

The background image shows a coastal scene at dusk or dawn. In the foreground, there's a concrete structure, possibly a pier or breakwater, with two large, dark, rectangular blocks. The water is calm, reflecting the sky and the structures. In the middle ground, there's a line of trees. In the background, several wind turbines are visible against a blue sky with some clouds. The overall mood is serene and modern.

INNOVATION STRATEGY 2025 - 2030

Shaping the future of water innovation in the UK

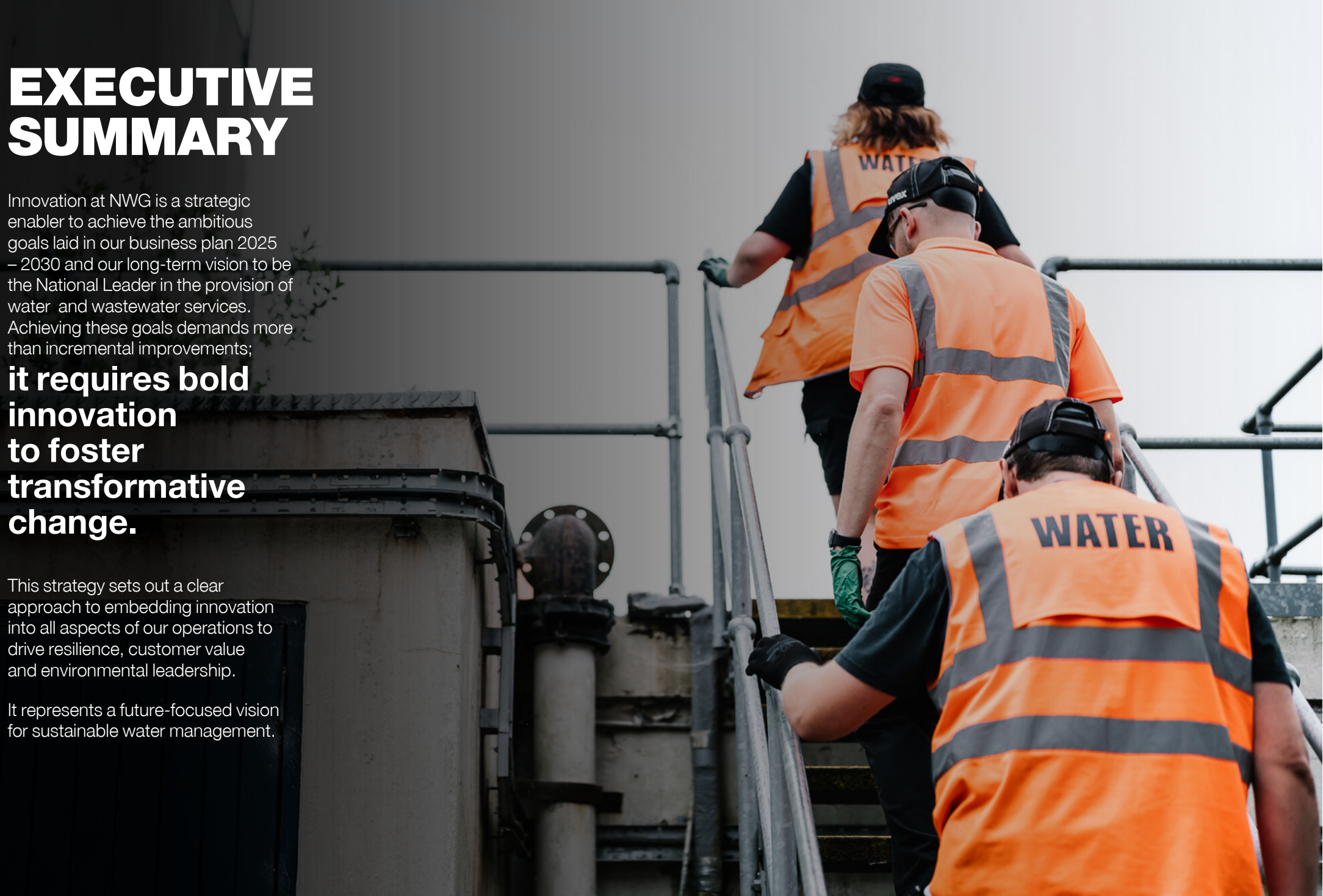
EXECUTIVE SUMMARY

Innovation at NWG is a strategic enabler to achieve the ambitious goals laid in our business plan 2025 – 2030 and our long-term vision to be the National Leader in the provision of water and wastewater services. Achieving these goals demands more than incremental improvements;

it requires bold innovation to foster transformative change.

This strategy sets out a clear approach to embedding innovation into all aspects of our operations to drive resilience, customer value and environmental leadership.

It represents a future-focused vision for sustainable water management.



MESSAGE FROM OUR HEAD OF INNOVATION

At the heart of our strategy is a relentless focus on what matters most for our customers and communities. We set clear innovation objectives, ensuring our creativity and ambition are backed by leadership, robust processes and accountability.

By nurturing a culture where new ideas can thrive, managing risks responsibly, and learning from global pioneers, we are not just keeping pace with change – we are driving it. Our structured approach enables us to unlock smarter solutions, reduce uncertainty, and deliver real benefits at scale. With innovation as our compass, we will lead the UK water sector towards a more resilient and sustainable future.

Angela MacOscar,
Head of Innovation



**WE ARE
SHAPING
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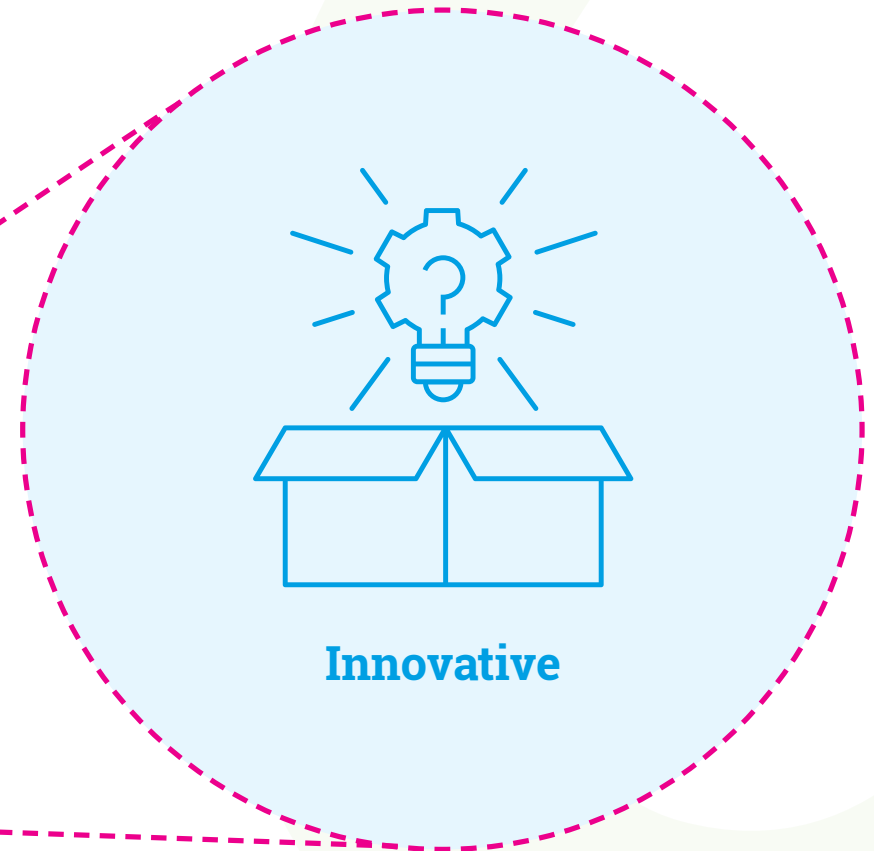
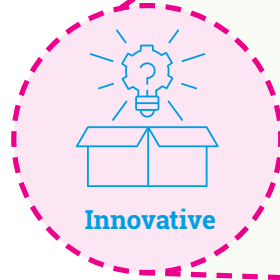
OUR ETHOS

Our **Innovation Strategy** is intrinsically linked to NWG's company purpose and vision and is aligned to the strategic themes from our business plan.

Innovation is one of our company values, and we are proud to say we continuously strive for innovative and better ways to deliver our business.

Our purpose as an Innovation team is to be a beacon to inspire, support, facilitate and create organisational value through leading in innovation in the UK water sector and beyond.

Our Vision: To be leading in Innovation in the UK water sector and beyond.



OUR PRINCIPLES

As well as being driven by our vision and values, innovation at NWG is also guided by four specific principles – People, Purpose, Process and Passion.



PURPOSE

Innovation is not random or reactive but intentional and aligned with long-term organisational goals and purpose to care for the essential needs of our communities and environment.



PEOPLE

Innovation is an important pillar within NWG and is not a separate department but is spread across all functions and directorates as a hub and spoke model. We empower all our people to be innovative.



PROCESS

We create the right conditions to innovate and we are guided by structured but agile processes that allow flexibility, creativity and a safe place to fail and learn.



PASSION

Passion is not just helpful but essential for innovation. It is the catalyst that fuels creativity, curiosity, perseverance and the drive to challenge the status quo.

PURPOSE: STRATEGIC OBJECTIVES

Our innovation focus should always be around our strategic themes, outcomes and company scorecard. We have set out our strategic objectives for the business in PR24 and our most ambitious targets span four key domains;

1

Environmental impact

2

Resilience and service quality

3

Investment and efficiency

4

Customer support and affordability

ENVIRONMENTAL IMPACT

Our Environmental targets are embedded into innovation objectives. We have committed to a **£1.7bn investment** in our business plan towards environmental improvements. Traditional methods alone cannot meet the scale and urgency of environmental targets like eliminating serious pollution or achieving net zero.

- **Net Zero**

One of the most significant and currently most difficult areas of greenhouse gas emissions to eliminate are emissions from our treatment processes, which form part of our scope 1 emissions. Innovations in the types of processes we use, and in the capture and removal of fugitive emissions would help us to combat these emissions directly. Without this, we will need to find offsetting emission reductions outside of our operations to achieve net zero.

- **Eliminate serious pollution events**

Eliminating the harm from storm overflows will be one of our major areas of investment for the next 25 years. Innovative solutions could help reduce costs and deliver benefits faster. For example, increased monitoring and active control could increase the working capacity of our wastewater network and avoid the need for more costly interventions.

- **Biodiversity and Nutrient Neutrality**

Achieving biodiversity enhancement and nutrient neutrality is a complex challenge that demands innovative thinking and solutions beyond conventional engineering. As outlined in our business plan, we are committed to reducing nutrient loads through nature-based interventions and improving habitats across our catchments. Innovation is key to unlocking scalable, cost-effective approaches, such as constructed wetlands, smart nutrient monitoring, and adaptive land management, that deliver environmental benefits while maintaining operational efficiency. By fostering collaboration across disciplines and embracing new technologies, we can accelerate progress toward these goals and ensure our activities contribute positively to the ecosystems we depend on.

Excess phosphorous and nitrogen in the natural environment causes major ecological harm. Innovation that enables us to remove nutrients more efficiently, either through technological solutions at our works or innovation in permitting and partnership working that enables more effective management of nutrients at a catchment level would help deliver nutrient reductions quicker and at lower cost, unlocking the potential for additional housing developments.

RESILIENCE AND SERVICE QUALITY

The water sector is undergoing a profound transformation, driven by rising customer expectations, evolving regulatory demands, and increasing environmental pressures. Customers now expect not only reliable service but also transparency, sustainability, and responsiveness to their needs. Regulators are setting more ambitious targets for leakage reduction, pollution control, and drought resilience, requiring utilities to go beyond traditional approaches. At the same time, population growth, climate change, and urbanisation are intensifying demand for water and placing greater strain on ageing infrastructure. To meet these challenges, NWG must embrace innovation as a strategic enabler - leveraging new technologies, data-driven insights, and collaborative models to deliver resilient, high-quality services that are fit for the future.



INVESTMENT AND EFFICIENCY

NWG plans to deliver £400m in efficiencies between 2025 - 2030 - an ambitious target that can only be realised through process innovation, digital transformation, and lean operations. Innovation is the engine that enables smarter asset management, predictive maintenance, and automation, helping to reduce operational costs while improving service delivery.

It also ensures that the £6bn investment planned for AMP8 yields maximum value by embedding innovation into capital programmes, procurement, and delivery models. As a strategic objective, we will foster a culture of continuous improvement, invest in scalable technologies, and build cross-functional innovation capabilities to unlock efficiencies across the business and accelerate our journey toward ISO 56001 compliance.



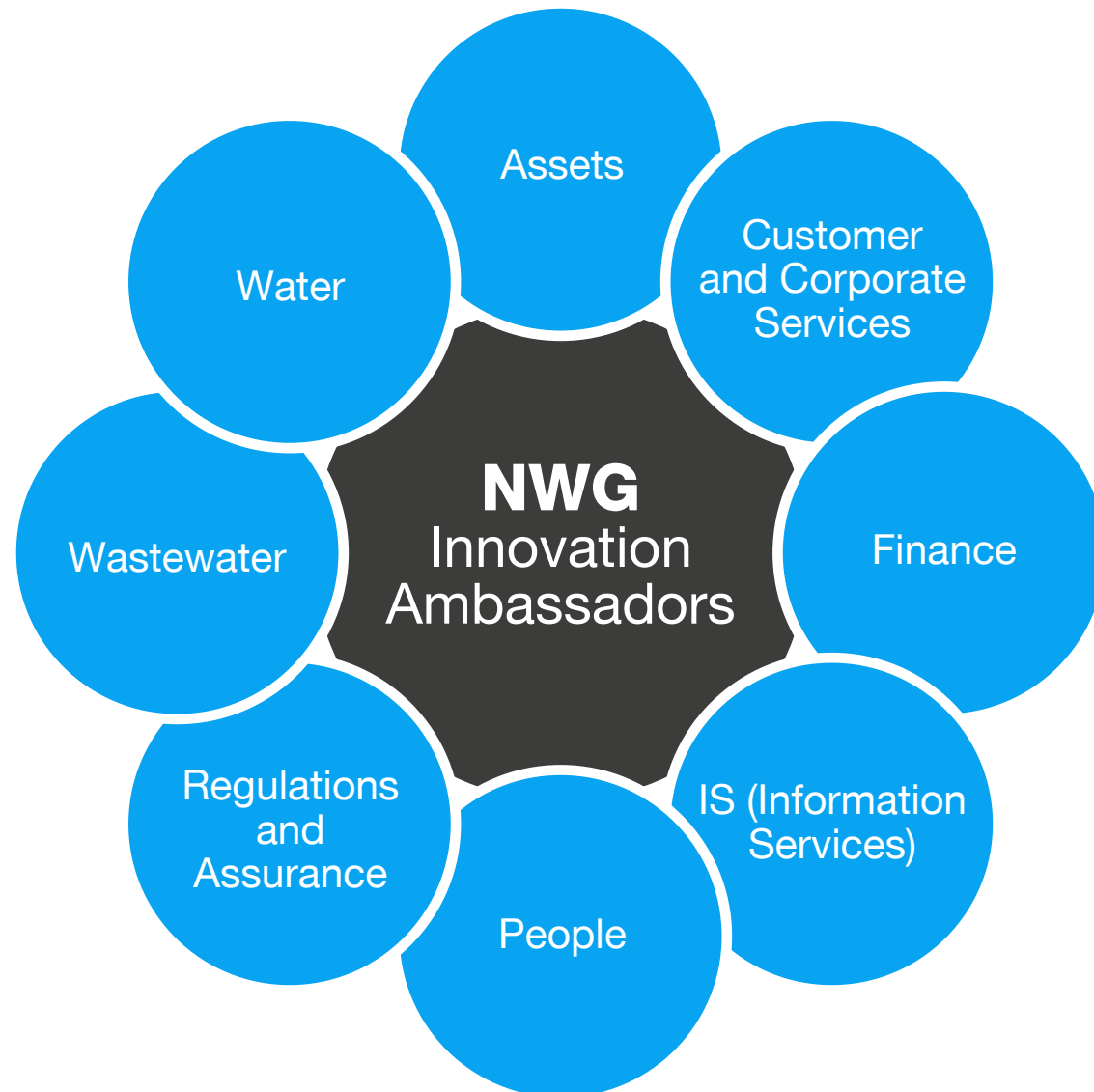
CUSTOMER SUPPORT AND AFFORDABILITY

To eradicate water poverty and double social tariff coverage, NWG must innovate in customer engagement, data-driven targeting, and service design. Innovation will enable inclusive solutions that are responsive to diverse customer needs, ensuring that no household spends more than 5% of its disposable income on water bills. As part of our strategic objectives, we will leverage behavioural insights, digital platforms, and predictive analytics to identify and support vulnerable customers more effectively. We will also explore co-creation models and community-led innovation to ensure our services are accessible, equitable, and aligned with the lived experiences of those we serve.



PEOPLE: OUR CULTURE

Innovation is an **important pillar within NWG** and is not a separate department. Innovation activities at NWG operate within a hub and spoke model, meaning innovative work is spread across all functions and directorates.





LEADERSHIP CULTURE:

Senior leadership is pivotal to fostering a robust culture of innovation. NWG has designated senior leader champions to support and advocate for innovation projects, ensuring alignment with business objectives, culture shifts, and widespread project adoption.

This leadership commitment underscores the priority of innovation within NWG and sets a powerful example for the entire organisation.



ORGANISATIONAL CULTURE:

NWG is committed to cultivating an environment where innovation can thrive. Our Innovation Ambassador Group, the NWG Innovation Festival, and programmes like Invest Quest collectively drive this vision. By setting an ambitious target of

40% of the organisation to actively engage in innovation activities annually,

we create a vibrant culture where innovation becomes a shared responsibility.



INCLUSIVITY:

NWG's Innovation Ambassador Group spans all directorates, functions, and levels of the organisation, fostering inclusivity and collaboration. Monthly meetings provide a platform for knowledge-sharing, and external speakers bring fresh perspectives, reinforcing NWG's commitment to inclusive innovation.

We aim to create an environment where every colleague feels empowered to participate in the innovation journey.

PROCESS: OUR METHODOLOGIES AND PROCESSES



NWG's innovation processes are aligned with ISO 56001, the global standard for innovation management. Our processes guarantee a structured, systematic approach to managing innovation, enhancing transparency, governance, and value realisation.

1 Intelligence - Horizon Scanning to identify emerging trends, risks and opportunities

2 Intent – Prioritise problems and create an innovation challenge linked to a specific business problem, risk or opportunity

3 Ideation - Ideas can originate internally, via our supply chain, academic partners or in collaboration with our ecosystem of innovation partners

For those big challenges, our approach is rooted in design thinking. We apply the Jake Knapp (Google Ventures) Design Sprint methodology - an intensive five-day process that fosters problem-solving, creative thinking, ideation, and rapid prototyping. We adapt the methodology to suit the challenge at hand, incorporating principles of regenerative and human-centred design thinking.

4 Passport - Every project that requires funding and a Proof Of Concept at NWG is guided by an innovation passport containing critical project insights, including risks, success criteria, intended outcomes, potential impact, benefit and value. This framework helps prioritise high-value projects, enabling us to allocate resources effectively.

5 Pipeline – We take a portfolio approach to activities. All innovation projects are added to the Innovation Pipeline and follow a structured stage-gated approach, ensuring that ideas mature efficiently from discovery to delivery. Projects flow through various delivery routes depending on scale and complexity, and are assessed at each stage, promoting efficiency, transparency and agility. Every gate is guided by specific success criteria and go/no-go decisions, empowering a 'fail fast, learn faster' ethos.

6 Value - Projects that are successful may become BAU or scaled. We capture both financial and non-financial value to the business.

Funding

Early-stage funding is essential to unlock creativity and reduce barriers to experimentation. To encourage early-stage project development, the Innovation Ambassador Group allocates up to £20,000 monthly to test new ideas in a low-risk environment. This initial investment helps validate concepts before committing larger resources.

Why this funding matters:

- Encourages bold thinking by reducing the fear of failure
- Accelerates learning through rapid prototyping and feedback
- Builds momentum for ideas that might otherwise stall due to lack of resources
- Signals organisational commitment to innovation, fostering a culture of experimentation.

Multi-phase funding model: Once a concept proves viable, respective directorates provide additional support and funding, creating a collaborative pathway from idea to implementation. This staged approach ensures:

- Cross-functional ownership of innovation
- Strategic alignment with directorate priorities
- Sustainable scaling of successful initiatives.

External Funding:

We strategically prioritise The Ofwat Innovation Fund as an external funding opportunity as it is designed to accelerate transformational change across the sector and is aligned with our strategic objectives. A condition of the fund is collaboration across the sector which strengthens our innovation ecosystem and opens access to external expertise and new technologies and solving shared challenges with other water companies.

- NWL has secured **£38.7m across 19 successful bids** in the first five rounds of the Water Breakthrough Challenge (WBC), which is more than any other company in the sector.
- Our success in the competition is a powerful endorsement of our organisation's innovation capabilities.

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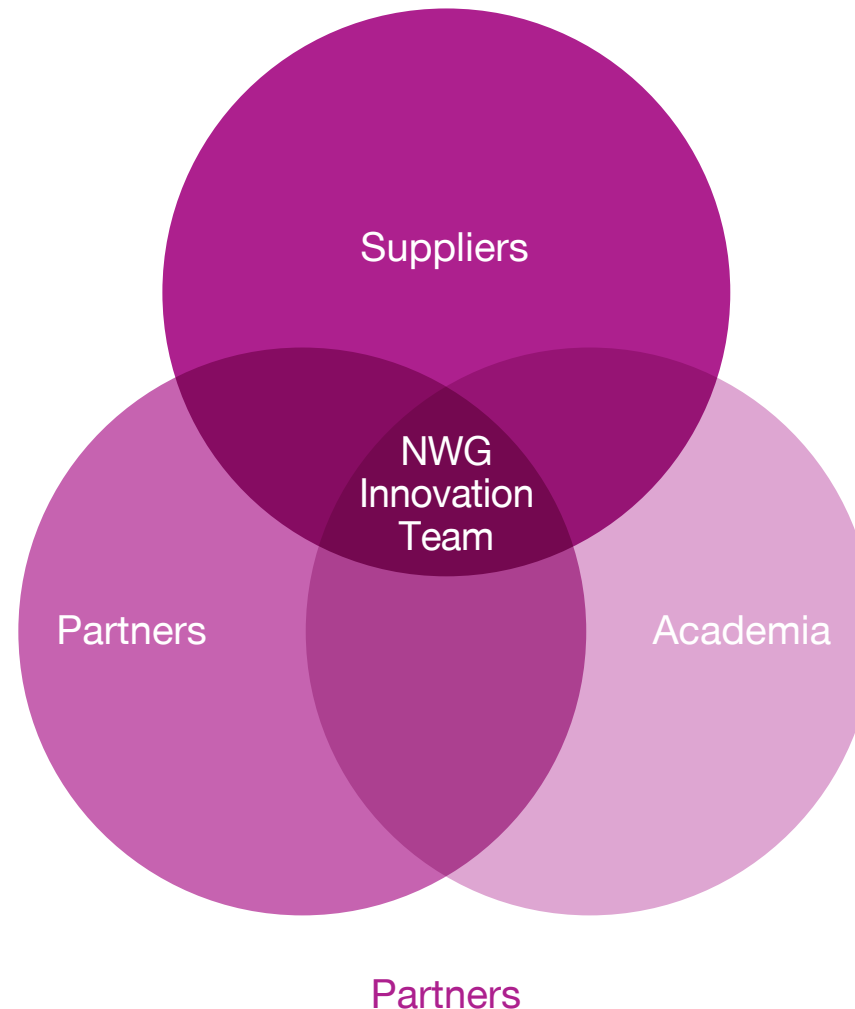


Innovation Ecosystem

We build strong enabling relationships with external organisations and individuals to support us in delivering our strategy. Over the years we have built sustainable partnerships at an industry and regional level to deliver innovative solutions that benefit our customers and the communities in which we operate.

We leverage the expertise of our framework partners and Living Water Enterprise to support us in achieving our bold ambitions.

We are continuously identifying new partners based on what we can learn from different industries



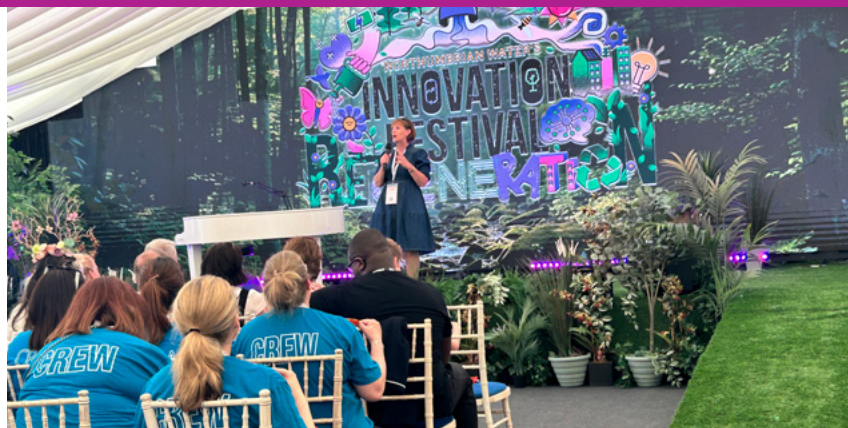
Our thriving Research and Development (R&D) programme forms an important part of our innovation strategy; de-risking innovation by resolving uncertainties and allowing novel solutions or new technologies to be implemented in a safe and secure manner. It also allows for up-front due-diligence to be carried out and for learning and insights to be robustly captured as new approaches are tested. Our R&D programme also provides a powerful opportunity to broaden and strengthen our ecosystem – connecting partners, academics and innovators to accelerate breakthroughs and deliver lasting value for our customers, communities and the environment.

Innovation Festival

The Innovation Festival has grown from humble beginnings into a globally recognised event, now attracting more than 3,000 participants each year.

It has become a powerful catalyst for ideas, creativity, and collaboration – bringing together industry leaders, partners, academics, and innovators to tackle some of the most pressing challenges facing the water sector. As our reputation and reach expand, so too does our ambition to shape a better tomorrow, driving solutions with meaningful, lasting impact.

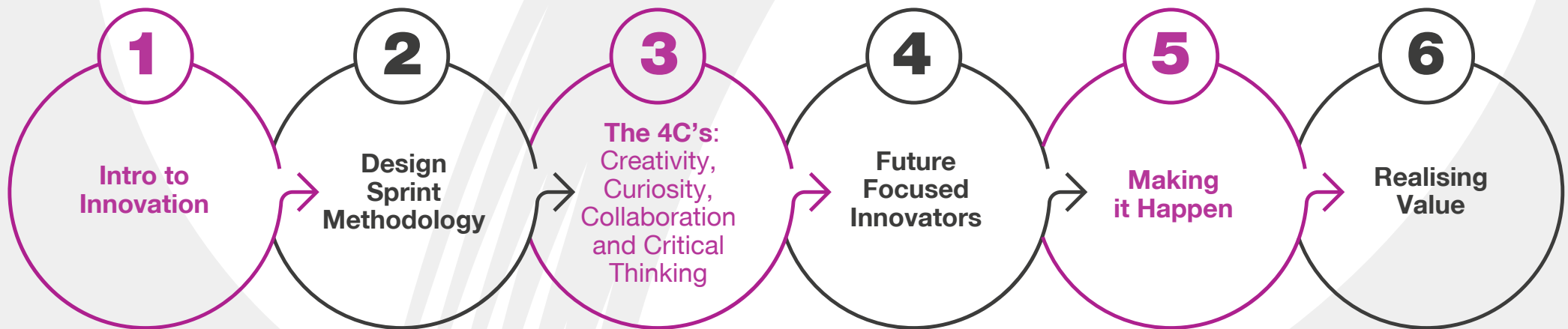
Serving as a dynamic platform for ideation, project acceleration, and partnership formation, the festival ensures Northumbrian Water remains at the forefront of innovation. By harnessing input from academic partners, our supply chain, Isle Utilities TAG, Trial Reservoir, Spring Challenges, and other key industry initiatives, the festival connects bold thinking with practical action to accelerate progress and deliver positive change.



Training and Resources

The Innovation University at NWG offers six core training modules to equip colleagues with foundational innovation skills.

Supplementary modules are available to deepen skills and drive capability across the organisation, ensuring colleagues have the knowledge and tools to contribute effectively to our innovation efforts. We equip innovators with toolkits and guidance to support them on their learning journeys.



Recognition

NWG recognises outstanding innovation through annual awards, including the ViVa Award for Innovation which celebrates our internal colleagues, and the GEM (Going the Extra Mile) Awards which recognises our third-party suppliers and partners for their efforts in meeting our values, including innovation. We also utilise our internal reward platform 'Tap Into' and a regular Innovation Ambassador segment of "Innovation Round of Applause" celebrating top projects, behaviours and outcomes. Internal and external communications amplify these successes, creating a positive feedback loop that motivates continued innovation.



Metrics

NWG monitors progress through key performance indicators, including metrics on engagement, project outcomes, Innovation Festival participation, and external funding. These metrics provide insight into our progress toward a culture of impactful innovation aligned with our business goals.

Two key metrics are measured on our company scorecard alongside industry ODI's. The measures are monitored on a monthly or quarterly basis and assessed against their respective internal targets giving a green or red status.

Our adherence to ISO 56001 principles ensures that our innovation performance is continuously measured and improved through a structured framework, fostering accountability and sustainable impact.



Leading in Innovation

Enable the business to deliver value from innovation projects

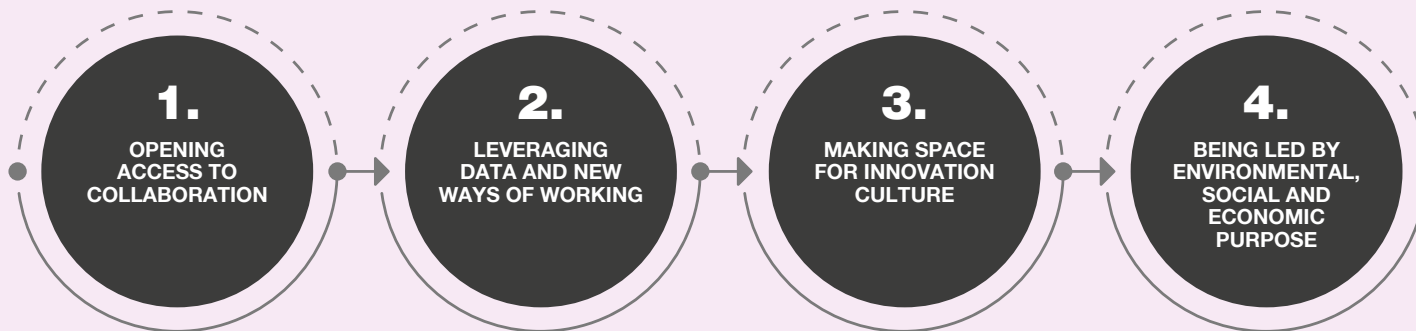
Number of NWG employees involved innovation activities

Alignment with Water 2050 Strategy

The NWG innovation strategy is aligned with the sector strategy, embracing the seven themes

VISION

PRINCIPLES - How we will innovate



THEMES - What we will innovate



Providing the services society needs, expects and values



Providing clean water for all



Protecting and enhancing natural systems



Delivering resilient infrastructure systems



Achieving net zero carbon



Taking a whole life approach to responsible consumption and production



Enabling diverse future-ready people and partnership

OUTCOMES - Why we innovate

Social and public value

Provision of safe, affordable and reliable service to customers

Thriving environmental systems

Resilient systems and improved customer experience Accelerated change and improved use of resources

Improved collaboration and access for external partners to water sector's innovation

Leverage resources and markets to deliver innovation at scale

WE ARE SHAPING THE FUTURE OF WATER INNOVATION IN THE UK