Information Pack 25/01/2023









About the Ofwat Innovation Fund

£200 million

of funding has been unlocked by the Ofwat Innovation Fund to unleash a wave of innovation in the water sector and tackle some of the major challenges of our time delivering transformative benefits for customers, society and the environment.

Three different innovation competitions, currently on the **third** funding round





has been awarded



Approximately **300** different organisations and partners have been involved in entries



Could you be next?



Water Discovery Challenge: Key information



Entry period opens 25 January 2023



~£4 million available

Up to £50k seed funding for Finalists



Up to £450k development funding for Winners

Entry period closes 5 April 2023

Aims of the Challenge

Accelerate the discovery, development and adoption of promising innovations by the water sector in England and Wales. Deliver benefits to customers, society and the environment

Directly support organisations with innovative propositions and facilitate their engagement with water companies in England and Wales

Water Challenge

Discovery Our Innovation Themes



1. Responding and adapting to climate change including achieving the sector ambitions of net zero carbon, zero waste and zero leakage

> 2. Protecting and enhancing the environment and natural systems to protect current and future customers from the impacts of extreme weather and pollution



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



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

Innovations of any kind (process, people, technology or digital) that are ready for concept proofing, testing, early feasibility studies, development and verification in the water sector. Specifically, Innovation Maturity Level 2-3 equivalent to technology readiness level (TRL) 3-6.

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Innovation that will benefit customers, society and the environment across England and Wales in alignment with the four innovation themes. Initiatives from all sectors and all types of organisations, domestic or international*

*Must be a UK-incorporated entity and hold a UK business bank account. E&W Regional Water Companies are **not** eligible.





Water

Discovery webinar series

From an introduction to the water sector and opportunities for innovation, to water and sewage treatment and distribution, reusing resources, delivering for customers and climate change challenge. Y

Entry clinic

Support on your entry, the entry process and innovator journey Online and downloadable materials

Entrant Handbook, Entry templates, FAQs...

Questions?

waterinnovation@challengeworks.org

Appendix Our focus sectors

Focus sector: Energy

The energy sector services millions of homes and businesses across the UK via a network of over 4,300 miles of wires (Source: <u>National Grid</u>), while UK water pipes amount to 216,686 miles (Source: conversion of <u>Discover Water</u> data). Both sectors are vulnerable to changes in weather and demand, and answer to regulators as well as their customers. With climate change increasing the risk of infrastructure damage from extreme weather, innovation is needed to...

Enable a sustainable, resource efficient water system

Innovations that use data or technology to make use of wastewater, or excess water due to flooding, have potential to be captured to generate energy, and make the water system more efficient.

Create a modern and reliable distribution network

Innovations seeking to introduce state-of-the-art, adaptable materials to ensure reliability of this infrastructure regardless of climate change, or that use high tech sensors to improve maintenance of these structures, could ensure a more environmentally and cost-effective water system.

Maintain contact with both regulators and customers

Innovations that enable more efficient and accurate information and data sharing, using new technologies, could improve services for customers and help regulators to track progress.

Focus sector: Cities and Transport

Over eight million people live in cities in the UK, with some transport networks moving up to five million people a day (Source: <u>TfL</u>). The structures that help keep cities moving rely on high-tech and streamlined infrastructure, which is subject to external factors including climate and demand. Cities now also need to respond to challenges that could never have been predicted by their architects. To ensure the long-term supply of water to people living in big cities, we should work with them to find solutions that work in city environments. This might involve:

Reducing surface water runoff to keep cities moving and improve sustainability

Innovations that use green space in cities to reduce impact of flooding and also deliver environmental and community benefits could reduce disruption for cities and transport and mitigate the consequences of extreme weather in future.

Improving and maintaining linear infrastructure

Innovations such as remote surveillance, including sensors and other smart digital technologies, could revolutionise the system and help both industries to save time and money.

Focus sector: Construction

The vital task of delivering water is entirely reliant on building safe, adaptable, climate-resilient, low-carbon, and innovative water systems. This includes:

Developing and testing new building materials and methods

The water system could benefit from innovations that use new construction materials for the first time in the water infrastructure to reduce environmental impacts, meet sustainability targets, and are more resilient so require less frequent replacement and repair.

Introducing and improving less invasive building methods

Innovations with less disruptive installation techniques could help water companies improve relationships with local communities.



Focus sector: Digital data and internet of things

Digital technology, data and the internet of things have vast potential for the water sector – from improved treatment technology to sustainability and efficiency management. This includes:

Managing remote sources and improving water quality

Innovations that use smart technology such as sensors could play an essential role in collecting and transmitting data, coupled with connective networks (through AI and machine learning) this could improve performance and efficiency and enable better decision making – especially in reaching and monitoring remote water infrastructure, and the quality of water within it.

Preventing leaks

Innovations that develop connected technologies to spot, flag and monitor leaks on site can aim to flag leaks as soon as they occur and ensure the monitoring and repair process is more efficient – as teams won't have to travel long distances for manual monitoring.

Promoting customer satisfaction

Innovations that use technologies and AI to improve digital communication and ease of customer/ company engagement will improve relationships and customer satisfaction.

Focus sector: Agriculture

The farming and agriculture industries require water for crops, livestock and food production, and also generate significant wastewater– working together, the sectors could help to:

Make farming and food production more sustainable

Innovations that can use technology or data to optimise water use on farms – such as by leveraging wastewater for irrigation – can reduce treated water use and therefore reduce carbon emissions.

Revolutionise the role of biotechnology

Innovations that reconsider or develop the role of biotechnology could improve water quality by assisting nutrient and pollution control in local water supplies and water systems.