River Water Quality

Real time insight through continuous monitoring and predictive analytics

Our aquatic environment is a precious resource, but it is a resource that it under threat of quality degradation. Water companies play an important role in protecting the aquatic environment. This same environment is our primary source of water and there is a circular relationship that demands careful and effective management.

CGI's solution provides the capability for a comprehensive, catchment level view of quality. It supports frequent data collection through low-power WAN networks and a cloud-based aggregator for widely available sensors; the solution incorporates AI and ML capability to provide actual and predictive alerts.

BUSINESS AND MARKET CHALLENGES

Regulators are demanding improved environmental protection performance, whilst society's expectation of their water company's role in ensuring clean rivers and healthy aquatic ecosystems are increasing.

In addition, current solutions are unable to cost-effectively support the safeguarding of water supplies throughout a river's entire catchment.

Finally, some analysis can only be undertaken at a laboratory, hindering the ability to respond to incidents quickly and effectively.

CGI SOLUTION

CGI's IoT Platform, SensorInsights360, enables water companies to respond to pollution incidents quickly, based on real-time data.

The solution allows trends in diffuse pollution to be identified more effectively through the deployment of a high-density network of sensors located across a river's catchment.

It can also monitor the performance of waste water treatment works in real-time, not just through periodic sampling. It provides raw water quality information that can be used to inform water extraction, and predicts events such as bacterial growth and eutrophication from measured water parameters.

Key Success Factors

- Enables water companies to maintain a 24 X 7 'watch' on river water quality.
- Low cost, highly effective alternative to traditional sampling solutions.
- Can be integrated with OT to support operational controls.
- High-density deployment of sensors provides catchment-wide real-time data and insight.

BUSINESS BENEFITS

- Undertake 24 X 7 monitoring of entire river catchments, automating abstraction controls based on actual and predicted data.

- Reduce personnel and operational costs, focus activity at specific sites with detailed insight on the nature of the incident.

- Supports the realisation of environmental targets, improving both regulatory and societal reputation.

- Undertake analysis on the edge, producing timely and effective decision-making information and reducing operational and IT costs.

- Fit and forget sensors (including battery and solar powered devices) that can be configured remotely.

Real-time monitoring of river water quality, fills a void in operational insight, realise environmental expectations

About CGI

Founded in 1976, CGI is among the largest IT and business consulting services firms in the world.
We are insights-driven and outcomes-based to help accelerate returns on your investments. Across 21 industry sectors in 400 locations worldwide, our 77,000 consultants provide comprehensive, scalable and sustainable IT and business consulting services that are informed globally and delivered locally.

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