Innovation funding and competition: Further consultation on design and implementation

Open Data Institute response June 2020

About the ODI

The Open Data Institute (ODI) is an independent, non-partisan, not-for-profit organisation founded by Sir Nigel Shadbolt and Sir Tim Berners-Lee in 2012.

The ODI wants data to work for everyone: for people, organisations and communities to use data to make better decisions and be protected from any harmful impacts. We work with companies and governments to build an open, trustworthy data ecosystem. Our work includes:

- **pilots and practice:** working as a critical friend with organisations in the public, private and third sectors, building capacity, supporting innovation and providing advice

- **research and development:** identifying good practices, building the evidence base and creating tools, products and guidance to support change

- **policy and advocacy:** supporting policymakers to create an environment that furthers an open, trustworthy data ecosystem

We believe that:

- Sectors and societies must invest in and protect the data infrastructure they rely on. Open data is the foundation of this emerging vital infrastructure.
- Everyone must have the opportunity to understand how data can be and is being used. We need data literacy for all, data science skills, and experience using data to help solve problems.
- Data must inspire and fuel innovation. It can enable businesses, startups, governments, individuals and communities to create products and services, fuelling economic growth and productivity.
- Everyone must benefit fairly from data. Access to data and information promotes fair competition and informed markets, and empowers people as consumers, creators and citizens.
- People and organisations must use data ethically. The choices made about what data is collected and how it is used should not be unjust, discriminatory or deceptive.
- Everyone must be able to take part in making data work for us all. Organisations and communities should collaborate on how data is used and accessed to help solve their problems.
- Furthermore we believe that open innovation can enable wider access to talent, expertise and creativity, increased capacity, faster development processes and an opportunity to reduce costs[1].

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[1] https://theodi.org/article/what-is-open-innovation/

We have a mixed funding model and have received funding from multiple commercial organisations, philanthropic organisations, governments and intergovernmental organisations to carry out our work since 2012.

Consultation response

Intellectual Property Rights and royalties

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.)?

1.1 We agree that distinguishing between Background IP and Foreground IP is useful and we agree with the allocation of Foreground IP to those who created it. However, we believe that the outcomes from the innovation funding would be improved if there was a requirement for Foreground IP to be openly licensed to allow unrestricted use across the sector and beyond, for two main reasons:

a. We believe that the best overall outcome for the sector will arise if the products developed through the innovation funding were available to everyone with as few restrictions as possible, as this allows them to be further developed, reused and built upon. These spillover effects are significant drivers of innovation around non-rival resources such as data, code, documentation and other intellectual property. Open licensing will also enable greater collaboration across different projects funded through this innovation funding, and avoid unnecessary and wasteful duplication of effort.

b. The Foreground IP is being developed with public (customer) funding. Under the proposal, this is likely to turn into private profit. It is good practice for public money to be used to create public assets, which can either be achieved by the transfer of IP to the Crown or the open licensing of those assets. Openly licensing code and other assets generated through the innovation funding is also consistent with Ofwat's commitment to open data and information.

1.2 We recommend that where there is significant Background IP involved in the development of a solution, e.g. in the case of tailoring or trialling a platform for specific purposes, that there is a commitment to a free usage period.

1.3 We also recommend that smaller businesses (startups and SMEs) are given more leeway to use more restrictive (non-open) licences than larger (water) companies. Where the innovation funding is being used to stimulate the creation of new products and services by

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smaller businesses, those businesses will need to develop a revenue model, which will likely involve charging water companies as customers. The IPR they develop will therefore need to be protected.

1.4 Note that open licensing only addresses rights arising from intellectual property law. Other rights, such as data protection rights, may still apply such that particular data generated as part of the innovation process might not be made available to everyone in an unrestricted way.

1.5 We recommend that bids to the fund include details of the assets being produced, and details about the intended licensing and access arrangements that will be used for them.

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

2.1 See our response to Q1. We think Ofwat should consider an arrangement where Foreground IP is openly licensed by default, particularly when the recipients of the funding are the water companies themselves. This would reduce the requirement for a complex and administratively costly accounting of royalties; instead, customers will get a return on their contributions by benefiting from the innovation and efficiencies delivered through the innovation funding.

Open data and information

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

3.1 The ODI agrees that data generated through the innovation competition should be as open as possible, and open by default. Data that isn't open should be the exception rather than the rule (i.e. something that participants have to justify for reasons such as privacy or security) and should still be made available as widely as possible (e.g. through secure research environments).

3.2 One reason the ODI promotes open innovation is that it can help to build and establish trust between participating organisations, enabling innovation to be developed with shared outcomes in mind. Working openly with others provides the greatest opportunity to innovate collaboratively and share problems, findings and opportunities.

3.3 Making data open requires organisations to license it with an open licence. An open licence is one that places very few restrictions on what anyone can do with the content or data covered by that license.

3.4 Using open licences[2] for data and other assets such as code, enables a wider network of organisations to participate in and generate ideas and innovation. This therefore creates a more dynamic and multifaceted ecosystem.

3.5 As well as considering data that is generated through the competition, we would recommend encouraging the open licensing of data be built into any new services that are launched via the competition. Data may be required as an input, for example to drive analysis, or train models. This data should also be as open as possible. The challenge design should have an eye on building the long term data infrastructure required to make the challenge solutions sustainable in the long term.

3.6 Finally we would stress that for data to remain current, useful and valuable in the long term, it will be important to think about how the data is maintained, stewarded and governed. This includes both the underlying data used to generate new innovative services, and the outputs of those services. This may require the development of a data institution[3], for example as part of a broader role for the innovation "one-stop-shop", or Ofwat taking on additional responsibilities for stewarding this data on behalf of the sector. An independent data institution will help with independent decision making around access to data, build trust, develop standards, advance interoperability, explore further licensing considerations, and develop any processes needed for longer term sustainability.

Risk sharing

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

4.1 No response

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

5.1 No response

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[2] https://theodi.org/article/publishers-guide-to-open-data-licensing/

[3] https://theodi.org/article/designing-trustworthy-data-institutions-report/

Types of projects funded

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

6.1 The mix of project types and sizes outlined appears to be an appropriate way to explore small scale, high risk projects, as well as support the roll out of successful solutions.

6.2 Furthermore the iterative agile approach is appropriate for a programme of this type and the intent to use the water companies' innovation strategies to guide the definition of the challenges, gaps and opportunities will ensure internal buy-in from them.

6.3 From our experience in running data innovation challenges, we recommend having separate tracks for solutions focused on the different stages of the innovation process, for example prototypes, pilots, roll-outs and scale. This will help set expectations of desirable outcomes and deliverables for all the parties involved, as well as enabling the planning of more targeted stakeholder engagement.

6.4 For solutions focused on roll-out and scale, we recommend having a fast-tracked internal procurement process within the organisations (such as water companies) that would be responsible for the roll out of the solution or its procurement, to avoid delays and bottlenecks. Ideally this procurement process would be co-designed by the water companies so it is standardised and widely adopted.

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?

7.1 We believe that introducing arrangements for small-scale projects can help to encourage a broader range of experimentation with innovative uses of new technologies, and may help to kickstart new collaborations and ways of working. Though these projects may have a high risk of failure, they provide a useful way to encourage innovation. Consequently, this type of project may not require the same level of project governance, or expectations of achieving market impact, as larger investments that are intended to support bringing new products and services to market.

7.2 Typically, these projects would tackle a defined and relatively simple challenge, usually prompted by the desire to test an assumption, test new technologies, or explore a problem area by undertaking new data analysis and collection. Armed with greater insight, project partners may then be supported in scaling up their project through other elements of the challenge.

7.3 We believe that small-scale projects could be defined based on a range of factors including: introducing a cap on the size of funding awarded, restricting project length, requiring a focus on exploring a specific research question vs developing a new product or

service, and an emphasis on building collaborations and testing new technology or approaches.

7.4 Due to the minimal financial contribution and time needed to develop small-scale solutions, we recommend using a model such as a stimulus fund[4] rather than a challenge. A stimulus fund would significantly reduce administrative and operational costs.

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?

8.1 No response

Protecting the innovation funding

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

9.1 No response

Partnerships and collaboration with third-parties

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?

10.1 We believe that the approach to the proposed innovation challenge is sensible and aspirational. However, in order to ensure the principles work in practice, we recommend the application process includes direct incentives to include SMEs and startups as partners in the bid. This could be done either as a requirement or as a weighted criteria part of the scoring.

10.2 Other approaches to encourage participation of smaller innovations could include offering 100% reimbursement of costs for startups, SMEs, academic institutions and not-

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[4] ODI 'Data access initiatives: stimulus fund' (2020) https://theodi.org/article/invitation-to-tender-data-access-initiatives-stimulus-fund-rdpm-041/

for-profit organisations, or other financial incentives that are not offered to water companies or larger private sector organisations.

Protecting customers' interests

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?

11.1 No response

Interactions with the price review

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

12.1 No response

Updated principles

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?

13.1 Yes we agree with the proposed amendments to the principles. We do not have any further amendments to propose.

Piloting the innovation competition and innovation activities (2020-21)

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

14.1 The strategic themes are appropriate and relevant. We would recommend that ahead of the open call they are narrowed down in order to prompt more specific areas of interest in line with the joint Innovation Strategy.

14.2 The activities and objectives identified in the three strands are good but the approach and design could be simplified. We would recommend the following:

14.3 The Innovation in Water Challenge could be focused on short-term exploratory projects designed to create prototypes and simple pilots to address some easier challenges – e.g. those focused on data analytics – and aimed at testing some assumptions. Running a series of these challenges for the first year would provide a pipeline of tested assumptions and early-stage solution development to provide solid foundations for more complex and strategic scalable roll-outs for the main competition. Ideally the water challenge would run for 1-1.5 years. The ODI supported the EU-funded Data Pitch[5] programme, which used a similar model.

14.4 The Main Competition should be launched off the back of the Innovation in Water Challenge, with updated challenge statements based on the tested assumptions, findings and early-stage solutions. This ideally would launch in year 2 and would run for the rest of the programme's duration. In the main competition, particular emphasis should be put on developing technical solutions that are scalable both geographically across the country and within different organisations. The OpenActive initiative,[6] stewarded by the ODI, used a similar model to test initial assumptions and create an open data infrastructure that makes it easy to scale solutions across regions and companies, thus increasing the impact created.

14.5 While the Enabling Activities strand highlights some important aspects, we don't think these activities require a separate strand in the competition design. Rather they represent a mindset and way of working which we believe should be embedded in the new culture and innovation approach that all water companies should take going forward.

14.6 We recommend embedding activities such as building peer networks, skills development and culture change into the design of the other two strands. Our experience is that these are an important mechanism to delivering successful solutions and should be tightly connected to the outputs and outcomes rather than being standalone activities. Doing so will also ensure these principles and ways of working are reinforced internally and promote a change of culture from the ground-up.

14.7 Some activities are not tightly connected to the development of a solution within a challenge but are still important – for example the creation of a Centre for Excellence or the development of the necessary data infrastructure or data institutions to steward data. We recommend the water companies contribute to funding these activities beyond the duration of the challenge through a sustainable business model, such as the 10% match-funding envisioned in the programme design, and as part of the 20% funding that is not covered by the grant.

14.8 Outside of the operational aspects of designing the innovation challenge, we also encourage Ofwat to consider the role of existing organisations within the industry, consumer groups and other stakeholders in helping to develop challenge ideas, contribute

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[5] https://datapitch.eu/
[6] https://www.openactive.io/

to innovation projects, share learning and provide insights to help to drive transformation across the sector.

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

15.1 Following our suggestions to have two strands, the Innovation in Water Challenge and the Main Competition, we recommend a split of funding, across the programme, of 25% for the Innovation in Water Challenge and 75% for the Main Competition. This is in line with the different complexity and timescales of the two innovation models.

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?

16.1 While it is possible, we wouldn't recommend running all three types of activities in the pilot year as this would be operationally challenging. Rather we recommend initially testing assumptions and developing some prototypes in an agile way, before defining strategically complex challenges for the Main Competition.

Key implementation considerations

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

17.1 No response.