

MINIMIZING THE COST OF ENVIRONMENTAL MONITORING

EQuIS helps leading building materials company optimize environmental monitoring of United Kingdom sites.

As one of the biggest building materials suppliers, CEMEX operates quarries, cement plants, ready-mix-concrete facilities, and landfills in 50 countries. CEMEX uses EQuIS™ for most of its operational monitoring in the United Kingdom. CEMEX was awarded the Wharton Infosys Business Transformation Award 2004 for their creative and efficient use of information technology.

THE CHALLENGE

Hundreds of operational and legacy sites in a heavily regulated industry are requiring complex environmental monitoring to adhere to regulatory authority permits, minimize liability risks, and assess performance on an ongoing basis. Managing a portfolio of different sites across the UK results in high volumes of field and laboratory data that must be managed regularly. New data are collected routinely and need to be transformed into meaningful information instantly.

220
Sites

4,500
Sampling Locations

15,000
Samples

27,000
Water Levels Measured

100,000,000
Records generated



Active Monitoring

-220 sites

-4,500 sampling locations (monitoring wells, surface water sampling points, and landfill gas measuring points)

Annual samples

-15,000 samples collected and analyzed for various parameters resulting in

-27,000 water levels measured manually

-270,000 analytical results

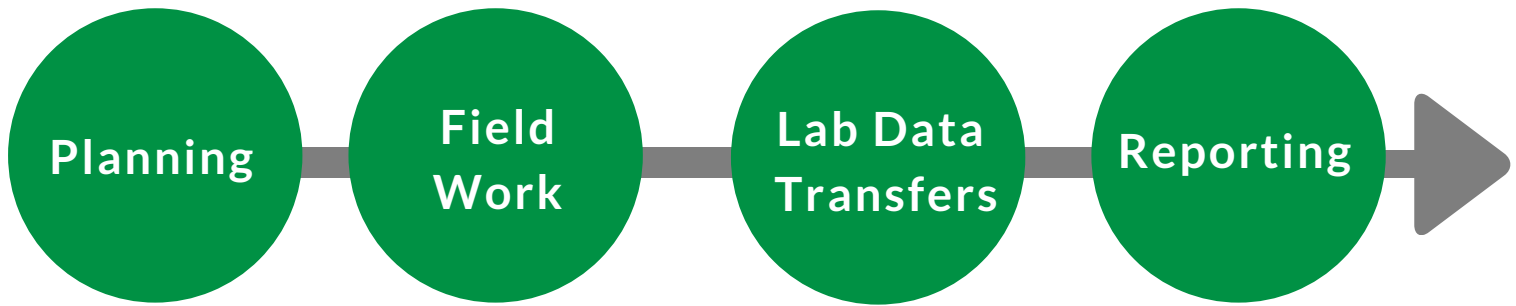
-100,000,000 records generated by flow, water level, and meteorological data loggers

THE SOLUTION

CEMEX implemented EQUIS™ as their central environmental database solution after assessing three systems. EQUIS™ has been used to manage most environmental monitoring efforts since 2000 and sample plans, including subcontractor agreements, are established beyond 2020.

EQUIS is utilized to manage the complete planning > sampling > analysis > reporting workflow for all UK sites from **one central location**. Centralizing all monitoring activities allowed CEMEX to standardize processes throughout the company. A small, well-trained team of dedicated data specialists in the UK Sustainability Department accomplishes tasks that would otherwise be spread across multiple sites with local managers using their own inconsistent procedures.

The graphic on the following page showcases the CEMEX data management process.



The planning phase includes the development of a monitoring plan for each site. New monitoring locations are established, monitoring frequencies are determined, and field activities (e.g., sampling or field measurements) are planned. EQUIS provides tools to automatically schedule events for monitoring periods including dates, resources, samples and required analysis. Customised reports optimize plans and generate task lists for field crews and laboratories.

CEMEX and their subcontractors are using EQUIS to record field data electronically on tablet devices. Field crews are provided with task lists and upload data to the database on completion of each site visit, where it is immediately available for assessment and reporting. All laboratory work is pre-registered in advance each month so that the required analysis is programmed as soon as the samples arrive at the laboratory.

Analytical data from laboratories are sent by email in a standardized format. Once received data are subjected to an automated verification and importing process.

EQUIS provides flexible reporting and analyses tools that allow CEMEX to track performance throughout the monitoring plan and to fulfill the self-monitoring requirements by the regulators. New results are automatically checked against permit limits, and regular reports to the authorities are generated from pre-defined templates.

EQUIS also provides the tools to analyze and visualize collected data on web dashboards, allowing CEMEX staff to easily assess data. The dashboards enable the display of up to date results from all data sources including data loggers and weather stations for immediate status checks.

THE RESULTS

CEMEX chose EQuIS as their environmental database because EQuIS was able to standardise and control the monitoring processes for all sites and media in one central system. CEMEX technical specialists are able to assess data across multiple sites to manage compliance and environmental performance. The collected data become an asset, providing insights beyond the monitoring itself.

Management of complex datasets for hundreds of sites in an enterprise system lead to improved data quality while significantly increasing the monitoring costs effectiveness. EQuIS automated quality control and validation tools expedite the data flow—making new data available immediately after they enter the system.

Kevin Wilson, the CEMEX EQuIS systems manager, estimates that the company would have had to employ an additional 4 to 8 people if all monitoring data were managed without EQuIS. EQuIS annual software and hosting costs are *less than* the cost of one additional employee.

BENEFIT OVERVIEW

- Improved management of plans and resources
- Improved data consistency and quality
- Simplified reporting
- Simplified and more current data visualization
- Minimized monitoring costs
- Reduced contract costs with laboratories and field teams
- Reduced consultant project time by 25-30%
- Reduced costs for document management
- Able to compare costs and environmental performance across multiple sites

EarthSoft

EQulS™ is Earth's most widely used environmental data management workflow and efficiently manages the environmental sample data for thousands of organizations.

For more information, visit www.earthsoft.com or write us an email at sales@earthsoft.com.