

# FWA: Yorkshire Water Liaison

March '24



# Yorkshire Water

**Overview and who's who at Yorkshire  
Water**





**5 million**  
customers

**140,000**  
businesses

**4000+**  
colleagues

**1 billion**  
litres a day collected,  
treated and returned

**£1 billion**  
revenue in yearly water bills

**£1 million**  
invested per day to maintain and  
enhance network

**72,000 acres**  
of reservoirs and countryside

**658**  
treatment  
works

**85,000**  
km of pipes  
and sewers



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# Yorkshire Water

## CHALLENGES IN THE FINAL PERIOD OF AMP7



# Water

## Improving Asset Health

- Continuing to hit the AMP7 Leakage target, getting to 15% by 2025 is stretching
- Continuing to improve WQ customer contacts at last year's rate, reduced by 1 per 10000
- Improving supply interruptions which has plateaued in the last 3 years at c.9mins, influenced by large single events and trunk mains
- Reducing WQ compliance risks at WTWs and service reservoirs

## Creating an engaged, high performing team

- A smaller, resilient and technically competent reactive team
- A larger proactive team fully focussed on asset and network maintenance to break the reactive cycle
- A dedicated Customer facing team to deliver sector leading service
- Consolidation of tasks by complexity to enable better delivery and a systems led approach to workforce management.
- A partnership approach to Metering and Leakage to enable flexibility and drive efficiency
- Natural progression through network roles, with functional expertise balanced with the flexibility required to ensure resilience and deal with variation in demand

## Taking a joined-up approach

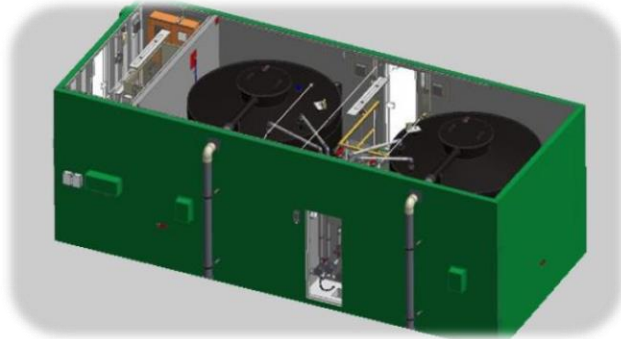
- Getting our business processes ready (systems & outcomes) for 1.5m Smart Meters in AMP8 to maximise service, consumption and leakage benefits
- Delivering regulatory compliance dates for DWI WQ schemes and EA reservoir safety schemes



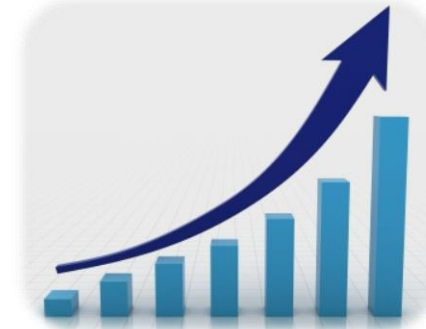
# Wastewater



**Back ended programme**



**Supply chain issues**



**Significant ramp up in our chem consumption**



**Programme affordability**



**Greater regulatory scrutiny**



**AMP8 Readiness**



# Yorkshire Water

## PLANS AND DELIVERY CHALLENGES FOR AMP8



# What we need to deliver

## £7bn Programme

- c.40% step up from AMP7

## Significant investments into

- Smart Metering
- WINEP
- Storm Overflows
- River Water Quality
- DWI Programme
- WRMP

## Our first DPC programme

- 2 WTWs – Elvington and Chellow
- Discreet batch of the largest Storm overflow storage solutions

**£1.3bn Storm  
Overflow  
Programme**

Focus on **Asset  
Health**

Growing a **diverse and  
skilled** workforce

Delivering via a  
**Collaborative Supply  
Chain**

**Net Zero Carbon  
Target**

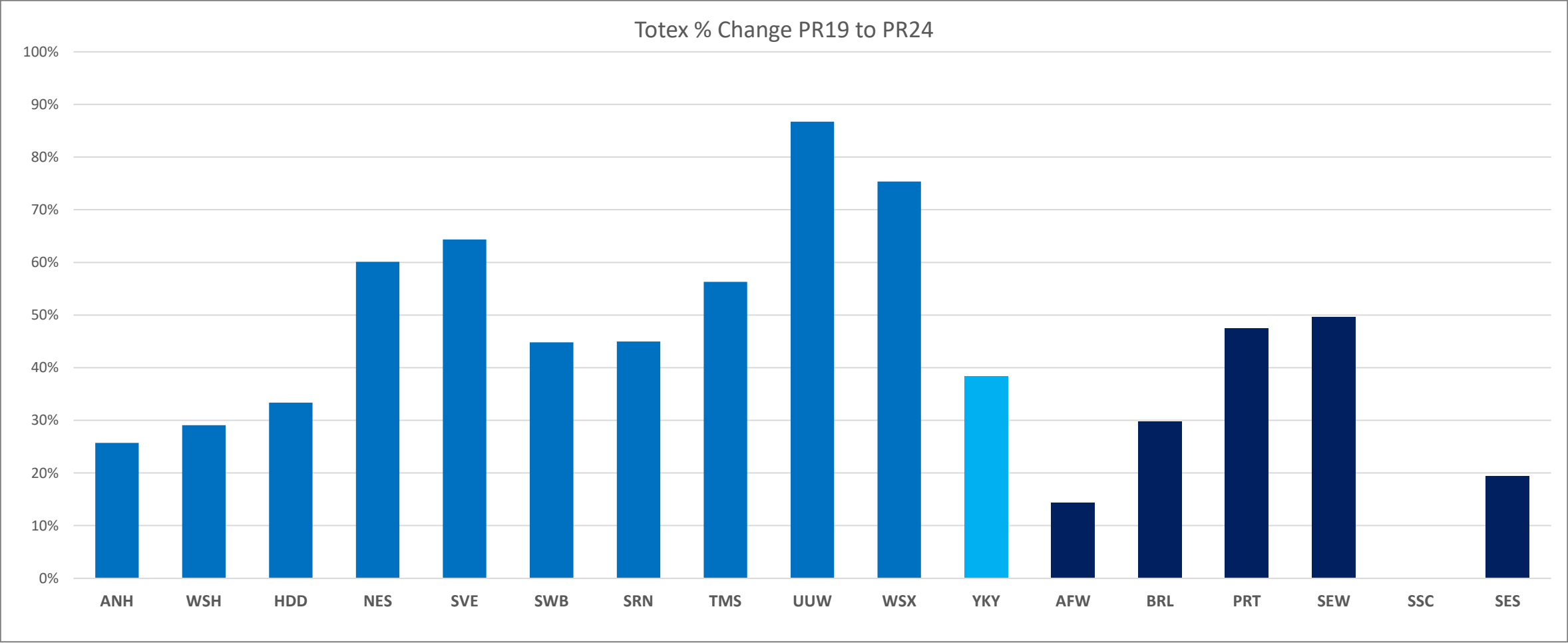
**Increased  
Infrastructure  
Programme**

Industry Leading **Safety  
Performance**

**£1.5bn** Non-Infrastructure quality  
programme across clean and  
waste assets

Delivering  
**blue/green**  
infrastructure  
solutions

# PR24 proposed Totex increase



This graph indicates the % Totex difference between companies’ final submitted plans at PR19 and the PR24 submissions. Excludes DPC costs.

Note: Numbers should be considered indicative.

# Delivery Goals and challenges

## What we need to achieve

- To deliver quality outputs, safely, within the planned cost and time allowances
- To achieve the regulatory commitments and price control deliverables
- To achieve the planned savings/efficiencies
- To define and deliver sustainable solutions which are optimised for carbon, totex and achieve YW's nature first commitments
- To deliver predictable volumes of spend on an annual basis

## Challenges we are facing

- Uncertainty of PR24 outcome
- Continued media focus and political uncertainty
- Risk of resource availability due to industry wide ramp-up in workload
- Readiness to deliver from day 1 of AMP 8
- The time and dependency on others required to make nature-first a success
- The need to make savings and deliver at pace concurrently

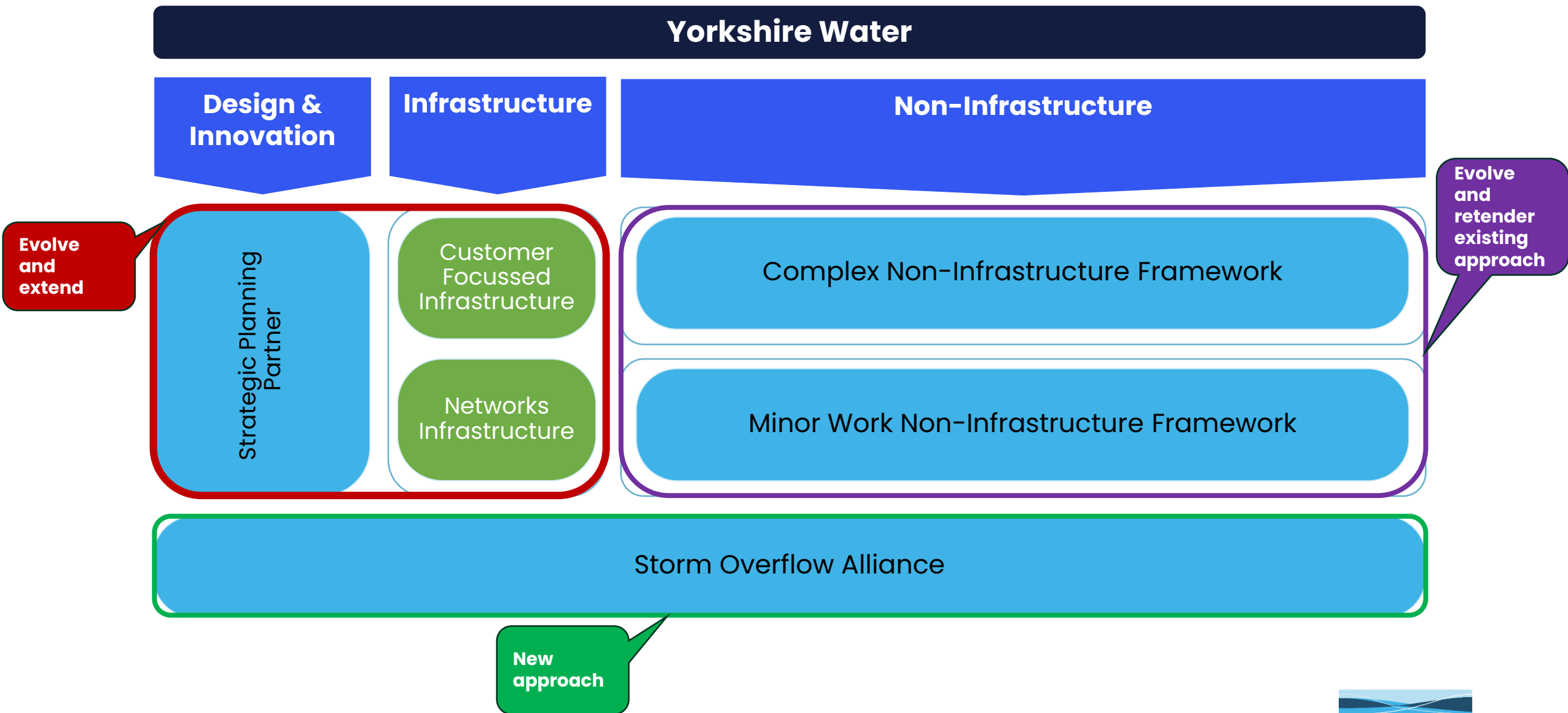
# Commercial considerations

- The right commercial model for the right area of the programme
  - Understood solutions, low complexity, high volume
  - Partially understood solutions, moderate complexity, low volume
  - Solutions unclear, high complexity, low volume
- Ensure arrangements match commercial complexity with risk, supplier type and contract method
- Evolve past arrangements, not rip it up every 5 years
- Desire to follow best practice and deploy an Alliance, but where it fits best
  - Known programme with low volatility
  - Clear outcomes and strategic aims
  - Where there are a range of solutions possible and not client defined





# AMP8 Framework Overview



# Yorkshire Water

## AMP8 PROGRAMME AND CAPACITY CHALLENGES



# Delivery Goals and challenges

## Critical Part of the Programme

- Significant Storm Overflow programme
- Continued WINEP Programme
- YW's nature first commitments

## Capacity challenges we are facing

- Delivering the largest capital programme the industry has ever seen
- Risk of resource availability due to industry wide ramp-up
- Ability to retain the supply chain through AMP7 Year 5 in order to hit the ground running in AMP8
- The time and dependency on others required to make nature-first a success
- Increasing lead times
- MCC, Systems Integration
- WINEP P Removal – Chemical dosing, TSR
- Continuing to influence customers on sewer misuse

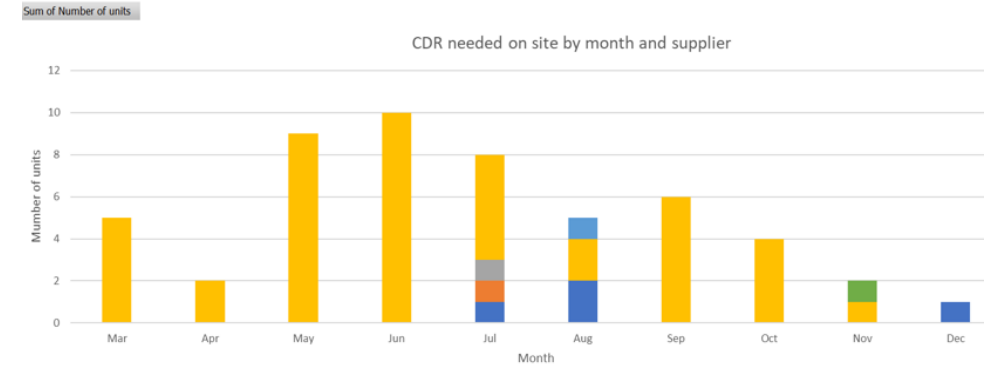


# Delivery Goals and challenges

## Supporting Capacity Concerns

- Client resource ramp up
- Improved focus on effective demand forecasting
- Standardised designs
- Infrastructure roll over & programme allocation
- Strategic Planning Partner programme optimisation
- Increased focus on partnerships
- Improved early engagement with key supply chain during value engineering

Focus on driving improved demand forecasting down to supplier level



# Yorkshire Water

**INNOVATION, CURRENT AND FUTURE PROJECTS**





## Water Industry Innovation Needs.....

*"Global Water Intelligence estimates that meeting the UN Sustainable Development Goals for water and sanitation between 2018 and 2030 will cost \$1,785 billion for rehabilitation and \$4,056 billion for new infrastructure. Activity on this scale will require significant innovation and forward thinking."*



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## Water Industry Innovation Needs.....

### THE WATER SECTOR'S VISION:

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

*"Collaborative innovation will support the water sector in meeting ambitions for customers; improving social and environmental value in the long term."*

**Ofwat**  
**£200 million**

Ofwat additional funding  
available for innovation



# Water Innovation Ecosystem

Innovation is a complex, non-linear process, so the water innovation ecosystem is similarly complex.

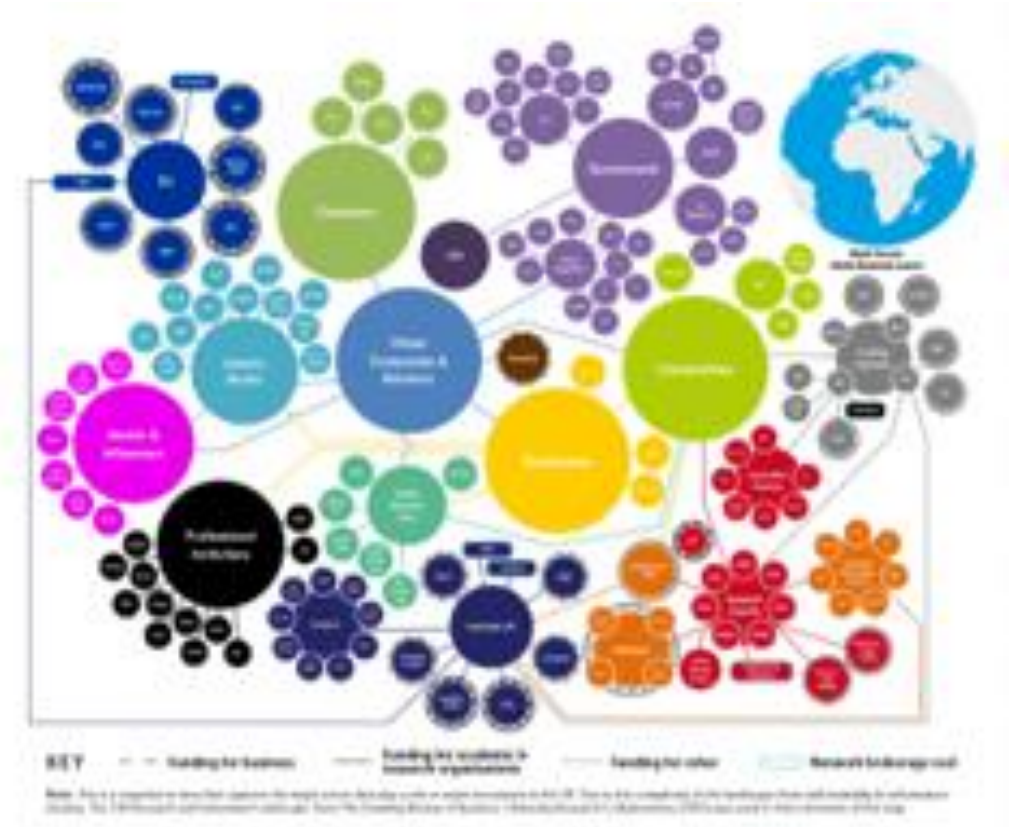
Map of the key actors that play a role in water innovation activity to:

- Identifying the gaps
- Establishing relationships between different actors,
- Developing collective understanding over time
- Making collaboration with, and innovation within, the water sector easier.

Cross-sector collaboration is central to addressing some of society's biggest challenges:

- Carrying out research
- Developing innovative technologies
- Driving behavioural change
- Implementing policy frameworks

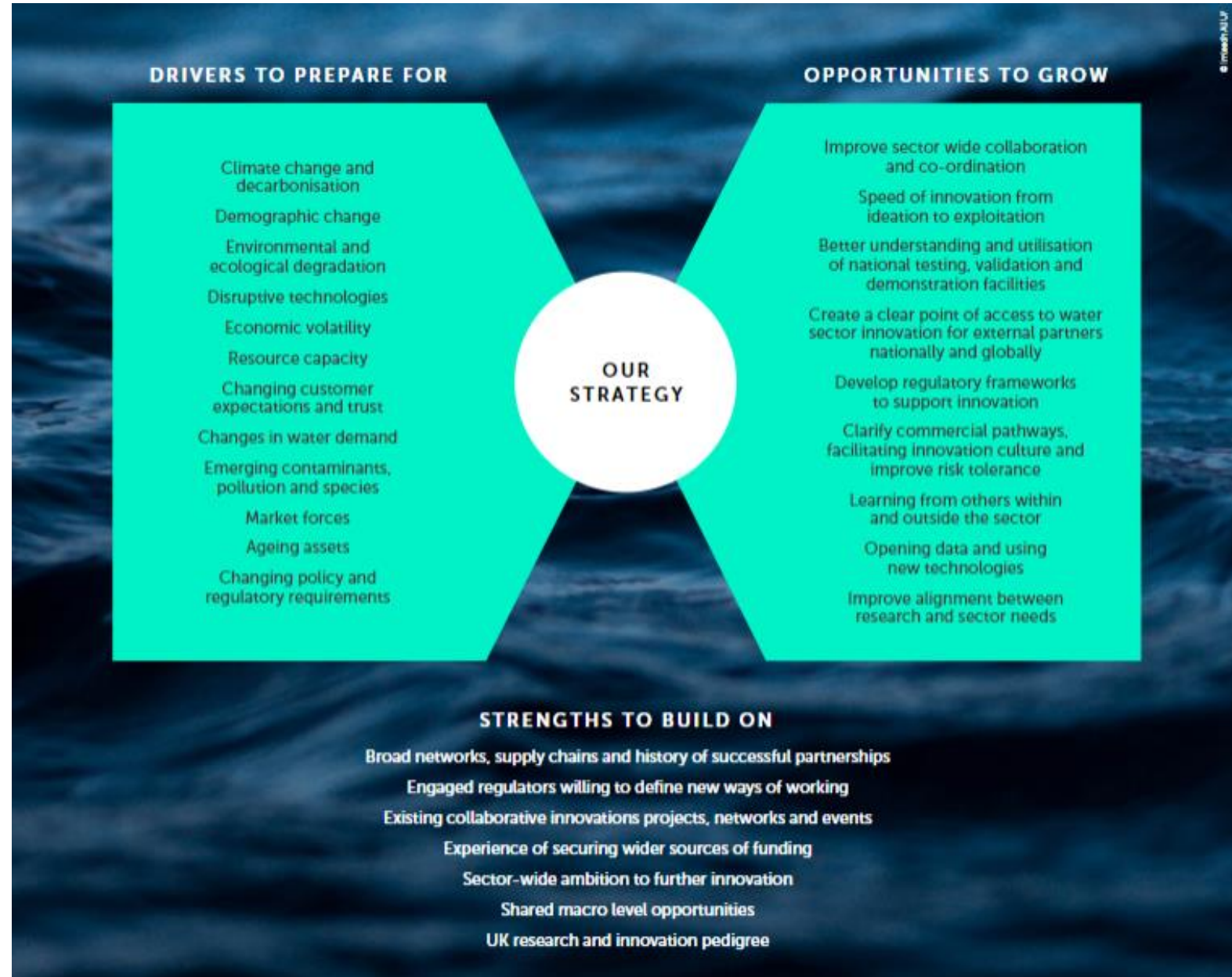
***"Working together ensures there is the right engagement and support to create a successful ecosystem that is more than the sum of its constituent parts."***





# Drivers and Opportunities

- Climate change and decarbonisation
- Demographic change
- Environmental and ecological degradation
- Disruptive technologies
- Economic volatility
- Resource capacity
- Changing customer expectations and trust
- Changes in water demand
- Emerging contaminants, pollution and species
- Market forces
- Ageing assets
- Changing policy and regulatory requirements



# Themes at a glance



**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.

Short- (2025),  
Medium- (2035)  
Long-term (2050) aims

SUMMARY / INTRODUCTION / STRATEGY / PRINCIPLES / THEMES / IMPLEMENTATION / EVOLUTION / APPENDIX	
<b>PROVIDING THE SERVICES SOCIETY NEEDS, EXPECTS AND VALUES</b>	<b>We need to innovate to build customers' trust and deliver transformational customer service.</b>
<b>AMBITIONS FOR 2050</b> 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.	<b>KEY ENABLERS TO DELIVERING THIS THEME</b> We need new enablers and ways of working to address these key questions which include: • Creating an open two-way dialogue with customers • A shared purpose and collaboration across the water sector • Developing an understanding of the true value of water among customers • Creating national benchmarks for data sharing and collaboration • Ensuring all IT systems are agile and have inter-operability and internal data • Sharing broader environmental benefits with customers • Improving customer engagement processes • Cross-utility partnerships • Working collaboratively with the non-household market • Understanding the true extent and impact of water poverty across customers
<b>UPPER 10% questions</b> How do we achieve accessible, affordable for all, protect vulnerable customers and lead to zero customers in water poverty by 2030?	<b>PETA JAKARTA - CREATING CROWD-SOURCED FLOOD-MAPPING</b> Pilot an innovative approach to citizen engagement in Indonesia, the Peta Jakarta project in 2016/17 used real-time social media engagement to generate crowd-sourced disaster maps in a period of monsoon flooding. (Hollands and Tappin, 2020). Based on the success of this pilot, this project has been expanded, called Peta Simpana, to the greater Jakarta region. <b>Innovative use of social media for disaster response and citizen protection</b> The project enables Jakarta's citizens to report the locations of flood events using the social media network Twitter. This real-time, citizen-driven data collection supported accurate and publicly accessible real-time mapping of flood conditions. Cross-validation of formal flood reports data sources with live data. Creation of information for flood assessment, targeted response, and management in real-time. The study demonstrated the value and utility of social media as an urban method for crowd-sourcing situational information to support decision-making and response coordination in the face of extreme weather conditions. (Hollands and Tappin, 2020). <b>Relevance to UK water sector</b> This project illustrates the potential to crowd source data and to bring the community to centre of projects. This is a step change from a more traditional approach of having customer and community engagement as a one-way broadcast rather than a two-way dialogue and process of co-creation.

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TOWARDS 2025		TOWARDS 2035	TOWARDS 2050



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23



# Ofwat Innovation Fund

£200 million Innovation Fund – funded by Water Company Customers

***“to grow the water sector’s capacity to innovate, enabling it to better meet the evolving needs of customers, society and the environment.”***

Split into 2 competitions:

- **Water Discovery Challenge (for Suppliers): c.£4 million** “competition for bold and ingenious innovation up to **£500,000**.
  - WDC1 winners announced in Feb.2024
- **Water Breakthrough Challenge:**
  - **Catalyst Stream: c.£10 million** fund for projects between **£150,000 – £2 million**.
  - **Transform Stream: c.£30 million** for initiatives between **£2 million – £10 million+**.
  - Judging of WBC4 entries is ongoing – Winners to be announced in May 2024

About the Fund: [Ofwat Innovation Fund \(challenges.org\)](https://challenges.org)

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

Consultation on **significant!** Increase in the Innovation Fund in AMP8



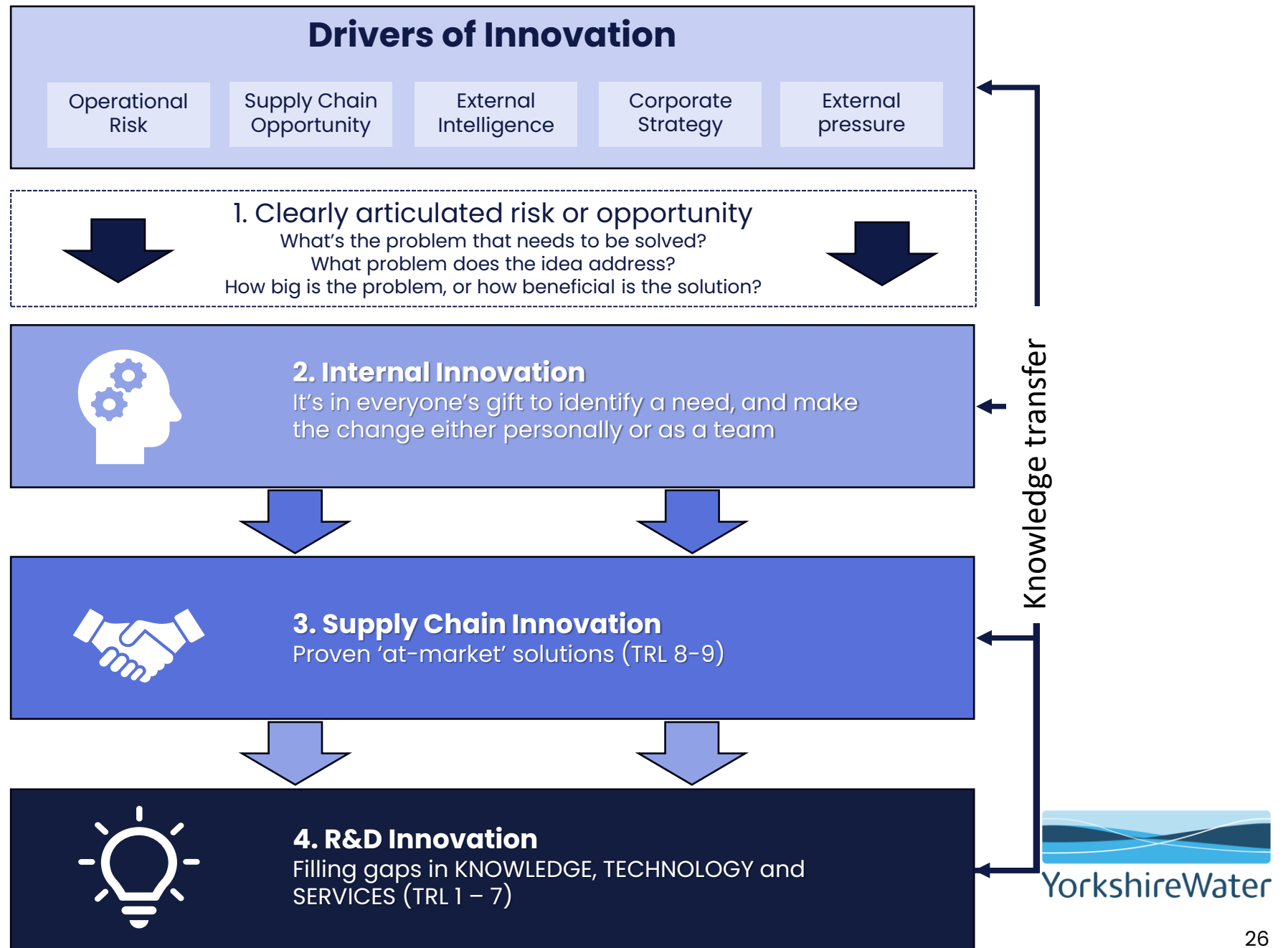
# Innovation in Yorkshire Water

R&D innovation Team's role is to accelerate and de-risk the adoption of new solutions that:

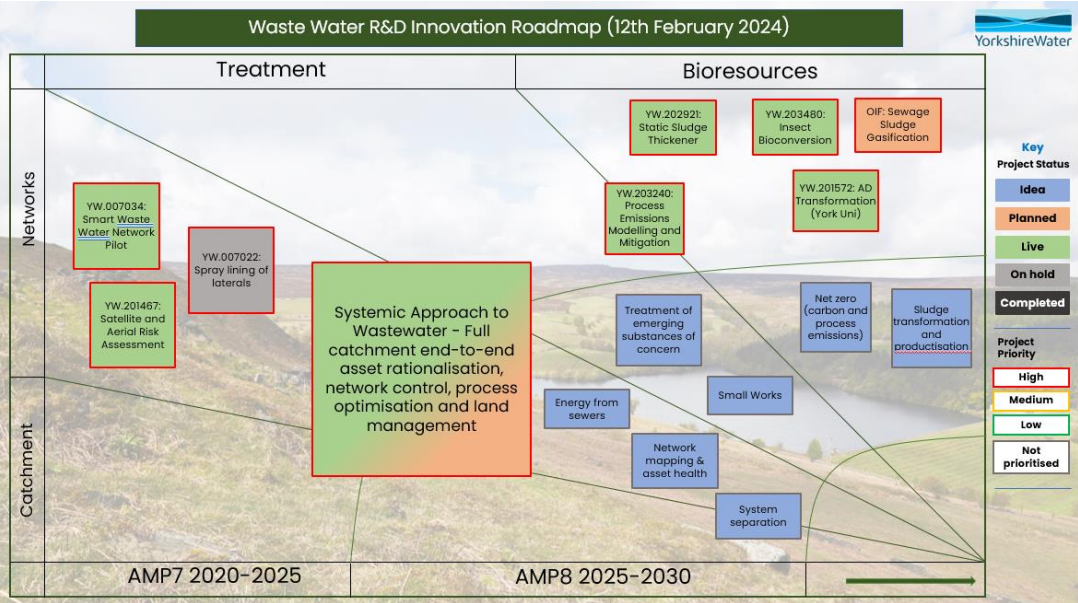
- Improve **service** performance,
- Mitigate emerging risks and improve **resilience**,
- Realise operational **efficiency**
- Enable business **growth**

“The deliver a Transformational and Incremental Innovation programme, in order to **fill gaps in KNOWLEDGE, TECHNOLOGY and SERVICES**” (e.g. TRL 1-7)

# How we do 'Innovation' at YW



# R&D Innovation Programme

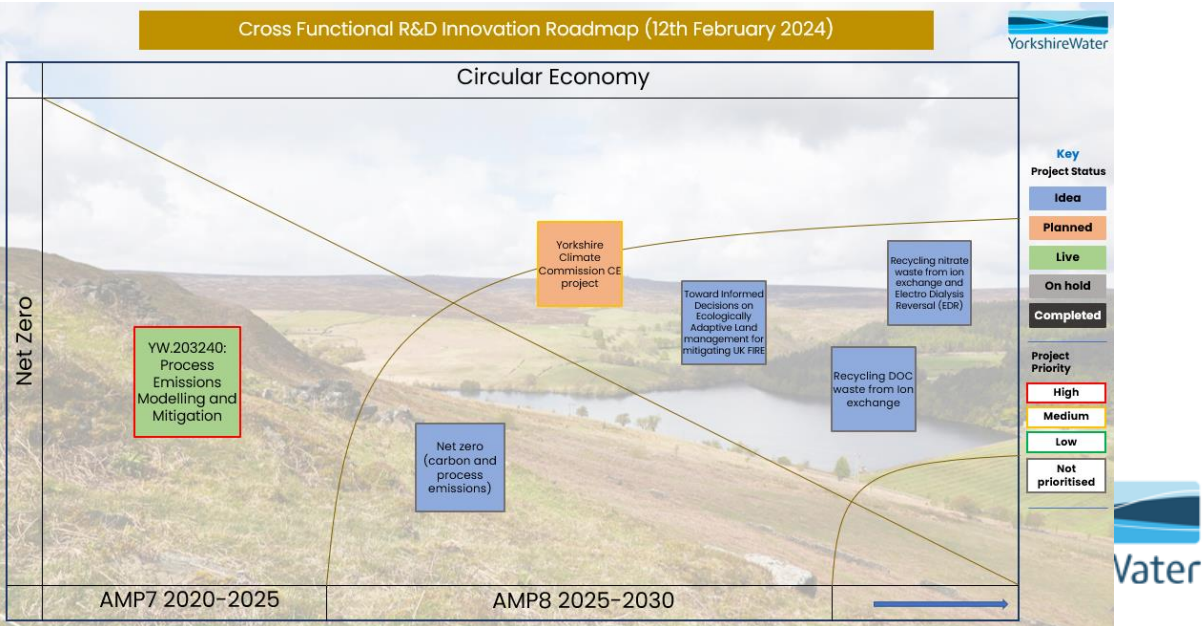
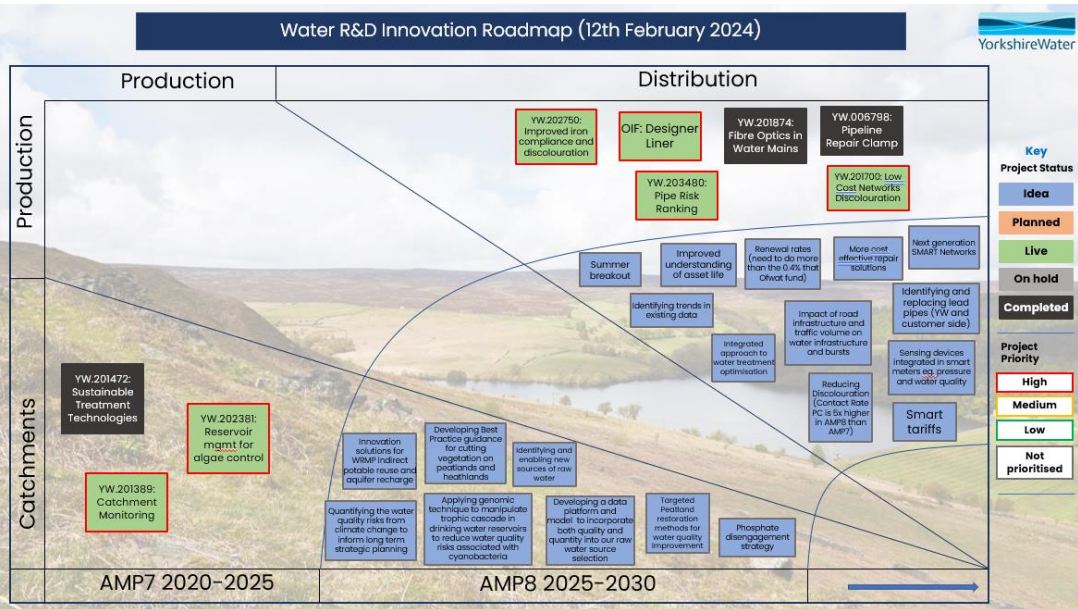


## Innovation Programme

- AMP7: £11m + third party leverage (>£20m to date)
- AMP8 Plan: £18m + >£18m third party leverage

## 3 Roadmaps

- Water
- Wastewater
- Cross-Functional
- To be made available on the YW Innovation website



# R&D Innovation – ‘Key areas of focus’ in AMP8

## **Water Catchments and Production**

- Drinking Water Quality
- Water Resources
- Raw Water Catchment Management

## **Wastewater Networks**

- Storm Overflows / Pollution
- Internal and External Sewer Flooding

## **Water Distribution**

- Asset Health and Resilience
- Leakage, Demand Management, Bursts

## **Wastewater Treatment and Bioresources**

- Wastewater Treatment Works Compliance
- Sludge treatment and disposal

## **Cross Functional**

- “Smart” technology
- Resource recovery and reuse
  - Net Zero
- Capex and Opex Efficiency



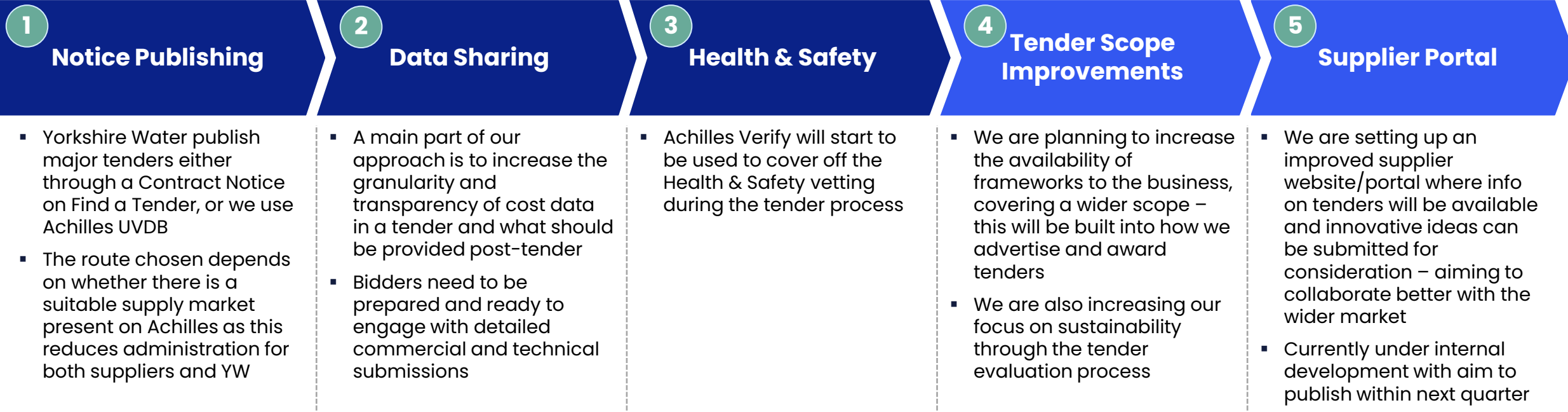
# Yorkshire Water

**WORKING WITH THE SUPPLY CHAIN**



# At Yorkshire Water, there are a number of different ways we engage with suppliers and stakeholders when approaching a tender process to ensure the best outcome for all

Our focus has been about speeding up the tender process and making sure we provide quality and insightful feedback to suppliers along with a transparent process.



**The next phase will be increasing speed and reducing effort to tender, e.g. through single-day commercial rounds, eAuctions and more flexible choice of procedures**



# Yorkshire Water has a Commercial Business Partner model with key contacts leading to connect suppliers to internal colleagues



## Directs

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## Networks

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## Capital Delivery – Main Frameworks

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## Capital Delivery – Enabling Frameworks

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## Indirects

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# Sustainability focus on a page



**Themes**  
YW's Priorities

Carbon and GHG Emissions

Local Economic Impacts

Environmental Health & Pollution



**Key Targets**  
Our Commitments

Achieve net zero operational carbon emissions for the sector by 2030

Operational Carbon - 12% reduction from 2020 to 2025

Deliver an energy efficiency programme to reduce electricity use by 28% by 2030

All vans and cars will be electric by 2030

Reduce capital emissions by 23% by 2025

Length of river improved - 741.6km river improved by 2025

Leakage - 15% reduction by 2025 and 50% by 2050

Plant a million trees by 2028

Prevent the equivalent of 4 billion plastic bottles ending up as waste by 2030



**Categories**  
Spend areas which can address the priorities

Capital Delivery

Chemicals

Corporate Services

Energy & Fuel

IT & Telecoms

Infrastructure Repair & Maintenance

Operational Assets

Recycling & Waste



**Commercial Levers**  
Approaches we can deploy

Governance and Accountability

KPIs and Measures

Training

Tendering

Supplier Relationship Management