

Oakland Group Case Study

Yorkshire Water

The Challenge

A core component of water management is the treatment of wastewater and its by-products, colloquially known as sludge. To do this effectively, the Yorkshire Water wastewater team required a solution that could distil a complex network of sites and production data into a minimum cost treatment schedule, allowing them to plan the sludge management process more efficiently.

Alongside this, the end-users wanted a solution that they could 'tweak' and re-run, either to incorporate recent site changes/impacts or plan for potential operational scenarios. And at the same time, Yorkshire Water wanted to achieve an outcome with minimal OPEX expenditure.



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How we did it

Following an initial MVP to prove our solution's technical capability, we collaborated with Italik, the end-users, and data science and IT teams to expand this into a production-level solution. This ensured we could bring together open source technologies, an Azure-based architecture, and graph-based modelling techniques to create a deployed solution in around four months.

The project also coincided with the start of the first National lock-down, so we were unable to meet the client team or business sponsor face-to-face or visit the site. Despite operating remotely in this far from ideal scenario, we worked effectively with the Yorkshire Water teams to deliver the project to schedule.

Outcome

- A performant solution is utilised multiple times per week, allowing Yorkshire Water to develop business critical, user-specified production plans and associated costs.
- The operational team's ability to adapt and refine the model to test various scenarios was a previously unachievable process.
- A significant reduction in Yorkshire Water's OPEX costs, which is a huge factor in the utility market.

