

CAPABILITY STATEMENT

The University of Queensland's Sustainable Minerals Institute (SMI) is a world-leading multidisciplinary research institute committed to developing the people, technologies and approaches needed to address global sustainability challenges through the responsible supply of mineral resources.



SMI researchers integrate expertise in geoscience, mining, mineral processing, workplace health, safety and risk, environmental management, social responsibility, and organisational improvement to create unique capabilities and collaborations.

The Institute undertakes research in collaboration with industry, governments, civil society, local communities, Indigenous Peoples, and inter-governmental organisations. It translates research into impact through commercialisation, contract research and consulting.

SMI is committed to training the next generation of industry and community leaders through higher degrees by research, formal teaching programs and public and bespoke professional development courses, to support an appropriately skilled workforce.



Research centres

The Institute operates through six disciplinary research centres, an International Centre of Excellence in Chile and the Technology Transfer company JKTech:

- Centre for Mined Land Rehabilitation
- Centre for Water in the Minerals Industry
- Julius Kruttschnitt Mineral Research Centre
- WH Bryan Mining Geology Research Centre
- Centre for Social Responsibility in Mining
- Minerals Industry Safety and Health Centre.



Strategic research programs

The Institute has also initiated five strategic research programs which draw on capabilities across SMI's research centres and the wider University community to take a multidisciplinary and systems-based approach to key challenges facing society:

- Unlocking Complex Orebodies
- Resourcing Decarbonisation
- Future Autonomous Systems and Technologies
- Leadership and Organisational Improvement
- Development Minerals.



Advantages of partnering with SMI

- 1 Established research institute** with demonstrated experience collaborating across a range of disciplines and organisations
- 2** Comprehensive and diverse capabilities with **-300** people working across the life-of-mine
- 3** Consistently ranked in the world's **top 5** for mining and minerals research
- 4 Strong international links** with industry, communities and civil society groups, governments, and research organisations
- 5** Strong focus on **research impact and translation**



Capabilities

- ✓ Integrated water and environmental management
- ✓ Quantitative mineral, rock and deposit characterisation and evaluation
- ✓ Deposit and regional mapping, interpretation, modelling and exploration
- ✓ Mine waste transformation
- ✓ Deep mining geoscience
- ✓ Risk management, hazard identification and critical control management
- ✓ Human aspects of mining automation
- ✓ Workplace safety, health and hygiene
- ✓ High-temperature processing
- ✓ Novel separation technologies
- ✓ Flotation chemistry
- ✓ Future autonomous systems and technologies
- ✓ Energy transition and process decarbonisation
- ✓ Effective leadership
- ✓ High Reliability Organisations
- ✓ Environmental, Social, and Governance (ESG) risks and mapping
- ✓ Community and stakeholder engagement
- ✓ Social impact and cultural heritage studies
- ✓ Policy analysis and independent review
- ✓ International development and mineral security

Learn more at smi.uq.edu.au
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