



Ofwat's emerging strategy: Driving transformational innovation in the sector

Written evidence submitted by EnTrade

Executive Summary

1. The water industry is facing a future in which essential utility services are increasingly expected to diversify their model to deliver a better service to citizens and communities. This will require water companies to innovate by reconnecting with water as a system and delivering public value by using their networks and assets to generate data and information that enables the company and other stakeholders to improve the system. There is currently limited incentive for innovating in this way as:
 - Any financial outperformance via innovation compared to traditional approaches is only rewarded via a reconciliation at the end of the price review. To make innovations worth pursuing, the cash saving must outweigh the regulatory returns from traditional approaches allowed in the AMP;
 - Uncertainty over the coming AMP cycle deters investment in innovative approaches to achieve targets. This is particularly felt where new approaches require scalability in order to become cost effective and justify the investment in innovation.
 - Water companies are not currently being incentivised to apply “systems thinking” to diversify their services. Water companies can make their service more relevant to customers as citizens and to local communities by leveraging their assets and networks to develop non-asset solutions based on information.
2. We would welcome the additional financial support cited in Ofwat's strategy paper to stimulate innovation in the sector by addressing the current mismatch between risk and reward for innovation. We recommend the following as additional principles for financial support:
 - Funding proposals should include water companies partnering with an Ofwat-recognised supplier of innovative services to the sector;
 - Success of innovative methods should be determined via achievement of targets including social and environmental benefits rather than being solely based upon financial savings. For example, the 'stackable' benefits that EnTrade can deliver with additional funding will achieve natural capital benefits beyond only the regulatory requirements targeted by traditional approaches, including biodiversity enhancement, flood management and carbon offsetting. Market mechanisms like EnTrade can give customers and communities agency in the identification and pricing of regional services and reduce information asymmetries.
 - Including supply chain partners will encourage the roll-out at scale of successful innovations across the sector to the benefit of as many customers as possible. It will also protect customers against the risk of individual water companies receiving funding for projects whose benefits will remain within their own

operating regions. The second principle above will address the current mismatch between risk and reward for adopting innovation.

3. The role of the supply chain is paramount in achieving cost savings via innovation. As such, suppliers should be able to bid for funding where they are investing in innovation that they aim to roll out at scale across the water sector to maximise the impact of benefits.
4. The annual competition is the better funding mechanism for stimulating innovation in the water sector. This is due to the increased certainty it provides over funds, as well as the lower associated financing and opportunity costs compared to the end-of-period rollout reward.
5. The final funding mechanism should allow for funding to take the form of:
 - An upfront contribution to facilitate co-creation and innovation trials involving a supplier working with multiple water companies;
 - Ongoing annual funding during the roll-out phase of the innovation at scale after a successful trial period without requiring annual re-submission for project funding.
6. EnTrade would seek financial support of £6.7m over AMP7, phased as per **Q:2** below. This would be used in order to fund:
 - a. Establishing a sustainable and consistent water quality market between water companies and farmers/land managers and moving it beyond trials and pilots;
 - b. Further improvement of the trading platform;
 - c. Increased EnTrade app functionalities enabling even greater outperformance for water companies than the current 41p per £1 of business-as-usual catchment management (per the case study in the section below);
 - d. Roll-out of EnTrade to more water companies and prospective customers in other industries (e.g. developers), reducing transaction costs to the industry.

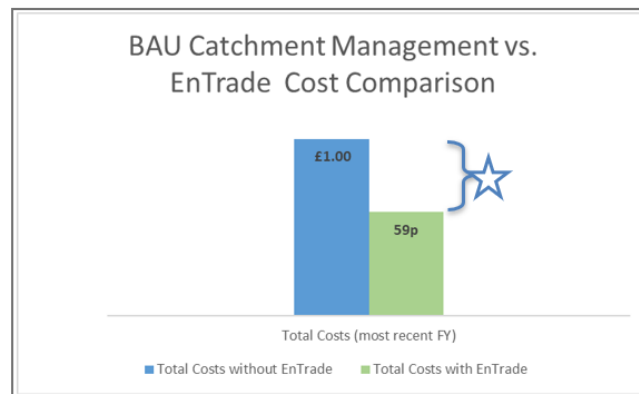
Context - What is EnTrade?

1. The UK Government has identified innovation as an essential component in the strategy to achieve long-term resilience while protecting the interests of customers. This context requires water companies to innovate in and roll out new ways to engage citizens and communities in the context of system capacity and resilience. To respond to these challenges, Wessex Water has established a new company, EnTrade, with big ambitions to transform the catchment management industry.
2. EnTrade uses the market to enable a price discovery process to take place for environmental outcomes. We are working with water companies and other infrastructure providers, NGOs, public bodies and place-based partnerships to improve the environment in areas such as water quality and storage and on biodiversity and carbon offsets, combining these improvements to add greater value as packages of 'stackable benefits' where possible. Data drives the platform – but equally the platform can organise and aggregate information to engage land

managers, customers and communities. In a water industry context, the EnTrade platform provides a vehicle for water companies to reconnect with the water system. To scale, we need consistent rules behind the markets we operate in and to be a trusted and open market operator to enable the discovery of opportunity and cost.

3. Ofwat's strategy document cites EnTrade as a good example of innovation in the water sector, acknowledging 'Wessex Water's work to create and make available to other companies its EnTrade platform for creating markets to better facilitate long term catchment management schemes'.
4. EnTrade is part of Wessex Water's vision to support the industry in outperforming its ODIs, lowering costs through exposing stackable benefits of environmental outcomes while reducing transaction costs and overheads. EnTrade can also help reduce price asymmetries and improve the efficiency of funding allocations to these outcomes by exposing information about the cost of the measures required to deliver them.

Currently 41p total unit cost savings are being achieved per £1 of business-as-usual ('BAU') catchment management through EnTrade's involvement at Wessex Water:



★ Opportunity for outperformance of ODIs

It should be noted that there is scope for even greater improvements in opex reductions as EnTrade would look to add remote verification of measures (compared to farm visits), easy payment processing and contract agreement functionalities to the platform and app with additional funding. Further savings can be found by bringing in other buyers of the benefits and combining measures calibrated for stackable benefits (as opposed to individual measures for discrete benefits).

5. To further stimulate wider collaboration and overcome the high risk aversion in the water sector towards innovative technologies and approaches, EnTrade would seek financial support for innovation via the mechanisms proposed by Ofwat in its strategy document. EnTrade would request such funding as both:
 - a. A proportion of innovative project costs and
 - b. A contribution towards partnering water companies' costs of trialling and rolling out EnTrade in order to establish consistent environmental markets.

Questions and Answers

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

The main barriers to innovation in the water sector are the risk-averse mindset of the industry coupled with a lack of explicit financial incentives for pursuing new approaches. In addition, uncertainty over regulatory requirements for the coming Asset Management Period (AMP) cycle deters investment in innovative approaches to achieve targets.

While assurance has been provided that 'non-asset' approaches will be funded through operational costs for AMP7, the 'safe' option for water companies has been to pursue asset-based solutions with guaranteed rates of regulatory return.

Innovative approaches are inherently riskier. Currently, outperformance against assets and opex through innovation are rewarded via a reconciliation at the end of the price review, if the new approach succeeds *and* generates an in-AMP cash saving, rather than being rewarded for achieving a particular outcome. This provides only limited incentive for innovating:

- Rewards are only realised if they are cash outperformances in the AMP against the assets approach. There is no reward for non-financial benefits (e.g. natural capital gains, lower carbon output from catchment management compared to upgrading a water treatment works and using stronger chemical dosing);
- There needs to be an acceptance from regulators that, by definition, innovation will involve risk – which means that not everything will work. This requires regulators to work with outcome-based targets and identify where these risks should lie;
- Under the existing outperformance reward structure, any cash returns from innovation carry the same risk profile as an asset-driven approach. However, by its very nature, innovation is riskier than the business as usual approach and so should be matched correctly with a higher rate of return in the event of success. The current mis-match between risk and reward deters companies from innovating;
- Changes in amounts and timings of regulatory targets allowed by innovative methods (such as offsetting of diffuse nitrate and phosphorus pollution via "catchment nutrient balancing") deter water companies from spending cash on new approaches that require scalability in order to become cost effective and justify the investment.

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

The financial support cited is required in order to stimulate innovation in the sector by addressing the current lack of relationship between risk and reward for innovation, as discussed in **Q:1** above.

The financial support cited in section three could be calibrated to provide both:

- Targeted financial support to innovate where upfront cash outlays currently inhibit new methods from being trialled, particularly for collaborative initiatives;
- Long-term rewards for successful implementation after initial trial and ongoing delivery.

EnTrade would seek financial support of £6.7m over AMP7, phased as below by financial year. This would be used in order to fund:

- Establishing a sustainable and consistent water quality market between water companies and farmers/land managers and moving it beyond trials and pilots;
- Further improvement of the trading platform;
- Enhancing EnTrade app functionalities allowing even greater outperformance for water companies than the current 41p per £1 of business-as-usual catchment management (per the above case study);
- Trials and further roll-out of EnTrade to more water companies and prospective customers in other industries.

The breakdown of this financial support by year (for AMP7) is as follows:

	AMP7					Total
	FY20-21	FY21-22	FY22-23	FY23-24	FY24-25	
Internal Development Costs	0.73	0.73	0.73	0.73	0.73	3.64
Roll-out and Co-creation Costs	0.42	0.64	0.67	0.67	0.67	3.06
Total	1.15	1.37	1.39	1.39	1.39	6.70

Further detail behind these amounts will be provided as part of a formal submission for financial support via the eventual mechanism.

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

Addressing each of the draft principles in the order in which they are listed in Ofwat's strategy document in terms of how they safeguard the interests of customers:

- The broad definition and wide range of innovation proposals encouraged will help ensure consideration of the maximum possible benefit to customers via any additional funding;
- As mentioned above, such funding should be targeted to compensate water companies for taking calculated risks to achieve customer benefits through innovation, where such risk is not currently rewarded and so left unexplored;
- Flexible funding mechanisms (in terms of both scale and phasing) are essential to encourage companies to:
 - Firstly, engage in trials with suppliers and/ or invest in internal development of new innovations;
 - Continue roll-outs with suppliers after successful trials and/ or maintain and improve internally developed innovations.
- Any innovation funded should be subject to appropriate levels of scrutiny to ensure that customers' money is wisely allocated to candidates with sound proposals clearly evidencing wide-reaching benefits to customers. A competitive approach here will help to maximise returns from such funding in the same way as was achieved for Ofgem's Low Carbon Network Fund.
- Requiring companies to contribute to project costs will ensure that companies have a stake in the success of any innovation and further mitigate the risk of no benefit being delivered to customers;
- While we appreciate that funding mechanisms should be aligned to price review periods, we insist that innovation proposals put forward be judged appropriately according to the 'life cycles' of the specific interventions. This will help ensure that long-term interests of customers are safeguarded;
- Requiring evidence of collaboration with other water companies and scalability of the benefits of innovation proposals will ensure that customer benefits are achieved as widely as possible across the sector;

- Similarly requiring an 'open by default' approach to data and learning will aid in developing knowledge and skills as widely as possible from innovation, so that the benefits are felt by customers of as many service providers as possible.

We also recommend the following principle for additional financial support:

- Proposals should, where possible, involve partnering with an Ofwat-recognised supplier of innovative services to the whole water sector.

This will encourage engagement by the water companies with new market entrants and maximise the benefits achieved by driving the roll-out of successful innovations across the sector to the benefit of as many customers in England and Wales as possible. It will also protect customers against water companies from receiving funding for projects whose benefits will only be felt within their own operating region.

Furthermore, a candid recognition that, even after strict scrutiny, some proposals will not succeed, is essential to allow water companies and their suppliers the freedom to innovate, with outcomes-based measures of success being a vital component of the rewards structure.

The counterweight to this freedom to innovate is a responsibility to deliver and ongoing assessment of project delivery is required to monitor companies' performances and, in special circumstances, return funds to customers to prevent abuse.

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

We approve of the idea of companies competing for innovation funding as this will help to select the best projects as a further safeguard of customers' contributions.

One key consideration that we wish to clarify is that the annual competition should permit funding to take the form of:

- An upfront contribution to facilitate co-creation and innovation trials involving an approved supplier working with multiple water companies;
- Alongside ongoing annual funding during the roll-out phase of the innovation at scale after a successful trial period without requiring annual re-submission for funding.

It is our opinion that with initial approval, and subject to regular review, the above funding set-up would provide a measure of certainty over ongoing funding of the project through the AMP and thus encourage take-up by more water companies through giving them the assurance of financial support for their innovation proposals.

The provision of financial support on such an 'up-front and ongoing' basis would also allow companies to avoid incurring finance costs in the case where additional funds would be required for innovations, as well as opportunity costs. Helping to lower these extra costs of innovation via the competition funding would further encourage innovation.

Other key considerations:

Suppliers

Furthermore, we ask that approved *suppliers* of innovative services who meet the final key principles for financial support be allowed to compete, in conjunction with water companies,

for joint funding of projects. This should be embraced since it is felt (per the Ofwat strategy document) that ‘partnerships could also compete for access and that, ultimately, all results would be shared across the sector and beyond’, while companies are encouraged ‘to work together and with their supply chain to propose innovative projects’.

We observe that, while companies would recover funding based on their projected revenue for 2020-25, an alternative mechanism would be required for the supplier. We propose that suppliers submit their own proposals for recovering funding for review by the independent expert, due to the variety of potential suppliers involved.

Industry Standard Recognition

Moreover, while support from Ofwat for EnTrade in draft determinations is gratefully received, as is the citing of EnTrade in the strategy document here as a favourable example of innovation, it would be even better if Ofwat could be explicit about creating EnTrade and similar new market entrants as universal industry standards. This would bolster the case for water companies to partner and innovate with EnTrade and other new suppliers.

A key risk of the innovation competition is that water companies, if successful in applying for funding their own projects, will not be encouraged to share their innovations across the sector, and the benefits of any such innovations will not be maximised. Making partnering with an explicitly accredited supplier to the whole industry a key condition of being successful will encourage new market entrants to proceed with projects and maximise the benefits achieved by driving their roll-out across the sector and beyond.

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

EnTrade’s preferred mechanism would be for innovation to be funded on an ‘up-front and ongoing’ basis via the competition rather than via the end-of-period roll-out reward. As explained at **Q:4**, the early assurance of up-front and continued funding would provide the necessary confidence with which to proceed with innovative projects and lower the additional financing and opportunity costs of these projects. By contrast, the end-of-period roll-out reward would add these extra costs to any innovative project, with the additional uncertainty over eventual recovery of these costs further lessening the likelihood of such projects being undertaken.

However, if the end-of-period reward will *complement rather than replace* the annual innovation competition funding discussed at **Q:4**, *then* the end-of-period innovation roll-out reward could help to increase the adoption of innovations across the sector,

A key concern about the innovation competition is that the necessary framework will take a year to set up. However, many water companies and suppliers will be looking to develop and trial innovations as early as possible in AMP7 in order to maximise the impact of successful trials by encouraging roll-out at scale. Moreover, if trials are unsuccessful at an early stage of the AMP, time will also remain for alternative solutions to be implemented so as not to jeopardise delivery of AMP7 performance commitments.

Early guidelines should be published over the project success criteria for the roll-out reward, making it clear that innovation projects undertaken prior to the competition will be eligible for the end-of-period funding under the same or similar governance framework as with the innovation competition.

This would give water companies and their suppliers the necessary assurance to start development work and trials early in AMP7 while the competition framework is being established.

Other key considerations:

The following further considerations should be taken into account:

- Submissions for the innovation competition should be asked to clearly separate out the phasing of funding requests into the in-year/ annually recurring element and the end-of-period reward for any projects commencing prior to the competition. This will help to avoid double-funding;
- Combining requests for funding in both ways under the overall framework of the competition will mitigate the risk of adopting sub-optimal or business-as-usual solutions;
- As suggested earlier in our response, suppliers of innovative solutions should be included in the scope of such funding, provided that suppliers are working with water companies within the competition framework and are sharing findings with other organisations to the benefit of customers.

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

As stated in response to other questions above, innovative suppliers who comply with the framework should be considered within the innovation funding mechanism.

In our view, suppliers should bid in partnership with water companies and ensure that proposals clearly state where funding requested relates to:

- Upfront costs to be incurred solely by and therefore allocated directly to the supplier to encourage development of projects with potential for far-reaching benefits;
- Funding for trials with water companies to be allocated to the water company to incentivise water companies to innovate in partnership with the supplier.

We would furthermore encourage that an appropriate split of available funding/ reward be stated in any application, along with clear and verifiable conditions of success of the innovation. In this way, necessary development expenditure and ongoing financial support for an effective roll-out could be funded with further rewards allowed for at end-of-period based on such criteria for success.

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

We see the main value of a sector-wide joint innovation strategy being in highlighting, for the benefit of the sector and its suppliers, the key challenges and uncertainties faced by the water sector as well as any projects or activities that the sector is planning to undertake to address these.

From the perspective of a supplier seeking to engage with many of the water companies, this would shine a light on those key areas where innovation would be most relevant and

where any projects undertaken by ourselves would have the greatest positive impact for companies in the sector and their customers.

An 'Innovation in water centre of excellence' would be more suited to specific products than EnTrade's activities involving implementation of offsetting measures across catchments within each water company's operating area. In addition, the costs of funding such a centre would necessarily shrink the pot of available funding for specific projects.

We feel that the desired impact of such a centre would be best achieved in the context of EnTrade via remote networks and we have documented and can share our case studies of the opportunities for water companies to outperform compared to business-as-usual catchment models. Therefore, we do not recommend this activity.

Water companies should be encouraged to allow third parties, including suppliers such as EnTrade, to access and analyse appropriate data. Increased data availability from water companies would help in the development of innovative products and approaches. Of special relevance to EnTrade would be information that could be used to better design and test the measures required to achieve benefits being traded via the trading platform.

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

Proposals of the types given in section five will further help drive innovation. New market entrants without the necessary resources to devote to compliance would benefit from the 'fast and frank feedback' service regarding regulation when developing innovative projects.

This sort of service should also be extended to cover screening of potential entries into the innovation competition. This will help to ensure that only high-quality projects with reasonable chances of success are taken to full bid status.

Furthermore, increased coordination across regulators in other sectors will enable water companies to have an expanded vision of the innovation market and consider their applicability to the water sector, benefitting the industry and customers.

This is of appeal to EnTrade: the auction platform has been developed to allow buyers to bid on packages of multiple, 'stackable benefits' (e.g. measures calibrated to both offset carbon and enhance biodiversity) which frequently transcend regulatory bodies. Any elimination of regulatory barriers in order to facilitate the roll-out of proven technologies would be of special relevance here.

Moreover, such 'stackable benefits' bring down costs compared to implementation of individual measures aimed at achieving discrete benefits. In this way, with increased coordination across regulatory bodies, EnTrade will have greater potential to reduce costs in areas beyond the water sector, creating even greater lasting benefits for more customers.