



## Case Study – Remote Pumping Station

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### Overview

A sensor solution was implemented for a water utility company that required a way to remotely monitor and diagnose issues in underground pumping stations in real-time. Stoke successfully installed a smart sensor system on each pump, which now provides accurate, around-the-clock data and analytics to maximize the visibility of the asset.



## The Challenge

Pumping stations are used to transport fluids between locations across many industries. Water utilities run a series of underground pumping stations with legacy control systems that alert an operations team if a fault is detected. For this utility, without visibility of the asset, every alert required an underground investigation by a two-person inspection team. In many cases, no action would be required, or the team was not equipped to resolve it in a single visit. Underground inspections are costly and expose inspection teams to significant health risks. Following an unsuccessful trial of a competitor's equipment monitoring product, the Utility tasked Stoke with finding a solution that provided real-time processed data and reduced the need for manual inspection.

## Stoke's Solution

Stoke proposed installing SmartEdge™ sensors on critical pump measurement points. Data processing at the sensor and Edge AI that understands the pump's behaviour evaluates the information gathered. Processed data is transmitted via LTE onto the Stoke dashboard in the cloud that is accessible by the Company in real-time. Alerts are pushed through to the dashboard, helping to diagnose issues early and accurately identify when corrective action is needed. Stoke's algorithms run on the sensors and continuously assess pump behaviour for potential failure (or other issues). Stoke's Edge AI technology refines its understanding and increases its level of accuracy with ongoing use.

## The Outcome

This system was piloted on one of the client's sites and following a successful trial is now rolling out across their network. Following the implementation, the company has recorded decreasing maintenance costs and reduced risks associated with manual inspections.

## The Benefits

Stoke provided a plug-and-play solution, with no downtime for the pumps, requires no additional infrastructure and uses existing LTE networks. Once installed, the sensors immediately began transmitting data, increasing the understanding of the condition of the asset. Stoke can implement a similar system for any pump across all industries, tailored to the application's needs.