

COLLABORATIVELY SPEAKING

Collaboration and Ofwat's competition for cash topped the bill at the postponed 21st annual Leakage Conference last month.

An autumn webinar last year, organised in lieu of the pandemically postponed Leakage Conference, heard about many and varied examples of innovative measures in play in the water sector's efforts to up its game – from satellites and smart networks, to sniffer dogs and drones. And the sector's confidence in its leakage ambitions for 2025, 2030 and 2050 was buoyed up by the 7% leak reduction achieved during 2015-2020. Though that was offset by a sense of caution born out of being at start of the journey with a lot of the low-hanging fruit gone.

This mix of momentum from recent success and new ventures set the tone for the 21st annual Leakage Conference in February this year. Many of the speakers picked up where they had left off in October with Ofwat's Innovation fund drawing much attention along with the sector innovation strategy, the innovation heat map and the leakage route map.

Leakage and the Fund

Ofwat's director of regulatory policy Harry Armstrong asked the question: "Why have an innovation fund?" Ultimately his answer was to suggest that innovation was lacking: "Innovation is happening but [the] UK water sector has arguably fallen behind compared to others. There are innovation enablers that the sector should start making better use of."

He asserted that innovation needs to be

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coupled with collaboration to achieve its full benefits for customers, society and the environment. Collaboration, he said, should extend beyond water companies to include other sector stakeholders including the supply chain. He called also for a "long-term view on innovation". This he said included "being more open to innovation risk".

While making tacit acknowledgement of Ofwat's perceived part as an inhibitor of risk-taking, he insisted the regulator was supportive of it. "We realise that there are other factors in our incentives and regulatory framework that affect this [risk taking] but we are hoping that through the innovation competition [see box] we can signal the interest Ofwat has in companies trying new and different things along with third parties doing the same and taking a bit more risk there."

Risk clearly occupied a significant place in the reasoning behind setting up the innovation fund. Ben Tam, UK managing director of Isle Utilities – part of the partnership with Ofwat leading the innovation competitions – emphasised first that the competitions will look to "things that have not been funded so far – from outside the original business plans". Tam went on to say that while each entry into the competition will be judged on whether it is innovative, whether it is going to move the sector forward and its capacity to deliver, meeting those criteria will not guarantee a successful outcome once the money is spent. "Some of these schemes will not scale up. That's OK. But as sector we must be taking some of these risks to take ourselves forward," said Tam.

Armstrong hoped the fund would induce scalability and deployability in water sector innovation: "The sector does a lot of pilots and early testing but it doesn't scale these up and roll them out across the sector. We want to see more of that." More generally he saw the fund as augmenting Ofwat's established innovation activities – measures in the price controls such as laying down "stretching, long-term targets" for the water companies and driving efficiency.

Armstrong went on to emphasise that the need to scrutinise progress and make adjustments meant the first IWC will not necessarily be a template for subsequent competitions – although the main competition will, he said, build on IWC. "We will adapt

as we learn what works and doesn't – we will shift elements of competition to focus where innovation is needed." With multiple competitions lined up for this AMP, he stressed the new fund was "not a one-shot deal".

For later competitions, Armstrong added the competition organisers will be looking at policy changes such as the eligibility of parties outside the water sector. "We can't guarantee that we can do that, but we want to explore it."

Central delivery model

In her update on progress on the water sector innovation strategy, head of research, development and innovation at Thames Water, Andrea Gysin, echoed the multi-faceted nature of demand for innovation sketched by Armstrong. She said the water industry, through its Innovation Strategy, was looking to "make sure we are not just looking at point solutions". She went on to describe how the sector was "looking to create a culture of openness," featuring, for example, open data and deeper partnerships.

Gysin's presentation had a strong – and arguably reassuring – thread of references to the need to garner the engagement of innovators from the supply chain and other non-water company sector stakeholders. She acknowledged the gap in familiarity with leakage issues some of these may have: "For the supply chain and for new entrants, it's difficult to understand what exactly do we need to achieve to reduce our leakage," she said. With that in mind she added: "We have set out to drill down to more specific challenge areas." Top challenges included cost effectively locating all existing and developing leaks – especially low-level background leakage and designing and installing pipes to ensure all new pipes are leak-free. All very familiar to water company ears.

Gysin moved on to look at the planned virtual Centre for Excellence. "The strategy is a great document for intent and guiding directions as a sector, but the Centre of Excellence is the central delivery model we are looking to build," she explained. The Centre's proposed functions will include a portal for innovators to post ideas and solutions; information on the latest innovation challenges and opportunities; a brokerage for collabora-

tion relationships and opportunities; and access to and integration of existing collaborative research and innovation.

"Recognising it has to serve the sector as a whole, we are looking to form a board that is not just representative of the water companies but includes the supply chain," said Gysin. She added: "We are also looking for start-up funding. We have already secured significant seed funding from the water companies but we will be bringing forward a bid to the IWC to boost that funding and accelerate the development of the centre and then recruit a team."

The Centre promises to provide a means to reduce duplication of effort in innovation – a time-honoured drain on financial and intellectual efficiency in research efforts. Gysin pointed out that ground was already being made in curbing duplication in leakage research through UK Water Industry Research's Innovation Heat Map published last May.

Hot spots

The Heat Map records innovation hot spots, from 320 projects across 17 water companies. UKWIR's leakage programme lead and SES Water innovation manager Jeremy Heath, said the map had revealed an inequitable share of activity between the four elements of leakage: prevention, awareness, location and mending.

One "congested area" of study is in awareness and location where there are many providers coming forward with artificial intelligence and other smart technology. There was, Heath said, significant activity in quantifying leaks with a "a lot of work driven by compliance". Work has been growing also in prevention of leakage. On the other hand, there had been "not lot of innovation in mending."

"We're ploughing money into awareness and location – I get that – but it would be really great to see strong innovations coming through [in mending]." There has, however, been an upturn: "Considering how little innovation we've had on repair techniques, since we put out the call we are now getting regular contacts from people saying they are looking there or have got solutions."

On collaboration, Heath suggests the leakage "industry" could have a head start. Where there is "ground to make up" on general water industry collaboration, "The leakage industry is getting quite good at collaboration," said Heath. "Not just between water companies – with the supply chain."

Gysin said the 20-year networking history of the Leakage Conference would form the basis of a "leakage department" for the Centre for excellence: "This conference has created an enduring community. So what we would do with the Centre is find a way of making that community interactive throughout the year and that would become the leakage department so to speak."

With collaboration the dress code for the IWC show, leakage projects are, it seems, looking good.

Carry on collaborating

In her keynote address to the conference, Affinity Water chief executive Pauline Walsh set out collaboration as the central plank for leakage innovation and the sector's other Public Interest Commitments. "We need to work collaboratively. No individual company can deliver commitments on their own," she said.

"The challenges posed to water supplies are rising to the top of society's agenda," she added and highlighted the part played by Covid lockdown measures in amplifying

FUND AND GAMES

Ofwat's £200m Innovation Fund will be allocated through a series of competitions over the next five years. In the coming year there will be two sets of Innovation in Water Challenges (IWC), each with £2m in total available, with awards of up to £250,000. Each entrant will be required to provide 10% of the funding it wins.

The competition organisers envisage the awards will be "between £50,000 and £250,000 with about ten to 15 awards going to "small projects that will be up and running quickly." But they stress that it will be a learning process.

There will also be a main competition with £40m available.

environmental concerns: "There is a wider appreciation of our local environment than there has ever been and more people are taking an active interest in the roles they need to play to stem the tide of the effects of climate change."

"We all know how easily water saving messages lose gravitas when people perceive that so much water is lost through leakage. We all have a part to play in tackling this crisis as individuals, as representatives and as companies to ultimately transition to a more sustainable way of living."

The collaboration message is clear, but how well is the water industry placed to collaborate? Regulation is often cast as an obstacle, "fairly or unfairly," commented Armstrong. "Some barriers are regulatory and we are keen to learn how to overcome those – particularly risk and how we feed knowledge from the IWC into the price reviews."

Gysin suggested that some of the ties between water firms and the supply chain were not as close or advanced as they might be: "There are some great examples, really deep relationships between supply chain but still a way to go – sometimes we point to partnerships but they are actually traditional supplier client relationships."

There is dialogue, she continued, but it lacks clarity: "We need to be clear as companies on our needs so third party, supply chain and new entrant innovators can respond. The conversations are happening – we just have to push ourselves to make those relationships work."

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