Study Scope

• What are the drivers for transformational R&D for the Queensland Minerals Industry?

• What is the current extent of research and development activity relevant to the Queensland minerals sector?

• What are the knowledge, capabilities, barriers, gaps and opportunities for R&D relevant to the Queensland mineral sector?

• What are the R&D priorities relevant to the Queensland minerals industry for the next 10 years?

• What are the barriers and solutions to research and commercialisation priorities?

• Undertake an interjurisdictional analysis of R&D approaches applicable to the minerals sector – what has worked well?

• What are the potential roles for the Queensland Government in minerals R&D, including skills and value that government adds to the minerals industry?
Drivers for transformational R&D for the Queensland Minerals Industry

- Lack of new mineral discovery despite high prospectivity
- Depletion of existing resources without replacement
- More orebody complexity
- New mineral targets
- Skills depletion
- Cost-competitiveness
- Dealing with legacy assets
- Social license imperatives
Industry / Research Collaboration in Mining – The Status Quo

**Current State Characterised by**

- Short term funding for near-term issues
- Decline in research capability
- Imbalance between fundamental and applied research projects
- Uncoordinated

**Barriers to effective collaboration**

- Industry needs not fully explained or understood
- Ideas get “lost in translation”
- Insufficient funding commitment to address longer term industry issues
- Outcomes not integrated into larger value propositions

**Converging Pressures**

- Missalignment
Research and development activity relevant to the Queensland minerals sector.

The Brisbane River is the “Silicon Valley” of METS expertise.
Knowledge, capabilities, barriers, gaps and opportunities for R&D relevant to the Queensland mineral sector
R&D priorities relevant to the Queensland minerals industry for the next 10 years
Barriers and solutions to research and commercialisation priorities

Barriers to effective R&D

- No long-term policy and strategic focus to R&D
- Focussed on incremental not transformational change
- Lack of long-term reliable funding for R&D
- Lack of industry collaboration to create collective outcomes
- R&D investment lacks coordination
- Failure of R&D to address industry needs
- Researcher capacity and capability depletion
- Lack of industry-researcher collaboration

Highest Barrier
Higher Barrier
High Barrier
Moderate Barrier
Moderate Barrier
Low Barrier
Lower Barrier
Lowest Barrier
Interjurisdictional analysis of R&D approaches applicable to the minerals sector
Potential roles for government

Queensland R&D – roles for government in crossing the valley of death

- Enabling collaboration between researchers and end-users
- Innovation funding initiatives (Commonwealth & State)
- Showcasing innovation
- Angel investor initiatives
- Living labs
Potential roles for government

Role of Government in enabling effective R&D

- Provide a supportive economic environment
- Provide other incentives for R&D
- Provide funding platform or direct funding for R&D
- Enable collaboration and linkages between industry and research
- Provide consistent long-term R&D priority-setting process
- Facilitate path to market through commercialisation and trade assistance
- Establish physical arenas for R&D (i.e. Clusters, Innovation Precincts, incubators)
- Establish lead agency for minerals R&D management or prioritisation in Qld

- Very effective role for government
- Good role for government
- Probable government role
- Possible government role
- Not a role for government