Know more, lose less.

Why a data-driven approach to leakage is now a critical priority →

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2,923.8m litres per day, or 1.06tn litres per year[1]. Whichever way you cut it, the volume of water wasted across the UK's water network as a result of leakage are unpalatable at best. As the Environment Agency warns that the country will simply begin to run out of water within the next 25 years[2], those figures are fundamentally unsustainable.

None of this is to suggest that water companies aren't doing their part to bring those numbers down; the publication of the ambitious Leakage Routemap 2050 earlier this year provides clear evidence that they are. So too do the hundreds of millions of pounds that are spent every year on searching for and stopping leaks across the network.

Not all leaks are the same, of course. While a major incident like a burst pipe on the mains network may be easy to detect, others – specifically those that occur on residential and business premises – can be significantly harder to spot. And, small as they may be in comparison, limited visibility and sheer cumulative scale means that customer-side leaks can end up accounting for a huge percentage of a water company's total losses each year.

Naturally, finding and addressing those leaks as quickly as possible is in everyone's best interests. This is where Advanced Metering Infrastructure (AMI) comes into its own, providing hourly intelligence on water consumption on a per-property basis. With the right data processing capabilities in place, AMI gives water companies the insights they need to detect leaks almost instantaneously.

1. Water firms in England and Wales lost 1tn litres via leaky pipes in 2021 – The Guardian, 19th August 2022
2. Will the taps run dry? England set to run out of water in the next 25 years – The UK Water Partnership

Proof of AMI's impact on leakage detection can be found in Anglian Water's rollout of the technology over the past few years. Before making the move to AMI, the company was detecting around 7,000 customer-side leaks per annum. Since ramping up its implementation programme in 2020, that number has increased tenfold, with Anglian now capable of spotting as many as 70,000 incidents in a 12-month period.

This information does not go unused, either. Speaking on a webinar hosted by the Chartered Institution of Water and Environmental Management (CIWEM), Doug Spencer – head of Anglian Water's Smart Metering programme – noted that the company has been able to "reduce leakage by 85 – 90% on the customer side" as a direct result of AMI.

A similar story exists just a little further south, where Thames Water has used AMI to improve leak detection in residential and non-residential properties alike. On that same CIWEM webinar, the company shared statistics that showed an 8% "continuous flow" rate for its household customers, rising to 26% amongst business users. Those insights have provided Thames Water with a clear directive to work proactively with its commercial customers in order to tackle that wastage.

As with any kind of transformational technology, implementing AMI into a water network isn't a tick box exercise. As Anglian Water's Doug Spencer notes, installing devices that can generate hourly data from millions of properties presents a whole new set of challenges in terms of information management. Gathering that data is one thing, while turning it into something useful and insightful can be quite another. Process and protocol are both essential.

At the same time, the more that water companies know about leakage, the more power they have to minimise its impact. In the run-up to 2050, and that industry-wide commitment to halve the amount of water that goes wasted, AMI presents an opportunity to strike at the very heart of the problem.

You can see the full case study here.

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