CSIRO-Chile ICE
International Centre of Excellence
Mining and Mineral Processing

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Director AMTC: CSIRO-Chile ICE partner
CSIRO’s reputation and impact

Australia’s premier science agency

One of the largest and most diverse in the world

Ranked in top 1% in the world in 13 research fields

About 6,400 staff, over 2,000 PhD’s

>160 companies founded on CSIRO technology

Thousands of companies utilise CSIRO innovations in their business
CSIRO’s place in Australia’s innovation system

- Innovation Chain

  Academic Research  Applied R&D  Industrial D  Consultancy etc

  Commercialisation

CSIRO

Universities  CRC’s  Industry

An introduction to CSIRO
CSIRO’s areas of impact

- Water
- Oceans
- Energy
- Climate
- Landscapes
- Food & Agriculture
- Safeguarding Australia
- Services and ICT
- Materials and Manufacturing
- Promoting health
- Understanding the Universe
- Mineral resources
CSIRO in the mineral resources sector

• About 500 scientists and engineers at fourteen laboratories.
• Collaboration with 60 universities and other institutions, both nationally and internationally.
• Engagement with about 300 companies across the value chain...
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Exploration  Mining  Mineral processing  Metal production  Manufacturing

Sustainable development (social, environmental, economic factors)
CSIRO partnerships and technology transfer
Vision for a Centre of Excellence in Chile

- A world class **Centre of Excellence** in Mining and Mineral Processing
- CSIRO – UCH partnership
- Innova-CORFO $ funding
- Significant industry $ funding
- Applied industrial research and technology development
- Built upon strong collaboration between key Chilean universities, and the CSIRO and other R&D partners
- A hub for early stage commercial interactions with Chilean and Australian technology and service groups
LASC
Automation of underground longwall mining operations

• World’s best practice technology automates:
  • Shearer Position
  • Face alignment
  • Horizon Control
• Significant step change in safety
• Between 5 and 10% improvement in productivity
• Licensed to the leading OEM’s:
  • In Bye Mining
  • Joy Global Machinery
  • Bucyrus
  • Eichoff
  • ZZM Kopek
Hylogging™ systems

• Rapid non-destructive mineralogical characterisation of cores & chips.
• Developed for mine and exploration-based activities for efficient and objective mineralogical analysis (e.g. vastly improved, rapid resource delineation and grade control)
• Specialist Hardware and Software systems: Hylogger™; HyChips™; TSG software suite
• In discussions with potential commercial partner(s).

• Developed in collaboration with the Australian industry, the State Geological Surveys and Geoscience Australia.
Increasing Mixing Intensification in Tanks

Impact:
* improved product consistency;
* enhanced heat transfer;
* reduced scaling

Implementation at QAL, RTA
3 months service life extended to 12 months
CSIRO Minerals Down Under Flagship
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Thank you

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