

Ofwat Innovation funding and competition: further consultation on design and implementation

Severn Trent Response

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WONDERFUL ON TAP



Introduction

About the consultation

Following Ofwat's decision to make up to £200m of customer funding available for the period 2020-2025, and to hold a collectively-funded innovation competition at least once a year, Ofwat is now seeking views from stakeholders on a number of key outstanding policy issues. It is also seeking views on how funding can be used and its proposals for the design and implementation of the competition.

Overview of our response

As a company we see that there is real potential for innovation to deliver transformative improvements and value for customers. It is this potential that had led us to get active in this field already. For example, we have helped found the World Water Innovation Fund to bring together like-minded global utilities to address common problems and openly share the results. We have invested £5m in a Resource Recovery & Innovation Centre at Redditch Sewage Treatment Works giving us a safe and flexible environment for demonstrating at scale evaluations of innovative technologies. We are also active in the external funding field and have several funders we work with both within and outside the UK – including Horizon 2020, Interreg Europe, Innovate UK, Carbon Trust and the Department for Business, Energy and Industrial Strategy – where we have a track record of securing bids and delivering externally funded projects with these funders and projects partners across the UK and globe.

We strongly support Ofwat's ambition for innovation funding and an innovation competition. Particularly important is the focus on transformative innovation and strengthening collaboration across the sector and beyond. In our view, this will play a central role in boosting the sector's pace of innovation and accelerating changes that will benefit customers.

We have embraced Ofwat's call for water companies to come together and link-up with their stakeholders to develop a joint Innovation Strategy to further innovation in the sector. Currently, we are working actively with UKWIR (UK Water Industry Research) to help develop this strategy. It has the potential to be a useful tool for (i) coordinating innovation activities in the sector and (ii) encouraging collaboration between companies and more widely.

We think that Ofwat's plan for an innovation one-stop-shop will be of benefit to innovators, particularly amongst the small businesses that might be looking to partner up with water companies. We can see that helping potential innovators understand the relevant rules and regulations is likely to increase the number of businesses looking to take part, as well as the quality of any innovation proposals that they then put forward. We understand that Ofwat will seek views on potential one-stop-shop activities separately from the current consultation, and we look forward to participating in that process.

In our view, Ofwat's intention to clarify plans for managing IPR and royalties is a sensible move, particularly as such clarity could help reassure potential innovators that are new to our sector and so widen the pool of innovators. Further support for widening the talent pool is likely to come from proportionate arrangements that reflect project size, as this should help encourage smaller innovators to take part.

We agree that additional funding contributions beyond water company contributions are worth considering. Not only would this help manage demand on the innovation fund, it should also increase the number of innovations developed. Arrangements for match rate funding are a logical part of this – a proven approach used by other funding bodies.

When it comes to avoiding bias towards certain types of project, we think it is worth considering whether sufficiently exceptional circumstances could arise that would justify a certain degree of bias. One example is the impact of COVID-19 on water demand, where we have seen a step-change increase across the country. This

raises the question whether innovations focused on water demand could prove additionally beneficial at this challenging time.

Response to the consultation questions

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 are supportive of the approach of separating out Background and Foreground IPR. We are also supportive of participants retaining all rights to their Background IPR, ensuring the ownership of and having the rights to grant a licence for the purposes of the project. We believe there would be benefit in extending the guidance to include Sideground IPR; where partners may develop or acquire IP in parallel to projects. We would propose Sideground IPR are considered in the same way as Background IPR and are not shared with other project partners unless a separate agreement is reached.

In the case of joint IPR results, we agree that these should be shared proportionally by project partners and we have proposed an approach for this in our response to question two.

For clarity, we believe there would be benefit in expanding the guidance beyond royalties to include internal business use and further research, including rights to a sub-licence and access to international markets related to all types of IPR.

One of the key benefits of the fund is to enable companies to trial and develop transformative innovations while managing the associated financial, operational and reputational risks. We agree the entire sector needs to benefit and implement innovations sponsored as part of this fund. To us, the proposed default arrangements that are further detailed in the later sections, appear to offer little incentive for those companies that contribute the 10% match funding and take the inevitable risks associated with transformative trials.

We would also draw attention to the approaches of other established funding bodies such as Innovate UK and Horizon 2020. These actively encourage IPR management and royalty agreements to be established between trial partners to both support the wider economic benefit of the funded innovation and incentivise the Innovators/SMEs involved in the development of the technology. We would flag that there's a risk that the planned approach for the water innovation fund may discourage some Innovators/SMEs if they will automatically have a reduced claim to the Foreground IPR and associated potential revenue both inside and outside of the sector. It is worth keeping in mind that these Innovators/SMEs are also more likely to be responsible for more transformative innovations sought by the sector.

It's also worth considering whether the case-by-case proposal of 'alternative treatment of IPR' will result in a slower project selection, trial initiation and implementation. Agreements are often a limiting factor when it comes to the pace of the trial and ultimate implementation if successful, and so it is essential that there is clearer guidance to add detail to the high level IPR approach.

To us it appears that the proposed IPR and royalty arrangements may not support or incentivise companies – who choose to trial and develop transformative innovations – to manage the financial, operational and reputational risks associated with innovation. Furthermore, we see that there is a risk that the proposals may discourage some companies from collaborating on transformative innovations, ultimately increasing costs to the sector. A further potential risk is that companies could see such projects as being high-risk but low return and so decide not to progress them. We have suggested options for updating the proposals for consideration in the subsequent section.

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

It is our view that IPR collaborations should be encouraged, with royalty caps, defaults and payment deferrals being set out within the fund guidance. This could both benefit and attract Innovators/SMEs who can openly build maximum royalty payments (capped & shared amongst collaborating partners) into their innovation business models while water companies are rewarded fairly per trial. This would reward those companies that choose to take on the associated innovation-related risks through collaborations, while reasonably limiting the potential benefit received by such companies and avoiding significantly disadvantaging companies not involved in trials.

Regarding IPR, licence agreements between SMEs or the supply chain could be encouraged by including time-limited discounted purchase agreements and/or licensing fees. This would enable those companies not directly involved in the trial to not be deterred from purchasing and deploying the innovation in the early stages while innovators/SMEs are rewarded with an available market. Companies could then review the need and efficacy of the innovation when the discount-period ends to ensure customers receive a fair return and access as part of their indirect investment in the innovation.

If project partners are unable to agree on terms related to any Joint IPR then we believe a default model could be used. Joint rights could be licensed between parties to create a division of the market for commercial exploitation, a regime for managing the protection of said IPR and a regime for exploitation such as limits or profit sharing. This would of course comply with competition law.

Finally, we would also recommend that an IPR register for the management of all IPR is implemented in order to ensure effective overall IPR management and alleviate potential conflict between parties.

All proposed changes would help enable agreements to be reached faster between companies and Innovators/SMEs and increase the pace of innovations being initiated.

The proposals above would be suitable for all types of innovations.

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

Like many utilities the water sector has an abundance of data that could help inform, test and improve innovation technology and research. There are considerations detailed below that we feel would benefit from further clarification.

There will clearly be some examples of data that will require further consideration and a planned or restricted approach; for example, commercially sensitive data, personal data protected by GDPR and critical asset data. A requirement that participants of the fund outline the data that will be made available as part of the project could be included as part of the bidding process. This may be a suitable way to consider data on a case by case basis. There could also be a standard pre-requisite that a minimum amount of data will be shared e.g. the results of the trial. An instrument which details pragmatic rules around data sharing could be included within project agreements.

It is likely that many innovations will require technical experts to work with 'fast-following' companies to help support the transfer of knowledge and implementation of the innovation, requiring the sharing of trial data. For simplicity within the funding T's & C's, a confidentiality clause could be included to ensure trial data is protected, whilst also including a commitment to make data available upon request for the implementation of the innovation.

For Innovators/SMEs, an open-data approach may disadvantage these groups from registering patents by allowing competitors to access their trial data to develop an improved technology. This means that the release

of trial data could exhaust any potentially patentable rights if it discloses the efficacy of an inventive step. This also supports the recommendation for a clear confidentiality clause within the funding T's & C's to address this issue.

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

We agree that additional funding contributions beyond water company contributions should be considered to help limit the demand on the fund and increase the number of innovations developed.

In addition, how commercial partnerships could be arranged in line with bid windows while remaining compliant with the Utility Contract Regulations 2016 would need clarification, as any innovation partnerships or procurement will need to be through tender/framework and ensure single companies are not being unfairly advantaged.

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

We actively support company contributions and agree with the 10% match rate. We assume based on other funding schemes that the 10% contribution would apply to all project participants as part of their discrete budget but seek clarification on this point from Ofwat. This is a proven approach as many existing funding bodies require a match contribution as part of successful applications for grants.

To incentivise organisations such as SMEs and those in academia, other funding bodies either reduce or remove the need for match funding from these types of organisations. We believe a similar approach to this could be employed for the Ofwat Innovation Fund.

We think there is benefit in incentivising companies leading on innovation trials and taking on the associated risks (i.e. through IPR ownership and royalties). The methodology should also encourage fast follow and fast roll-out, but not a 'watch and wait' approach.

Q6: Do you agree with the overarching approach we set out here (being guided by Joint Innovation Strategy and retaining flexibility to avoid bias towards certain types of projects)?

While we do not wish to promote an unfair bias towards particular innovation areas, we accept that some coordinated bias may be beneficial. Water demand has increased exponentially across the country as a result of COVID-19 and innovations to reduce demand would be hugely beneficial to the industry.

We believe innovation calls should be as open as possible to ensure innovations are selected on their merits rather than formalised through criteria that could inadvertently result in less transformative innovations being progressed.

We also appreciate that a surplus of innovations will be unsuccessful in securing grants from this fund but would ultimately be worth pursuing. Guidance and any potential restrictions or considerations for companies continuing to progress these innovations would be helpful to allow consistency across the industry.

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 agree that having proportionate arrangements and governance that reflect project size would encourage smaller innovators to take part in projects. Key to small project funding is a straightforward application process, quick turnaround/fast-track decision-making from the funder and simple governance around project monitoring and claims (e.g. Innovate UK's Knowledge Transfer Partnerships). SMEs typically respond well to participation in grant programmes when the match-funding required is negligible or zero and when support with bid-writing is available.

The level of scrutiny and assessment by the Fund Administrator should ensure proposed projects support the themes set out in the joint Innovation Strategy and will deliver benefits for customers.

It is our opinion that the fund should benefit customers in the following ways:

- Large-scale, transformative solutions which can be within sector/ across multiple sectors that provide a step-change and benefit water customers directly or indirectly. (For example, the application of fibre within waste and water pipes for both monitoring and communication/internet purposes).
- Small-scale projects, likely to be within-sector that benefit from the industry acting to both create a sustainable market for the resulting innovation and work together where regulatory change/approval is needed. (For example, developing a low temperature cure sealant for distribution service reservoirs would reduce customer supply interruption times across the industry).
- Enabling work needed to develop or implement innovations. We see this as both physical enabling works and research for earlier TRL innovations.

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?

The benefits of innovation to customers are only realised when that innovation is implemented and rolled-out, so we believe it makes sense for the competition to be designed to reflect and incentivise this. Bid documents should detail a roll-out plan and a proportion of the funding should be allocated to support this. It may be that a number of stages are required to reduce the risk of roll-out, for example (and depending on the starting TRL of the technology) after successful piloting there may be the need to trial at large 'demonstration' scale (as a final stage prior to full scale permanent roll-out). Here the use of existing 'test beds' or 'living labs' infrastructure could be an efficient way deliver great benefit and value.

In addition, using a jointly developed and approved technology verification system would give added confidence and reduce the risk for both leaders and early adopters. The EU's Environmental Technology Verification (ETV) scheme may make a good model to base this system on – it has been used successfully in Horizon 2020 research programmes.

A comprehensive Exploitation Plan that is agreed before project inception is also key to roll-out. Although subject to change through the project life cycle, this maps out:

- intended roll-out post-project
- commercials including IPR, licence free agreements, royalties, etc
- roles and responsibilities of project partners post project
- risk and rewards
- integration of new knowledge

- necessary policy and regulatory development for successful exploitation
- skills and educational opportunities
- actionable outputs

The crucial element here is that the risk and reward for leaders and followers is clearly articulated, proportionate and forms part of the funder's evaluation process.

The reward for leaders has been detailed in earlier sections; however, we believe rewards for roll-out should be available. Where enabling activity is required, this should ideally be detailed in a bid document as part of the enabling competition.

Roll-out reward could also benefit Innovators/SMEs by establishing an available market quickly. Roll-out rewards could relate to the number of orders placed over a defined period (with safeguards on cancelled orders). This could be one way for companies to demonstrate commitment to an innovation while providing stability and guaranteed turnover for SMEs. This approach could also be a fair way to balance the difference between capital asset innovations and smaller-scale solutions. Capital asset innovations by their nature will take longer to implement than smaller scale or later TRL technologies.

Another factor in fast roll-out will be knowledge sharing. It is our belief that companies could be rewarded for the 'packaging' of trial outputs (where a selection of companies are involved directly in trials). The packaging of these projects could be assessed on their ability to guide and support implementation by fast followers and would incentivise roll out plans to be comprehensive and implementable.

Existing funding bodies such as Horizon 2020 promote the value of leverage funding, where partners have access to the findings and results of all other projects within the programme. The open, shared approach of this fund should encourage sector and non-sector partners to benefit from this leveraged funding and associated knowledge. Further clarity would be beneficial to understand if partners are likely to benefit from funding itself or just the data produced in the projects it funds.

We consider part of the enabling fund could be used to support smaller companies and their customers without the same reserves and manpower available to implement innovations quickly. While they would be disadvantaged from any 'fast follow' reward, they may ultimately have access to a greater proportion of the enabling fund, depending on the criteria used.

One additional watch out is that incentivising fast following could give an unfair advantage to one supplier's product over a competing product. It may be that at the point of writing the bid, initial soft market testing has been completed to ensure there are no existing alternative solutions on the market. However, by the time the innovation is ready for roll-out, there may very well be competitor products on the market.

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

The implications of COVID-19 on our customers' ability to pay their bills has been seen across the sector. Whilst monies need to be available for successful bids to draw from, we propose the following, in line with existing funding bodies such as Interreg:

- An upfront pre-finance payment is released to projects. This will support fast purchase of materials or services to enable trials to be initiated quickly.
- Payments are based on audited claims, with set claim periods. All work, associated time etc is tracked and audited. Once assurance has been given, the fund administrator releases funds made in that claim period. We believe this approach would enable companies to pay monies into the fund periodically and would

reduce the burden on available cash flows. An auditable approach will also provide customers and regulators with additional assurance throughout the innovation trials.

We are supportive of Ofwat's proposal for reporting on the Innovation Competition in the APR, as set out in the "Consultation on regulatory reporting for the 2020-21 reporting year". We will respond with detailed thoughts on the table through that consultation, but believe that this structure will help to deliver the transparency and robustness of reporting required.

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?

It is important to encourage participation of SMEs and academia (both in the UK and internationally) and we support the idea of an innovation challenge. If managed effectively this could enable those lower TRL (higher risk) but potentially transformative ideas not only to get off the ground, but to lay out a clear path to full scale implementation. We suggest the competition is designed to provide not only the necessary funding, but also to ensure access to trial sites, and to industry guidance and expertise. We think that the centre of excellence, proposed in the water sector joint innovation strategy, would be the best place to provide this support and signposting for SME's.

We believe that proactive, wide-scale communication of the fund will be critical to success to ensure engagement with SMEs. This communication could attract international as well as UK interest. We also believe that good quality application materials will be another key to success for the innovation challenge (the application materials should provide focus and clarity of the 'scope' of any call/invitation to bid. A range of support avenues such as telephone/web support will enhance quality and quantity of potential applicants).

We asked some of our current small innovator partners for their views and they provided the following responses:

SME 1 Response:

"The GovTech Catalyst model provides a clear framework with the correct funding and procurement structure to ensure projects are beneficial to innovator business development strategies, including gaining investment. Independent monitoring to ensure awarded projects are carried out to the expected scope and timeline will be required but it must be considered what is suitable for small companies to report in terms of their available resource. Ensuring a balanced focus on technology development and reporting is key. More regular project updates using a 'light touch' reporting method would be preferred."

SME 2 Response:

"The major challenges for small innovators are money and resources.

Creating a facility that allows testing of early stage prototyping with water authority engineers and health and safety/compliance on hand would be invaluable to work through the shortest route to failure which is great for the innovator and its funders and great for the water authorities.

Having a team that know where you are on the Technology Readiness Level scale would be very helpful.

It is all about team building and how you build it around an innovation at the right time and find the best people. The team needs to believe in change and progression.

The customer is the key, the product must be what the customer needs and can afford, water companies need to make themselves a customer for innovators."

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 support the approach of returning funds to customers where the project has not been effectively managed in the agreed or expected way. We also think that the approach should be open to the possibility that a fail fast approach could see projects end early. If a company demonstrates effective management of the innovation project and that project is killed because it is recognised that it will not be successful, then it seems reasonable to think that companies would not have to return funds for the costs already incurred on the project.

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

We do not share the concern that some companies have around trialling innovation that could have a negative impact on ODIs. In our view, this is likely to be a known risk which is managed through the relevant risk assessments and mitigations within any project and would not deter us from trialling innovative solutions.

There is one area where we think some additional clarity could prove useful. Based on the APR21 consultation that is ongoing, we expect that a version of the new section 9 – Innovation Competition will form part of the Price Review 24 data tables. We think that consideration should be given to the time period these cover and the interaction of “carryover” spend that could potentially occur between AMPs.

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 are supportive of the principles, providing they support the commercial success of a project for the innovators involved. We support incentivising roll-out if there is a Utility Contract Regulation 2016 compliant way to do this which also rewards the first to act.

Whilst we recognise that the fund must benefit all customers in England and Wales; we also acknowledge that climate, geographical landscape, population density and demographics of each region within England and Wales will differ. Therefore, there may be examples where there is a need to prioritise different innovations in each region.

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

We agree with the proposed focus and strategic themes and believe these should link to the water sector joint innovation strategy. We support the approach of funding some higher TRL projects in year 1, whilst identifying the longer-term strategic projects. We also agree with releasing funding for enabling activities.

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

We assume that projects funded under the ‘Innovation in Water Challenge’ will be delivered at pace. This would lend itself to a more frequent fast-track approach to the release of funding, potentially requiring a lower funding

amount to be available in this category. We propose that the centre of excellence could be suitable to run the 'Innovation in Water Challenge'.

The 'Main Competition' which involves larger, more strategic projects, would suggest that this element commands the larger share of available funding.

We would like to seek clarification on what sort of activities would go into the three areas and are particularly looking for clarification on what would be included in the enabling activities. We would like to understand if funding could be released early for enabling infrastructure such as developing a centre of excellence and creating a repository and strategy for open data.

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 believe it is feasible to run all three types of activities in the first year and would support this. As above early access to the enabling funding would also help support this.

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

We agree with the proposed approach overall. We believe there needs to be an "audit approach" to claims.

For example:

- Payments based on audited claims, with set claim periods.
- All work, associated time etc is tracked and audited.
- Once assurance has been given, the fund administrator releases funds made in that claim period.
- An auditable approach will also provide customers and regulators with additional assurance throughout the innovation trials.

This approach would enable companies to pay monies into the fund periodically, reducing the burden on available cash flows, while encouraging accurate project forecasting from companies which the administrator could use to ensure the necessary funds are available.

We believe the independent panel will need some water sector experience/knowledge in order to establish which projects are more important. We also believe that the independent expert panel should have a transparent and measurable evaluation process similar to EU funding bodies that follow a point/score-based approach with feedback on funding decisions.