

Leakage reduces thanks to sprint led by Morrison Water Services at Northumbrian Water Innovation Festival

3 years ago



A ground-breaking solution to tackling the challenges of water scarcity and demand identified by Morrison Water Services and Northumbrian Water has reduced leakage in two pilot areas by at least a quarter.

Morrison Water Services, a part of M Group Services' Water Division, and Northumbrian Water have been successfully trialling ground-breaking new leak-detection technology, VariSim Delta, since March in a bid to reduce leakage from the clean water network.

Leakage in the pilot areas, Newcastle and Dagenham, has reduced by 25% using the software system that uses flow meters, pressure sensors, high-frequency sampling and acoustic loggers to help identify leakages and bursts before they happen.

Trialling VariSim Delta came out of a sprint held at the Northumbrian Water Innovation Festival last October. Innovators from across the world came together to look at creating a proactive approach to avoid leakage from a clean water network.

Morrison Water Services is the exclusive UK supplier of VariSim Delta, a ground-breaking technology can help to minimise disruption to customers' homes and businesses, keep water flowing and reduce the amount of water lost from the network through leakage.

VariSim Delta has already been implemented successfully in Qatar and Dubai, two of the most water-stressed countries in the world.

By using millions of calculations per second, VariSim Delta creates an identical digital replica of a water network, known as a digital twin or pipeline simulator.

This real-time virtual recreation of the network can also help water companies understand why bursts happen, assess the condition of network assets and pipes and the profile of customer demand to help make informed decisions about asset optimisation.

Driven by Artificial Intelligence (AI), VariSim Delta software can also be taught to spot new leaks and bursts, identify changes in customers' water consumption and create alerts for malfunctioning assets.

Andy Carter, Business Services Director for M Group Services Water Division, said: "We are delighted our pilots with Northumbrian Water have so conclusively demonstrated that VariSim Delta is a proactive solution to water leakage. For this to come out of working together at the Innovation Festival is proof that collaborative working between innovative thinkers can successfully explore new ideas and identify new ways to tackle leakage and other challenges the water industry faces.

"Predicting leakages and bursts means fewer emergency excavations and more proactive action to tackle leakage in ways which are good for reducing costs, reducing carbon emissions and delivering better outcomes for customers.

"As the exclusive supplier of this progressive technology to the UK's water industry, we are confident we can revolutionise the ways leakage and network performance are managed, minimising disruption on the network and keeping water flowing to customers' homes and businesses."

Andy added: "We're pleased to be supporting the festival again this year and look forward to meeting people at the reception and throughout the week for more interesting conversations about the power of innovation."

Glyn Addicott, operations director at Hydraulic Analysis, said "We are delighted to be working with Northumbrian Water in delivering an industry-leading Digital Twin. We will reduce leakage and improve asset performance by monitoring critical supply areas in the region using live hydraulic models driven by pressure, flow, and acoustic data. Our pipeline simulation software, VariSim Delta, is deployed on water networks and trunk mains around the world and we look forward to implementing our proven solution in the UK in this groundbreaking contract."

Jim Howey, Head of Water Networks for Northumbrian Water, said: "By using this exciting new technology, we can look proactively at leakage – stopping the churn of finding and fixing without knowing the root cause.

"The digital twin is helping us to understand our networks better and has been built based on data we already have along with pressure sensors in pipes.

"By using it, we can look for anomalies and tackle leaks in a much more efficient way – helping to save water and resources across our operating areas."

Morrison Water Services will be at the Northumbrian Water Innovation Festival again from 12 – 15 July. This year it will be joined by Z-Tech and i&C, all part of M Group Services' Water Division.

The three businesses are sponsoring the festival reception. The event is being held online and at Newcastle Racecourse.

Showcasing innovative thinking and new technologies across the water industry, the theme for this year is 'Untapped Potential'. The festival will focus on finding and bringing together untapped talent from different sectors, backgrounds, and locations across the globe particularly focusing on finding solutions for leakage complications.

To attend this year's Northumbrian Water Festival, register here:

<https://www.innovationfestival.org/register/>.