

April 2022

Innovation fund consultation – Approach to 2022-25 appendices – April 2022

Appendix 1 – Proposed competition themes for 2022-25

1.1 Pilot period innovation fund themes

For the Ofwat innovation fund pilot period we consulted on key themes for the fund in our [May 2020 consultation](#). Based on the feedback we received we confirmed our five key strategic themes for the pilot period in our [August 2020 decision document](#):

1. Responding and adapting to climate change including how to meet the sector’s ambition of net-zero emissions.
2. Restoring and improving the ecological status of our water environments, protecting current and future customers from the impacts of extreme weather and pollution.
3. Understanding long-term operational resilience and infrastructure risks to customers and the environment, finding solutions to mitigate these in sustainable and efficient ways.
4. Testing new ways of conducting core activities to deliver wider public value.
5. Exploring the opportunities associated with open data, stimulating innovation and collaboration, for example encouraging new business models and service offerings that benefit customers, including those in vulnerable circumstances.

These five themes were designed to reflect both the [Ofwat strategy](#) and the Government [Strategic Policy Statement](#) for Ofwat set in 2017. In parallel the sector developed the [2050 water innovation strategy](#) which was published in September 2020. This included seven themes the sector had identified as key areas where innovative thinking was needed to drive change out to 2050.

There is notable overlap in the five innovation fund themes and the seven water innovation strategy themes which we outline below. However, the water innovation strategy's purpose is much broader than the fund, and we expect it to be a key tool for the water companies to coordinate innovation activities and collaborate with each other and beyond out to 2050.

Table 1.1: Ofwat and water innovation strategy theme comparison table

Ofwat key strategic theme	2050 Water innovation strategy theme
Theme 1 - responding and adapting to climate change including how to meet the sector’s ambition of net-zero emissions.	Theme 5 – achieving net zero carbon Theme 6 – taking a whole life approach to responsible consumption and production (zero waste and zero leakage)
Theme 2 - restoring and improving the ecological status of our water environments, protecting current and future customers from the impacts of extreme weather and pollution.	Theme 3 – protecting and enhancing natural systems

<p>Theme 3 - understanding long-term operational resilience and infrastructure risks to customers and the environment, finding solutions to mitigate these in sustainable and efficient ways.</p>	<p>Theme 4 – delivering resilient infrastructure systems</p> <p>Theme 2 – providing clean water for all</p> <p>Theme 1 – Providing the services society needs, expects and values</p>
<p>Theme 4 - testing new ways of conducting core activities to deliver wider public value.</p>	<p>Theme 1 – Providing the services society needs, expects and values</p>
<p>Theme 5 - exploring the opportunities associated with open data, stimulating innovation and collaboration, for example encouraging new business models and service offerings that benefit customers, including those in vulnerable circumstances</p>	<p>Theme 1 – Providing the services society needs, expects and values</p>

The water innovation strategy *theme 7 – enabling diverse future-ready people and partnership working* aligns more closely with the innovation enablers that we believe are, and will continue to be, critical to growing the water sector’s capacity to innovate:

- **Collaboration:** building and strengthening collaboration and partnerships across companies, the supply chain and outside the water sector.
- **Openness:** to sharing data, insights and ideas within the water sector and with other sectors.
- **Adaptability:** flexibility and openness to trying out new ways of working.
- **Innovation risk management:** delivering value from all innovation projects, particularly more experimental projects, even if they fail.
- **Scalability and deployability:** improving the ease of scaling up and rolling out of proven innovations within the sector.
- **Long-term view:** taking both a longer-term and broader perspective to better meet the evolving needs of customers, society, and the environment.

1.2 Evolution of the innovation fund themes

All entries submitted to the innovation fund must align to one or more of the innovation fund themes. As we show in appendix 5, we have seen a good spread of entries across all five of the innovation fund themes to date. However, during the pilot period we received feedback from stakeholders that although the innovation fund themes were clear there was some confusion as to how the innovation fund themes overlapped with and interacted with the water sector's innovation strategy themes. Table 1.1 above outlines this overlap and interaction between the two sets of themes.

The innovation fund and the 2050 water innovation strategy are complementary. The sector strategy has a much broader purpose than the innovation fund as it encompasses all innovation needs to meet the sector goals for 2050. The innovation fund is more focused on identifying transformational innovation over and above incremental innovation to improve

business as usual tasks and on the greatest areas of need for innovation. However, we have reflected on the feedback and reviewed the themes following the first two rounds of competitions and propose to make the following amendments to the innovation fund themes for years 3-5:

Table 1.2: Proposed Ofwat innovation themes for years 3-5

Ofwat key strategic theme	Reason for the change
Theme 1 – responding and adapting to climate change including achieving the sector ambitions of net zero carbon, zero waste and zero leakage	We have included the wording from the water innovation strategy themes 5 and 6. However we believe responding to and adapting to climate change can encompass more than this.
Theme 2 – protecting and enhancing the environment and natural systems, to protect current and future customers from the impacts of extreme weather and pollution	We have amended the wording of this theme to align with theme 3 of the water innovation strategy and the updated Government Strategic Policy Statement for Ofwat 2022.
Theme 3 – delivering long-term operational resilience and understanding infrastructure risks to customers and the environment, finding solutions to mitigate these in sustainable and efficient ways	We have amended the wording of this theme to align with theme 4 of the water innovation strategy and the updated Government Strategic Policy Statement for Ofwat 2022.
Theme 4 – testing new ways of conducting core activities to deliver the services customers and society need, expect and value both now and in the future	We have amended theme 4 to more specifically reference customers and society. Feedback from stakeholders was that the use of public value was ambiguous as it can mean different things to different people and so we have made this theme more specific for years 3-5. It also aligns more closely with theme 1 of the water innovation strategy and the updated Government Strategic Policy Statement for Ofwat 2022.

We propose to remove Ofwat theme 5 going forward as this largely included the innovation enabling activities we outlined on page 2 above.

Q1. Do you have any comments on our themes for 2022-25 of the fund?

1.1.1 Theme or targeted challenge competitions

Within the four innovation fund themes outlined above we could develop more specific and targeted challenges for future competitions.

We are mindful that SPRING is currently running specific and open challenges for innovators and that others in the sector have successfully run a series of targeted challenges eg Wessex Water's marketplace for ideas and Future Water Association Water Dragons. If your responses to this consultation suggest we should pursue this approach, we will work collaboratively with the water companies and wider water stakeholders, to develop more targeted challenges.

To develop targeted challenges, we propose to engage with water companies and wider water stakeholders at least three months in advance of a competition opening for entries to co-develop the challenge(s). We will learn from the experiences of others in the sector who have used targeted challenges to ensure we provide a sufficient level of information for potential entrants.

Q2. Do you think we should use specific, targeted challenge(s) for future competitions? If you think we should, do you have a view on how we should create them and which future competitions we should apply them to?

Appendix 2 – Proposed competition approach for 2022-25

For 2022-25 we propose to:

- split the remaining £120 million of the fund into three annual award amounts of approximately £40 million between 2022-25;
- introduce a new competition targeted primarily at innovators to support earlier stage idea development;
- allocate a portion of the funding (circa £4 million) available for 2022-25 to this new competition;
- remove barriers to involvement for the new competition;
- allow anyone to be a lead entrant in partnership with any organisation for the Water Breakthrough Challenge Catalyst stream;
- allow owners of background IPR to charge a licence fee at a fair, reasonable and non-discriminatory rate for entries to the Water Breakthrough Challenge Catalyst and Transform streams; and
- maintain all other elements of the Water Breakthrough Challenge Catalyst and Transform streams.

2.1 Introduction

We have used the pilot period (January 2021 – April 2022) to drive forward innovation efforts across the sector, challenge water companies to collaborate with a broader range of partners and trial different competition formats and policies. We have been pleased with the positive impacts we've seen from the competitions so far but we can see that there is more we can do to enable more innovation to come forward in the water sector. We provide more detail on progress during the pilot period in Appendix 4 and we provide a summary of insights from the pilot period in Appendix 5.

Under the current innovation fund arrangements any organisation, domestic or international, can enter our competitions as a partner, but only the 17 water companies or 8 NAVs in England and Wales can be lead entrants. A number of innovators and third parties have commented that they have struggled to gain access to water companies to share their ideas during the pilot period. We received a recurring request from innovators and third parties that they would like to be able to apply to the fund directly to demonstrate proof of concept to the broader water sector. Water companies have also indicated that there may be benefit in the fund helping to identify earlier stage, more conceptual innovations (see Appendix 5 for more insights from the pilot period).

Improving opportunities to access the fund will support our aims for the fund to accelerate the creation and roll-out of innovations, grow the capacity and capability of the sector to innovate and to embed a culture that values, encourages and supports innovation (see Appendix 4). Beyond the pilot, in 2022-25 we want to evolve the fund in the following key areas to:

- support more early-stage ideas through the innovation fund;
- allow innovators to have greater access to the fund;
- encourage a wider range of innovations to come forward, including from other sectors;
- reduce barriers to involvement with the fund;
- facilitate new relationships and collaborations across the sector and from other sectors.

We are seeking your views on the proposed approach for the fund beyond the pilot, which we set out in the following section.

2.2 Proposed approach for 2022-25

We propose to split the remaining £120 million of the fund equally over the next three years to award £40 million annually.

Based on feedback from stakeholders we propose to maintain a level of consistency with the pilot period competitions by retaining the Water Breakthrough Challenge Catalyst and Transform streams. However, we propose to introduce a new competition to fund early-stage innovative projects up to £250,000. We provide more detail on the proposed approach below.

2.2.1 New competition

For 2022-25 **we propose to introduce a new competition focused on enabling and supporting early-stage idea development and encouraging direct involvement of innovators with the fund.**

We propose to allocate a portion of the fund (circa £4 million a year) for early-stage initiatives to request up to £250,000. This new competition will be targeted primarily at innovators who can enter the fund alone or in partnership with others. There will be no requirement to enter in partnership with a water company or with any other organisation.

By providing a funding route for lower value entries, it may encourage the exploration of potentially higher risk, more conceptual ideas which could lead to new transformational innovations coming forward. We have received feedback from third parties that the £100,000 minimum entry value during the pilot period was prohibitive and so removing this barrier may attract in new innovators to the sector.

The entry process will be proportionate to the funding available. We propose to have a short entry form to capture key aspects of the initiative and will ask entrants to deliver a short presentation if they are shortlisted for funding.

Intellectual property rights (IPR) – For the new competition, **we propose to remove IPR policy conditions on both foreground and background IPR**. This approach will allow any IPR developed to be retained by the organisation funded.

Risk sharing – For the new competition, **we propose to have no mandatory financial contribution**. Due to the smaller entry values removing this requirement may help to encourage smaller organisations to submit entries.

Q3. If we introduce this new competition focused on earlier stage innovations, would innovators consider entering? Please explain your answer.

Q4. Do you have any views on how we could structure the new competition? We have provided indicative figures above but would welcome your thoughts on entry value limits, the amount of the overall fund allocated to this new competition, the frequency of this new competition (eg annually)?

Q5. Is there anything else we should consider if we introduce this new competition?

The new competition could be open to all innovative ideas as has been our approach during the pilot period. All initiatives entered into the fund must be aligned to one or more of our innovation fund themes (see Appendix 1.2). However, this new competition could be focused in on a specific theme or targeted challenge to guide those organisations new to the water sector (see Appendix 1.1.1). We discuss the role of water companies and water stakeholders more below but to ensure any targeted challenges are focusing in on the highest priority areas for the sector these would be set collaboratively.

Role of water companies and water stakeholders

We want to ensure there is a pathway for early idea progression from the new competition, either through the Water Breakthrough Challenge or through direct adoption by water companies or the supply chain. Through our pilot period engagement stakeholders highlighted that for any innovation to be developed and adopted in the water sector it needs to be procured by a water company or the supply chain. Therefore, we think that water company and wider water stakeholder (eg supply chain bodies, SPRING) involvement in the new competition is important to ensure earlier stage ideas gain sufficient exposure and steer.

We've identified some ways we think water companies / water stakeholders could support this new competition:

- work collaboratively with Ofwat to shape **specific competition challenges**;
- provide **data** to aid the development / testing of early stage ideas;
- **role in selecting winners**, either in assessing feasibility of ideas or providing representation on the judging panel (or both); and
- **role in developing solutions**, by potentially choosing to sponsor a challenge (and subsequently working with all winning entrants), or by partnering with individual entries.

Q6. How could water companies and water stakeholders most effectively support and engage with this proposed new competition?

Q7. Do you have any views on the areas we have identified for potential water company and water stakeholder support?

2.2.2 Water Breakthrough Challenge

During the pilot period we introduced the Water Breakthrough Challenge to fund a broad spectrum of innovation projects. We evolved the format over two competition rounds. The second round is due to conclude at the end of April 2022.

We are encouraged by the level of interest, collaboration, quality and types of entries we have seen during the pilot period and therefore we propose to maintain the Water Breakthrough Challenge with Catalyst and Transform streams for 2022-25. However, to evolve the fund to address the key areas outlined in section 2.1 we are proposing to make a few changes to future Water Breakthrough Challenges.

The **Catalyst stream** aims to encourage new ways of working that go beyond business-as-usual innovation practices in the water sector, in particular, increasing and improving collaboration and building partnerships from within and outside the water sector.

For the **Catalyst stream** for 2022-25 we propose to award circa £6 million a year to initiatives between £250,000 and £1 million. We propose to allow anyone to be a lead entrant in partnership with any organisation.

Transform stream aims to spark ambitious innovation and enable new approaches and ways of working; equipping the water sector to address the big challenges it faces, driving far-reaching and long-lasting benefits to customers, society and the environment across England and Wales now and into the future.

For the **Transform stream** for 2022-25 we propose to award circa £30 million a year to initiatives between £1 million and £10 million. We propose to maintain that any organisation,

domestic or international, can enter the Transform stream as a partner, but only water companies or NAVs can be lead entrants.

We propose to maintain the same entry process as developed for Breakthrough 2 for the Catalyst and Transform streams. See sections 5.1 for the [Catalyst stream entry process](#) and the [Transform stream entry process](#).

For the Water Breakthrough Challenge, we propose running the competition once a year – opening for entries in October with winners announced in April. We intend on opening the next round (Breakthrough 3) in October 2022.

Intellectual property rights

We set out our proposed approach to intellectual property rights (IPR) for the Water Breakthrough Challenge Transform and Catalyst streams below.

Background IPR - This is pre-existing IPR, which exists prior to the submission of any entry to the innovation fund competition. For example, this could involve a product or solution developed prior to entry into the competition and without any competition funding.

Based on the insights we have gained from the Breakthrough 2 Catalyst stream trial (see Appendix 2), **we propose to expand the background IPR policy relaxation to both streams of future Water Breakthrough Challenge rounds**. Our view is that each participant should retain all rights in and to its background IPR, including where a bid involves more than one participant. Owners of background IPR will be able to charge a licence fee at a fair, reasonable and non-discriminatory rate, if use of the background IPR is necessary to receive the benefit of the foreground IPR. Entrants will be required to demonstrate value for money and how, ultimately, customers will benefit from the project being funded, regardless of the licence fee.

Foreground IPR - This is new intellectual property that is created through a project funded by the innovation fund.

We have received feedback that our default policy approach to foreground IPR is a barrier to third party engagement with the fund. We have been clear from the outset that any new intellectual property that is generated through a project funded by the innovation fund must be made available royalty free and in perpetuity to all 17 water and wastewater companies and new entrant water and wastewater companies in England and Wales. The money available through the innovation fund comes from water company customers and so all water company customers in England and Wales must benefit from any foreground IPR generated.

Any foreground IPR royalties earned by water companies in other sectors in England and Wales will be shared with water company customers (in proportion to the funds that customers have contributed to the project). Foreground IPR royalties earned by other third

parties in other sectors in England and Wales, do not need to be shared with water company customers.

We propose to retain our current policy on foreground IPR, so all foreground IPR generated through an innovation fund project must be made freely available to water companies in England and Wales for the benefit of water customers. This does not preclude the commercialisation of that foreground IPR in non-England and Wales markets.

Risk sharing

To encourage entrants to demonstrate a clear commitment to entries into the innovation fund competitions and to ensure that customers do not bear all the risk of projects funded, one of our eligibility criteria has been for entrants to make a 10% mandatory financial contribution to an entry. All entrants to the competitions to date have complied with the 10% mandatory contribution.

There was some initial confusion in the Innovation in Water Challenge (IWC)¹ that the 10% mandatory financial contribution had to be made by the lead entrant. We updated our FAQs for IWC and we amended the eligibility criteria as part of Breakthrough 1² to clarify that all partners in an entry can contribute to the 10%. A number of stakeholders commented that the mandatory financial contribution is a challenge for some to meet. We have reviewed our approach and believe that a 10% mandatory contribution is proportionate and comparable to other competitions where between 5-20% financial commitments are required from entrants.

In the IWC and Breakthrough 1 competitions we saw entrants offering more than the 10% financial contribution on average. Entrants included staff time (strategic support & technical expertise), site/facilities access, data access, sampling and analysis, software/platforms access, dissemination activities, promotional activities, land deals, discounts, training, materials and equipment as part of this additional contribution. In Breakthrough 2 we have seen fewer entrants offering more than the 10% financial contribution, however this was in part as entrants did not specify a financial cost to the in-kind contributions being provided and we received less entries overall. We summarise the average financial contributions made by entrants in Table 2.1.

¹ The IWC, our first competition, was launched in January 2021 and made £2m available to fund entries between £50k and £250k in value.

² Our first round of the Water Breakthrough Challenge (Breakthrough 1) opened in May 2021 and made £40m available to fund projects between £1m and £10m in value. Entries with a lower value than £1 million were permitted for smaller water companies and NAVs if requested.

Table 2.1: Average financial contributions made by entrants

Competition	Average contribution across all entries	Average contribution across winning entries
IWC	14%	21%
Breakthrough 1	14%	18%
Breakthrough 2 - Catalyst	10%	10%
Breakthrough 2 – Transform	10%	N/A

We propose to **maintain the requirement for entrants to contribute a mandatory 10% financial contribution in future Water Breakthrough Challenge rounds.**

Q8. Do you have any comments on our proposed approach for the Catalyst stream for 2022-25? We have provided indicative figures but would welcome your thoughts on award amounts, entry values, entry requirements, entry process and frequency of competitions?

Q9. Do you have any comments on our proposed approach for the Transform stream for 2022-25? We have provided indicative figures but would welcome your thoughts on award amounts, entry values, entry requirements, entry process and frequency of competitions?

Q10. Should we enable any organisation to enter the Transform stream without needing to be in partnership with a water company? Please explain why?

2.3 General questions on the proposed approach for 2022-25

We would welcome your thoughts on the following overarching questions on the proposed approach for 2022-25.

Q11. Does the proposed competition approach for the innovation fund for 2022-25 make you more or less inclined to enter? Please explain your answer.

Q12. Are there any barriers you can see with our proposed competition approach for 2022-25?

Q13. Are there other ways or approaches you think we should consider for the innovation fund for 2022-25 that may better enable new innovations to come forward and / or make future competitions more appealing to innovators?

Q14. Do you have any further comments on either the proposed approach for 2022-25 or your experiences from the pilot period?

Q15. The innovation fund was set up to run between 2020-25, we would welcome your thoughts on if we should consider running the innovation fund, or an adapted version of the fund, beyond 2025.

Q16. To help us improve in future, we would welcome any thoughts you have on this consultation.

Appendix 3 – Consultation questions and next steps

We would welcome any comments on this document by 17 May. Please either respond [online](#) or email your comments to innovationconsultation@ofwat.gov.uk or post them to:

Innovation fund April 2022 consultation response
Ofwat
Centre City Tower
7 Hill Street
Birmingham B5 4UA

If you wish to discuss any aspect of this consultation, please email innovationconsultation@ofwat.gov.uk and we will be in touch.

We will publish responses to this consultation on our website at www.ofwat.gov.uk, unless you indicate that you would like your response to remain unpublished. Information provided in response to this consultation, including personal information, may be published or disclosed in accordance with access to information legislation – primarily the Freedom of Information Act 2000 (FoIA), the General Data Protection Regulation 2016, the Data Protection Act 2018, and the Environmental Information Regulations 2004. For further information on how we process personal data please see our [privacy policy](#).

If you would like the information that you provide to be treated as confidential, please be aware that under the FoIA there is a statutory [Code of practice](#) which deals, among other things, with obligations of confidence. In view of this, it would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information, we will take full account of your explanation, but we cannot give an assurance that we can maintain confidentiality in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on Ofwat.

3.1 Consultation questions

See below a summary of all the questions we would welcome your views on:

Innovation fund themes

Q1. Do you have any comments on our themes for 2022-25 of the fund?

Q2. Do you have a view on if we should use specific, targeted challenge(s) for future competitions? If you think we should, do you have a view on how we should create them and which future competitions we should apply them to?

New competition

Q3. If we introduce this new competition focused on earlier stage innovations, would innovators consider entering? Please explain your answer.

Q4. Do you have any views on how we could structure the new competition? We have provided indicative figures above but would welcome your thoughts on entry value limits, the amount of the overall fund allocated to this new competition, the frequency of this new competition (eg annually)?

Q5. Is there anything else we should consider if we introduce this new competition?

Q6. How could water companies and water stakeholders most effectively support and engage with this proposed new competition?

Q7. Do you have any views on the areas we have identified for potential water company and water stakeholder support?

Water Breakthrough Challenge

Q8. Do you have any comments on our proposed approach for the Catalyst stream for 2022-25? We have provided indicative figures but would welcome your thoughts on award amounts, entry values, entry requirements, entry process and frequency of competitions?

Q9. Do you have any comments on our proposed approach for the Transform stream for 2022-25? We have provided indicative figures but would welcome your thoughts on award amounts, entry values, entry requirements, entry process and frequency of competitions?

Q10. Should we enable any organisation to enter the Transform stream without needing to be in partnership with a water company? Please explain why?

General questions

Q11. Does the proposed competition approach for the innovation fund for 2022-25 make you more or less inclined to enter? Please explain your answer.

Q12. Are there any barriers you can see with our proposed competition approach for 2022-25?

Q13. Are there other ways or approaches you think we should consider for the innovation fund for 2022-25 that may better enable new innovations to come forward and / or make future competitions more appealing to innovators?

Q14. Do you have any further comments on either the proposed approach for 2022-25 or your experiences from the pilot period?

Q15. The innovation fund was set up to run between 2020-25, we would welcome your thoughts on if we should consider running the innovation fund, or an adapted version of the fund, beyond 2025.

Q16. To help us improve in future, we would welcome any thoughts you have on this consultation.

3.2 Next steps

We will consider all responses and plan to publish a decision document in summer 2022. We intend on opening the next round of the Water Breakthrough Challenge for entries in October 2022.

Appendix 4 – Progress during the pilot period

4.1 Competition progress

In spring 2020 we consulted on [the design and implementation of the innovation fund](#) and in August 2020 we published our [decision document](#). We are currently within the Fund pilot period (January 2021–April 2022). The pilot period provided us with an opportunity to trial different competition formats, test policy positions, refine our entry processes, platforms and materials.

Figure 4.1: Pilot period progress



In January 2021 we opened the first competition, the Innovation in Water Challenge (IWC). We made approximately £2 million available for entries up to the value of £250,000 each. In April 2021 we announced the [11 winning entries](#) for the competition and awarded £2.1 million.

In May 2021 we opened our second competition, the Water Breakthrough Challenge (Breakthrough 1). This competition aimed to attract longer term, more strategic projects and made approximately £40 million available for entries valued at between £1 million and £10 million.³ In September 2021 we announced the [9 winning entries](#) for the competition and awarded £36.1 million.

In August 2021 we [consulted](#) on our intellectual property rights (IPR) policy and [decided](#) to trial a relaxation to the background IPR policy in the second Water Breakthrough Challenge competition through the Catalyst stream.

In October 2021 we opened our second round of the Water Breakthrough Challenge (Breakthrough 2). Following feedback from the water sector, we brought together elements from the IWC and Breakthrough 1 to provide a more unified and streamlined process for water companies and their partners to access the fund by creating two streams: the Catalyst stream and the Transform stream. The Catalyst stream made approximately £5 million available for entries valued between £100,000 and up to £1 million. The Transform stream made approximately £34 million available for entries valued between £1 million and up to £10 million. We announced the [13 winning entries](#) for the Catalyst stream on 22 March and

³ Entries with a lower value than £1 million were permitted for smaller water companies and NAVs if requested.

awarded £5.2 million. We will be announcing the winners for the Transform stream in late April 2022.

Table 4.1: Overview of entries received and awarded funding during the pilot period

Competition	Total eligible entries submitted	Total value requested	Stage 2 entries	Winning entries	Total amount awarded
IWC	61	£10.6m	N/A	11	£2.1m
Breakthrough 1	31	£117.2m	21	9	£36.1m
Breakthrough 2 - Catalyst	18	£7.7m	N/A	13	£5.2m
Breakthrough 2 - Transform	13	£59m	9	TBC	TBC

4.2 Progress against the fund aims and objectives

The overarching objective of the Fund is that the **sector can better meet the needs of, and create long-term value for, customers, society and the environment through innovation**, with funding targeted at tackling [key strategic challenges](#).

Based on the insights from the pilot period so far (see appendix 5), we have made progress on all three of the fund aims. However, there is more we need to do to accelerate the creation of innovative products, services and concepts and to grow the capacity and capability of the sector. We have seen good engagement and collaboration in the development of projects related to the fund. Stakeholders have commented that the fund has created a shift in focus for some water companies and there is more of a drive to identify and a willingness to investigate and support new innovations. However, there is more progress to be made here too to embed this culture across all water companies and across the sector.

Figure 4.2: Progress against the innovation fund aims during the pilot period



In relation to the seven intended **outcomes** of the fund, we have made progress against all of these, however, as with the aims there is more we need to do to achieve these outcomes.

Table 4.2: Summary of progress against the outcomes during the pilot period

	Outcome	Progress during the pilot period
1	The industry understands and values the role of innovation in solving long-term problems	We have seen good engagement with the innovation fund themes and with the water innovation 2050 strategy development. The establishment of SPRING and the commitment to this shown by water companies provides further evidence of progress toward this outcome.
2	More partnerships and collaboration across companies, the supply chain and outside the water sector.	We have seen good progress through the pilot period competitions. With more new partnerships being developed in the supply chain and outside the water sector (see Appendix 5.3). We are keen to see the development of more new partnerships both within and outside of the water sector.
3	Projects supported or motivated through the fund are innovative and deliver benefits and learning even if they fail.	The projects we have funded to date have been assessed to be innovative by an expert technical panel and a judging panel. One IWC project has completed to date, with more due to complete over the coming 3-6 months. We will share findings from these projects in summer 2022 when we will be hosting a post pilot event and publishing our evaluation of the pilot period.
4	More openness to sharing data, insights and ideas to support innovative practices within the water sector and with other sectors.	Through our engagement with the sector there is a willingness to be more open to sharing innovations for the benefit of customers, and we've seen much greater coordination of innovation activities between water companies and other stakeholders. We will continue to encourage openness and sharing of innovations through showcase events and post-competition events. The recent creation of SPRING should also help to facilitate the sharing of data, insights and ideas from innovative practices.
5	Barriers reduced to scaling up and rolling out proven innovations within the sector.	Progress against this outcome will become more apparent as the funded projects conclude. Having robust plans for scaling up and rolling out were part of the entry process for Breakthrough 1 and Breakthrough 2.
6	The sector has increased and embedded new innovation skills into their ways of working.	The sector has fed back that the innovation fund has driven some water companies to reflect on and develop their innovation capabilities. Some have developed innovation strategies to work towards embedding innovation into ways of working. However, there is more to do here.
7	Ofwat understands how to better direct and enable innovation in the water sector.	This is an area where there is more work to do. We will continue to engage with the sector to ensure we are enabling innovation in the most effective and efficient ways going forward.

Appendix 5 – Insights from the pilot period

Throughout the pilot period we have sought input and feedback from stakeholders through a variety of different sources, including surveys, meetings, workshops, monitoring reports and consultations. This has helped to inform the changes we made during the pilot period and to inform the options we propose in this consultation. More broadly, the insights we have gained have helped us to better understand the barriers and enablers to innovation.

5.1 Access to the fund

During the pilot period, we have engaged with a broad range of innovators and third parties a number have commented that they have struggled to gain access to the water companies to share their ideas. Water companies cited the short time period between competitions and procurement regulation as a barrier to engaging with new partners and suppliers during the pilot period.

We held a number of brokerage and partnering sessions during the pilot period to raise awareness of innovators and third parties with more water companies. Of the 30 suppliers who pitched their solutions, six have gone on to work with water companies in entries to one or more competitions, and two have been part of winning teams.

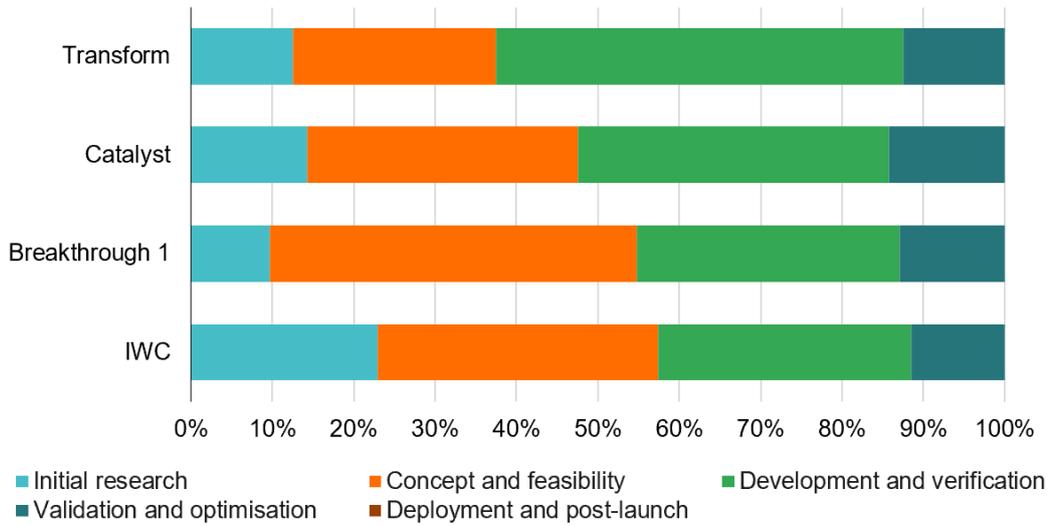
Supply chain organisations suggested that in some cases water companies may not be aware of the full range of possible innovative solutions available and so could miss valuable opportunities. We received a recurring request from innovators and third parties that they would like to be able to apply to the fund directly to demonstrate proof of concept to the broader water sector. As we outline in Appendix 1, we are proposing to make changes to our competition approach for 2022-25 to enable innovators and third parties to enter the fund directly. We are proposing to create a new competition to allow innovators to demonstrate proof of concept to the water sector. We welcome your views on our proposed approach.

5.2 Project innovation maturity

We have seen projects submitted to date which have been pitched at a range of innovation maturity levels,⁴ see figures 5.1 and 5.2.

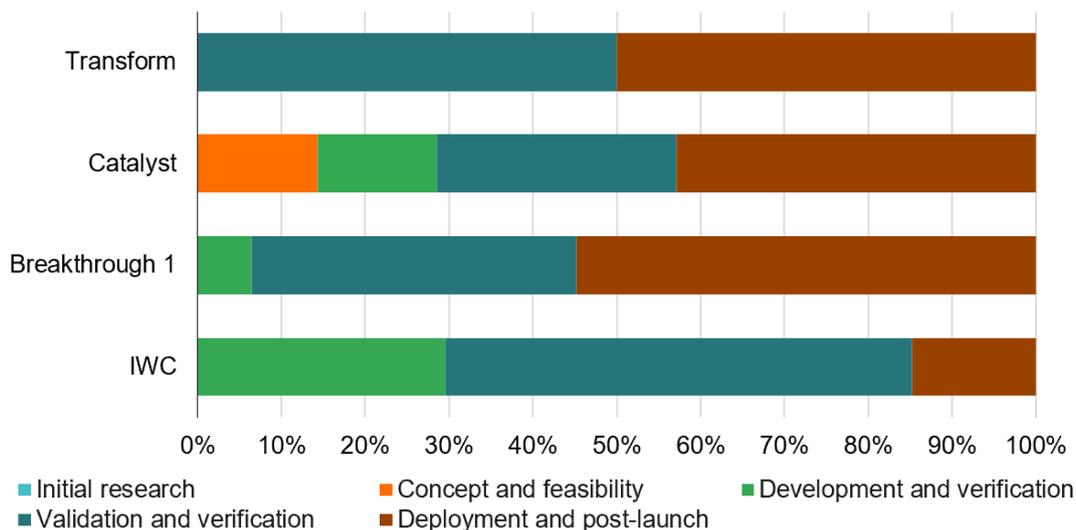
⁴ We defined project innovation maturities in our entry handbooks. See Appendix 1, page 49, [Breakthrough-Transform-Entrant-Handbook-v1.2.pdf \(challenges.org\)](#)

Figure 5.1: Innovation maturity at project start (all entries)



Through IWC and Breakthrough 1 over 50% of projects proposed were starting at earlier stages of maturity. In Transform over 50% of entries were starting at development / verification and validation stages of maturity. Figure 5.2 shows innovation maturities for the projects proposed at completion. This shows that approximately 50% of projects entered into Breakthrough 1 and Transform were proposing to reach deployment by the time of project completion.

Figure 5.2: Innovation maturity at project completion (all entries)



Feedback from both water companies and the supply chain has indicated that earlier, more conceptual innovation projects are harder to support as the risk of failure is higher. We are keen to look at how we might be able to encourage a focus on earlier-stage conceptual innovation projects with third party innovators that are new to the water sector which could lead to more transformational innovations for adoption across the sector. As we outline in Appendix 2, we are proposing to introduce a new competition which is focused on earlier stage conceptual innovations and is aimed at innovators. We welcome your views on our proposed approach.

5.3 Collaboration

One of the key challenges to innovation that led to the creation of the innovation fund was the need for more effective collaboration and partnership working in the water sector in addition to a change in company culture. This is one of the key areas where we have observed notable change and received positive feedback from stakeholders. We have received feedback about the cultural change arising from company involvement with the fund as it has increased and improved collaboration both between water companies and with a broader spectrum of stakeholders.

To encourage collaboration and partnership working, our competition eligibility criteria required that lead entrants (a water company in England or Wales, or a NAV) must partner with at least one other organisation. In the IWC, we saw on average, four partners per entry. For Breakthrough 1, the level of collaboration increased and on average there were nine partners per entry. In Breakthrough 2, we saw a good level of collaboration with, on average, six partners per entry in the Catalyst stream and on average 13 partners per entry in the Transform stream.

Table 5.1: Overview of water company involvement and partnerships developed during the pilot period

Competition	Number of entries	Water companies / NAVs as lead entrants	Involvement of water companies / NAVs	Average number of partners
IWC	61	20 out of 25	20 out of 25	4
Breakthrough 1	31	14 out of 25	21 out of 25	9
Breakthrough 2 - Catalyst	18	7 out of 25	16 out of 25	6
Breakthrough 2 – Transform	13	6 out of 25	17 out of 25	13

We have seen nearly 100 entry partners involved during the pilot period from:

Other water companies in England and Wales	NAVs	Water retailers
Water companies outside of England and Wales	Academia	Healthcare services
Energy, gas and oil companies	Consultancies	Government bodies
Associations	Local authorities	Insurance
Charities	Software and electrical engineering	Aquaculture solutions
Manufacturing	Telecoms	Aerospace engineering
Real estate and investment	EU funded projects	Customer services
Financial services	Security and surveillance	

Based on stakeholder feedback and our observations during the pilot period, to continue to facilitate partnership building across the water sector and between other sectors and third parties, we need to provide as much lead in time to our competitions as possible. This will allow innovative ideas to come forward and new relationships to be established. Additionally, stakeholders have asked us to retain consistency between competitions (design and format) so that potential entrants can take more time to develop prospective innovative ideas in the knowledge of when the next opportunity to enter a competition will be and what the broad parameters of that competition will look like. As we outline in Appendix 2, we propose to maintain the Water Breakthrough Challenge Catalyst and Transform streams. The amendments we are proposing to make are intended to encourage new innovative ideas to come forward and to facilitate new parties to enter the fund.

Most entrants to the IWC and Breakthrough 1 agreed that the competitions encouraged them to explore new ideas and said that they were motivated to form new partnerships to enter the competitions. Timelines during the pilot period have been challenging, both the short time between competitions and the length of entry periods. In this consultation we outline that we propose to run the Water Breakthrough Challenge annually each Autumn. The new competition we propose could be run more frequently but we welcome views on capacity to enter. See Appendix 2 for more detail.

5.4 Competition process

During and after each of the competition rounds to date we have asked all entrants for feedback. Overall, the feedback we received on the competition processes to date has been positive and we received some specific suggestions for improvement. These suggestions led to us making changes to the level of information provided in the entrant handbooks, amendments to the entry forms, clarifying elements of the assessment criteria and bringing in third party support for bid development.

At the end of each competition, we provide entrants with feedback on both the successful and unsuccessful entries. We received feedback from the IWC entrants that more detailed feedback would be welcome, we took this into account for Breakthrough 1 with more information provided on all entries. In general, unsuccessful entrants indicated that they wanted a stronger steer on if the feedback was actioned would it be worth them re-submitting their entry in future rounds or not. Following Breakthrough 1 we fast tracked a small number of entries to stage 2 of Breakthrough 2. These entries were flagged by the judges as promising entries that needed further development. Water companies fed back that they would appreciate seeing the assessors and judges scoring and potentially the raw feedback. We will consider our approach to feedback following this consultation and will outline our approach for future competitions in our Summer 2022 decision document.

A majority of entrants to Breakthrough 1 and the Transform stream stated that the two-stage competition process worked well and was proportionate to the amount of funding available. Although some entrants asked that the first stage could be lighter touch with a focus on conveying the core innovative idea. Further detail on project delivery could be provided at stage 2. We also received comments from stakeholders that the competition entry forms could be simplified further to reduce the administrative requirement for entry and designed to allow for more conceptual innovations to be presented. The current format was said to support more traditional innovations which made it more difficult for entrants to convey earlier stage innovations in the current process. We will consider what further changes could be made for future rounds to reduce the administrative burden on entrants.

During the pilot period we received feedback that there was significant variation in water companies and NAVs capacity to engage with the fund. We introduced bid writing support, through Science Practice, to help those companies with less resource capacity for Breakthrough 2. Table 5.2 shows the take up of bid writing support.

Table 5.2: Summary of entries that used the bid writing support

	Entries supported
Catalyst	4 entries out of 18
Transform (stage 1)	2 entries out of 8
Transform (stage 2)	8 entries out of 9

We saw increasing take up of the bid writing support for stage 2 of Transform but less take up for Catalyst and stage 1 of Transform. We received feedback from water companies and NAVs that not all entrants were aware of this support service which is reflected in the low take up for Catalyst and stage 1 of Transform. We increased our communication on the availability of this service for stage 2 of Transform which resulted in nearly all entrants using the bid writing support. A majority of those that made use of the service indicated that the feedback they received from Science Practice was helpful and having a fresh perspective from a company from outside the water sector was beneficial. We have been engaging with those who were involved with Breakthrough 2 to understand their experiences of the support services provided. We will consider this feedback to determine what support services to provide for future competition rounds. We welcome any thoughts you might have on this in your responses to our consultation.

We amended and simplified the entry forms for Breakthrough 2 and maintained as much consistency between Breakthrough 1 and Breakthrough 2 as possible to reduce the burden on entrants. More recent discussions with water companies and NAVs indicated that this capacity issue remains. A number of companies have indicated that they are working to build up capacity internally to develop future innovation projects / initiatives and support the management of successfully funded projects.

5.5 Intellectual property rights

In our August 2020 decision document, we set out our default Intellectual Property Rights (IPR) policy.⁵ We differentiated between background and foreground IPR but also allowed for entrants to request alternative IPR arrangements for consideration. Our default IPR policy was set to ensure all water company customers benefit from the projects that receive money via the innovation fund, which is collectively funded. It was also designed to ensure customers are not subject to additional costs for projects that they have funded (ie by not having to pay twice to access IPR developed using customers money).

In both the IWC and Breakthrough 1 competitions, 74% of entries aligned with our default IPR policy and 26% of entrants put forward alternative IPR proposals. We received feedback from the water companies and the supply chain that our default IPR policy disincentivises innovators, especially early stage and digital or data-driven solutions from getting involved with the fund. As a result, we [consulted](#) on our IPR policy in August 2021 which included a proposal to trial a relaxation to our background IPR policy for the Catalyst stream. The relaxation proposed would allow owners of background IPR to charge a licence fee at a fair, reasonable and non-discriminatory rate for the use of the background IPR solely to the extent necessary for water companies to receive the benefit of the foreground IPR. Based on the responses we received, we [decided](#) to proceed with the trial for the Catalyst stream.

We were encouraged by the Catalyst stream entries we saw through the trial, however we still need to see how this will work in practice longer term. All of the background trial entries were able to demonstrate that they had thought through how to ensure that their proposed licence fees following the completion of the innovation fund project would be set at a fair, reasonable and non-discriminatory rate. We have received positive feedback on this policy change from stakeholders with an ask to expand this relaxation to both streams in future competition rounds. As we outline in Appendix 2, we are proposing to expand this relaxation to both the Transform and Catalyst streams of future Water Breakthrough Challenge rounds.

Table 5.3: Summary of competition entries IPR

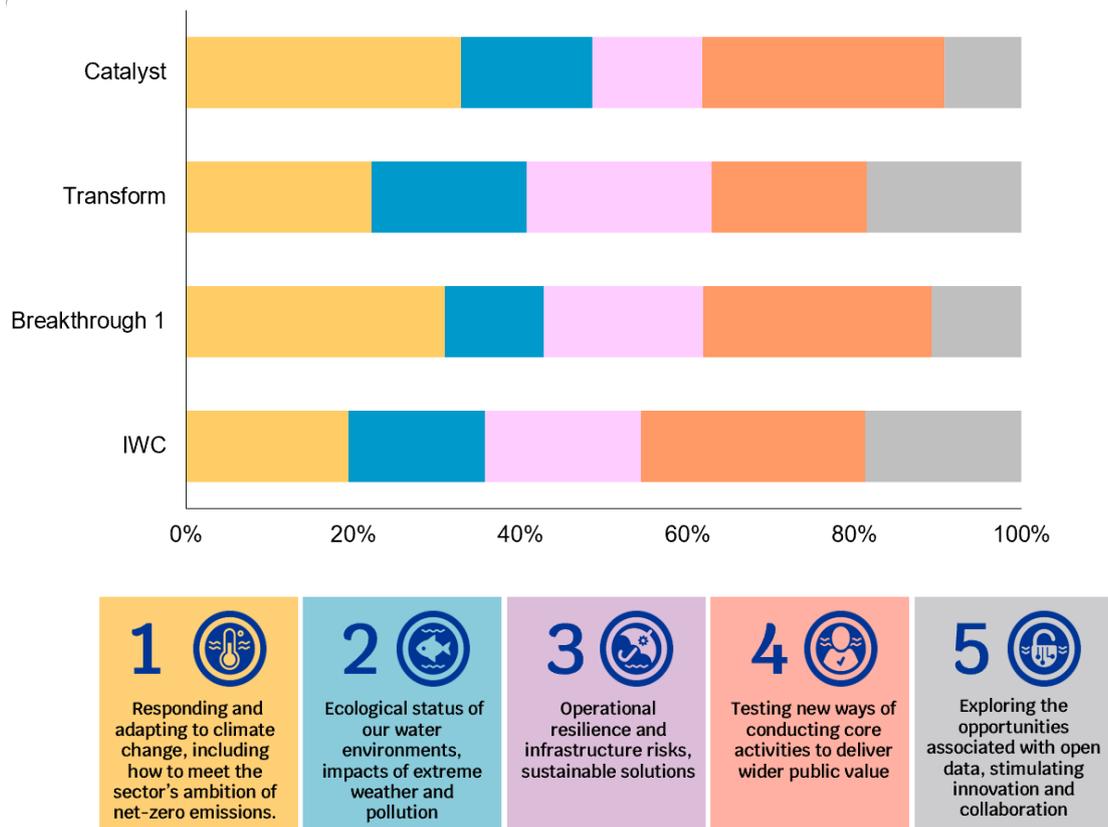
Competition	Total eligible entries	Default IPR	Alternative IPR	Background IPR trial
IWC	61	41	20	N/A
Breakthrough 1	31	27	4	N/A
Catalyst	18	9	2	7
Transform	13	12	1	N/A

⁵ Ofwat, [Innovation funding and competition: decision on design and implementation](#), August 2020, pp 11-12.

5.6 Innovation fund themes

Across the three competition rounds to date we received a good spread of entries across all five of the innovation fund themes.

Figure 5.3: Proportion of entries aligned to the innovation fund themes



Feedback from stakeholders suggests that although the innovation fund themes were clear there was some confusion as to how the innovation fund themes overlapped with and interacted with the water sector's 2050 innovation strategy themes. We have reflected on this feedback and propose to align the themes more closely to the water sectors innovation strategy themes and the revised UK government Strategic Policy Statement, see Appendix 1.

5.7 Insights from the independent assessors and judges

During the pilot period, independent assessors and judges have reviewed the entries to each of the competitions. This approach has ensured entries are objectively reviewed against consistent criteria. We share the overarching feedback provided by the assessors and judges in the decision documents we publish after each competition is complete.⁶ We will be

⁶ Ofwat, [IWC decision document](#), May 2021; Ofwat, [Breakthrough 1 decision document](#), September 2021

publishing the decision document for the Breakthrough 2 Transform and Catalyst streams at the end of April.

The quality and types of entries received to date have overall been good. The assessors and judges have commented that the quality of the entries has improved in each of the competition rounds. The types of entries have been diverse and the problems the entries are trying to solve have been largely well articulated.

There are some recurring areas of improvement that have been flagged by both the assessors and the judges that we outline below as this might help future entrants:

- clearly evidence the benefits the project will deliver to customers, society and the environment;
- clearly articulate what the project is aiming to achieve, detail its objectives and intended outcomes;
- clearly explain the innovative elements of the project and how it goes beyond business as usual;
- outline how the project offers good value for money in terms of delivering impact for the funding requested;
- clearly articulate the business case for the project to outline the viability of the deliverables, risks and mitigations;
- outline what horizon scanning has been undertaken (for example in other sectors in the UK or in the EU) to show how learning from others has been taken on board and will be built upon; and
- outline clear stage gates in the project plan with go / no go points built in to manage the risk of failure; and
- clearly outline the approach that will be taken to share both learning and data gathered during and on completion of the project.

The assessors and judges have commented that the entries to the competitions to date have been water sector focused and in some cases are a bit insular. Some entries could have been strengthened by doing a more thorough horizon scan of other sectors in the UK, EU and further afield to identify if there are other technologies or approaches in use and proven elsewhere that could be built upon rather than determining that the solution has to be bespoke and built from scratch for the water sector. There were also opportunities identified for entrants to work with others outside of the sector which could provide more credibility for entries and demonstrate more ambition and potential for transformative innovation.

As we outline in Appendix 2, our proposed approach for 2022-25 is intended to encourage new innovative ideas to come forward from outside of the water sector and to facilitate new parties to enter the fund.

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