



Ofwat's emerging strategy: Driving transformational innovation in the sector - response to consultation

Mark Kaney, Director of Asset Management, Black & Veatch Europe

Q:1 What are the main barriers to innovation in the sector and why?

Risk averse culture:

- Water companies want to attract and maintain long-term investors seeking stable, predictable returns
 - Innovation has no guarantee of return on investment, which changes the risk profile for investors
- Consequences of using unproven approaches/technologies can have serious environmental and public health consequences

Disparity of assets:

- Age range of water company assets spans all points between the Victorian era to present day. This mitigates against the likelihood of developing innovations that are sufficiently scaleable, or offer industry-wide transformation

Regulatory framework:

- Seen as punitive rather than enabling, and fails to reward innovation
- Time of individuals to participate in innovation when there is a focus on delivery of core regulatory drivers

Ownership of intellectual property rights (IPR):

- Water companies expect to own IPR of innovations developed by supply chain. This acts as a disincentive to suppliers because they do not get a sustainable return on their investment in innovations

Q:2 Do you think that the financial support cited in section three is required to stimulate innovation in the sector? If so, what do you believe is the appropriate amount of funding and why?

The proposed financial support of £200m equates to £40m per annum across AMP7. Water companies' average final determination is £3b. We are unsure whether 1.3 percent of the average final determination is sufficient to stimulate innovation that could be of the transformational nature sought.

By way of comparison the 2017 total sector spend on research and development (R&D) for telecommunications was £737m, for motor vehicles and parts was £3,300m, and for electricity, gas and water supply combined was £68m (ONS Data set: Current Expenditure on R&D performed in UK Businesses 2017).

Q:3 Do you agree that our proposed draft principles for additional financial support will effectively safeguard the interests of customers?

Water bills in England and Wales are already largely affordable. The average combined water and sewerage bill is £415 (Discover Water, Water UK April 2019 to March 2020). This compares to the average annual dual fuel (gas and electricity) bill of £1,066 (Ofgem data portal, 31 Jan 2017); while the median household disposable income* in the UK was £29,400 in the financial year ending 2019 (ONS, Average household income, UK: Financial year ending 2019 (provisional)).

It is in customers' interests to have resilience of water assets increased at the minimum unit cost. Safe guarding the interests of customers, however, should not be seen solely through the prism of keeping bills low. For the sake of continuity, funding for innovation should be ringfenced, and not subject to the five-yearly changes of the spending review.

There is also an issue of liability. If an innovation believed to be transformational is adopted sector wide and fails in one area, is the cost of failure and remediation to be borne solely in the affected area, or at sector-wide level?

*According to the ONS, "Disposable income is arguably the most widely used household income measure. Disposable income is the amount of money that households have available for spending and saving after direct taxes (such as Income Tax, National Insurance and Council Tax) have been accounted for. It includes earnings from employment, private pensions and investments as well as cash benefits provided by the state."

Q:4 What are your views on the collectively funded innovation competition model which we describe in section three? What other key considerations not highlighted should we take into account in designing/ implementing the competition?

Our initial understanding is that this proposal is similar to the approach taken to support innovation by Ofgem in RIIO ED1. As part of the RIIO price controls Ofgem introduced the Electricity Network Innovation Competition (NIC). The Electricity NIC is an annual opportunity for electricity network companies to compete for funding for the development and demonstration of new technologies, operating and commercial arrangements. Funding will be provided for the best innovation projects which help all network operators understand what they need to do to provide environmental benefits, reduce costs, and maintain security as Great Britain moves to a low carbon economy. Up to £70m per annum is available through the Electricity NIC.

Water companies typically look to the supply chain as the engine of innovation. As a result the collectively funded innovation competition model needs to be open to the supply chain, not just the water companies.

It is unclear whether the water companies would be mandated to take part in the competition. If participation is optional the outcome of the competition would risk being less effective, so

participation would need to be incentivised. We note that companies will be required to fund a proportion of innovation costs. This approach may deter smaller companies with smaller budgets and resources to commit to innovation.

Q:5 What are your views on the end-of-period innovation roll-out reward we describe in section three? What other key considerations not highlighted (e.g. whether it should be collectively funded or individually funded) should we take into account in designing/ implementing the reward?

Ofwat proposes to apply the innovation proposals to the 17 largest regulated water companies in England and Wales, with the intention that these 17 companies will work with the smaller water companies to deliver innovation.

Our concern with this approach is that the larger companies will potentially dominate the drive for innovation leaving the smaller companies as observers rather than active participants. There is a risk that the innovation may also be more deployable in larger organisations preventing smaller companies and customers of those small companies to benefit. This concern is common to the collectively funded innovation competition and the End-of-period innovation roll-out reward.

Some types of innovation may require the adoption of certain IT platform/architecture. There needs to be a mechanism which allows the smaller companies to be able to afford the implementation of these types of innovation.

Is there the potential for an observer company to benefit from the implementation of innovation developed by another company without contribution to the solution? On the flip-side how will Ofwat prevent innovation partner companies who successfully design and implement an innovation solution becoming a monopoly for specific solutions?

The proposal envisages the financial reward for innovation during AMP7 being reaped in AMP8. This may penalise smaller companies who lack the financial resources to invest in innovation in one AMP without seeing a return on that investment until the next AMP. The only way around this under the current regime would be for the company to successfully seek an interim determination.

Ofwat notes the risk of implementing suboptimal solutions and potential to reward companies for implementing solutions that they would have rolled out as business as usual. This needs to be fully addressed.

Q:6 What other potential alternative mechanisms for funding/ rewarding innovation not discussed do you think we should be considering? Which financial support mechanism or combination of mechanisms should we introduce and why? What would be an appropriate split of available funding/ reward?

The second innovation funding approach used by Ofgem as part of the RIIO framework is the Networks Innovation Allowance (NIA). The NIA provides limited funding to RIIO network licensees to use for two purposes:

- To fund smaller technical, commercial, or operational projects directly related to the licensee's network that have the potential to deliver financial benefits to the licensee and its customers; and/or

- To fund the preparation of submissions to the Network Innovation Competition (NIC) which meet the criteria set out in the NIC Governance Document.

Ofwat could consider this model.

Q:7 Do you think the potential industry activities discussed in section four could help drive innovation? Are there other activities not identified which you think the industry should be considering?

The development of a centre of excellence would be a beneficial approach to promote innovation, we would like to see this as a cross sector function to increase visibility and sharing of new solutions which are transferrable. The centre of excellence could also be a mechanism by which the water companies in England and Wales could benefit financially through the export of their innovation to other countries.

Among the best water industry centres of excellence for fostering innovation is the Water Industry Alliance (WIA) in Australia <https://www.waterindustry.com.au/>

The WIA was founded in Adelaide, South Australia, in 1998 as a not-for profit association with around 15 members. Today the alliance has more than 100 members that collectively represent the complex business of water including; manufacturers, contractors, engineering services, technology companies, water utilities, professional services and research organisations. Part of the WIA's strength is that it encompasses the supply chain and academia, as well as water utilities.

The water industry spends a significant amount of money upon procurement. Measures to reduce the cost of procurement should be investigated, with a view to reinvesting the savings in the centre of excellence.

Another possible approach is to initiate an industry-wide framework with 'incubator' hubs – as has happened for FinTech (finance technology) where innovative disruptive ideas are developed with the support of the sector, investors and existing and new market entrants. This approach has proven to be a genuine catalyst for innovation in the financial services sector, helping cement the UK as a global forward-looking leader in this area. Could water industry collaboration be harnessed to create a 'WaterTech' version of same which helps drive innovation for the benefit of the customer and long-term investment in our sector?

We view the intention to take an open default approach to data through the companies and also specific innovation organisations as an essential pre-requisite to enable transformational innovation. We would like to understand further details on how this would work, its governance and maintenance, liability for incorrect data, etc. This would be a good example to build a fully integrated digital solution, which would have potential to quickly increase cross sector data sharing.

We feel that to succeed any framework or organisation intended to foster transformational innovation must depart from the water sector's current conservative, risk averse culture. An agile, fail-fast and move-on culture will be necessary. Any framework or organisation to foster transformational innovation must also be sufficiently flexible to deal with the wide range of organisations whose expertise will be required: water companies, the supply chain, and academia.

Funding and reward must flow through the water companies to the supply chain or entity that has invested in the creation of the innovation. There must be reward for the investment; otherwise the

lack of return will be stifle investment. The customer and the water company gain reward by the adoption and scalability of the innovation into the water utility business, which either eliminates or reduces redundant costs.

Too often water companies seek to procure innovation either free or at low cost and try and own the IPR for go forward implementation with no or limited reward to the supply chain. This culture and procurement practice should be incentivised to change. If it is the sector will be seen as a rewarding sector in which to invest in R&D and innovation and the customer, utility company and innovator benefit.

Q:8 Do you think the proposals in section five will help drive innovation? Are there other activities not identified which you think Ofwat should be considering?

Regulation can function as an enabler of innovation providing the regulator can demonstrate the right culture and competencies.

The Ofwat proposal highlights many of the issues and governance requirements experienced under the RIIO framework, so – under the proposals to use regulation as an enabler of innovation Ofwat could simply adopt the Ofgem approach and develop the innovation frame jointly with Ofgem going forward.

Mark Kaney, Director of Asset Management, Black & Veatch Europe

