

## Project Capability

### Dams

Successful dam construction and performance monitoring requires multi-disciplinary controls covering soil and rock mechanics, hydraulics, seismology, environmental engineering as well as civil engineering. Maxwell GeoSystems' **MissionOS** ensures projects are communicating and speaking a common language and that quality data gets to where its needed quickly with useful tools to address construction concerns.



The Ulu Jelai Dam, Malaysia.  
Owner-Tenaga Nasional Berhad. Constructor- Salini. Systems - Maxwell GeoSystems.

Dam design and construction begins with ground modelling and easy access to a variety of investigation data in crucial to success.

With its 3D interface providing a rich contextual environment **MissionOS** is a great place to collaborate utilising the ready ability to extract data for analysis and republish results for sharing.

At construction stage vast numbers of work elements are installed including ground supports, drill holes for grouting, fill layers with compaction in addition to concrete and all have requirements for pre and post quality testing and syn- and post- construction performance monitoring.

The dynamic nature of construction means that the communication of information between parties needs to be automated so that nothing is missed.

Quality in construction needs testing and where better to manage this than in **MissionOS** data models linked to configurable activity shift reports. Events such as instrument alarms and non-conformances are easily dealt with using the built-in logging systems.

#### Key Capabilities Include:

- Map, Section, 3D...4D displays.
- Load topographic survey, geology data digitally as well as spatially reference documents and photos.
- Configurable data models for sensor and construction data featuring calculations and statistical summaries for review.
- Create derived instruments and ratios.
- Link instruments results to design predictions either as equations or as datafiles.
- Link appropriate predictions to construction progress stages.
- Load weather data, CCTV and other environmental feeds.
- Powerful **MissionOS** Canvas report designer.
- Automated processing, analysis and reporting with built in audit methodology.
- Simplified progress or full shift reporting with linked Construction Data Models (CDM).
- Auto-tracking of plant and data logging straight to shift reports and CDM.
- QA/QC management using configurable data models.
- Event management with blogs (alerts and alarms, safety incidents, request for inspection and non-conformance management).
- Manage post construction performance monitoring and environmental monitoring.

Category	Dams	MissionOS System	Mission Monitor
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