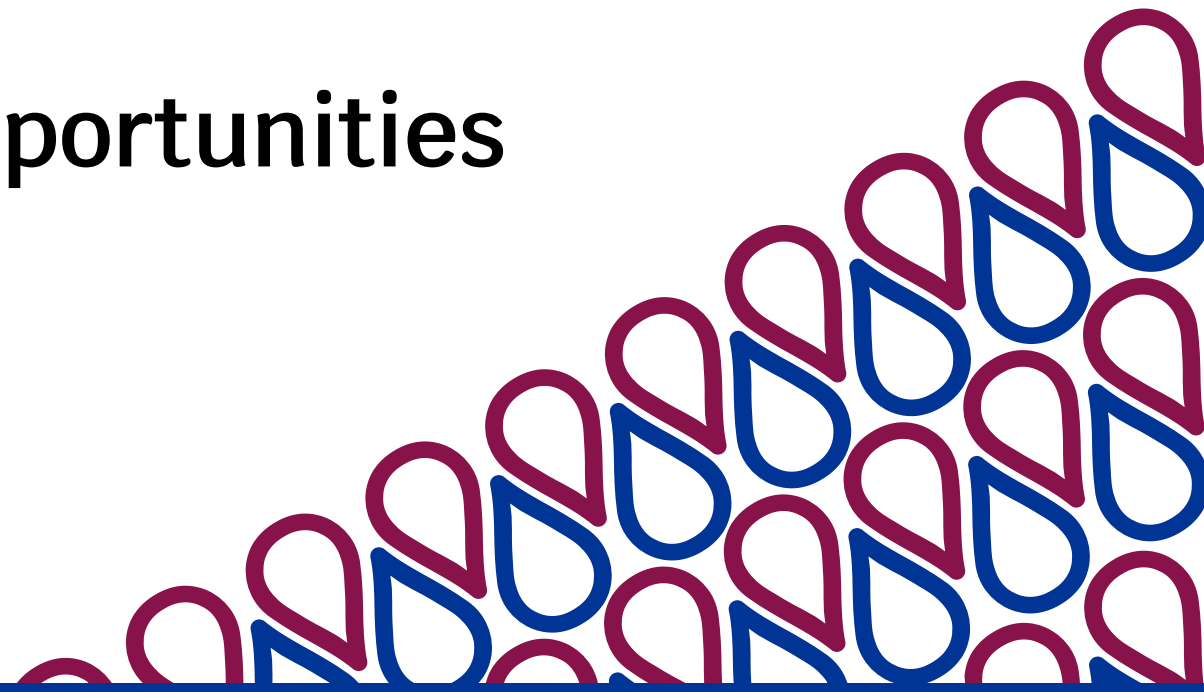




# Discovery Innovation Opportunities

2<sup>nd</sup> February 2023



Delivering in partnership:





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## Q&A

Ask your questions on Slido  
[Sli.do/discovery22](https://Sli.do/discovery22)

#discovery22





Introduction to Spring



The Water 2050 Strategy



Innovation Opportunities



Questions



# An introduction to Spring

How is Spring helping to accelerate innovation across the water sector?





Spring is an **innovation accelerator** that **enables collaboration** within and beyond the water sector to drive transformational innovation



# The UK 2050 Water Innovation Strategy

How was it developed?

What is the vision for the sector?



# UK Water Innovation Strategy 2050



## The first step in change is understanding your challenges and creating an ambition for the future



**PROVIDING THE SERVICES SOCIETY NEEDS, EXPECTS AND VALUES**

**AMBITIONS FOR 2050**

Customers have trust and confidence in the service that the water sector provides  
Water services are accessible, affordable for all, protect vulnerable customers and lead to zero customers in water poverty by 2030  
Service provision is transparent, and customers and communities work with water companies to improve service and decision making



**PROVIDING CLEAN WATER FOR ALL**

**AMBITIONS FOR 2050**

Drinking water supply is low impact and sustainable  
UK water supply is reliable with zero interruptions  
We provide enough water for all across the UK



**PROTECTING AND ENHANCING NATURAL SYSTEMS**

**AMBITIONS FOR 2050**

Wastewater services are environmentally sustainable  
We work with customers to halve freshwater abstractions, leaving more water in the environment  
Water companies work in collaboration with customers and communities to have zero uncontrolled discharges from sewers  
Emerging contaminants and lead are dealt with effectively causing zero harm for people and the environment  
We have developed, protected and enhanced our natural environment  
We have used natural solutions to improve our resilience to current and future challenges



**DELIVERING RESILIENT INFRASTRUCTURE SYSTEMS**

**AMBITIONS FOR 2050**

We work with customers to develop resilient human, physical and digital systems which can adapt to known and unknown future challenges  
Our assets are maintained for the long term providing economic, social and environmental value



**ACHIEVING NET ZERO CARBON**

**AMBITIONS FOR 2050**

We have achieved operational and value chain carbon negativity  
We have implemented carbon sequestration across the water sector  
Customers, communities, water companies and the supply chain work together to achieve carbon neutrality across the value chain



**TAKING A WHOLE LIFE APPROACH TO RESPONSIBLE CONSUMPTION AND PRODUCTION**

**AMBITIONS FOR 2050**

We have maximised the recovery and reuse of resources to support sufficient resource availability for nature and society and achieved zero waste  
We have sustainably achieved zero leakage



**ENABLING DIVERSE FUTURE-READY PEOPLE AND PARTNERSHIP WORKING**

**AMBITIONS FOR 2050**

We have a shared innovation culture which improves customer experience  
Collaboration pathways are paved between water companies, regulators, supply chains, SMEs, start-ups, academia, customers and other innovators to allow innovation to work  
The whole sector's workforce has the skills and diversity of thought to take an active approach to prepare for and address emerging challenges  
The UK regulatory framework has evolved to incentivise innovation to benefit customers and the environment





# The UK 2050 Water Innovation Strategy



The strategy has been developed by representatives from across 19 water companies, with close co-operation from Ofwat and facilitated by UKWIR and Arup on behalf of the sector.





# The Vision, Principles and Innovation Areas

Our vision is to create open collaboration opportunities across the water sector to drive **transformational change through innovation** that delivers greater value for customers and the environment.

## Principles – How we will innovate



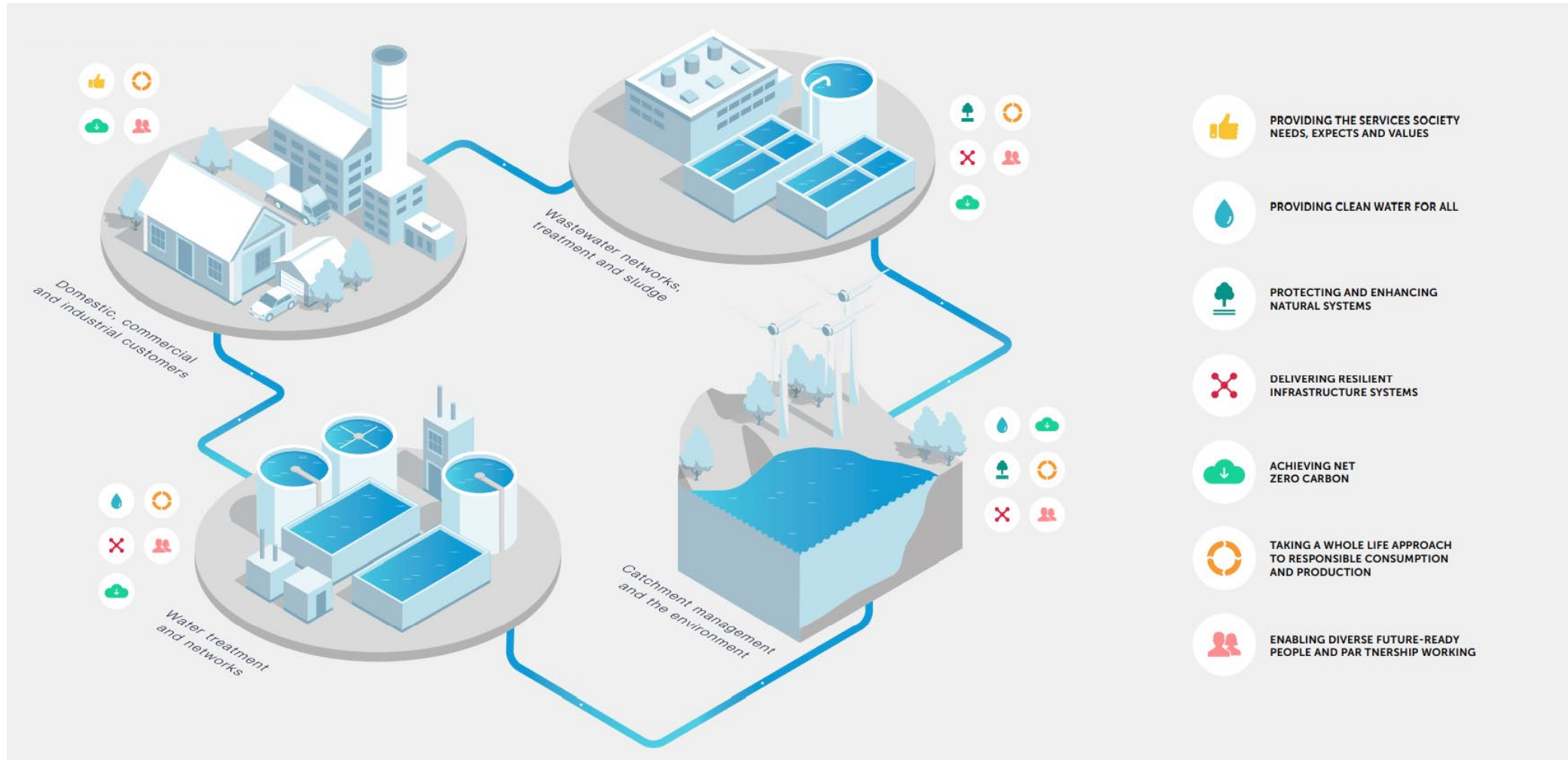
## Innovation Areas – What we will innovate





# The Vision, Principles and Innovation Areas

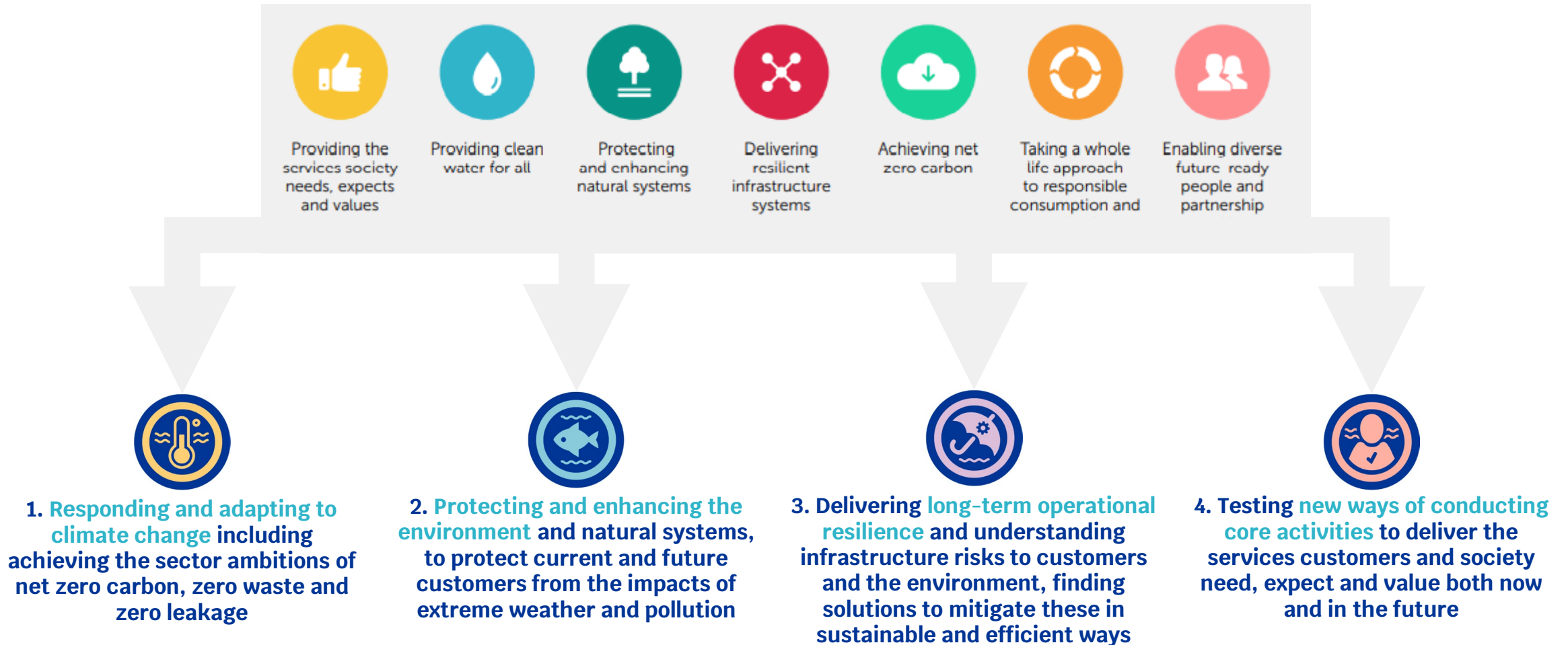
## Innovation is needed across the sector





# The Vision, Principles and Innovation Areas

The UK 2050 Water Innovation Strategy has fed into the Ofwat Water Discovery Challenge Innovation Themes







# Innovation Opportunity Areas



## Responding and adapting to climate change

How do we achieve operational and value chain carbon negativity?

How do we maximise the recovery and reuse of resources?

How do we provide enough water for all across the UK?

How do we sustainably achieve zero leakage?

### **We're looking for solutions that, for example:**

- Reduce current carbon emissions or help avoid future carbon intensive solutions
- Encourage water conservation and/or grey water use
- Improve access to low cost methods for monitoring, modelling and treating water
- Help water companies make effective data driven investment decisions

### **An example from outside the sector: Resource Recovery**

In 2010 GSK introduced a company-wide approach to achieve zero-waste to landfill. Through adjusting their thinking they have since delivered multiple resource recovery schemes such as: composting egg waste; generating green gas from food waste; and re-using refrigerated packaging for construction projects.

**We want to find these kind of initiatives that when combined can lead to significant benefits**





# Protecting and enhancing the environment

How do we ensure freshwater abstractions leave plenty of water for the environment?

How do we stop uncontrolled discharges from sewers?

How do we enhance our natural environment?

## We're looking for solutions that, for example:

- Improve engagement with customers around the role they can play in helping to deliver environmental outcomes
- Improve access to low cost methods for monitoring, modelling and treating waste water
- Assist in implementing a multi-capital holistic approach to decision making

### **An example from outside the sector: A Sustainable agriculture code**

Unilever has developed a 'sustainable agriculture code' which is now followed by its suppliers around the world. The code addresses: use of agrochemicals and fuels, soil and nutrient management, water and energy consumption, biodiversity, waste, human and animal welfare, and skills development to improve local economies

**We want to innovate our decision making and that of our supply chains like this to further improve social, environmental and economic benefits of our activities**







## Long term operational resilience

How do we achieve zero interruptions to the water supply?

How do we reduce the occasions of failure with drinking water standards to zero?

How do we maintain our assets effectively for the long term?

How do we ensure no harm from emerging contaminants?

### We're looking for solutions that, for example:

- Improve the effectiveness or efficiency of incident management, maintenance and infrastructure investment
- Help further develop partnership approaches to catchment management
- Help water companies make effective data driven operational decisions

### An example from outside the sector: Distributed ReStart

A project run by National Grid and Scottish Power Energy Networks to make use of distributed energy resources (such as solar panels, small wind turbines etc.) to restore power in the event of a total or partial blackout of the national electricity transmission system.

**We want to introduce solutions like this that can help improve water infrastructure resilience and performance.**





## New ways of conducting core activities customers and society need, expect and value

How do we build customer trust and confidence?

How do ensure water services are accessible and affordable for all?

How do provide a transparent service with customers and communities involved in decision making?

How do we improve skills and diversity in the sector?

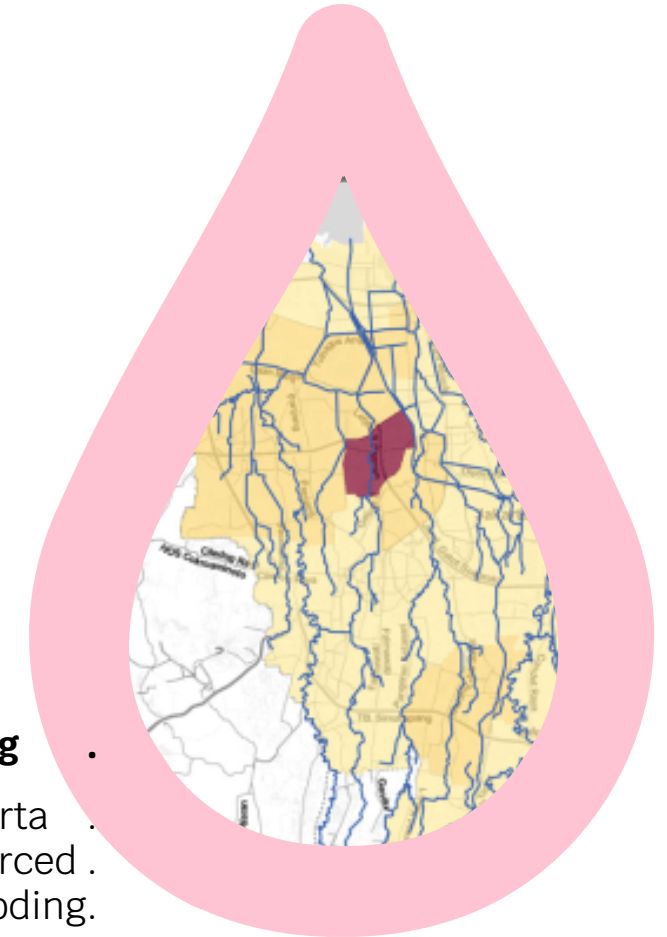
### We're looking for solutions that, for example:

- Help with developing an understanding of the true value of water among customers
- Help create national benchmarks for data sharing and collaboration
- Improve customer engagement processes so they feel truly part of the water cycle
- Enable cross utility partnerships

### An example from outside the sector: Crowd-sourced flood mapping

An innovative approach to citizen engagement in Indonesia, the Peta Jakarta project uses real-time social media engagement to generate crowd-sourced disaster maps in periods of monsoon flooding.

**We want to think differently like this to help us deliver our activities in ways that customers and society will value**





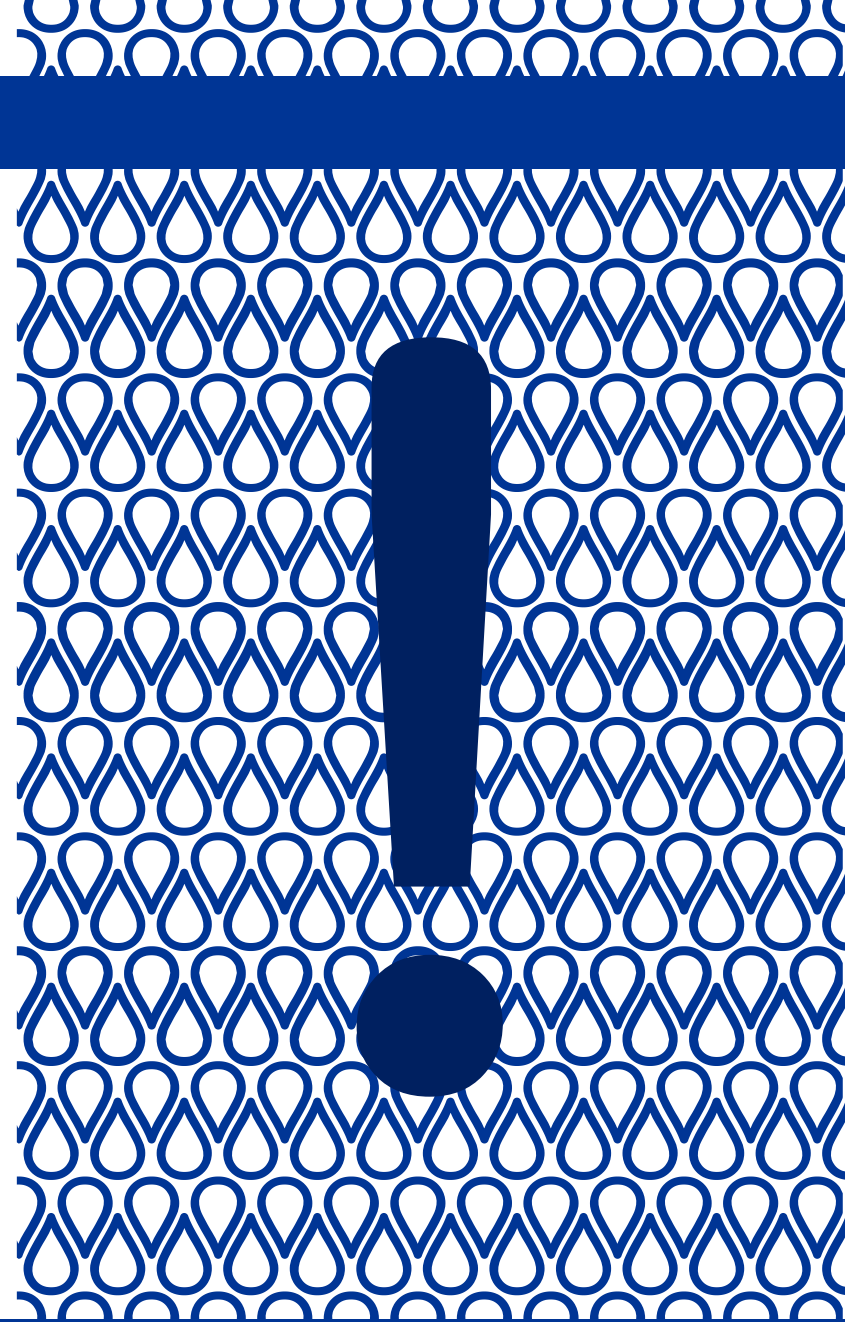
# Spring Overview



**Spring is the water sector innovation centre of excellence across the UK & Ireland. We are here to facilitate collaboration within and beyond the water sector.**

**We support innovators by:**

- Communicating the sectors priority innovation areas
- Facilitating collaborative innovation projects
- Helping share and scale effective solutions



## Q&A

Ask your questions on Slido  
[sli.do/discovery22](https://sli.do/discovery22)



# Thank you!

For more information about the Water Discovery Challenge, contact:

w: [waterinnovation.challenges.org](https://waterinnovation.challenges.org)

e: [waterinnovation@challengeworks.org](mailto:waterinnovation@challengeworks.org)

You can also sign up for updates on the Water Discovery Challenge at:

[waterinnovation.challenges.org/newsletter](https://waterinnovation.challenges.org/newsletter)

For more information about Spring or The UK 2050 Water Innovation Strategy, contact:

w: [spring-innovation.co.uk](https://spring-innovation.co.uk)

p: <https://spring-innovation.force.com/spring/s/>

e: [admin@spring-innovation.co.uk](mailto:admin@spring-innovation.co.uk)