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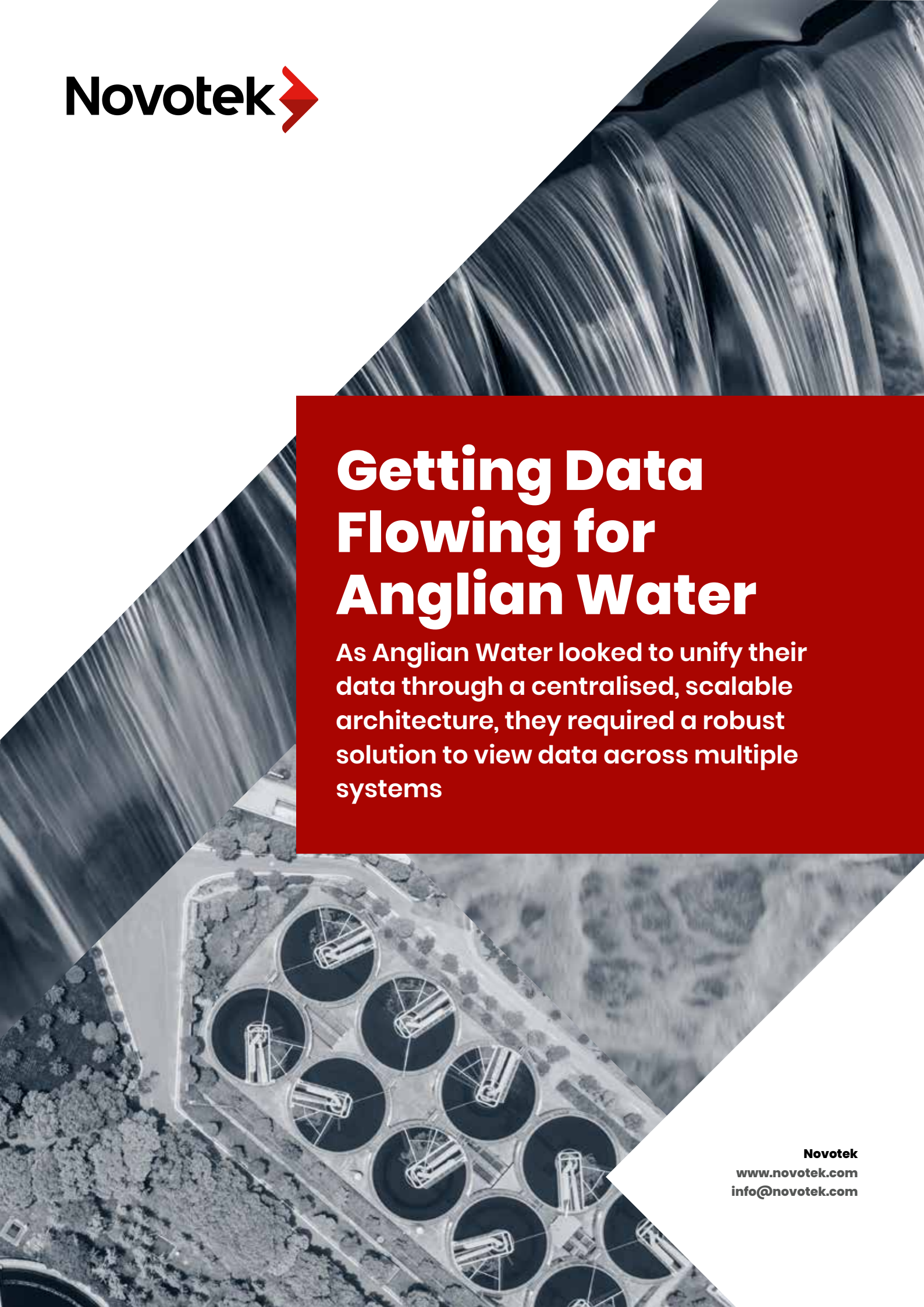

Getting Data Flowing for Anglian Water

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Novotek
www.novotek.com
info@novotek.com

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Anglian Water, a leading water utility in the east of England, manages extensive water and wastewater services. Operating across a flat landscape requires employing a highly asset-intensive infrastructure, with **over 10,000 physical assets** ranging from pumps to large water treatment plants. This setup requires sophisticated data management, with more than **a million data points** across these assets needing real-time monitoring. Traditionally, their systems have focused on reactive data collection, alerting operators to issues only when problems arise.

However, Anglian Water's strategic goal has evolved toward **predictive, data-driven management**, aiming to prevent problems before they escalate.

Challenges Faced

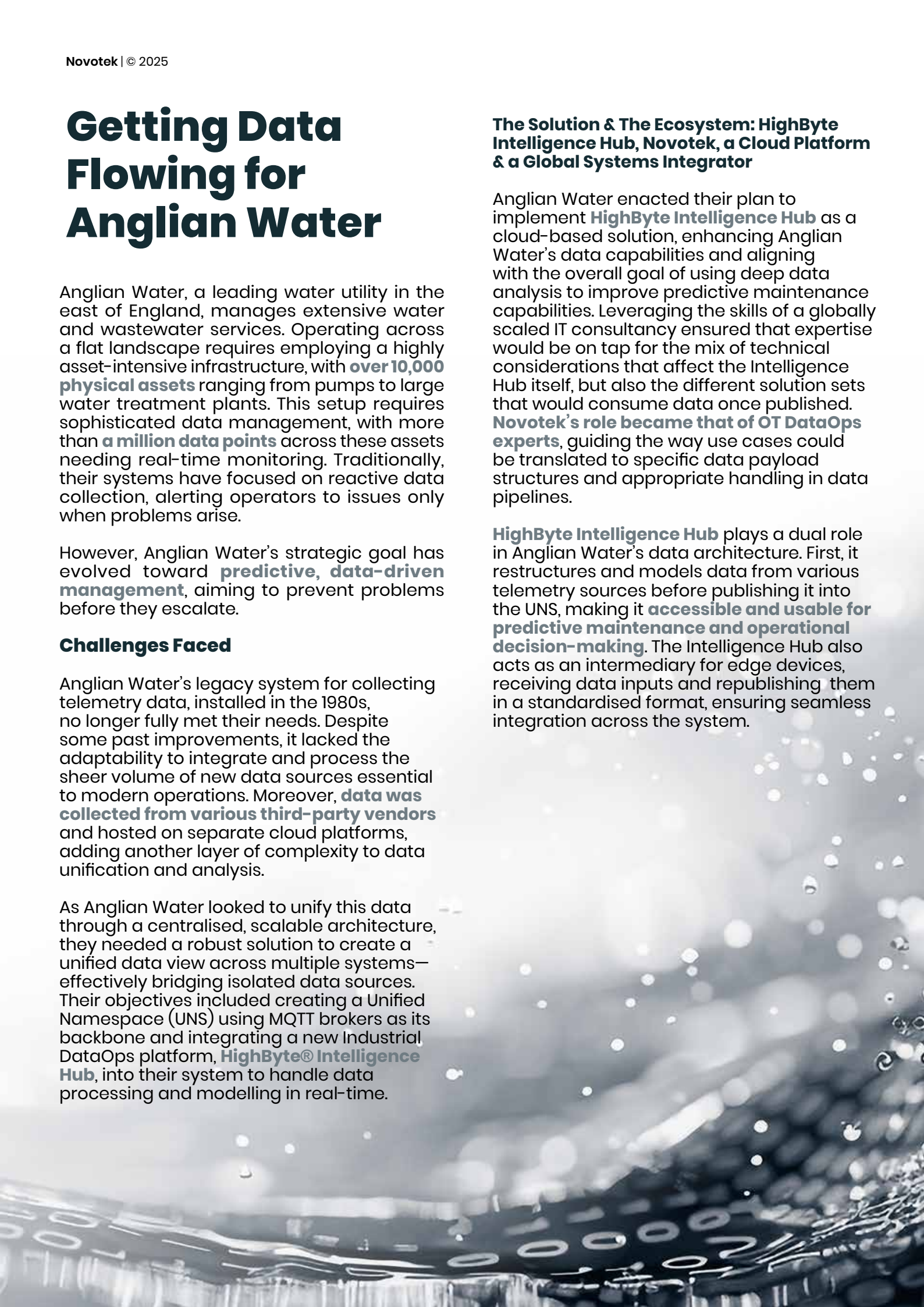
Anglian Water's legacy system for collecting telemetry data, installed in the 1980s, no longer fully met their needs. Despite some past improvements, it lacked the adaptability to integrate and process the sheer volume of new data sources essential to modern operations. Moreover, **data was collected from various third-party vendors** and hosted on separate cloud platforms, adding another layer of complexity to data unification and analysis.

As Anglian Water looked to unify this data through a centralised, scalable architecture, they needed a robust solution to create a unified data view across multiple systems—effectively bridging isolated data sources. Their objectives included creating a Unified Namespace (UNS) using MQTT brokers as its backbone and integrating a new Industrial DataOps platform, **HighByte® Intelligence Hub**, into their system to handle data processing and modelling in real-time.

The Solution & The Ecosystem: HighByte Intelligence Hub, Novotek, a Cloud Platform & a Global Systems Integrator

Anglian Water enacted their plan to implement **HighByte Intelligence Hub** as a cloud-based solution, enhancing Anglian Water's data capabilities and aligning with the overall goal of using deep data analysis to improve predictive maintenance capabilities. Leveraging the skills of a globally scaled IT consultancy ensured that expertise would be on tap for the mix of technical considerations that affect the Intelligence Hub itself, but also the different solution sets that would consume data once published. **Novotek's role became that of OT DataOps experts**, guiding the way use cases could be translated to specific data payload structures and appropriate handling in data pipelines.

HighByte Intelligence Hub plays a dual role in Anglian Water's data architecture. First, it restructures and models data from various telemetry sources before publishing it into the UNS, making it **accessible and usable for predictive maintenance and operational decision-making**. The Intelligence Hub also acts as an intermediary for edge devices, receiving data inputs and republishing them in a standardised format, ensuring seamless integration across the system.



Implementation Process and Novotek's Approach

Novotek's highly collaborative approach emphasised the need to adapt the Intelligence Hub for Anglian Water's operational environment. The Intelligence Hub's functionality is traditionally geared toward factory floors; **however, it's a natural evolution for the Intelligence Hub to be a valuable asset for Anglian Water's cloud-based operations**. By sharing good practices around ingestion of SCADA and telemetry data, modelling it according to operational needs, and creating use-case-driven endpoints, **Novotek aided Anglian Water in understanding the best way to fit the Intelligence Hub into their architecture.**

Often, the guidance given translated to a better understanding of how to leverage data from existing OT systems, as much as to specific HighByte Intelligence Hub configuration questions. As is often the case, no single firm or individual began the project with a perfect understanding of all the methods and nuances that would be involved. Ultimately initial rough points in the project were resolved through the combined expertise of Anglian Water, their integration partners and Novotek's OT-savvy architects.

Key Results and Benefits

Enhanced Data Visibility and Predictive Capabilities:

Anglian Water is now on track to achieve a unified data environment, providing comprehensive asset visibility. With access to standardised and real-time data, Anglian Water will be able to enable both decision support, as operators can identify potential issues before they occur, but also the kind of offline analysis that will enable a significant step up from reactive behaviours. This transition allows Anglian Water to move toward a predictive, preventative maintenance model.

Increased Operational Efficiency:

HighByte Intelligence Hub's functionality within the UNS framework enables seamless data processing and modelling, allowing Anglian Water to optimise asset performance without system interruptions. The efficiency gains reduce the time spent troubleshooting and managing asset failures, allowing personnel to focus on proactive maintenance tasks.

Flexibility and Scalability:

Anglian Water's cloud-based UNS allows it to easily integrate new data sources as the company's asset portfolio grows. This adaptability is crucial for a water utility that aims to stay ahead of demand and environmental pressures while expanding its digital infrastructure.

Data-Driven Decision-Making:

HighByte Intelligence Hub's capabilities allow Anglian Water's data scientists and operators to generate insights previously unattainable. For instance, with unified data at their fingertips, operators can easily link ERP, telemetry, and geospatial data to specific assets, providing a holistic view that informs immediate and long-term decision-making.

Future Directions and Long-Term Value

Novotek and Anglian Water continue to work together to ensure long-term value from this technology. Anglian Water's strategy includes expanding the use of HighByte Intelligence Hub and refining the UNS to support broader digital transformation goals. Novotek has advised Anglian Water on best practices for managing data architecture and governance to maintain efficient and compliant OT data operations, and that is one of the elements leaving **Anglian Water poised to evolve into a fully data-centric organization**. Though initial focus has been on accessing and processing data generated in Anglian Water's OT layer, attention will be given to the way the Intelligence Hub can facilitate execution of visualization and even analytics—exploring the role of OT DataOps tools in enabling smart utilities operations back at the edge.

Lessons Learned and Novotek's Role in Anglian Water's Digital Journey

This project underscored the importance of adaptability and responsive collaboration in digital transformation. **Novotek provided key direction on methods and best practices, troubleshooting expertise, and upskilling support**. The success of HighByte Intelligence Hub's implementation has reinforced the value of having a partner who understands the client's technical and operational needs, especially for an industry with specific regulatory and infrastructure requirements like water utilities.

Novotek's work with Anglian Water is a testament to the impact of targeted digital solutions that bridge traditional operations with modern data management. Anglian Water's successful implementation of HighByte Intelligence Hub enhances asset management and sets the stage for continuous improvement through effective use of OT data. **With Novotek's support, Anglian Water is well-equipped to meet its predictive maintenance and operational resilience objectives, laying a solid foundation for the future.**

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