

## **Empresas de agua de Reino Unido y Gales se destacan por reducir pérdidas de agua con innovación tecnológica**

### ***Oportunidades e impacto para el sector de agua, saneamiento e infraestructura:***

*Las empresas prestadoras de agua potable de Reino Unido y Gales registraron una reducción del volumen de pérdidas de agua del 7%, el mínimo histórico alcanzado desde mediados de la década de 1990, según publicó la asociación de empresas [Water UK](#).*

*El ente regulador [OFWAT](#) estableció como meta quinquenal reducir las pérdidas de agua al 16% en 2025. Las empresas de agua se comprometieron en 2019 a acelerar esfuerzos facilitando enfoques innovadores y desarrollando competencias y habilidades en detección, localización y reparación de fugas.*

*Este logro de las empresas de agua de Reino Unido y Gales es atribuido a la adopción de nuevas tecnologías para controlar las pérdidas, entre las cuales destacan:*

*\* Captura y análisis de datos con correladores de alta frecuencia [Enigma](#) y [Gutterman](#) para localizar fugas en tuberías de plástico (que generan menor ruido comparado con tuberías de metal).*

*\* Drones equipados con imágenes térmicas para localizar fugas.*

*\* Red inteligente de distribución de agua mediante una alianza entre SES Water y la operadora de telecomunicaciones Vodafone.*

*\* Detección satelital de fugas no visibles de agua potable desarrollada por [Utilis](#) en la región de Suffolk y Essex.*

*Al respecto, el promedio de pérdidas de agua en países de Europa es del 23% de acuerdo a [Eureau](#), con datos del año 2017, mientras que en Ecuador supera el 50% según la [Agencia de Regulación y Control del Agua](#). Un estudio de [Roland Liemberger y Alan Wyatt](#) (2018) que cuantifica el monto de inversiones para reducir el Agua No Contabilizada a nivel global estima que en Ecuador se requieren inversiones anuales de \$265.2 millones.*

*Las empresas de agua de Ecuador que consideran la reducción de Agua No Contabilizada como un asunto estratégico tienen la oportunidad de poder replicar estas nuevas tecnologías que ya funcionan y están probadas en mercados y entornos regulatorios de alta exigencia.*

### Water companies record lowest leakage levels from pipes

- Drinking water quality remains very high, with 99.96% compliance
- Leakage down 7% down, to the lowest ever reported level
- Supply interruptions and water consumption down

Water companies have reduced the amount of water leaked from pipes by 7% to the lowest level since records began in the mid-1990s.

This improved picture on leakage is part of a general update to the [Discover Water](#) website which also reveals that:

- Water quality continues to be maintained at a high standard, passing 99.96% of quality tests;
- Supply interruptions are down from an average of 13 minutes in 2018/19 to an average of 12 minutes in 2019/20;
- The amount of water used per person in England and Wales has fallen slightly, from 143 litres to 142 litres per day;
- Sewer flooding increased by 14%; while some companies saw a reduction, other parts of the country were more affected by extreme weather in the last year, including storms Ciara and Dennis.

The overall volume of water being leaked has fallen by 216 million litres per day – enough to fill 86 Olympic size swimming pools – to 2,954 million litres.

Reducing leakage presents a significant technological challenge, and with 346,455 kilometres of water pipes, enough to go around the world eight and a half times, water companies are adopting some of this latest technology and innovation to reach every leak, including:

- Affinity achieved a 15% reduction in leakage through using state of the art technology, data capture and analysis and new innovative methods to find and fix leaks, whilst collaborating with other water companies to share best practice
- Anglian Water are using thermal imaging drones to detect leaks to find and pinpoint leaks
- SES Water has partnered with Vodafone to create an intelligent water-distribution network to help them detect and fix leaks
- Northumbrian Water are using satellite technology to help detect leaks in their Suffolk and Essex region

### Yorkshire Water are piloting the UK's largest smart water network

Even though there has been an improvement in leakage overall, there is still more work to do to meet industry-wide targets to reduce it by 16% by 2025, with a further reduction to half the current levels of leakage by 2050.

As part of the sector's Public Interest Commitments (PIC) set in 2019, water companies have pledged to triple the rate of leakage reduction by 2030 enabling action to be taken faster.

Through the Leakage PIC the industry will look to foster collaboration, enable innovative approaches to be proved and taken up faster and develop skills and competencies in all areas of leakage detection, location and repair.

Commenting on today's leakage figures, Water UK Chief Executive Christine McGourty said:

“Enormous progress has been made in tackling leaky pipes, and that's brought leakage levels down significantly in the last year. But the water industry is committed to doing much more, and companies are putting innovation and technology at the heart of a commitment to radically reduce leakage over the long-term. Intelligent networks, smart sensors, satellite technology and drones are all part of the armoury that's being deployed to detect and fix leaks faster than ever and at lower cost.”

Examples of innovative approaches to reducing leakage:

### **Affinity Water**

#### **[New leak detection technology](#)**

Finding leaks on plastic pipes has been a challenge for the water sector for many years. Traditional methods for detecting leaks used on metal pipes do not work as well on plastic pipes as the sound generated by the leak is virtually silent. This is why Affinity Water is using state of the art high frequency correlators by Engima and Gutermann, which allows engineers to pinpoint leaks quicker with greater accuracy and efficiency, especially on plastic pipes. Affinity Water has also been collaborating with Anglian Water to understand the optimal ways of deploying these devices. The devices have also reduced the amount of 'dry holes' that are dug to find leaks on pipes, which has helped to reduce impact on local traffic as leaks are located more precisely.

### **Anglian Water**

#### **[Using thermal drone technology to locate a leak](#)**

Anglian became the first water company to trial thermal imaging drones to detect leaking water pipes. With nearly 24,000 miles of water pipes to keep watch over, the aerial technology helps their leakage technicians to reduce the time and cost taken to find and pinpoint a leak, doing so more precise by spotting changes in soil temperature caused by the water escaping from the pipe. The technology also benefits customers by reducing disruption that would normally be caused by manual investigations, and by covering large distances in a short space of time. Once found it's immediately evaluated by a leakage technician on-site, rather than needing to be analysed back in the office. All of this means the job can be carried out quicker and more precisely – meaning less digging, less money, less water lost and less disruption to customers.

### **SES Water**

#### **[An intelligent water-distribution network to help detect and fix leaks](#)**

SES Water have partnered with Vodafone technology to create an intelligent water distribution network that aims to cut leakage by 15% over the next five years and pave the way for more than halving it by 2045. SES Water have been working with partners to install specialist digital water meters, sensors and acoustic loggers on underground mains water pipes. Data will be collected and transmitted across the system, and advanced analytics will be used to monitor readings and alert SES Water immediately in the event of a leak, low pressure or other network abnormalities.

Acoustic loggers 'listen' for escaping water within the network to determine when leaks have occurred and to assist in pinpointing the precise location. Readings from smart meters will provide valuable insight into customer demand patterns so that SES Water can help customers to better manage their water usage, help reduce their bills and be alerted to leakage occurring on customers' pipework before it can cause any damage.

### **Northumbrian Water**

#### **Water company reaches for the stars with satellite leakage detection**

Essex & Suffolk Water (part of Northumbrian Water) has teamed up with utility giant SUEZ and satellite experts Utilis, to harness the power of space satellites to help spot leaks on its network. Using the same technology that helps find water on other planets, the satellites are being focused initially on around half of the company's network across Essex and Suffolk, with a focus on remote areas and parts with higher records of leakage. The satellites are being used to help detect leaks and unusual deposits of water. These details will then be passed on to a team of leakage technicians on the ground who will carry out further investigations. The whole process takes place with no impact to any customers, and will hopefully result in problematic leaks in some of the most remote areas of the region being repaired much quicker than ever before.

### **Yorkshire Water**

#### **UK's largest smart water network pilot**

Yorkshire Water is starting the largest and most extensive smart water network pilot in the UK, collaborating with 15 companies in the digital water space to further improve the essential water supply service it provides to customers. This ambitious multi-stakeholder collaboration combines data from its acoustic, flow, pressure and water quality monitors and aims to reduce leakage and burst levels in the pilot area in West Sheffield. Fifteen companies in total are involved in the collaboration to test the latest cutting-edge digital water meters, sensors, advanced analytics and telecommunications channels. Yorkshire Water is hoping that the pilot, which will use data received at near real time from across its network, will revolutionise the way it manages leaks and interruptions to supply in the future and therefore reduce the amount of water taken from the environment.

**Fuente:** [Water UK](#), julio-2020.