

Northumbrian Water response to: Ofwat innovation funding and competition: further consultation on design and implementation

Northumbrian Water Response

We share Ofwat's ambition to drive transformational innovation in the water sector and continue to support this initiative.

It is clear that our customers expect us to be continually improving and as a result 'leading in innovation' formed one of six key themes in our PR19 business plan. In our business plan customer acceptability research our customers agreed that innovation was an important aim to improve efficiency, performance and expertise and that it demonstrated how Northumbrian Water is willing to exceed customer expectations.

Indeed, we have already demonstrated our commitment to innovation through the week-long Innovation Festivals we have staged in each of the past three years. These events deploy design sprint and data hack techniques to tackle a range of challenges affecting the sector, drawing in expertise from global businesses, local SMEs, academia, interest groups and customers. The events have been praised by visitors including from Government and regulators, and have yielded innovations now being implemented, including the 'Barnacle' sensor device, underground mapping and digital twins of our networks and assets. In the face of challenges presented by the current coronavirus pandemic, we continue to innovate, aiming to deliver a wholly virtual innovation festival this year, while maintaining the same level of collaboration, co-creation and productivity as our previous physical events.

We strongly support Ofwat's proposals to make additional funding available to support innovation activities and its ambition to transform the way we 'do' innovation across the sector, including innovation culture, sector capability, willingness to collaborate and share data and learning. We are confident that the water innovation strategy, co-created across all the UK water companies, is a key enabler to making this happen and that ongoing stakeholder engagement and consultation will identify the priorities for action and investment.

We agree that collective working between companies, and also in collaboration with customers, suppliers and regulators, can serve to share innovation risk. Of course, successful collaboration requires the benefits arising from innovation to be equitably shared as well and, most importantly, the overall balance between risk and reward has to be acceptable to all parties. While we are pleased that the revised principles, set out in the consultation document addresses some of these points, notably the expectations around minimum company contributions to project funded under the innovation competition, we feel that there is further work to do on finalising principles around IPR, royalties and data sharing.

We very much look forward to working with partners and stakeholders to deliver innovation that will transform outcomes for customers, the environment and organisations and people across the water sector and beyond.

Q1: Do you agree with our proposed default arrangements for managing IPR and royalties? Do you think these arrangements work for different types of projects and activities (e.g. new technology vs. process innovation, roll-out activities etc.)?

We agree with the proposed differentiation between Background and Foreground IPR, and with the proposed treatment of background IPR. It is important that innovative companies are confident that their existing intellectual property is not at risk, while at the same time being able to make it available to enable further innovation and implementation.

We agree with the proposed attribution of Foreground IPR to the participant(s) that create it, We suggest that for projects that draw the majority of their funding from the proposed funding mechanisms the Foreground IPR created and consequently owned by one or more of the water and wastewater companies or new entrant water and wastewater companies should be made available to

other water and wastewater companies otherwise the sharing of IPR is at the discretion of the owner of the IPR and they should be recognised or rewarded for sharing IPR in these cases.

We suggest that Foreground IPR created or co-created, and consequently owned or co-owned by a collaborating partner (i.e. not simply a contractor) should not automatically be made available to all other companies where this risks undermining the commercial interests of the collaborating partner.

We agree that royalties earned by water and wastewater companies and new entrant water and wastewater companies should be shared with all customers in proportion to the project funding drawn from the innovation competition. To encourage consortiums of multiple water companies, the application to all water customers across the industry will minimise complexity.

Q2: What alternative arrangements should we be considering for IPR/ royalties?

Royalties earned on IPR owned by partners should be treated so as not to undermine their incentive for collaborating with water and wastewater companies and new entrant water and wastewater companies, perhaps by introducing caps on total amounts returned to customers, or the period over which royalties should be shared.

Q3: Do you agree with the principle that data generated through the innovation competition should be open by default?

We agree that open data is an opportunity to accelerate the pace of innovation and drive value across the sector. The success of an open data approach relies on a collective effort from multiple players both within and beyond the water sector. NWG is well placed to leverage its experience and skill sets in digital transformation and data science to lead the sector and recommend a holistic open data strategy that can influence a value-driven approach.

We recognise that a more open approach to data offers significant opportunities to drive innovation and to enable greater transparency and accountability across the water sector. Opening, and indeed sharing, data should be informed by a clear strategy and must be underpinned by good governance, a sustainable value-driven use case and the appropriate infrastructure to ensure data security and data quality. We suggest that the default approach should be to consider the case for sharing data generated by projects drawing on the innovation competition funding, and that the case for doing so should be guided by the aims of delivering value to all customers, sharing learning and avoiding duplication.

We suggest that data that is sensitive from a personal, commercial or security point of view should not be open by default but may be shared with selected parties where there is a good case for doing so. Due consideration should be given to protecting data where, for example, access to that data, either solely or in combination with other available data might allow a third party to reverse engineer the intellectual property underpinning the data.

Q4: Do you agree with our proposed approach and that we should consider alternative arrangements beyond company contributions?

We agree with the proposed approach as we would expect to leverage funding from multiple sources, including collaborating parties and other innovation funding (where eligible). We would seek to achieve a wide ranging engagement in collaborative projects by recognising a range of possible in-kind contributions in the form of people's time, access to and investment in facilities, materials and consumables, travel and expenses and background IPR.

Q5: Do you agree that a guideline minimum company contribution of 10% is appropriate in this context?

We agree the 10% contribution seems appropriate, accepting that this too may be in many forms, so long as they are eligible and can be duly accounted for.

Q6: Do you agree with the overarching approach we set out here?

We agree that the proposed approach allows a wide variety of projects and initiatives to be considered for funding within the innovation competition. We note that the jointly developed Water Innovation Strategy sets out both a range of outcome-based themes and enabling mechanisms that

are similarly broadly scoped and seek to avoid bias towards particular areas or specific solutions. We are looking forward to the innovation competition unlocking the high-potential high-risk projects that companies are not able to embark on currently, but that could be key in addressing the many challenges faced by the sector, its customers and the environment.

Q7: What are your views on introducing separate, proportionate, arrangements for small-scale projects? How might we define small-scale projects for the purposes of the innovation competition?

We note that an innovation allowance is available to energy utilities under their regulated innovation funding arrangements and that this seems to work well, giving companies greater agility in developing and delivering their innovation programmes, including in funding the development of larger project submissions to their innovation competition. We also note that Innovate UK frequently funds lower-cost (c. £50k) feasibility projects to pre-qualify candidates for full funding applications. We consider that such a staged approach to funding both enables and de-risks larger collaborative programmes.

Q8: Do you agree with our proposal for ensuring roll-out is at the heart of the innovation competition? How might we reward both leaders and fast followers in this space?

We agree that implementation is key to delivering value from innovation, although being too demanding in this respect such that the vast majority of projects are expected to reach full roll out, will simply limit the ambition of the projects proposed for funding. Companies that lead the implementation of a particular novel practice, process, product or service inevitably shoulder the initial risk, but often they will have been funded to mitigate this risk to an acceptable level, and will have generated data and know-how to support their roll-out.

Fast-followers have the benefit of seeing that such an innovation has been successful, but they do not necessarily have access to the requisite data and know-how that will enable them to de-risk their implementation to an acceptable level. Leading companies should be rewarded for actively enabling others to follow fast and followers should be rewarded for recognising the contribution of the leading company and for collecting and sharing evidence of benefits arising. Some sort of reviews or referrals system could be used. The reward for the leading company could be created by charging access fees linked to recovering the 10% company contribution that was made.

Q9: What practical arrangements should we introduce to ensure adequate ring-fencing of the innovation funding?

Stage 1: We agree that neither the start nor the end of the charging year would be appropriate for payment transfer timing. As such, we believe that a practical and simple timing point would be the mid-point of each year: 1st October, the start of Q3. This seems to be the same as per Annex 3. It would aid transparency and cash flow planning if this date were fixed for all years, so the administering organisation knows the timing in advance and can organise payments accordingly.

Stage 2: We support the use of an administering organisation. The appointment of this organisation will require strong assurance over the ring fencing and transparency of the cash flows and balances.

Stage 3: Accountability of the funding awarded is critical for confidence in what will be a high profile area. All stakeholders will need to have confidence that the money has been well spent and delivered according to the project remit. Transparent annual reporting on a project by project basis of the cash flows and balances will be required.

For collaboration programmes, we agree that there should be an identified water company sponsor that would be the lead in terms of accountability and financial management.

Q10: Do you think the proposed innovation challenge approach will help better enable partnerships and collaboration between companies and third-parties, in particular smaller innovators? Are there alternative approaches we should be considering? How can we make sure this approach works in practice?

We recognise that the innovation challenge approach opens up opportunities to organisations that are not already in dialogue, or even known, to water and wastewater companies. For this to be successful we need a clear articulation of the need / opportunity, current state of the art, challenges to be

addressed, potential benefits and wider market opportunity. This approach enables a wide reach but is likely to generate many unsuitable proposals for 'solutions' or approaches and therefore demands a high overhead in terms of proposal assessment and screening, and a flexible approach to managing IPR.

The innovation competition approach allows for proposals to be co-created between problem owner and solver, meaning they are likely to be much more focussed on the addressing the key barriers and much more cognisant of the current state of the art; they are also much more likely to be limited to current sector knowledge and players. The ideal is a hybrid pipeline approach that employs an open innovation challenge approach to identify novel concepts and technologies, and extends the breadth of potential collaborators, followed by a competition funding approach to enable co-created collaborative development and roll-out.

Q11: Do you agree with our proposed approach to returning funds to customers? Are there any other circumstances, not considered here, under which we might consider returning funding to customers?

We agree with the distinction that Ofwat makes between innovative endeavours not always succeeding and any non-compliance with funding conditions. It is important that companies are encouraged to submit projects that have a possibility of not directly succeeding, but will contribute towards the sector collective understanding and knowledge base. Excess funding arising from underspends or under delivery should be returned to the innovation fund pool, although this may be for legitimate reasons (greater efficiency / scope change through learning) and thus should not be presented as failure but as a simple automatic mechanism. It would undermine credibility to require an efficient project to simply spend more money to avoid criticism. Participants that voluntarily return funding to the pool should thus be credited for their transparency.

It is important that proposals for longer term projects are not constrained by the 2025 'cut-off date'. As such, the mechanisms such as the innovation funding mechanism model and the PR24 models should recognise that funding and expenditure can straddle the 2025 date and ensure a neutral set of compensatory adjustments where necessary. We note there is an allowed future expenditure input to the reconciliation model which should allow that to happen.

Finally, in reviewing the reconciliation model, we noted that the Innovation funding return tab, cells F29-45 have a #REF in the formula which needs correcting.

Q12: Do you agree with our proposed approach for managing interactions with the price review?

We agree with Ofwat that impacts on ODIs of innovation trials should be minimal and could be positive or negative. As such, the default position should be to not make any changes to the ODI regime for innovation

Q13: Do you agree with our proposed amendments to the principles? Are any further amendments to the principles required to reflect our approach to outstanding policy issues outlined in this document?

We recognise that innovation is about bringing about sustainable beneficial change, and that the more widely such changes can be applied, the better. We agree that it is reasonable to expect companies to set out clear plans for implementing change arising from projects in their area; all innovation should be outcome-driven and based on a credible pathway to impact, be that reaching the next defined milestone or gateway, being successfully put into operation or being commercialised for the open market. For a variety of reasons arising out of contextual differences between companies, not every project output will be suitable for roll out across all, or perhaps any, other companies so we agree with the principle of expecting plans for wider roll out to be set out 'where appropriate' and would urge that funding selection criteria do not penalise projects that, for good reasons, are unlikely to meet the 'appropriateness' test.

We fully support the amendment to Principle 5; we are committed to supporting the innovation competition and a minimum 10% contribution, accepting that this too may be in many forms, is an acceptable minimum.

Q14: Do you agree with our proposed focus, major strategic themes and overall approach for the competition?

We agree with the proposed focus and note that the joint Water Innovation Strategy aligns with this proposal both in terms of 'what' we will innovate: the Water Innovation Strategy contextualises the challenges around each of the proposed strategic themes, highlighting innovation opportunities in the short, medium and long-term; and 'how' we will innovate: a set of guiding principles and innovation enablers address the cultural and ecosystem aspects of water sector innovation, including public value, open data.

We support the overall approach for the competition, recognising that some enabling activity will be required to support both the Innovation in Water Challenge and the main competition. We suggest that in order to best engage with stakeholders, particularly innovators and solutions providers, a clear distinction should be made between the purpose and processes of each funding route.

Q15: What is the appropriate split of available funding between the Innovation in Water Challenge, the main competition and enabling activities?

We suggest that enabling activities and the overheads of the administering the innovation fund, competition and challenge should be allocated around 5% of the total fund, although we would expect this to be front loaded in the period in order to best support actual project funding through the rest of the period.

Q16: What are your views on the feasibility of running all three types of activities in the pilot year, and on the proposed timings in Annex 3?

We suggest that the enabling activities and infrastructure should be in place early, even before running the first competition; some elements of the required enabling activity could be the focus of the first competition, for example to establish certain elements of the virtual Water Innovation Centre. We are aware that the timescales generally accepted to be required to develop and scrutinise high quality innovation funding proposals run into months rather than weeks and requires specialist resources. It seems ambitious to look to run both the Innovation in Water Challenge and the main competition in the first year. The Challenge approach would seem to lend itself to a more rapid start and should generate insight that could be applied to the main competition.

We specifically support the proposal for a review at the end of the pilot year, as there will be lessons to be learned about how the scheme can work best. It may be that the process can be simplified or streamlined in the light of experience for example.

Q17: Do you agree with our proposed approach to key implementation considerations outlined here?

We welcome the proposal to appoint a supporting organisation to design and run the innovation funding competitions and to recruit an independent expert panel to advise Ofwat on project funding decisions and look forward to working with both to develop and implement the mechanisms and evaluation criteria that will underpin the funding programme.

We welcome the assurance that decision making will be flexible, proportionate and efficient (and, we hope, rapid) and look forward to working with Ofwat to consider opportunities for transformational change in utility and environmental regulation in support of sector-wide innovation.

We recognise the importance of monitoring the effectiveness of the innovation funding initiative, both the 'softer' outcomes such as embedding a culture of innovation across the sector, broadening collaboration and partnerships, upskilling the sector and in harder outcomes that more obviously deliver benefits for customers and the environment. Measuring innovation is notoriously difficult; we note that the Water Innovation Strategy consultation seeks to address this through further consultation, to learn from others, for example the energy utility sector and to ensure that a measurement framework focusses on i) reflecting sector-level performance against the themes and principles (including open data) set out in the Water Innovation Strategy, and ii) on monitoring the performance and impact of projects funded through any of the three proposed funding mechanisms.

Northumbrian Water

June 2020