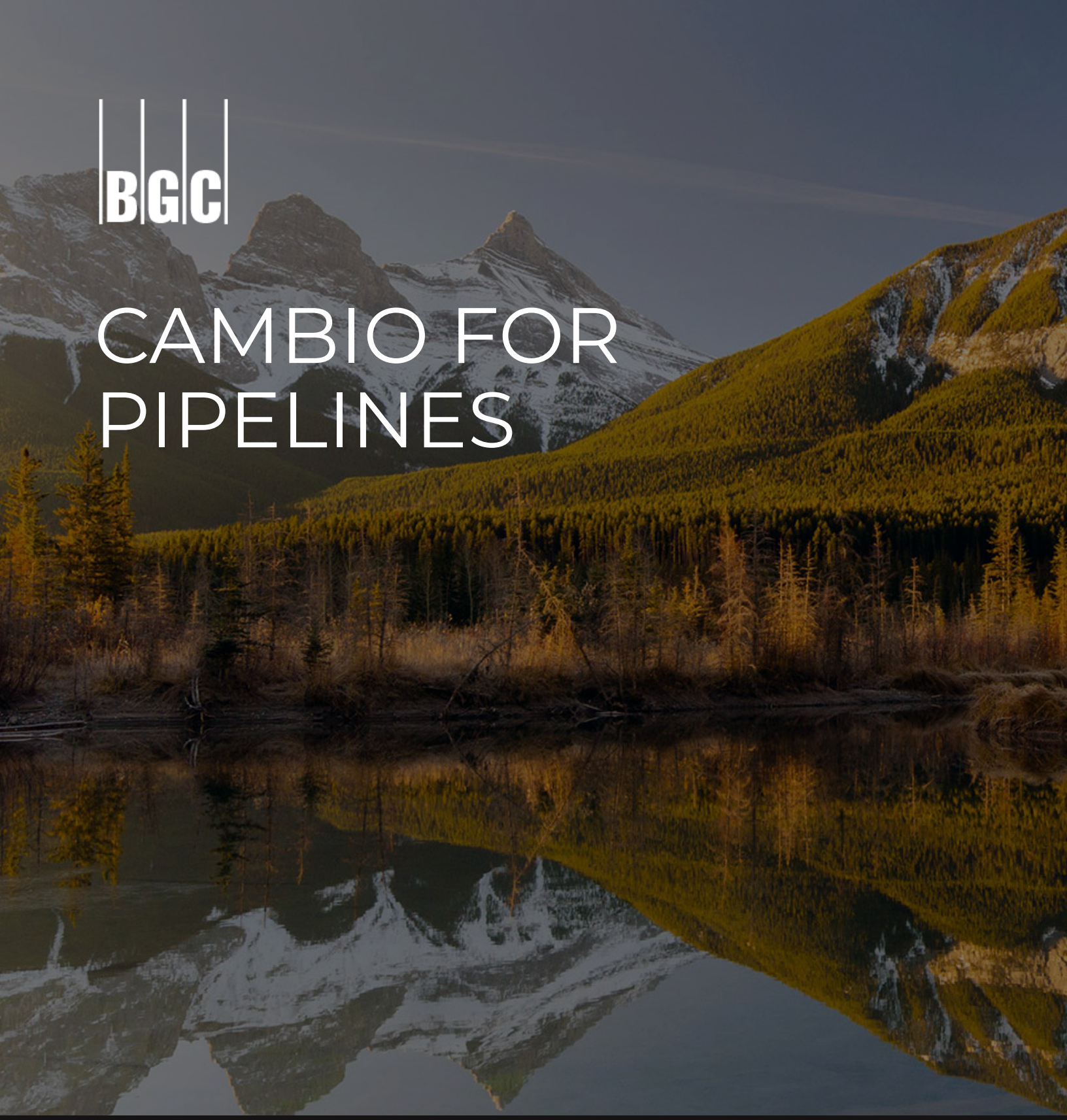

CAMBIO FOR PIPELINES

BGC ENGINEERING INC.

VANCOUVER | KAMLOOPS | CALGARY | EDMONTON | TORONTO
HALIFAX | FREDERICTON | DENVER | SANTIAGO

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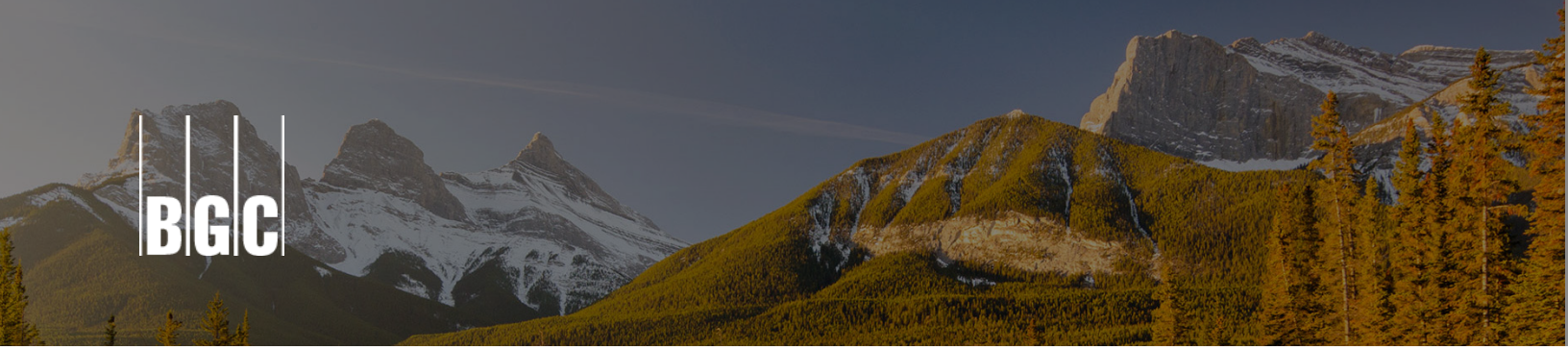


CAMBIO GEOTECHNICAL ASSET MANAGEMENT SOLUTION FOR PIPELINES

Cambio helps prevent pipeline failures and reduce failure consequences. It has inventories of geohazards affecting the networks of 19 pipeline operators in North America. The software uses remote sensing, seismic, and IoT based instrumentation data to support monitoring. The data are used with BGC's investigations and visual inspections to document change at geohazard sites. When combined with hazard and risk-based screening algorithms, the data support our engineering assessments and recommendations.

Pipelines that have gone through our full geohazard risk management lifecycle see a five-fold reduction in geohazard failures compared to the average North American failure rate.

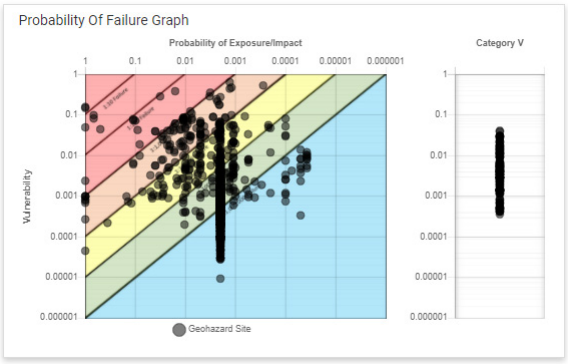
THE BENEFITS OF CAMBIO

IT'S EASIER TO ASSESS AND PRIORITIZE

Cambio combines specific client data with data from inspections and observations. Its predictive algorithms produce Annual Probability of Failure estimates for all inspected geohazard sites. That, along with failure consequences, creates standardized risk assessments and better data-driven management decisions.

VISUALIZE ASSETS AND HAZARDS

It can be hard to communicate the impact of detailed events or risks when you're dealing with a large inventory of assets. Cambio presents data in a visual way, making it easier to see information essential to decision making at a big-picture level. You'll also have the ability to go deeper into the raw data when needed.



CENTRALIZED DATA, AVAILABLE 24/7

Cambio is a cloud-hosted data-integration platform that pulls a variety of data sources into a single view. To ensure you get the most out of prior studies, we can integrate custom client data along with historical data and documentation for auditors. Cambio is available on desktop and mobile, 24 hours a day, seven days a week. Regular improvements mean you're always using the latest version with new features and updates.

KEY FEATURES

- Web based visualization of geohazard and pipeline data, including 3D map view.
- Defensible and repeatable geohazard inspections using the web and mobile applications.
- Risk-based algorithms estimate the annual probability of pipeline failure at each site.
- Real-time flood, precipitation and seismic monitoring and alerting.
- Site-specific recommendations and action timings are searchable and easily extracted for integrity management planning.
- Single location to store site histories including as-built records, surveys, inspections, and mitigations.
- Dashboard views to visualize geohazard risk across your pipeline network.
- Secure access for unlimited users within your organization.

PREDICTIVE MODELLING

Cambio provides independent estimates of probability of failure from geohazards based on data-driven algorithms.

Once BGC completes the data source integration for a specific client (assets, known hazards, available precipitation, etc.) and the baseline set-up of the geohazard risk management program, we can use Cambio's algorithms to advance the risk management program in cost-effective ways (e.g. real-time monitoring inputs, stream data, precipitation, etc.).

DID YOU KNOW?

Cambio supports geohazard risk management on 179,000 sites on 348,000 km of pipelines across North America.

For more information, visit **cambio.com**