Uisce Éireann AI leak detection on Dublin trunk mains

IMPLEMENTED 2025–2026 · ENERGY AND UTILITIES · IRELAND · BAND E · CLAIMED ONLY
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Ireland's national water utility is using an AI-enabled acoustic sensor sphere to find leaks in Greater Dublin trunk mains, with Microsoft, Suez and Aganova; no results have been published.

ABOUT THIS SYNOPSIS

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Facts and figures are as reported by the sources listed below, which may be incomplete, self-reported or out of date. Check the original source before relying on any figure.

The impact band, proof marker and SEAM view are MarLuc's opinion. The organisation is not a MarLuc client and has not reviewed or endorsed this synopsis. Names and trademarks belong to their owners.

NOTICE WORDING LAST UPDATED 16 NOVEMBER 2026

AT A GLANCE

No measurable effect: no results reported.

AI used: AI analysis of acoustic data from an in-pipe sensor sphere.

Implemented: 2025–2026. Grade: band E, No measurable effect, Claimed only.

Headline result, as reported: A 40km AI leak-detection survey of Dublin trunk mains was launched in 2025; no outcome reported

1 · The case

The facts, as reported by the 3 sources listed at the end. Where a source is silent, the field says "Not reported".

Organisation

Uisce Éireann (Irish Water). Ireland's national water utility, formerly Irish Water. It manages about 10,000km of water mains in the Greater Dublin area, of which 2,500km are trunk mains, per Aquatech. Headcount and turnover: Not reported. Canvas block: 4. Operations and process. Also 6. Data and technology.

Business challenge

The challenge. By Uisce Éireann's estimate in Aquatech, over 30% of treated water is lost to leaks across Ireland, and further reductions have become harder after a decade of progress. The utility has targets of 20% loss in Greater Dublin and 25% nationally by 2030.

Who implemented it

Aganova (Software vendor): Supplied the Nautilus system and AI analysis.
Suez (Systems integrator): Field and operational support.
Microsoft (Industry partner): Funding and technology under its water replenishment programme.

Technology (SEAM pillar E)

SEAM types: T8 Predictive / ML models. Deployment: Not reported. Vendors and products: Aganova, Nautilus.

Where it was built in: A free-swimming sensor sphere travels inside live trunk mains; AI analysis of its acoustic, flow and pressure data locates leaks and anomalies.

What changed

Before: leaks in large trunk mains were hard to locate without in-line inspection. After, by the partners' plan: the sphere travels up to 35km a day inside live pipes and locates leaks to under one metre, and Uisce Éireann repairs what is found. Measured results: Not reported. [1] [2] [3]

What it cost

Not reported. Aganova's chief operating officer says Microsoft provides funding and technology.

What it saved

Not reported. Aganova will monitor results to verify the project's volumetric benefits, by the Suez release. [1] [2] [3]

Governance and control

Uisce Éireann leads repairs and provides engineering and monitoring, by Aganova's account; Aganova verifies water savings. Safe use, human review of AI findings and independent assurance: Not reported.

S2 · Accountable owner · Claimed
Margaret Attridge, Head of Water Operations, speaks for the utility in the Suez release; Uisce Éireann leads repairs and provides engineering and monitoring, by Aganova's account. [2] [3]

A1 · Safe use · Not reported
Not reported.

A2 · Human in the loop · Not reported
Not reported.

A3 · Monitoring and assurance · Claimed
Aganova will monitor results to verify the project's volumetric benefits, by the Suez release. [2]

A4 · Vendor AI · Not reported
Not reported.

A5 · Agent controls · Not reported
Not applicable as described; not an agent deployment.

A6 · Standards and regulation · Not reported
Not reported.

What worked, what did not, what is unproven

WORKED

– Not reported

DID NOT

– Not reported

UNPROVEN

– Number of leaks found and repaired, and litres saved.

– Accuracy of the AI detection compared with other survey methods.

– Whether the approach extends beyond the 40km survey.

Timeline

Apr 2025 Suez announces the project with Uisce Éireann, Aganova and Microsoft to inspect 40km of strategic pipelines over 11 months [2]

Nov 2025 Aquatech interviews a Uisce Éireann representative, who looks forward to completion of the project [1]

2 · Grade and SEAM assessment

MarLuc's opinion, made on the evidence above. How cases are graded: marluc.co.uk/case-studies/how-we-rate

Level of change and impact

Claimed: Not applicable. Grade: E, No measurable effect. Proof: Claimed only. Level of change: Not graded.

No level assessed: band E, a project under way with no outcomes published.

Graded E, no results reported. The project is under way and no leak counts, repairs or litres saved have been published for it. This is an absence of evidence, not evidence of no effect.

The SEAM view and lessons learnt

The project joins a utility with a leakage target, a technology supplier and a funder seeking water benefits, so success will depend on repair capacity as well as detection. No result has been published, and verification is by the supplier. A leadership team should ask who verifies volumes saved and how repair crews are scheduled against detections.

1. Agree an independent way to verify water saved before the survey starts.
2. Plan repair capacity alongside detection.
3. Publish results so others can judge the method.

Evidence

Score 1 of 4. Self-reported: a partner press release and trade interview; supplier verifies its own project.

Evaluation method. Self-reported company statements: no results published.

Sources disagree. The Suez release describes Nautilus as an acoustic technology and does not mention AI; Aquatech and the supplier's article describe AI-driven analysis. Aquatech says the utility takes 600 million litres from the Liffey without giving a period; the supplier's article gives 600 million litres a year.

Status. Ongoing: announced April 2025 for 11 months; no completion reported by 25 November 2026.

3 · Original sources

Read these in full. To challenge a fact or a grade, use the contact form at marluc.co.uk or the link on https://marluc.co.uk/case-studies/uisce-eireann-dublin-trunk-main-ai-leak-detection

[1] Aquatech: Dublin turns to smart ball technology to save water
https://www.aquatechtrade.com/news/utilities/smart-ball-technology-helps-irish-utility-reduce-water-lost-to-leakage

[2] SUEZ in the UK: SUEZ Joins Forces with Microsoft, Uisce Éireann, and Aganova to Reduce Water Loss in Dublin
https://www.suez.com/en/uk/news/press-releases/suez-joins-forces-microsoft-uisce-eireann-aganova-reduce-water-loss-dublin

[3] WaterWorld: AI-driven leak detection in Dublin's critical water infrastructure (by Aganova's chief operating officer)
https://www.waterworld.com/smart-water-utility/article/55306670/ai-driven-leak-detection-deploying-smart-technology-in-dublins-critical-water-infrastructure

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