

Water authority Brabantse Delta

**Insight into maintenance requirements with data
platform in Azure**



Motion10



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Water authorities use an extensive network of different types of pipes and pumping stations for the transport of waste water. Measuring instruments register the process flow throughout the network. Motion10, in collaboration with Croonwolter&dros, has developed a data platform in Azure for Water Authority (Waterschap) Brabantse Delta, a client of Croonwolter&dros. With this, the data generated by the measuring instruments is near real-time available for Waterschap Brabantse Delta. This gives the water authority optimal insight into the performance and the maintenance requirements of the network.

Less maintenance costs, improved performance

The near real-time data is made available to employees of the central control room (CCR) of the water authority. This central department within the water authority is responsible for the daily management of the main KPIs, such as the maintenance requirements. Alexander Proost, Project Leader at Croonwolter&dros: “In the past, CCR employees received a periodic update on the performance of the pipes and pumping stations. Now they have 24/7 access to a dashboard in Power BI in which the data is visualized directly. This means that the water authority can act with accuracy, perform more specific maintenance according to the requirements and needs (less maintenance costs) and prevent failures (improved performance).”

Full-fledged alternative in the cloud for SQL Server environment

This high-performance data-driven process is possible thanks to the data platform developed by Motion10 in collaboration with Croonwolter&dros. At the basis of this solution is the Lakehouse architecture: the data is stored in Azure Data Lake Storage, and the data processing takes place in Azure Databricks. By using Delta Lake, with its support for transaction validation (ACID), a full-fledged alternative to a SQL Server environment has been realized in the cloud. Another advantage is the unlimited scalability. With this cloud solution, unlike with a SQL Server environment, you only pay for computing power that is actually consumed, which means more cost-effectiveness and flexibility.

Reports are updated hourly with the latest data from IoT devices

With the data platform in Azure, the water authority is taking its first step towards data processing in the cloud by using Azure Databricks (data processing) and Synapse (data analytics). The solution is very suitable for data exchange with for example IoT devices of the water authority and is fully event-driven: the reports are updated every hour with the latest data from the IoT devices.

New basis for process automation within water authorities

Croonwolver&dros and Motion10 have a joint objective with the data platform in Azure: to introduce a new basis for process automation within the water authorities. Alexander Proost: "We developed the platform for Waterschap Brabantse Delta to optimize their insight into their maintenance requirements, but also for the future rollout of their other KPIs. We are optimistic about achieving this objective. In any case, with this solution, Waterschap Brabantse Delta will be leading the way within its sector."

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Interested in learning more about applying a Lakehouse architecture within your organization?

Read the blog 'A Lakehouse: Data Warehouse and Data Lake in one solution' [Dutch] by Jerrold Stolk, Technology Lead Data & Analytics Motion10, and Dylan van Riel, Data & Analytics Consultant Motion10.

[Read the blog about applying a Lakehouse architecture here](#)