

INNOVATION IN THE MINE CLOSURE SUPPLY CHAIN

DR GUY BOGGS CEO | 31 JANUARY 2024

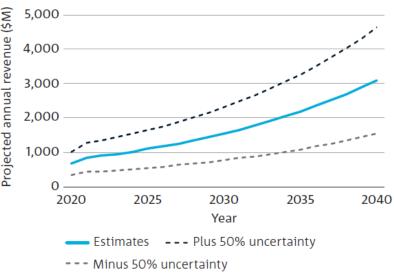


The value of the mine closure solutions industry

- Almost 240 existing mines expected to close around Australia by 2040.
- Expenditure on mine rehabilitation and closure activities could exceed \$4 billion each year; on-going and sustained expenditure on environmental remediation
- Significant opportunities for the existing METS industry, plant nurseries, drone operators, software developers, and so forth.
- Creation of business and employment opportunities for Indigenous and regional communities.



Projected annual revenue for Australia's mining environmental remediation market





Categories of mine closure solutions

Engagement and partnership

Solutions that enable effective engagement, co-design, and mutually beneficial partnerships to improve social performance, reduce social and governance risks and optimise outcomes.



Waste reduction and resource recovery

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Solutions that enable cost-effective reduction, reuse, and recycling of mine waste to minimise closure liabilities, residual risk, and ongoing maintenance costs.

Mine closure solutions

Mine rehabilitation

Solutions that improve the performance or cost-effectiveness of mine rehabilitation activities to ensure that mined land is safe, stable, non-polluting and able to support an appropriate land use.

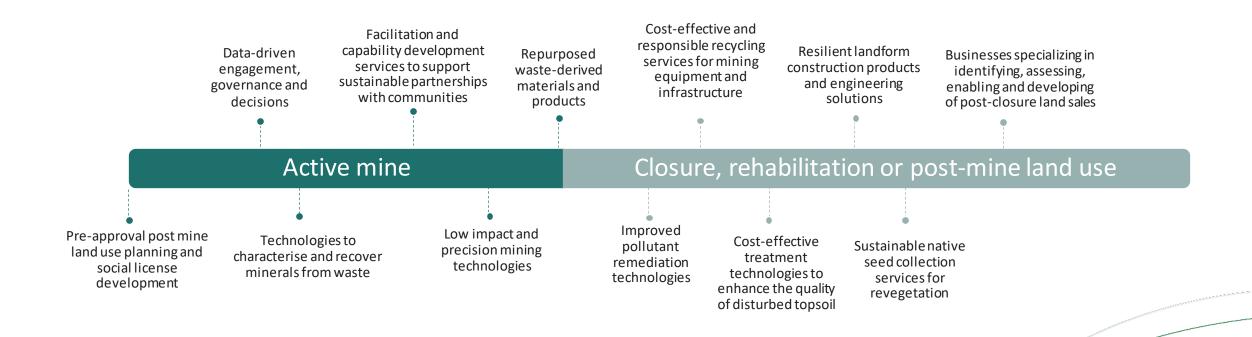


Land use transitions

Solutions that address challenges preventing the establishment of post-closure land uses on mined land to generate lasting social, environmental and economic value and offset the costs of managing ongoing liabilities.



Incorporating mine closure solution innovation into the life of mine





Waste reduction and resource recovery

Waste Reduction

Low impact and precision mining technologies

Repurposing mineral waste

Waste-derived materials and products

Resource Recovery

Technologies to characteris and recover minerals from waste

Recycling non mineral waste

Cost effective & responsible recycling services for mining equipment and infrastructure



Innovation In Post Mine Economic Use

Hannans North Tourist Mine

Kalgoorlie, WA

Historic gold mine converted into a visitor attraction and educational site.

Clean energy hub

Kidston, QLD

Gold mine under transition to develop renewable energy generation and storage site with solar, wind and pumped hydro technologies.

Image: Genex Power



Woodlawn Eco-Precinct

Tarago, NSW

Open-cut mine pit converted into a bio-reactor landfill creating bio-gas to fuel a power generator. Site also holds aquaculture facilities, solar and wind farm.

Image: Veolia



Recreational lake that was created from conversion of a coal mining pit via local river diversion.

Image: CRC TiME



SUPL: Stawell Underground Physics Laboratory Stawell, VIC

Laboratory located in an operational gold mine 1km underground, where conditions are optimal for research into dark matter, neutrinos and geoscience.





THANK YOU

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