

# PRIIF The Mining Consortium

Unlocking Complex Resources Through Lean Processing



Government of South Australia



THE UNIVERSITY of ADELAIDE



University of South Australia

## Multi-million dollar savings

Potential economic impact arising from

**2%** increase in copper recovery

**15%** increase in throughput

**17%** increase in copper production

**\$49m**

additional funding leveraged

**140+**

papers published

**75**

months of collaboration and research

**25**

research and translation projects

**21**

collaboration partners

**18**

young researchers upskilled

**17**

women in mining scholarships awarded

**15**

experienced mining and computer science researchers

**10**

higher degree by research students

**8**

postdoctoral researchers

**7**

years since inception

**4**

commercialisation projects

**2**

end-user partners

**1**

commendation award

# Unlocking complex copper resources

The Adelaide-based Integrated Mining Consortium of universities, METS partners, mining companies and research bodies has **unlocked potential multi-million dollar savings** arising from innovative projects that will increase copper recovery, throughput and production.

**\$mm**  
potential economic impact

*The overall benefit is predicated on a 2% increase in recovery, 15% increase in throughput and 17% increase in production.*

**\$49m**

additional funding sourced

## Leveraging additional funding

**Catalysing additional funding and support** across industry partners has added significantly to the scope and depth of projects since the Consortium began in 2017.

## Collaborating for technology readiness

Coming up with new ideas is hard, devising new ideas that work is even tougher. Collaboration between our partners was critical for translating the research **ideas into marketable products**.

**21**

collaboration partners

**25**

research and translation projects

## Realising the promise of research

Tackling multiple elements of the upstream and downstream mining processes through 14 research projects led to **opportunities for software and technology development** across 11 translation projects.

## Delivering innovation to market

The Consortium brought four projects to **commercialisation**: applying machine learning for accurate domain modelling; optimised reclamation of ore stockpiles in near real-time; applying pulp chemistry advances to maximise mill throughput; and harnessing force measurements to cost-effectively improve online particle size measurements.

four  
commercial-ready  
consortium  
technologies

18

young  
researchers  
skilled

## Resourcing a sustainable industry

Playing an important role in training the **next generation of scientists, engineers and data analysts**, the Consortium builds capability for industry success well into the future.

## Creating a national powerhouse

Establishing a **single focus targeting mining optimisation** has been overwhelmingly successful in combining research and industry knowledge and fostering collaboration to deliver wide benefits.

140+  
papers  
published

*Programs like this strengthen our workforce with scientists skilled in the technologies of the future.*



potential

## Data-driven deliverables

Aligning research with data-driven deliverables **future proofs the outcomes for miners**. Projects looked to harness sensors, machine learning, data analytics and other technologies to provide tools that integrate and optimise the mining value chain.

learn more



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