



OUR INNOVATION STRATEGY



Welsh Water
Collaborative Wastewater Innovation
at
Dai Cymru Welsh Water's South Wales WWT
NUP Energy's Low-Temperature Anaerobic Digestion
(LT-AD) Municipal Wastewater Treatment Solution
www.dai.gov.wales www.nup-energy.com

AUGUST 2022

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FOREWORD

This refreshed strategy sets out Welsh Water's updated thinking and priorities for how we want to work with you to develop and implement new innovative solutions on behalf of our customers, and in so doing help deliver the strategic outcomes we set out in our [Welsh Water 2050: Review and Update](#) document.

Although our long-term vision remains largely unaltered, our refreshed strategy builds on our new approaches with customers, a better understanding of the natural environment, much of which is underpinned by innovations in our data technology. In addition, our refreshed strategy reflects the transformative changes in the funding and collaborative landscapes through UKRI, UKWIR – our research body, the Ofwat Innovation fund and the formation of [Spring](#) (the UK water sector centre for excellence of innovation), respectively.

As a company with a core value of being 'open to ideas', we would welcome your thoughts both on this refreshed strategy, and more specifically on the new technologies and processes we need to develop and apply to achieve the 18 strategic outcomes set out in Welsh Water 2050 Review and Update. These might take the form of embryonic research proposals, or fully worked up technologies to trial, perhaps ideas for new regulatory or policy approaches, or just how better to engage with our customers and stakeholders. In this way they can

support us in our work through the changes and choices they make – and in so doing be very much part of the solutions we offer.

The challenges of climate change, population growth, are ever more clear to us, as well as the opportunities to work more closely with our customers and the natural environment utilising both nature based and smart data driven solutions. We hope that this strategy will help you understand and share our challenges, some of which are pretty unique to us here in Wales and those parts of England we serve. We hope this refreshed strategy will enable you to understand better the timeframes over which we are working, our priorities, and so be inspired to work with us and co-develop ideas and solutions we can take forward together for the benefit of our customers.

We welcome your views on this refreshed strategy, and look forward to engaging with you, so that we can become a truly world class water company, one which earns the trust of its customers every day. Please start a dialogue with us at innovation@dwrcymru.com.



Tony Harrington
Director of Environment



EXECUTIVE SUMMARY

OUR INNOVATION STRATEGY

We recognise that the world is rapidly changing and that innovation is fundamental to our ability to thrive and take advantage of new opportunities to benefit our customers now and in the future. We must adapt to trends such as climate change, changing customer expectations and regulatory or policy change. We have therefore doubled the leveraged value of our innovation investment between 2015-2020 and 2020-2025 to allow us to proactively secure the opportunities which we can offer our customers.

This strategy aims to support the delivery of our long-term plan, Welsh Water 2050 and its mission "to become a truly world class, resilient and sustainable water service for the benefit of future generations".

We will not be able to achieve this mission alone; we plan to continue to work in partnership to meet our own commitments, and so play our part in meeting society's wider goals.

This strategy brings together our existing innovation activity, looks forward to 2050 and outlines four enablers of innovation. Our enablers are:

Co-creation and Communication

We will build on our work to date to co-create and co-deliver solutions in Wales' unique environment with our partners as 'Team Wales', and work to communicate our innovation challenges and successes, so as to help develop and improve the regulatory frameworks we work within.

Resources

We will with our partners assign appropriate resources to innovation, and leverage our skills, time, funding and partnerships to ensure we are able to deliver the strategic outcomes committed to in Welsh Water 2050.



Figure 1: Enablers of innovation

Processes and systems

We will refine and adapt our process and systems to improve traction, to embed value, and provide sound governance so as to better evolve and develop new ways of working.

People and culture

We will continue to build an innovative culture, where our people are supported to innovate, learn and succeed by testing ideas through a learn fast and scale up quickly approach.

These four enablers as detailed in Figure 1 highlight our dual focus, looking externally to co-create and co-deliver with partners and support regulatory change, and looking internally, ensuring our culture and processes can provide the best value service possible.

We must work with our regulators and government bodies to co-create and co-deliver more innovative regulatory frameworks for water services and the environment. In order to meet our objectives, these will need to enable and incentivise long-term thinking.

Changes are sought to encourage efficiency through innovative solutions, whilst also encouraging specific changes to improve both our services and our engagement with customers.

Working collaboratively with a range of stakeholders to co-design the research and evidence to inform policy making is critical to our approach.

Underpinning this strategy are 18 journey plans, which are an in-depth look at the knowledge outcomes we need to deliver to meet our Welsh Water 2050 aims.

We understand that our approach to innovation must evolve to incorporate changing customer needs and our operating environment to ensure it is always current and future looking. To achieve this we plan to refresh our Innovation Strategy every five years and undertake annual reviews of our journey plans, all of which we will share with our partners.

DRINKING WATER	1	Safeguarding clean drinking water through catchment management
	2	Enough water for all
	3	Improving the reliability of drinking water supply systems
	4	Protecting our critical water supply assets
	5	Achieving acceptable water quality for all customers
	6	Towards a lead free Wales
CUSTOMERS & COMMUNITIES	7	Working with customers and communities
	8	Ensuring affordability of services delivered to customers
	9	Supporting customers in vulnerable circumstances
	10	Addressing our 'worst served' customers
	11	Employer of choice
	12	Leading edge customer service
	13	Smart water system management
ENVIRONMENT	14	Supporting ecosystems and biodiversity
	15	Using nature to reduce flood risk and pollution
	16	Cleaner rivers and beaches
	17	Protecting our critical wastewater assets
	18	Promoting a circular economy and combating climate change

INTRODUCTION

INNOVATION FOR OUR CUSTOMERS AND FUTURE GENERATIONS

The world is a rapidly changing place, which provides new opportunities and challenges across geographies and industries. We are grasping the exciting opportunity to proactively innovate and match this increasing pace of change for the benefit of our customers both now and in the future.

Climate change, demographic change, economic change, changing customer expectations, and the changing policy and regulatory environment are just a few of the trends that we have identified in our long-term plan; Welsh Water 2050. Over the last five years, the scope of opportunity to better align our operations and long-term planning to meet environmental challenges has increased by an order of magnitude. Allied to this, the opportunities to work more closely with our customers using data driven solutions has similarly increased.

Responding to the trend of complexity and uncertainty and delivering our mission statement **“Welsh Water 2050 – to become a truly world class, resilient and sustainable water service for the benefit of future generations”** will require us to find new ideas, technologies and ways of working.

Innovation is fundamental to our ability to thrive and take advantage of new opportunities in this ever changing world.

We will not be able to do this alone. As set out in Welsh Water 2050, we will work in partnership with others as ‘Team Wales’ to meet our own goals and play our part in meeting society’s wider goals.

We are committed for the long term to find new ways of working to engage with and better meet the evolving needs of our customers and the environment, now or in the foreseeable future.

We work in a highly regulated industry, and this regulation should enable us to deliver what our customers and future generations want and need. We know that we need to work with regulators and partners to deliver the right framework in which we can all meet our goals.

One of our company values is to be **‘open to new ideas’**; we encourage development of an environment in which our people are enabled to innovate and take reasonable risks to test their ideas. To support this we will work with governments to review the regulatory landscape in which we work. By working openly in this way, we can develop the regulatory framework’s and policy we work within and enable innovative solutions to be co-created and delivered for and with our customers.

We support everyone in our business, including our Capital Delivery Alliance and other partners to innovate through our ILab process. Our success in promoting innovation is reflected by most of business feeling they are encouraged to come up with new ideas; indeed some 78% of our colleagues understand and support our culture of continuously looking to improve the way we work.



Anaerobic sewage treatment trial plant – BUILT WELLS WWTWs

INNOVATION FOR 2050

Innovation has become ever more important to everything that we do at Welsh Water and this innovation strategy builds on this history to provide an update to our 2017 strategy. Our dedication to enabling innovation is reflected by our doubling of the leveraged value of investments focused on innovation from AMP6 to AMP7, from 1% to circa 2% of our turnover.

Since 2014, we have published Welsh Water 2050; our long-term plan in 2017 and refreshed in 2022. In this, we set out future trends, identified from a range of sources, including the World Economic Forum Global Risks Report 2017 and work undertaken on horizon scanning by Cardiff University.

These long-term trends and risks are still relevant today. However, the experience of the last five years has brought unexpected shocks and stresses along with five years further data on which to base our view of long-term uncertainties. This has identified the 16 issues most likely to affect Welsh Water's resilience over the next 30 years, with impacts on the business and its operations but also on society and the environment.

In developing Welsh Water 2050, we recognised and responded to important and globally unique legislation in Wales, including the Wellbeing of Future Generation Act. We recognise and welcome that the size of Wales









allows us to work very closely the Welsh Government, our regulators and local stakeholders to co-create and co-deliver innovative solutions.







One of the primary purposes of Welsh Water 2050 was to help us shape and prioritise our long-term science and research agendas, to ensure that the considerable investment that we make is focused on the issues that will matter most to our customers in the long-term.







The rapid pace of technological change holds the prospect of providing services more efficiently and reliably in the future. It is clear that significant efficiencies, perhaps halving the operational running costs of the business, will be required





over the course of the next 30 years if we are to meet the expectations of our customers and mitigate the challenges ahead, whilst keeping bills at an acceptable level.

We therefore committed, in Welsh Water 2050, to publish our Innovation Strategy and to seek ideas globally, and for our strategy to be updated every five years. Our **18 innovation journey plans** which set out a more detailed view of our innovation work, will be updated formally annually and placed on our website to enable academics and other stakeholders to fully engage with us.

-  Demographic change
-  Climate change
-  Change in customer expectations
-  Changes to the structure of the economy
-  Environmental change
-  Protecting essential infrastructure
-  Policy and regulatory change
-  Protecting public health

-  Changing climate patterns
-  Decarbonisation and sustainable business practices
-  Price caps, affordability and potential trade-offs
-  Public health
-  Regulatory changes
-  Major economic fluctuations

-  Drainage and Combined Sewer Overflows (CSOs)
-  Cyberattacks
-  Emerging and persistent contaminants
-  Increasing customer and stakeholder expectations
-  Resourcing disruptions
-  Water transfers

-  Legacy infrastructure
-  Environmental responsibility
-  Demographic and behaviour changes
-  Unsustainable land use

INNOVATION STRATEGY IN CONTEXT

Innovation is not new to Welsh Water. We have an existing ILab process, which governs and manages the process to gather new ideas and ensure our processes are efficiently delivered and targeted. We run hackathons and a biennial innovation conference to celebrate and engage with partners, and we have partnerships with leading universities and research institutes.

This innovation strategy brings together our existing innovation activity and the outcomes we are seeking to deliver as set out in each of the 18 Strategic Responses included in Welsh Water 2050. Each Strategic Response has a dedicated 'journey plan' which provides a detailed roadmap to deliver on this strategy. Individual teams will have responsibility to deliver on the defined action plans, which have been shared with stakeholders, and are locally owned.

We recognise that our strategy and approach to innovation should be regularly reviewed and reinvented to incorporate learning, best-practices and to accommodate changes to the regulatory and policy environment in which we operate, see Figure 2. For this reason, we have completed an international best practice review of innovation in utilities.

On top of this continuous improvement approach we have a formal review process of this strategy every five years, with this review and update supporting investment planning for 2025 to 2030. Our journey plans in Annex A are live documents which provide a more detailed view of our innovation work and will be formally reviewed once a year.



Figure 2: Strategy and approach to innovation

OUR INNOVATION STRATEGY

Our innovation strategy brings together aspects as can be seen in Figure 3, that enable innovation to thrive and thereby help achieve our vision as described in Welsh Water 2050.

This diagram describes our four key enablers for innovation. These are designed to help us to respond to the external trends identified within Welsh Water 2050.

Through our enablers, and the 18 journey plans, we will maintain a focus on delivering innovation for the long-term needs of the business and our customers. These enablers will provide continuity for delivering the Innovation agenda.

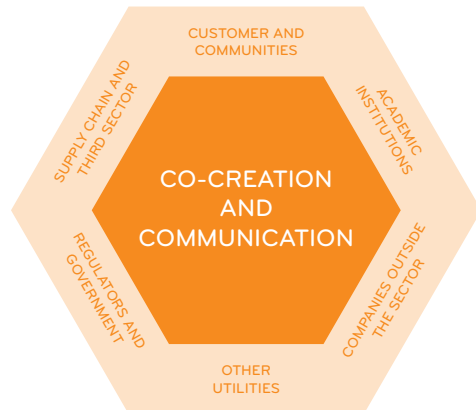
The pages that follow describe each of the four enablers in more detail, setting out the context and our key commitments to continue to develop a leading approach to innovation.



Figure 3: Detailed enablers of innovation

CO-CREATION & COMMUNICATION

“ We will co-create and co-deliver solutions in Wales’ unique environment with our partners, and work to communicate our innovation challenges and successes, so as to help develop and improve the regulatory frameworks we work within. ”



We have a strong relationship with our customers, as well as with external partners such as universities, third sector organisations, our supply chain, regulators, and the Welsh Government amongst others. We recognise that we are unable to achieve our commitments for the future alone, and that we must be flexible in the way we engage with our customers. It is important that they both support our innovations and are part of the solutions.

We must build on these relationships, at a local, national and international level, to enable us to achieve our innovation outcomes and thereby fulfil the aims that we developed with our stakeholders in Welsh Water 2050. We remain therefore committed to working in partnership with others as ‘Team Wales’ to meet our goals and play our part in fulfilling our functions so as to meet society’s wider goals. To do this we must share risk and reward with others including our regulators. We aim to use the unique context of Wales to co-operate and support our regulatory framework to facilitate changes such as enabling market-based ecosystem services and nature-based, catchment-based solutions to flourish.

We aim to enable further innovation by working closely and more openly with our partners to create an environment that supports co-creation and transparent communication. To achieve this, we aim to:

- Further embed a joined up approach to working with strategic partners through Spring, which enables suitable routes for co-creation and co-delivery in the long-term, such as the approach taken to nature based solutions in the Wye Valley.
- Collaboratively build a strong evidence base to support improved regulation and policy, making the most of relationships with academic and research institutions such as the GW4 Water Security Alliance, UKRI and Cardiff University through our new strategic MOU.
- Co-deliver pilot projects with the partners including the supply chain, customers, the third sector and regulators, such as nature based solutions to address nutrients in the Wye catchment.

WATER SECTOR 2050 INNOVATION STRATEGY AND SPRING

CASE STUDY

Overview

In response to the announcement of the £200m OFWAT Innovation fund, the R&D managers of the Water Companies engaged UKWIR to coordinate the writing of the UK 2050 Innovation Strategy. The strategy was consulted on widely within the water sector and beyond to produce a document that highlighted the needs in the sector and where innovation was needed to meet those needs. One of the outcomes of the Strategy was to create a Centre of Excellence that has evolved into Spring (spring-innovation.co.uk).

Benefits

The UK 2050 Water Innovation Strategy outlines the water sector’s vision for collectively delivering transformative innovation. The strategy defines how the water sector can work together through key principles to ensure innovation is delivered to the sector along with a number of key themes where innovation is needed. Spring plays a vital part in delivering the strategy and bringing the water sector together to enable innovation with one voice and a trial once philosophy so innovation can be adopted rapidly by the sector.

Another spin off advantage of the R&D managers getting together is a community of practice, where the R&D managers meet virtually fortnightly to discuss how to work closer together, share ideas on best practice and forth coming plans. This has led to much closer collaboration and trust between water companies.

- Building on the success of projects such as RainScope and Rhondda Fach Water Resilient Communities, we plan to roll-out new ways of working with partners; sharing cost and benefits equitably through our Water Resilient Communities programme.



Figure 4: Working with the community of Rhondda Fach area for apprenticeships and graduate schemes.

- Build on our existing successes, such as the Innovation Conferences and supporting the development of the UKWIR and Spring websites, which strengthen global relationships to share lessons, pilots and successes across Wales and beyond. We will also continue to build and improve our internal communication and delivery channels to ensure that the right messages are shared with the right people and at the right time.

- Develop strong, long-term multi-sectoral partnerships to help deliver innovation for the long-term benefit of water services in Wales, such as Spring.
- We will as part of our work on the £200m Ofwat innovation funded work, support and move to a position where we have open data access to our innovation work.

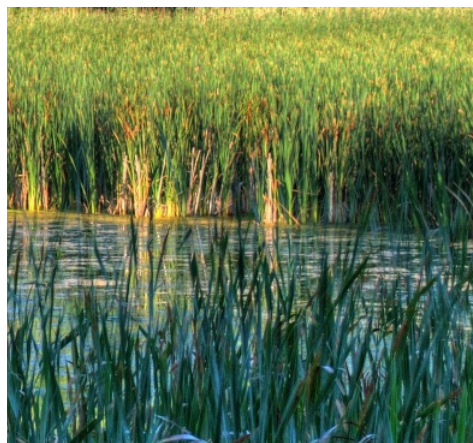


Figure 5: Wye Valley case study

NATURE BASED SOLUTIONS IN THE WYE VALLEY

Overview of approach

Dwr Cymru Welsh Water, Herefordshire Council, Wye and Usk Foundation, supported by Citizen-Scientist community-groups, have advanced a pioneering model, to collaboratively address nutrients in the Wye Catchment, using jointly funded tertiary treatment wetlands.

The project team are advancing an innovative partnership model to address catchment wide water quality issues. A series of collaboratively scoped, multiple benefit treatment wetlands, receiving DCWW treated final effluent, are progressing in the Wye catchment. The project team has created a framework, including regulatory guidance, design specifications, template designs and check lists to support further role out of collaborative schemes in other areas of Wales and the UK, where similar cross sector issues remain.

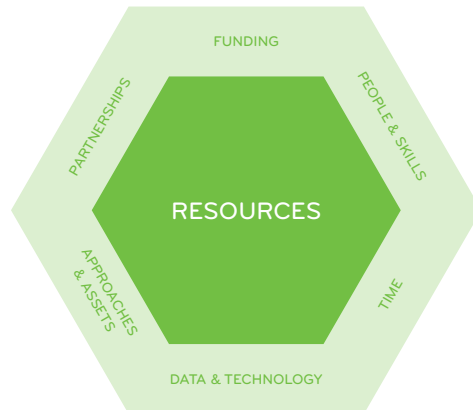
Benefits

Due to issues with nutrient loading across Herefordshire County, planning applications have been stalled, until scientifically certain solutions to reduce the nutrients in the river can be delivered. The collaborative wetlands are providing a net benefit to the environment by improving water quality, whilst also generating 'nutrient credits. These credits will allow development to progress in the catchment.

By working together with new partners there is an increased understanding of how water companies can positively influence the environment and support local communities and industries. The impact of this includes improved reputation of Dwr Cymru Welsh Water and improved trust by customers and stakeholders that we are going the right thing for the environment. By working with E-NGO partners we will be able to deliver nature-based solutions at a more efficient cost and will likely increase the use of NBS over 'grey engineering' or conventional solutions. The environmental impact and sustainability impact of nature-based solutions goes beyond improving water quality, there will be 36 hectares of increased habitat and increased access to green spaces created. There is now a newly formed, bespoke approach to regulating these joint benefit wetlands, increasing the ease of future schemes.

RESOURCES

“ We will assign appropriate resources to innovation, and leverage our skills, time, funding and partnerships to ensure we are able to deliver the strategic outcomes committed to in Welsh Water 2050. ”



It is great that we have talented people who have pride in working for Welsh Water. We work to harness their energy and enthusiasm for innovation, as we know that we can implement new and innovative processes quickly when sufficient focus and resource is provided.

Over the next five years, we are doubling the leveraged value delivered from our investment in innovation and will continue to assign appropriate funding for PR24 and beyond.

We recognise that resources are required to provide a robust knowledge base and financial plan to support innovation from idea development to delivery. At the same time, we do not have the capability internally to deliver all of the changes required. For this reason, we know that we must leverage the skills and resources of others and co-create and co-deliver solutions.

We aim to enable innovation by providing the required support for our people to have the skills, knowledge, time and finances to develop innovative ideas. To achieve this, we aim to:

- Building on the transformative OFWAT Innovation Fund, continue to assign appropriate funding to innovation, and work with others to maximise funding alignment with other sources, such as the UK Research Councils.

- Ensure that our people have skills and access to training needed to define, develop and deliver innovation. We will support the development of data skills within the organisation, by implementing a data literacy initiative that is internally led by our in-house Data Team.
- Support our people by providing sufficient time to innovate so that long-term and new thinking remains a priority for all, for example using lean processes to think about longer term business process change.
- Develop new and continually improve the technology to support our people to innovate, and provide the resources to support the effective use of this technology.
- Share and continually evolve the necessary approaches, tools and techniques required to ensure there is a smooth flow of innovation activity from definition through to delivery.
- Develop strong networks to enable access to wider expertise both within and outside the organisation through our close networks. We will also provide a breadth of best practice knowledge through these networks to help spark new innovative ideas, through our relationships with overseas water companies such as HOFOR in Denmark, or our proposed 'Data Academy', for example.

OFWAT INNOVATION FUND

CASE STUDY

Overview

As part of the regulatory settlement OFWAT have launched a £200m Innovation Fund with varying competitions where Water Companies can bid for projects to be funded. In total at the time of publication, Welsh Water have won or are part of collaborative projects worth £28.9m. We are leading on three projects and supporting 18 other projects led by other water companies. The projects we are leading focus on using eDNA to determine the risk of earthy taste and odour emanating from our reservoirs, background leakage and production of hydrogen from sewage

Benefits

The winning projects offer great value to our customers, drive collaboration within the water industry and they have the potential to transform how we perform as water companies. For instance, if we can determine the risk of taste and odour being produced in our reservoirs, this will enable us to deploy treatment in a timely manner. As we are involved 21 projects in total we will bring the knowledge gained into the company to drive efficiency, environmental improvements and water quality improvements to the benefit of our customers.

AZURE DEVOPS PROOF OF CONCEPT

Overview of Approach

The Transformation End of Discovery Report identified bringing together a single view of all change activity in ITS as one of the key pain points in order to align change activities and optimise the use of resources. Our team ran a Proof of Concept to understand if Azure DevOps can be used to address this. We also collaborated with the Strategy and Innovation team to understand if it can be used to enable effective prioritisation of work and alignment across ITS teams and to explore the benefits of utilising agile ceremonies to manage work across the Strategy and Innovation team. In order to support team capability, we have developed a series of training guides.

Benefits

Running this Proof of Concept achieved:

- Facilitate the identification of opportunities to integrate services.
- A cost-effective approach which when combined with some agile ceremonies, effectively enables us to track and prioritise work in the team and has started to do it across the broader Strategy and Innovation teams.
- Improved management visibility with onward reporting to ILab and the Waste Senior Leadership Team.
- Easier implementation of new ways of working that adapts well to the needs of the respective Strategy and Innovation teams.
- Recognise the appetite in the business to manage work through Azure DevOps maximising its benefit.

CASE STUDY



River WQ sampling to better understand our environmental footprint



Wastewater Hackathon with our Alliance partners

DŴR DATA ACADEMY

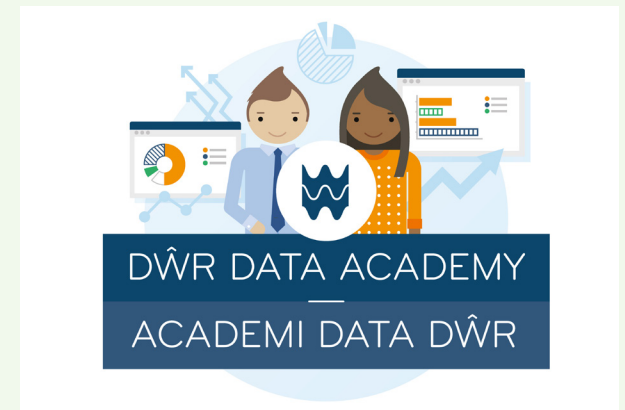
Overview of approach

Becoming an organisation that makes data-led decisions depends upon a general and widespread level of understanding and capability when it comes to data and analytics. In 2022 we launched our first internal data literacy initiative, titled the DŴr Data Academy, which aims to enable this ambition, providing colleagues with an important resource for training and upskilling across a variety of different data and analytics specialisms. Through the course of the next 12 months, the Data Academy will deliver training on specific topics, such as data visualisation and statistics, and will bring together and nurture interested colleagues into an internal data community that supports knowledge sharing and continuous development. The DŴr Data Academy will also provide an opportunity to disseminate best practice when it comes to data and analytics, assuring that any technical approaches adopted are consistent applied, important principles (such as data ethics) are considered, and the insight generated through analytics can be reliably trusted. A Business Forum, comprising of colleagues representing a cross-section of our organisation, has been established in tandem to ensure the initiative remains relevant and continues to add value to those who engage with it.

Benefits

Improving the understanding, awareness and capability of data and analytics across the organisation effectively empowers all colleagues to create valuable insight and make data led decisions that benefit the organisation and our customers. The advantage of creating and delivering training material internally means that colleagues can learn with examples and context based around the core business functions and operations of our organisation, therefore maximising impact through familiarity. Our broad capability to make data-led decisions will result in us being able to operate more efficiently and will allow our colleagues to better contribute their developing data and analytics skills to the strategic challenges that will ultimately benefit customers.

CASE STUDY

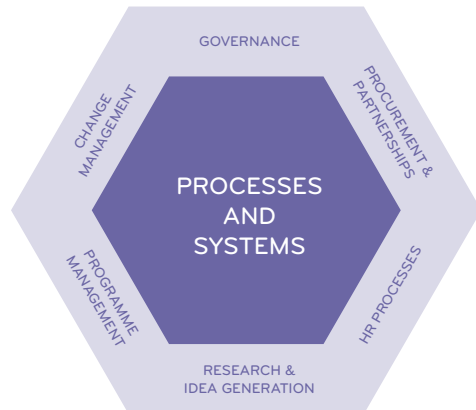


PROCESSES AND SYSTEMS

“ We will adapt our processes and systems to improve traction, to embed value, and provide sound governance so as to better evolve and develop new ways of working. ”

Our innovation processes, including our ILab governance process, innovation forums and customer service strategy, have helped to implement innovative projects across our business in the past few years. Our processes and systems will need to continually evolve to ensure that they support all phases of innovation, across all areas of our business, in a more integrated and coherent manner.

We will work to ensure that our processes are both robust and flexible, easily adapted as the world around us changes in the future, to always support and never be a barrier to innovation. We also recognise the need for our processes and systems to be resilient, intelligent, and use the large quantity of data we have more effectively to simplify our decision making and keep up with the pace of change, especially in technology and customer expectations.



We aim to further enable innovation by improving our current processes and simplifying them further. To achieve this, we aim to:

- Ensure our business processes support innovation; providing clear ownership at all levels and creating a 'safe space' to explore new innovative ideas. This is supported through our ideas platform 'Dŵr Eka' with Design Sprints supporting the progression of the UK Water Sector Strategy.
- Continue to develop long-term partnerships, such as Spring, UKWIR and with Cardiff University, sharing risk and reward to encourage innovation, review our procurement processes and identify ways to improve how we work with our supply-chain and other partners.
- Further embed ILab, a clear framework for the management of our portfolio of pilot innovation projects, enabling us to deliver them at pace.

STRATEGIC PARTNERSHIP WITH CARDIFF UNIVERSITY

CASE STUDY

Overview of Approach

Through operating with a spirit of cooperation, openness and trust, the partnership will continue to grow organically as a result of the collaborations as it develops and will achieve breadth and depth through responding to new and existing opportunities and challenges. The partnership will have a focus on delivering benefits to the region, supporting relevant ecosystems and clusters and developing global significance through research excellence, capacity building and reputational benefits. The approach will be holistic, encompassing research, innovation, skills and civic mission agendas.

Benefits

- By the end of the partnership, our ambition is to:
- Gain greater value from innovation projects through delivering increased levels of research collaboration leveraging significant external funding funded through Ofwat Challenge fund, UKRI and Horizon Europe.
 - Building long term relationships through significant partnerships in one or more University Innovation Institutes.
 - Improve knowledge exchange between the University and Dŵr Cymru through increased secondments and co-working.
 - Building innovation in capability in Dŵr Cymru staff through Innovation and other Science/Engineering training and development.

- Further embed our processes to support long-term research and development with academia and our partners through initiatives such as Spring and UKWIR.
- Review our process to enable enhanced recognition for our colleagues, and to incentivise innovation better in the business.
- Continually evolve the processes we use to generate and explore new ideas; using our journey plans to identify, provide clear scopes, and work toward innovating to address our key business challenges, for example by making better data led decisions.
- Use best practice in change management to embed new ways of working, new products and services into business as usual.



ILAB

Overview of approach

The DCWW ILab comprises membership from across the organisation at head of service level with occasional participation of others from inside, or outside Dŵr Cymru. Quarterly scrutiny sessions will review progress being made and in particular by Water and Wastewater services on their whole Innovation agenda to support our Welsh Water 2050 Strategic responses. The four ILab meetings are supported by periodic Water and Wastewater Innovation meetings which essentially drive our innovation agenda forward and align projects with our Welsh Water 2050 Vision, Mission and Strategic Responses' needs.

Benefits

The main benefits of the ILab governance process are that we ensure our customers funding is well targeted, and aligned with our stated priorities in the Journey Plans. Similarly, we are able to celebrate and communicate both to our Board, but also our partners, and colleagues the learning we have captured and applied from our innovation successes and failures.

PEOPLE AND CULTURE

“ We will build an innovative culture, where our people are supported to innovate, learn and succeed by testing ideas through a learn fast and scale up quickly approach. ”

We have talented people who take pride in working for Welsh Water, who want to make a difference and who are keen to innovate. Creating and implementing new and innovative ideas is part of everyone's job.

We recognise that we need to be more proactive in generating ideas internally, developing innovation, empowering our people to innovate and clearly aligning our innovation work to our 2050 goals. We will provide the leadership to create a culture that provides a safe space to fail quickly, balancing risk and uncertainty. We will work as a company to balance how we increase our risk appetite, while not compromising on quality and effectiveness of the services we offer.

Our culture will enable collaborative innovation at pace and will value innovation from the generation of new ideas through to delivery and implementation.

We aim to enable further innovation by continuing to inform, enable and support all our people to innovate. To achieve this, we aim to:

- Provide leadership for our people; emulating behaviours to support innovation and valuing new ways of working for the long-term.



COMMUNICATING INNOVATION

CASE STUDY

Overview

It is important to communicate the research and innovation that we are undertaking in Welsh Water. To that end we conduct a number of initiatives to ensure colleagues are aware of and enthused by the innovation projects within the company. Ways of communicating include a Yammer Community, regular communiques, meetings with our champions or ambassadors, meeting operation teams on the ground and vlogs such as "Let's Talk Innovation".

Benefits

By communicating the innovations that are undertaken within the company we enthuse colleagues to be more interested in innovation and get involved in what we are doing. We look to communicate in a number of ways so that we can reach as wide an audience as possible within the company. The benefits can be seen in our annual colleague surveys where being encouraged to do things differently and being open to new ideas always score highly.



- Continue to further embed our Open to New Ideas behavioural framework which ensures that all of our people understand how they can innovate as part of their everyday work and induce a culture of outcome-driven thinking.
- Empower colleagues, through training and development, to become agile innovators, as demonstrated by the pace of change in our commercial team and our 'Agile' approach to digital retail innovation.
- Recognise and celebrate colleagues' approaches to innovation; providing appropriate incentives and rewards.
- Enable cultural change to succeed through a 'fail fast/learn fast' culture; to be more adaptive and agile in our approach to developing new ideas, products and services. We hope this cultural change will be as transformative as our programme to increase our colleagues' perception of the importance of health, safety and wellbeing.
- Work with external parties, through initiatives such as Spring and organisations such as Isle WRC, to transform the pace at which they are able to turn ideas into new approaches or technologies.
- Ensure we have the diversity of skills and knowledge to deliver long-term end-to-end innovation.
- Support colleagues to be confident in decision-making that is long-term, impact orientated and evidence-based. To enable this, we welcome external challenge by sharing ideas and thoughts with partners and collaborators.
- Build on the improvements in our communication methods over the past five years which ensure that everyone is informed, engaged and can act on our innovation plans.
- Building on our long-term plan, Welsh Water 2050, and aligning with the UK 2050 Water Innovation Strategy, we will embed long-term thinking into our decision-making for today; innovating now to solve possible future challenges. For instance, our innovative move to a multi-capitals approach has the potential to transform our approach to long term decision making.

MULTI CAPITALS APPROACH

Overview

To support the ambitions set out in Welsh Water 2050 and aligning with Ofwat's latest strategy, 'Time to act, together', DCWW propose to apply an approach to its decision-making which better accounts for the impacts of investments across multiple capitals. The DCWW Multi-Capitals Service Measure Framework is proposed to be framed around the six Capitals of financial, manufactured, natural, social, human, and intellectual spheres. This is being implemented as part of the risk & value assessment process for the PR24 business plan.

Benefits

This approach aims to identify, measure and report on both financial and non-financial impacts and dependencies (often referred to as 'sustainability accounting') in monetary terms to enable holistic investment decision making. By monetising broader impacts, it enables different impacts to be directly compared, providing greater insight into their scale and magnitude, to support decisions which offer better value for customers and support local communities (social value) and the environment. By applying this approach, it enables Welsh Water to understand how changes in service impact on each capital, and define and/or quantify potential benefits of investment decisions.

CASE STUDY



Dŵr Cymru signs partnership with Cardiff University for future collaboration and research

SUMMARY

INNOVATION AT WELSH WATER

Our plans for innovation

This strategy has a dual focus. Firstly, looking externally, with a focus on co-creation and co-delivery with customers and external partners in particular making sure the regulatory frameworks we work within actually positively enable innovation, and secondly looking internally ensuring our culture, resources and processes can provide the best value service possible through the application of innovation.

This approach will enable us to work collaboratively to drive innovation in our own business and beyond – working to shape the regulatory framework and wider environment as needed to enable the effective and efficient co-creation and delivery of change.

Our innovation strategy will continually evolve

We understand that along with ever changing customer needs, evolving technologies and the external environment and changing regulatory landscape, our approach to innovation should also evolve.

Therefore, there is a need for us to regularly refresh our approach to innovation and this strategy, to ensure that it is always current and future looking. It is also important for us to proactively listen to the latest trends and developments in the sector and more widely, technology disruptors and shape our approach to innovation accordingly.

To achieve this and ensure that our approach to innovation is current and live, we plan to formally refresh our innovation strategy every five years.

Our innovation journey plans

Our journey plans show our detailed innovation programme. These are live working documents which will evolve to support innovative development in a changing context. They represent gaps in the knowledge required to help us to deliver Welsh Water 2050 and act as tool for development to improve our engagement, co-creation, culture and processes.

Our latest 18 journey plans have been included in this document in Annex A.

For more information on how to innovate and co-create with Welsh Water please contact us: innovation@dwrcymru.com

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