

# Revolutionizing water management with AI-driven analytics

Enhancing efficiency, sustainability and customer experience through a cloud-based data platform



The client, an Australian government organization responsible for delivering retail water supply and wastewater services in Southeast Queensland, sought to improve its operational efficiency and customer experience. They partnered with HCLTech to implement a cloud-based, AI-driven Intelligent Data Platform (IDP) that would enable real-time insights and data-driven decision-making. The solution involved migrating to Azure Databricks and using HCLTech's Sketch framework to streamline and automate the process. The result was a modernized infrastructure that facilitated informed decision-making, improved consumer experience and significant cost savings.

## The Challenge:

Overcoming the limitations of legacy infrastructure and data silos between IT and OT(Operational Technology)

The client faced numerous challenges, including multiple data silos, processing inefficiencies, limited digitization and data tracking capabilities in their legacy systems. Additionally, the organization had to ensure

data sharing processes was in compliance with SOCI (Security of Critical Infrastructure), and in adherence to standards of data quality, storage & real-time access.

## The Objective:

Utilizing digital technology for sustainability and enhanced customer experience

The client aimed to optimize business efficiency and profits by leveraging digital technology to protect waterways, promote sustainable water usage, reduce carbon emissions and improve customer experience. They sought to adopt an "On Demand" storage model, increase compute capability with PaaS/SaaS services and lower costs while embarking on a digital transformation journey.

## The Solution:

Implementing a unified data and AI-driven analytics platform

HCLTech created the "**Simplified Water Analytics Platform**" to help the client bring together data and AI, delivering predictive solutions for their customers and business. The platform consolidated multiple data streams into a data lake, converting information into dynamic dashboards and enabling informed decision-making to better serve communities.



HCLTech built a highly scalable, cloud-ready solution that provided:

**End-to-end data flow:** Azure Event Hub for streaming ingestion, Databricks for processing, and ADLS (Azure Data Lake Storage) for storage.

**Rapid development and automation:** A fully integrated, unified Intelligent Data Platform (IDP) that ensured data traceability for business stakeholders, leveraging HCLTech's Sketch framework for efficiency and enhanced user experience.

**Operational automation:** The Azure DevOps pipeline facilitated automation, while the semantic layer allowed for Cube and KPI measures.

HCLTech's Intelligent Data Platform (IDP) provided a flexible, scalable cloud data platform for enhancing customer and network operations. The platform offered effective data visualization, a service-driven architecture and cost-optimized design. Users were empowered with a unique UI framework for meaningful insights, while

data security and user access were managed through Azure Active Directory. The Model Manager facilitated AI/ML development, and the platform is designed to scale up as data volume, user base and concurrency grow, with plans to identify new use cases in the future.

## The Impact:

Enhanced efficiency, sustainability and customer experience

The implementation of the IDP resulted in numerous benefits for the client, including 100% data residency and data sovereignty compliance, 5x faster decision-making, 30%-40% reduction in development efforts and duration and 20%-25% reduction in compute costs. The solution also improved the customer experience for over 3 M users, reduced non-revenue water loss and supported environmental sustainability initiatives. Overall, HCLTech's cloud-based data platform empowered the client to make data-driven decisions and achieve operational excellence.



For any queries, please reach out to [digitaltransformation@hcl.com](mailto:digitaltransformation@hcl.com)