

Project 6: Automated 3D Modelling

Program Leader:

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Project Leader:

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Timing:

Phase 1:

1 January 2019 - 31 December 2021

Cash Funding:

\$847,600

Project Participants:

- University of Western Australia
- CSIRO

Industry Participants:

- Anglo American
- BHP
- Geological Survey of Western Australia
- Micromine

Project Summary:

Project 6 aims to develop an automated workflow, including algorithms and software, for the integration and first-pass interpretation of geologically characterised drill hole data and other data routinely used to build 3D geological models. The resulting workflow will facilitate rapid 3D model building processes that draw upon multiple geological datasets, are reproducible, provide uncertainty estimates, offer various geological hypotheses, and allow timely model updating. These models will enable uncertainty analysis and multiple geological scenarios to be developed as inputs to support resource estimation and data acquisition strategies.

This project will work closely with the international Loop consortium (<http://loop3d.org>) that has a long-term goal of building a generalised Open Source platform for 3D geological modelling, and all codes developed by Loop will be available for use by this project, providing significant leverage for MinEx CRC funds.

Phase 1 Objectives:

- Develop software tools which will facilitate and automate 3D geological model construction, thereby reducing the subjectivity of interpretation and reducing the time taken to build 3D models from a range of geoscientific data.