

TAKE DAM SAFETY TO THE NEXT LEVEL

Dynamically assess risk, manage regulatory compliance, and keep your dams safe. Use Dam Monitoring for a detailed view of failure modes and their consequences across all dams, wherever they are.

Improve risk-informed decision making

Dam Monitoring empowers operators and regulators to dynamically manage risk, keep their dams safe and ensure regulatory compliance. This powerful solution enables centralized dam record management by digitizing and storing all dam information in one place and super-charges your own data with remote analysis for tracking unusual changes in movement, seepage, vegetation and downstream hazards.

Featuring the most advanced AI and visualization engine on the market, the solution analyses data and highlights potential issues on, around and downstream of the dam structure. This underpins potential failure mode monitoring and provides a unique risk management tool that drives existing dam and reservoir safety to the next level.

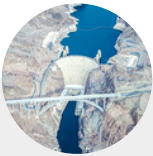
Assess risk & target resources

Dam Monitoring includes four core modules which combine to leverage the most comprehensive and robust data sets, enabling you to determine, assess and manage exact risk areas on and around your dam – even those you have not previously considered:

- Compliance
- Ground Motion & Seepage
- Downstream Hazard
- Risk Management

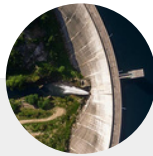
Zero-in on failure modes

The most comprehensive AI tool for dynamically managing risk, while deploying remediation resources to the right place at the right time.



Safety

- All dam records in one place
- Super-charged with geospatial data for ground motion & seepage, and downstream hazards
- AI and visualizations, trend analysis and data comparisons
- Underpin PFM monitoring
- Comprehensive, dynamic risk assessments
- Monitor inundation zones for risks
- Supports emergency action planning
- Easy report generation
- Supports regulatory submission
- Extensive data visualizations for stakeholder communications



Engineering

- Integrate sensor & water level data
- Upload survey data, reports and photos
- Remotely monitor ground motion & seepage for year-round full dam coverage
- 3 year historical analysis establishes baseline
- Alerts indicate evolving ground movement & seepage issues
- AI and visualization engine trends & analyses all data
- Stack & compare data sets for full risk assessment
- Dynamically manage likelihood of failure using the Risk Matrix
- Track evolving issues
- Assess remote areas
- Prioritize engineer deployment



Operations

- Prioritize issues
- Target dam inspection & repair resources
- Focus instrumentation on the highest risk areas to manage cost & maximise results
- Align the extent and severity of issue investment required
- Reduce the effort needed to track downstream urban change
- Determine changes in your flood zone that may affect your hazard rating
- Drive operational efficiencies
- Target investment
- Validate plans & budget submissions
- Build investment & regulatory confidence

Data-driven approach for a deeper understanding of your dam

Dam Monitoring leverages the most comprehensive and robust data sets, combined with world-leading AI models and visualizations, to help dam operators and regulators determine, assess and dynamically manage exact risk areas on and around the dam.

The solution combines four core modules, to give you data to support your decision-making, power comprehensive risk assessments and prioritize remediation plans:

Compliance

Creates a single dam record by digitizing and storing all dam information in one place and applies powerful analytics and visualization to all data including rainfall measurement, instrumentation, water level, geo technical and level survey data. This module enables you to easily manage dam records, generate reporting and ensure regulatory compliance.

Ground Motion & Seepage

Uses satellite data and AI to remotely determine unusual changes in ground movement, seepage and vegetation mapped onto your structure.

Year-round monitoring across the entire dam structure fills data gaps between manual inspections or in between sensor sites, and millimetric change alerts provide early warning on potential issues.

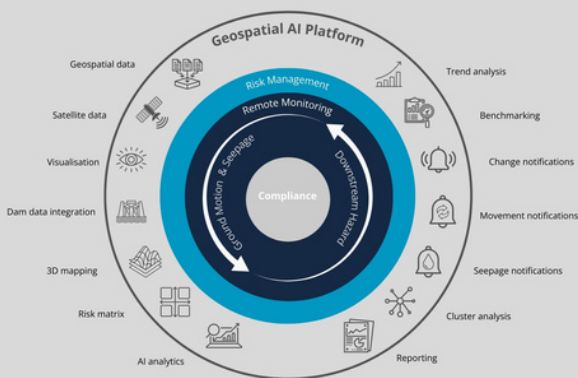
Downstream Hazard

Identifies the building changes in dam inundation zones that have the potential to change hazard ratings across entire dam portfolios and state-wide. Reduces the manual burden involved in collecting this information, enables targeted risk identification and powers emergency action planning.

Risk Management

Enables you to visualize your highest risk potential failure modes and dynamically manage risk, ensuring you are doing everything in your power to evidence and drive risk informed decisions.

Edit likelihood and consequence of failure metrics for each PFM, upload geospatially recorded photos, log site inspections and record findings, add notes to points and areas, assign actions to team members – and manage risk actions.



Powered by Rezatec

The Rezatec platform puts complex geospatial artificial intelligence and machine learning into the hands of dam operators and regulators, making its powerful insights easy to access and straightforward to use. Combine your dam records with remote ground motion, seepage, vegetation and downstream hazard data and leverage our AI algorithms, visualizations, charting, 3D mapping, trend analysis, risk management, AI forecasting, millimetric change notifications and advanced reporting features to take your dam safety to another level.