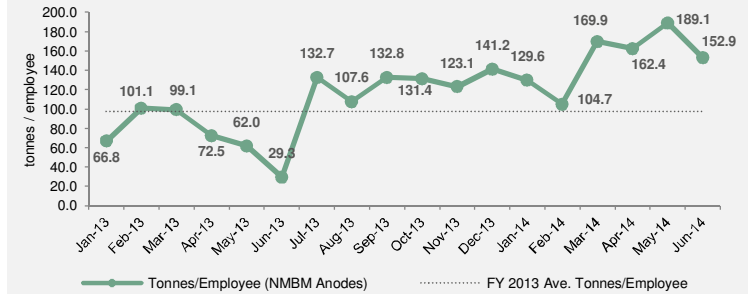


Rapid acceleration of LEAN – focus on quality, quantity and time; Mandate employees to accelerate change, and sustain behaviours around execution of standardised work.

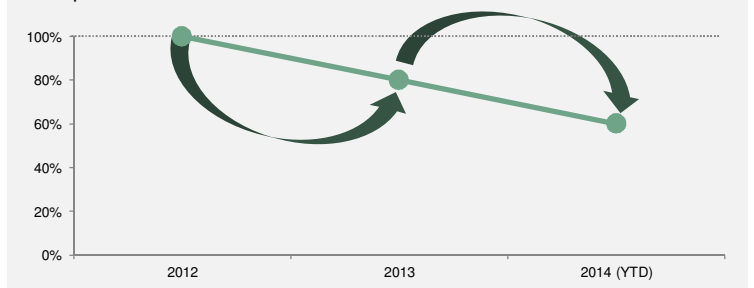


Any cost savings are real.

Productivity Ratios (hourly smelter employees)



Cost per tonne smelted

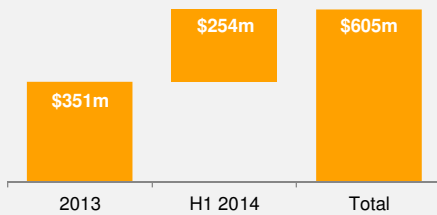




Training transformation

- > Set out to shift our training to engage people in a more efficient way
- > Savings to date: \$8m since first half 2013, a 16% reduction per head

Iron Ore product group – Total cost savings



Improvements since this time last year



~ 255,000 hrs / year released as productive time, no longer spent in training or assessment activities



7% reduction in actual Training FTEs



9% improvement in training team service ratio (efficiency)

Implementation approach



Streamlining Systems and Processes

Streamline the work through standardised training systems, processes and organisation.



Training Smarter

Develop fit for purpose training aligned to the requirements of the role and the individual.



Assessing Better

Design a less complex and more effective system of assessment.

For our people this means...



20-30 hours

saved per year for a heavy equipment operator



~ 25 hours

saved per year for a mobile equipment maintainer

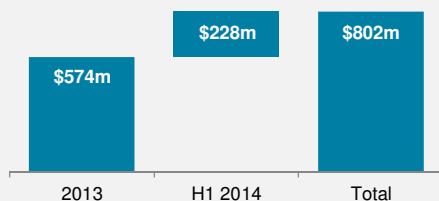
...with a focus on building proficiency rather than compliance



Productivity and cost reductions

- > Set out to improve productivity while reducing worked hours
- > Savings to date: \$9m

Aluminium product group – Total cost savings



Improvements since last year

Alma increased its **productivity** by implementing a **reorganisation of work** supported by the lean philosophy.

Standardising tasks across the plant allowed the Alma smelter to:



Improve work quality, efficiency and operational stability



Increase productivity by optimising worked hours



Reduce workforce

Implementation approach

The challenge was ensuring that the new standardised tasks were accepted and followed after their implementation and increases to productivity did not compromise on safety.

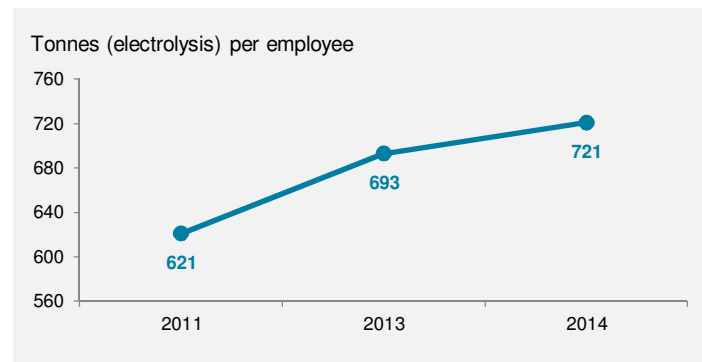
Key success factors:

- > Renewal of the labour agreement provided flexibility
- > Alma Works focused on a proactive strategy to implement reorganization of work
- > Standardisation of workforce planning

Results

The Alma smelter increased its productivity by **16% from 2011 to 2014**

(621 tonnes per employee to 721 tonnes per employee)



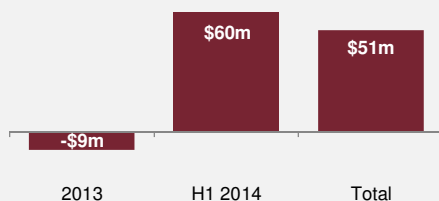


Argyle Diamonds power project


> Set out to reduce onsite demand for generator power through energy efficient projects and utilising power station capacity


> Savings to date: **\$6.2m**


Diamonds & Minerals product group – Total cost savings




Improvements since this time last year


 15% increase in Argyle's use of power network capacity.


 Reduction of greenhouse gas emissions by **23,300** tCO₂ – e per year

 A significant reduction in diesel use and a nomination for a **Golden Gecko Award in 2014.**


Implementation approach


 The team set out to more **efficiently** access available grid power **to reduce reliance on diesel generators** onsite.

 Optimisation of the onsite 30 MW power station.

 Working with our power providers to design and implement a new control mode called **import/export control.**

Achievements since last year

 Argyle can now vary the loading of the onsite generators to **maximise the use of grid power**, resulting in reduced Mega Watts per hour being required from the onsite diesel generators.

 To put this into perspective this additional power accessed has enough power to **illuminate 200,000 40W light bulbs!**

 **2013 Q4 Winner Operational Excellence Values**



Marketing

Processing plant by-product sales

> **1 million** tonnes (Rio Tinto share **821,000** tonnes) of thermal coal produced from by-products to 30 June 2014 since the start of the trial

In recent years, coking coal prices have decreased and the thermal coal market has evolved – these changes created a marketing opportunity for the Hail Creek mine. Traditionally a coking coal operation, the mine has created a range of new thermal coal products from by-product that was previously stockpiled, delivering a higher yield on material mined and bolstering both production and sales.



In September 2013

investigation commenced for a trial thermal coal product



The trial was successful

with minimal changes required in our current coal washing process



First production

was reported in Q3 2013

This project:



Takes advantage of the lower sulphur content of the Hail Creek resource which is a marketing advantage for Rio Tinto



Provides higher margins for the business due to lower costs of conversion/processing



Has contributed to the record H1 thermal coal production results