



Shaping our future

Sandeep Biswas

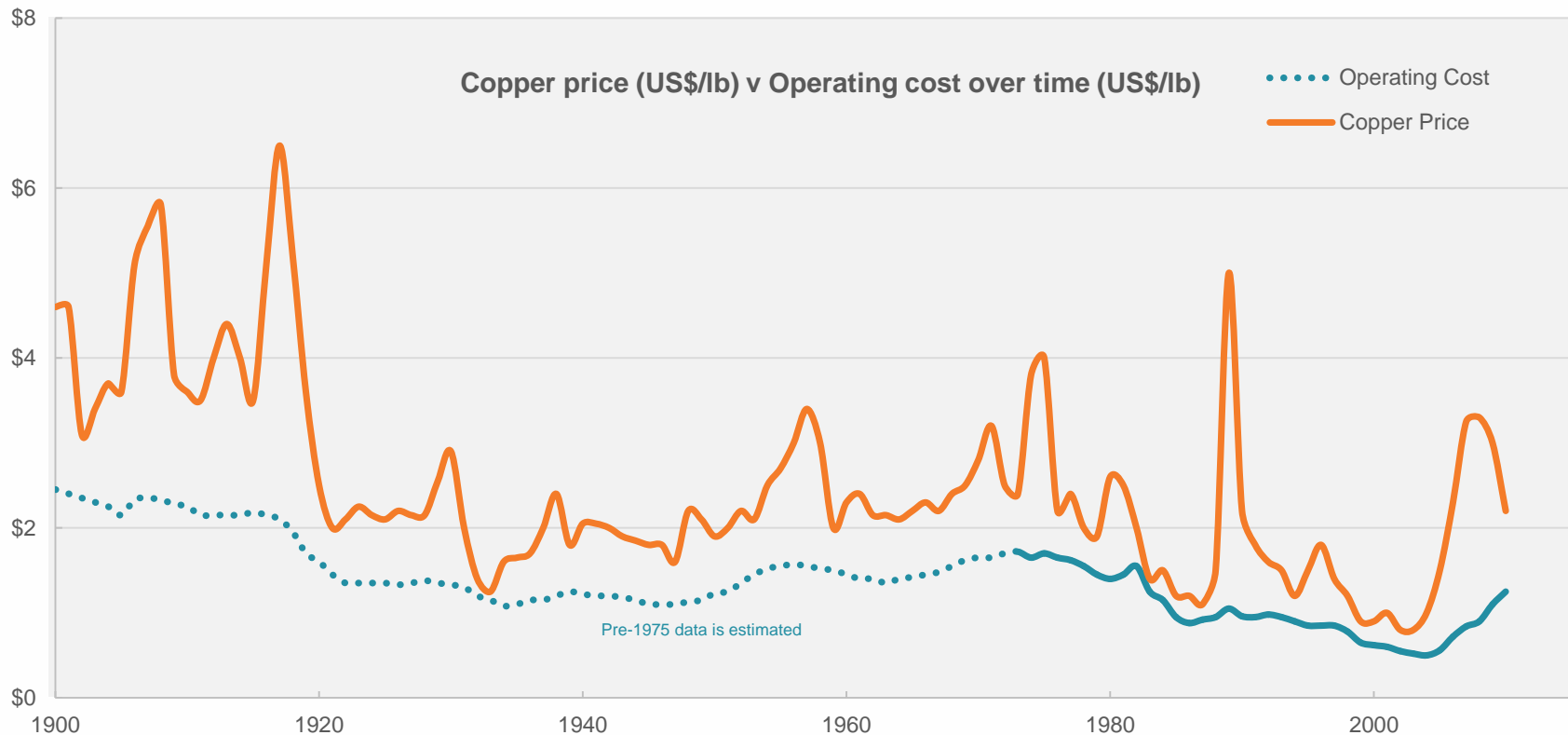
Managing Director and Chief Executive Officer

Sydney Mining Club, 1 June 2017

Australian mining industry today: bigger and stronger



Mining industry has consistently adapted



Source: R.Schodde, MinEx Consulting, 2010, *The key drivers behind resource growth: an analysis of the copper industry over the last 100 years*, supplemented by data from Wood Mackenzie
Y axis represents US\$/lb C1 costs (in real 2016\$ terms) for period 1900 – 2016. Data prior to 1975 is estimated

Gold price plummet

(US\$/ounce)



The vision

Our relentless drive to realise the full potential of our assets

Measure of success

Safely maximising cash generation

Stretch targets

Aspirational targets that drive breakthrough thinking and step-change innovation



Owner's mindset

A strong owner's mindset and behaviours with a bias to action and a high-performance, no-nonsense culture



Operating discipline

Rapidly identify and capture opportunities to safely increase free cash flow

Performance Edge is a key source of our competitive advantage to become the Miner of Choice™



Employee involvement



Personal ownership



Shared vision



Operational discipline



Bottom-up innovation



Inspirational leaders



Talent development

Owner's mindset is driving hundreds of value-creation initiatives



Lihir

Mobile maintenance department



\$1.5m



Cadia

Ore processing team



\$350k



Telfer

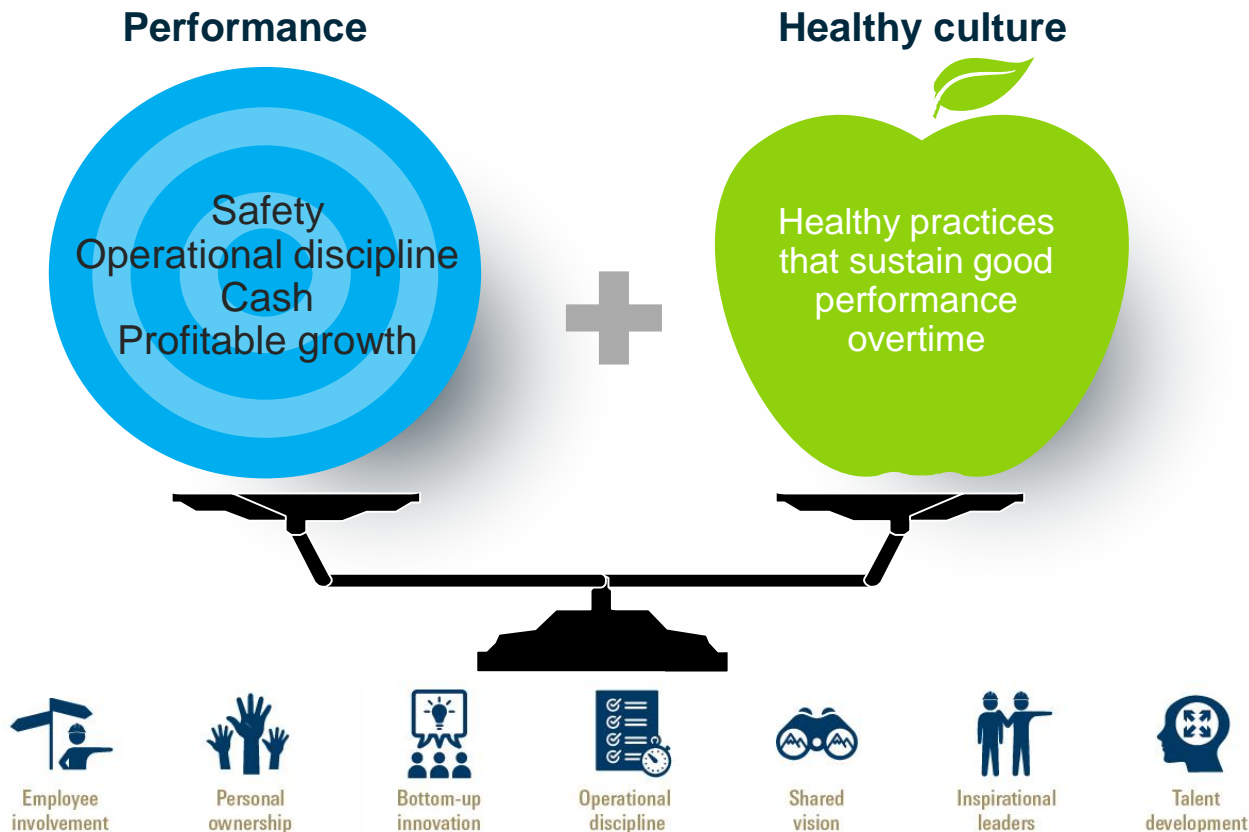
Mining engineers



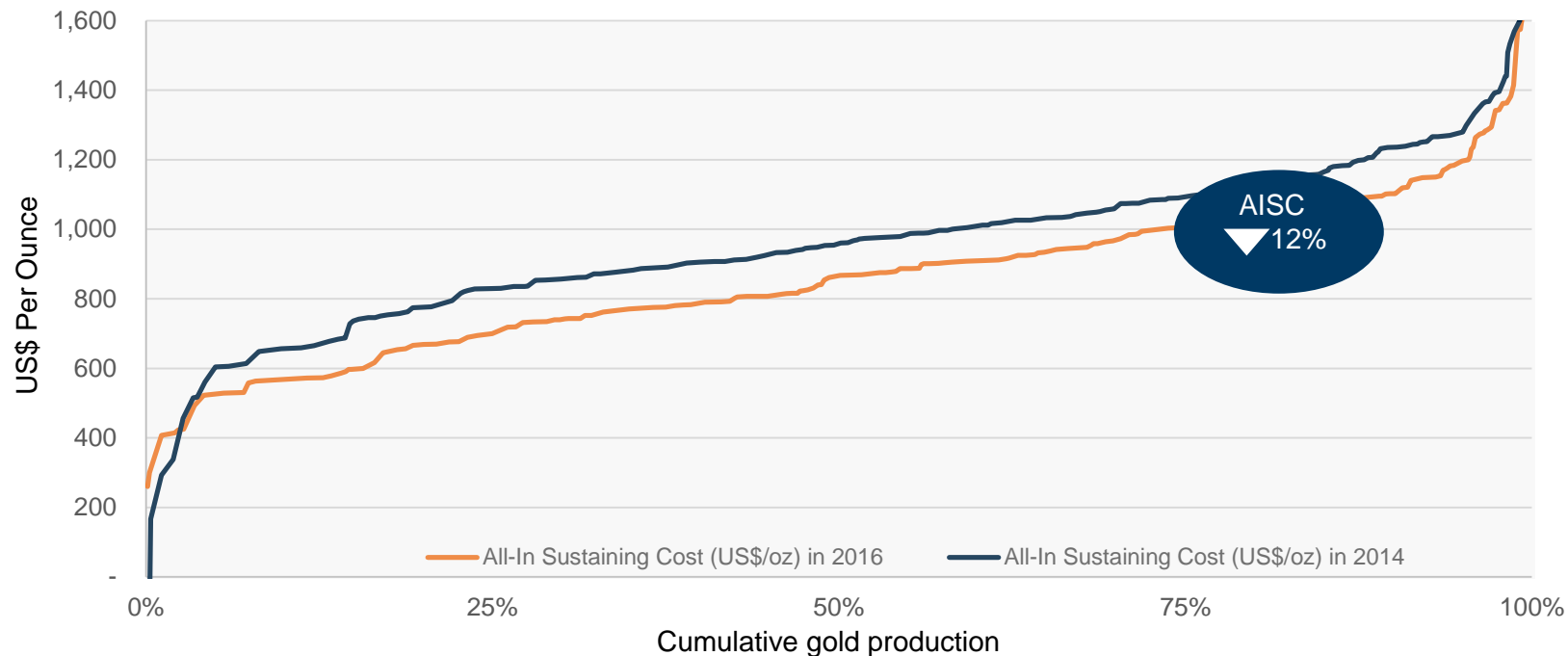
\$1.5m



Business transformation has two essential ingredients



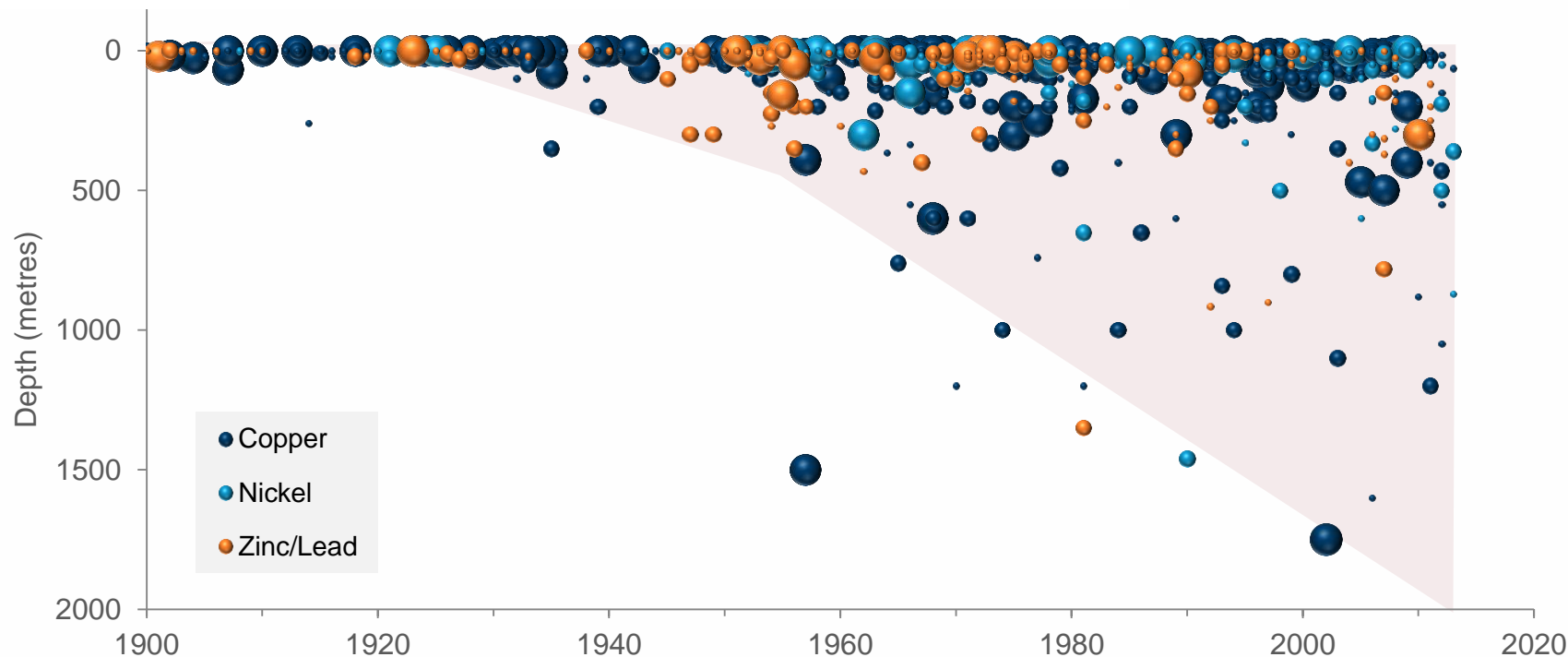
Global gold sector has improved performance, lowered costs



Rising to the challenge: finding and mining deeper under cover



Base metal deposits found in the world between 1900-2013

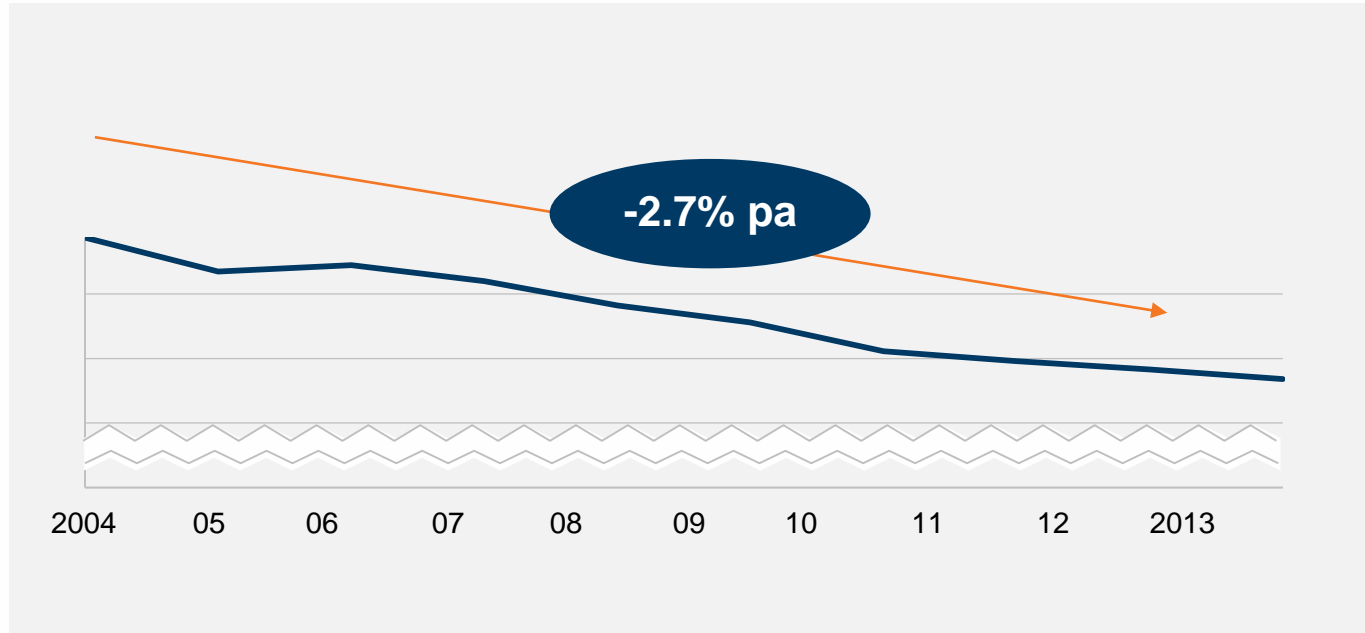


N = 1034. NB. Size of bubble refers to 'Moderate', 'Major' and 'Giant' sized deposits. Excludes Nickel
Source: R. Schodde, MinEx Consulting, The Global Shift to Undercover Exploration, 2014

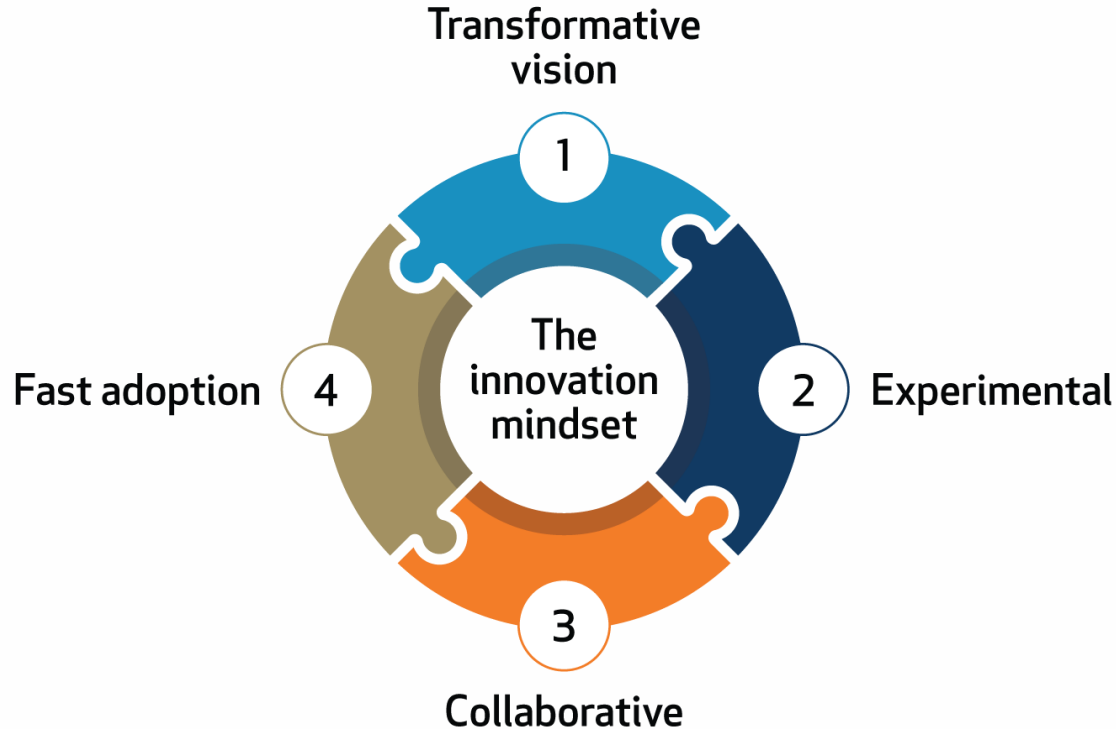
Rising to the challenge: grades in decline

Average grade estimate

Index, 2004 = 100



An innovator's mindset key to meeting industry's challenges



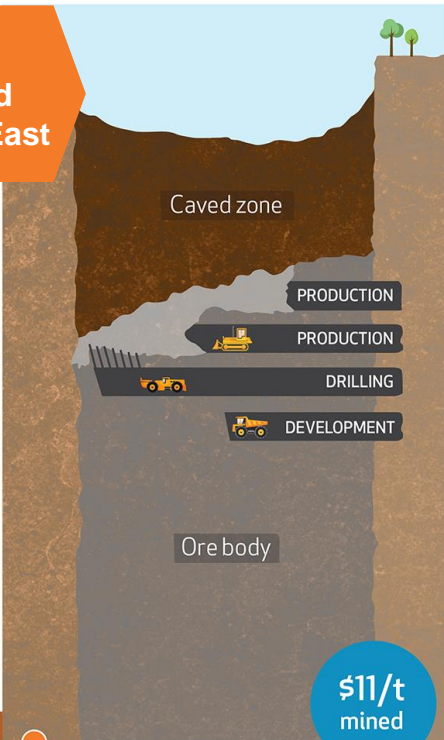
Innovation key to making deep, low-grade deposits viable

CASE STUDY

Bulk underground mining at Cadia East



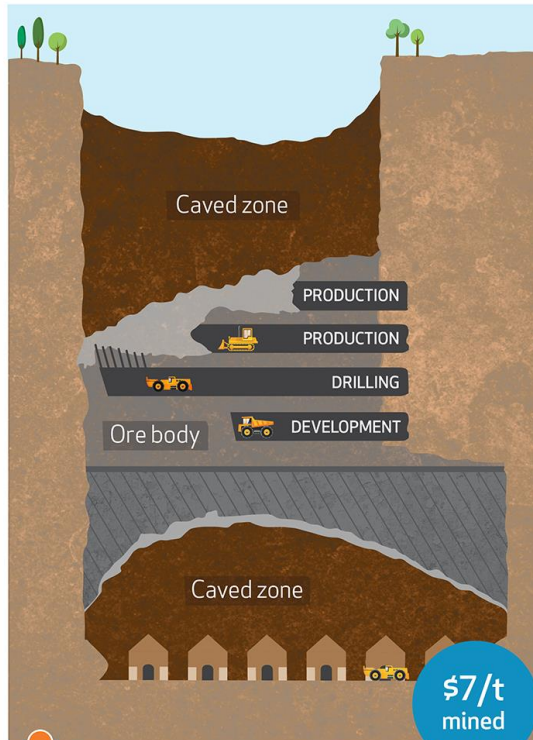
Cadia



\$11/t
mined

2001-2011

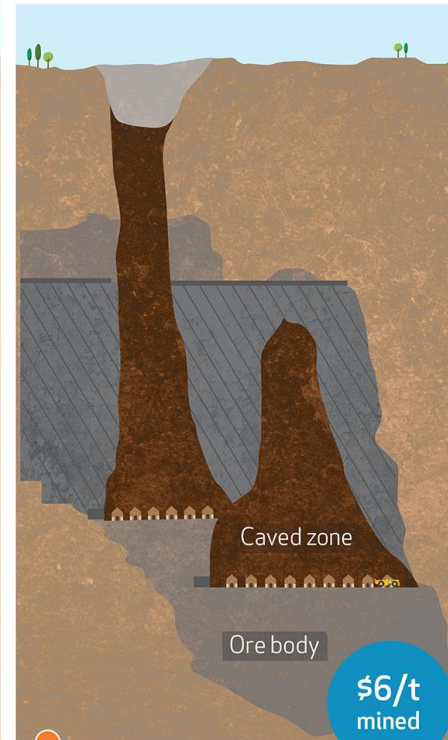
Ridgeway sub-level cave



\$7/t
mined

2009-2016

Ridgeway Deeps block cave



\$6/t
mined

2012 >

Cadia East block cave

Selective processing tackling declining grade



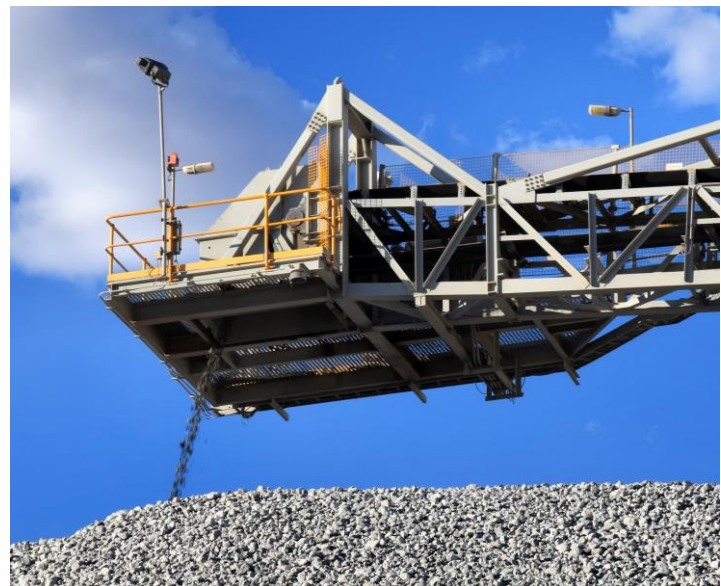
CASE STUDY

Industry partnership
supports selective
processing at Telfer

▲ +20%
throughput

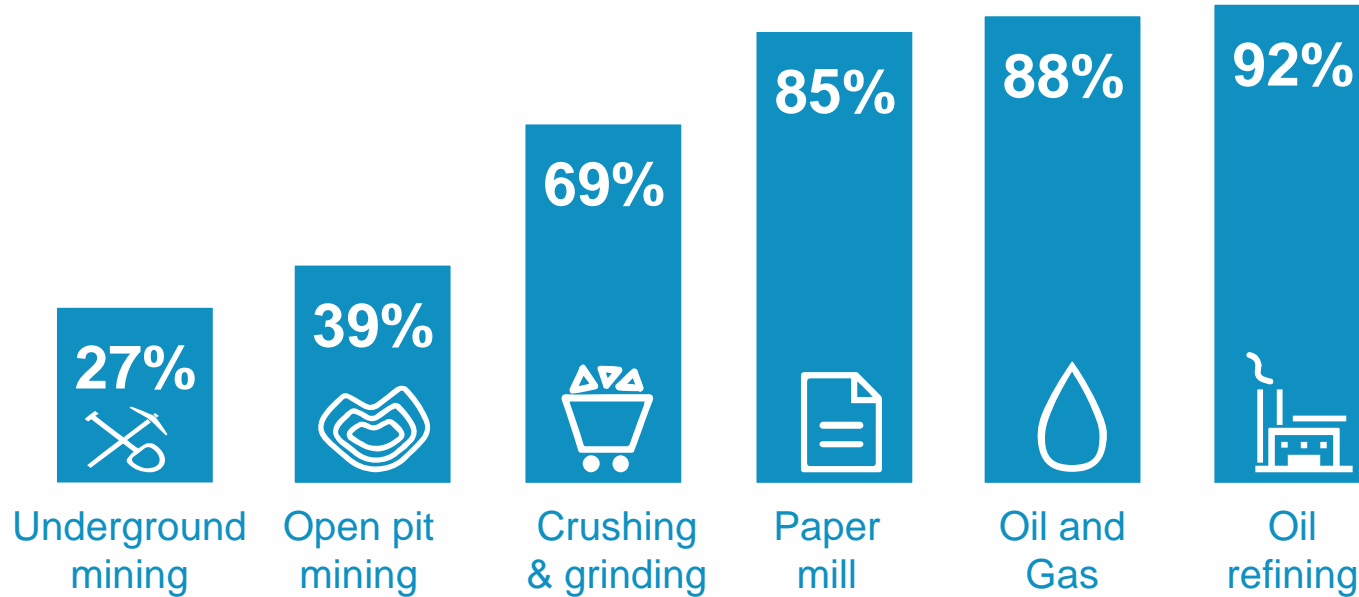


Sampling from an isolated belt



Rising to the challenge: Increasing equipment utilisation

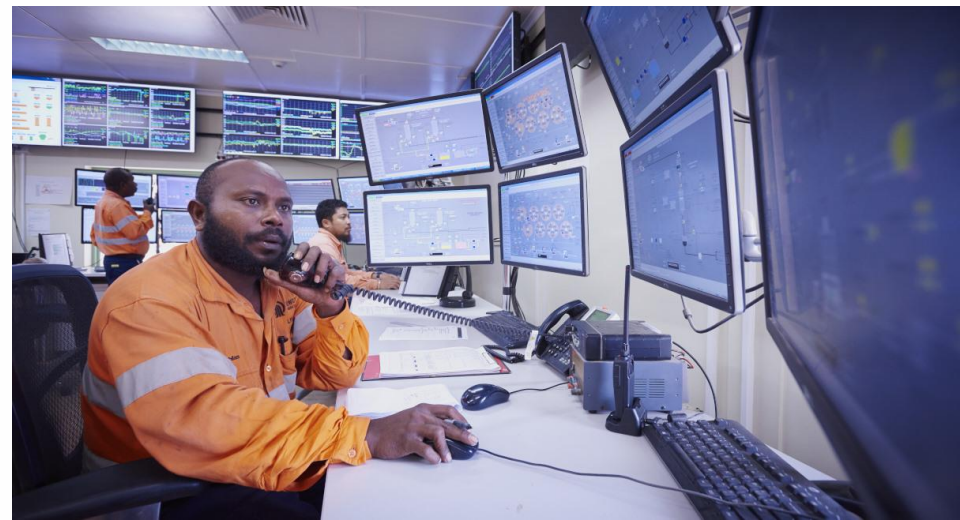
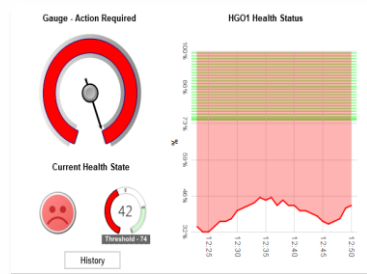
Average Overall Equipment Effectiveness
(OEE)



Collaboration on big data delivering results

CASE STUDY

Data science
collaboration eliminates
mill overloads at Lihir





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