

Elements of the plan

# Targeted Controls, Markets & Innovation

an  
**innovative**  
Water  
**Future**



**South West  
Water**



**Bournemouth  
Water**

## Elements of the plan



Engaging  
Customers



Addressing  
Affordability  
& Vulnerability



Delivering  
Outcomes  
for Customers



Securing  
Long-Term  
Resilience



**Targeted Controls,  
Markets & Innovation**



Securing Cost  
Efficiency



Aligning Risk  
& Return



Accounting for  
Past Delivery



Securing Trust,  
Confidence &  
Assurance

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## Introduction

Our business plan promotes long term resilience, securing great customer service across all of our value chain and revenue controls at an affordable price. Building on our current strong platform of delivering service efficiently, we have identified further efficiency initiatives and innovation in order to support a resilient future.

This document sets out how we use our customer focused culture to embrace innovation and markets to realise maximum benefit for our customers and their environment, by delivering an improved service at a lower cost.

Specific sections of the document cover the following aspects:

- Innovation delivered through systems, process and people
- Adoption of markets to deliver greater efficiency and resilience
- Resilient and sustainable long term water resources strategy
- Long term strategy for bioresources
- Allocation of RCV between water resources and water network plus
- Allocation of RCV between bioresources and wastewater network plus
- Our bid assessment framework for water resources, demand management and leakage services.

## Business plan navigation

This document is part of the overall business plan providing key information about our proposals and how it supports the initial assessment of business plan tests.

### Targeted Controls, Markets & Innovation

- CM 1** How well does the company's business plan demonstrate that it has the right culture for innovation which enables it, through its systems, processes and people, to deliver results for customers and the environment from innovation?
- CM 2** How well does the company use and engage with markets to deliver greater efficiency and innovation and to enhance resilience in the provision of wholesale and retail water and wastewater services to secure value for customers, the environment and the wider economy; and to support ambitious performance for the 2020-25 period and over the longer term?
- CM 3** To what extent has the company set out a well evidenced long-term strategy for securing resilient and sustainable water resources, considering a twin track approach of supply-side and demand-side options and integrating third party options where appropriate, to meet the needs of customers and the environment in the 2020-25 period and over the longer term?
- CM 4** To what extent does the company have a well evidenced long-term strategy for delivering bioresources services, integrating an assessment of the value from the delivery of bioresources services by third parties for the 2020-25 period and over the longer term?
- CM 5** How appropriate is the company's proposed pre-2020 RCV allocation between water resources and water network plus – and, if relevant, between bioresources and wastewater network plus – taking into account the guidance and/or feedback we have provided?
- CM 6** To what extent has the company produced a company bid assessment framework for water resources, demand management and leakage services that demonstrates a clear commitment to the key procurement principles of transparency, equality/non-discrimination and proportionality and the best practice recommendations?
- CM 7** To what extent has the company clearly demonstrated that it has considered whether all relevant projects are technically suitable for direct procurement for customers? Where it has one or more such projects, to what extent has the company provided a well-reasoned and well-evidenced value for money assessment supporting its decision on whether or not to take forward each technically suitable project using direct procurement for customers?

Answers to these questions are summarised in the **Summary** chapter of this document, with signposts to further detail and evidence within this document, and where appropriate, other documents forming part of the overall business plan submission – see **Document map**.

**Business plan navigation** continued

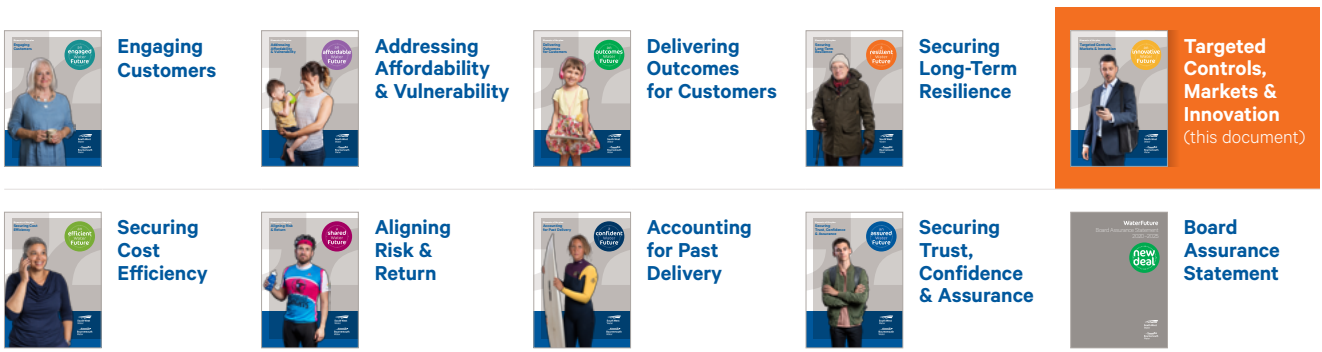
**Document map**

The primary documents within the business plan submission are illustrated below. Other supplementary information, reports and documents are also referenced within these documents and can be accessed using a link in the document, where appropriate.

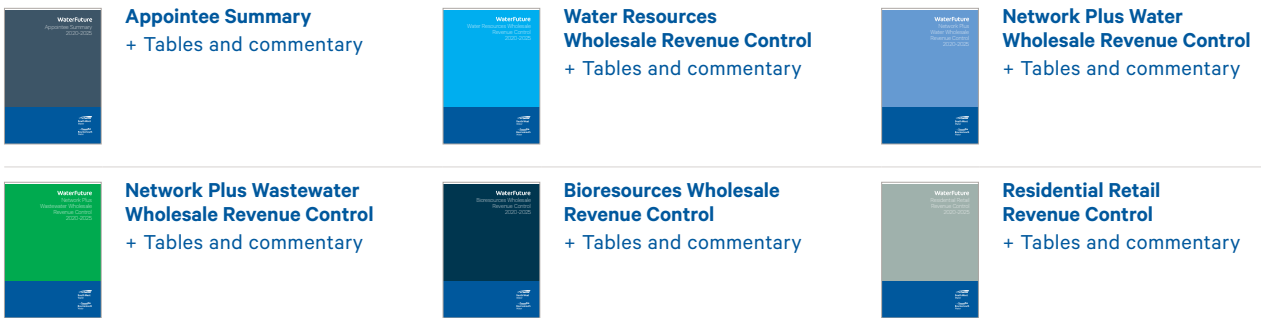
**Business plan to 2025**



**Elements of the plan**



**Revenue controls**



**Business plan to 2050**



## Executive summary

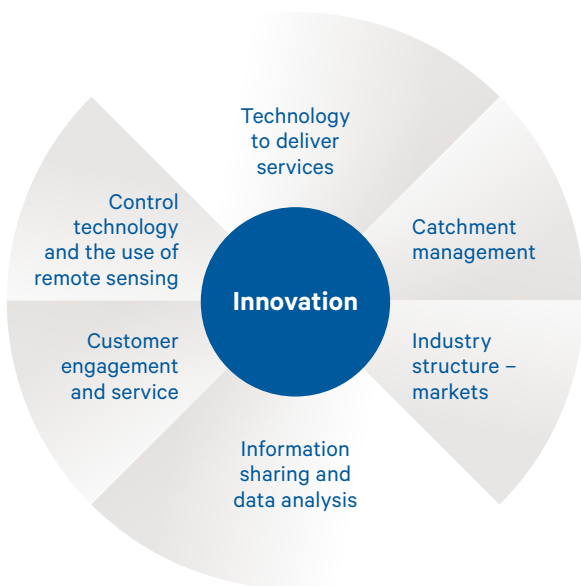
We support the use of markets where they deliver tangible benefits to customers. Competition can drive further innovation and help access new efficiencies across the value chain, providing a better deal for customers. Whether through markets or in our wholesale business, we foster a culture of openness and innovation.

We have a good track record of embracing change, introducing markets and innovation.



For more information, see **Totex, ODIs and innovation submission to Ofwat**

The merger with Bournemouth Water and innovative WaterShare mechanism are good examples of this.



**The successful integration of Bournemouth customers into our business demonstrates our capability of delivering significant change. This has delivered significant customer benefit and created new, better comparator (service and cost) for the industry.**



For more information, see **Accounting for Past Delivery**

The Board of South West Water **pioneered the introduction of the innovative WaterShare mechanism in PR14** to openly monitor and share the benefits of performance with customers in a transparent and timely manner.

WaterShare has realised c. £12m of additional customer benefit to date, with a further c. £8m anticipated by 2020.

We are proposing to offer customers the opportunity to receive this benefit in the form of a WaterShare ‘share’ dividend in 2020. Customers have told us they value share ownership in our business and this unprecedented step will give them a more direct route to hold us to account.

This customer share ownership scheme will also be an option for the sharing of future WaterShare benefits post 2020.

The WaterShare principles are being applied further post 2020 to include further sharing of gains through a cost of embedded debt sharing mechanism and applying this framework to Bournemouth Water customers.

## WaterShare+

We are one of the pioneers of catchment management starting back in 2003. Our business plan will see catchment management operating in 80% of the catchments we abstract from, bringing a net natural capital benefit of £40m NPV. We have also recently delivered the Mayflower Water Treatment Works – unprecedented new technology brought to a more traditional part of the value chain.



We understand the challenges of the future require new approaches if we are to deliver on our promises. We have always understood that this means we may not always be the sole provider, that there are different ways of delivering service. This is embedded in how we work.

In 2006, we delivered reverse auctions for pollution reduction in the Fowey catchment – using markets before any other company.



For more information, see **Upstream Thinking**



## Executive summary continued

More recently we have been using Payment for Ecosystem Services to deliver water quality and quantity improvements in the catchment that supports water supply to Exeter – one of our largest supply areas – at a price lower than traditional end of pipe solutions.

We successfully delivered on time the new non-household retail market opening – being one of the first companies to truly separate its activities at the very start of shadow operation in September 2016. This early start meant we had embedded new streamlined processes before the market went live. We have seen benefits in this approach in data visibility and improved SLA performance in our household business. Pleasingly our wholesale service performance as reported by MOSL is consistently amongst the best in the industry.

Innovating, embracing markets and change is in our culture, explicit in our values and applied across our systems, processes and people through the whole value chain.



For more information, see [Innovation](#)

We have undertaken a thorough review of direct procurement opportunities for the services we provide. We have developed a detailed framework for the objective assessment of all investments approved through our Investment Planning Committee. As a result we are proposing our 20Ml/day transfer from our Bournemouth region to Southern Water is opened up to direct procurement. We believe this scheme will generate significant multi-million benefit to the South East through delivering a low cost water supply alternative.



For more information, see [KPMG Direct Procurement for Customers](#)

Markets are not the only way we innovate to secure water resources for the long term. Back in 2011 we purchased two disused china clay pits and converted them into water resources in our network helping ensure the continuation of an unrestricted supply of water for our customers.

We have also piloted two new innovative schemes with our customers aimed at influencing customer behaviour through behavioural science techniques and incentives. Working with Greenredeem we undertook a pilot in one of our communities (including a local school) to see if incentives could be used to reduce their consumption of water. The results of the pilot are very encouraging and we plan to roll out this innovative scheme to the entire region post 2020.

**greenredeem**

At a customer level we have worked with Advizzo on a targeted campaign to influence customers to switch from an unmeasured supply. The results from this pilot again have shown positive results, so we are rolling this out region-wide post 2020.



These two types of innovative engagement illustrate the huge benefit that can be derived for customers through innovation. We are continuously looking to improve the way in which we engage with our customers. In developing our plans for water resources we worked with Pitney Bowes to develop a tailored interactive video (EngageOne) sent to all of our 'MyAccount' users, accounting for approximately half of our customer base to seek their views on long term water resource planning. The reach that this development afforded us was transformational from PR14, and not only allowed us to engage with customers to elicit feedback to inform our plans, it also helped educate customers on the value of water and if they weren't already on a meter, allowed an option within the video to start the switching process.



[Our interactive water resources video](#)

As part of our innovative affordability 'toolkit' we are metering all remaining unmeasured properties and giving customers a choice of bill. We believe this innovative approach will result in c. 10,000 customers switching and taking themselves out of water poverty. We have also developed a WaterCare app that can be used to by our WaterCare advisors to check eligibility to benefits and secure access to benefits without the need for complex and laborious paperwork – this is being deployed to all our social housing providers to enable our customers to access support more readily. As a result our Board is confident in committing to addressing water poverty for our customers by 2024/25.

For both bioresources and water resources we have approached these as standalone business units within the wholesale service.

**Executive summary** continued

For more information, see



**Water Resources Wholesale Revenue Control**

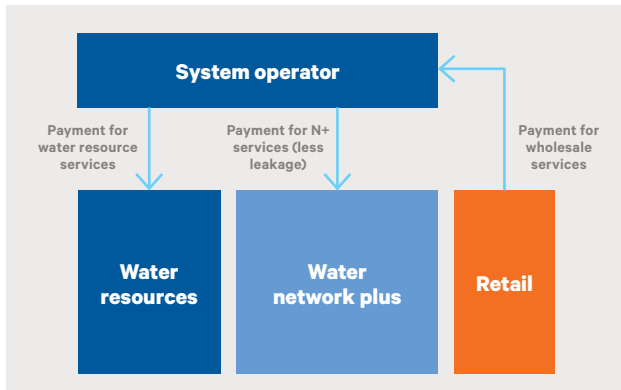


**Bioresources Wholesale Revenue Control**

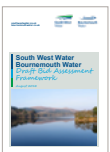
At a cultural level, this has made us think about the products and services different areas of the business deliver and who their customers are. This resulted in the introduction of an 'internal market' between our water and wastewater operations for the supply and use of water. This has successfully driven reduced water use, improved efficiency and enhanced resilience by revealing the underlying costs and risks in each area.

We have already established a System Operator function that undertakes long-term water resource planning, and advises on short-term system optimisation (for example, which resource to abstract from and when).

**South West Water internal model**



Our work on internal markets and our website for market trading gives us the platform to bring in and engage with new third parties for water supply, supplemented by a clear bid assessment framework.



For more information, see **Draft Bid Assessment Framework**

However, our healthy resource position means we have no current need for new water supplies.

Working alongside academic partners as well as our technology providers and supply chain, we are firmly committed to embracing innovation across all business areas. As a member of the NERC funded South West Partnership for Environmental & Economic Prosperity (SWEEP) we are tapping in to environmental science excellence to address issues in areas such as pollution prevention and collective management.



Elsewhere, we have embarked on a number of strategic and collaborative partnerships with companies such as Hitachi Consulting to look at how Internet of Things (IoT) technologies and analytics can help deliver a better customer experience and protect the environment.

As a water and wastewater business, during any year there is a huge amount of data received and / or generated. We are in the process of harnessing the value of that data to give near real-time insight into the efficiency and effectiveness of the business operating models. Previous investment in mobile field technologies (PUROS and iOPS) now offers a highly effective visualisation platform to better inform decision makers and service providers alike.

Our integrated business model for seeking out new approaches and solutions is putting the challenge of continuous improvement at the forefront of many of our business change decisions.

We are working with Exeter University developing a centre for water, waste and environmental resilience. This centre will deliver integrated and world-leading, trans-disciplinary research with the water and waste sector, and its supply chain. It will also pioneer holistic approaches to complex challenges, and 'whole systems' understanding to develop cost-effective and future proof solutions for the water and waste sectors.



For more information, see **UK research partnership investment fund: Innovation Centre for Water, Waste and Environmental Resilience**



**Executive summary** continued

Our proposed NAV application to provide water and wastewater services to the Isles of Scilly provides further evidence of innovation in our plans. We are part of an ambitious 'Smart Islands' initiative offering a unique opportunity of a rapid transition to a low carbon future, creating resilience in providing products and services while delivering sustainable value for the community being served in meeting its own needs.



For more information, see [Isles of Scilly business plan](#)

**Key messages**

- ✓ Culture of innovation embedded into way of working across the value chain
- ✓ Markets and competition embraced, delivering tangible benefits to customers
- ✓ Successful wholesale interaction with retailers and transfer of learning to the wholesale business
- ✓ Long-term water resources strategy ensuring sustainable supplies with a demand led strategy, alongside improving the reliability of existing sources to deliver efficient, long-term resilience
- ✓ Long-term bioresources strategy in place and exploring opportunities for the future, focusing on maximising the use of agricultural recycling of treated sludges, whilst also market testing our services and working with other water companies and third parties to ensure simple and effective trading arrangements
- ✓ Clear and transparent bid assessment and direct procurement frameworks published on our website and linked directly to our water trading platform
- ✓ Our pre-2020 RCV allocation between water resources and water network plus was received by Ofwat with no actions required. Our commitment to secure trust and confidence means we have provided independent assurance of our approach and transparently assessed the impact on our charges

# Innovation and markets summary

	Elements of our plan									Revenue controls				
	Engaging Customers	Addressing Affordability & Vulnerability	Delivering Outcomes for Customers	Securing Long-Term Resilience	Targeted Controls, Markets & Innovation	Securing Cost Efficiency	Aligning Risk & Return	Accounting for Past Delivery	Securing Trust, Confidence & Assurance	Water Resources	Network Plus Water	Network Plus Wastewater	Bioreources	Residential Retail
Customer engagement approach	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Bournemouth Water integration	●	●	●	●	●		●	●	●	●	●			●
WaterShare governance	●	●	●	●	●		●	●	●		●	●		●
WaterShare+ governance	●	●	●	●	●	●	●	●	●		●	●		●
Customer share ownership plan	●	●					●	●	●	●	●	●	●	●
Affordability and vulnerability package	●	●	●	●	●	●	●	●	●					●
Innovation Centre for Water, Waste and Environmental Resilience				●		●			●	●	●	●	●	●
Cross sector and stakeholder resilience modelling (Sim4Nexus pilot)				●		●				●	●	●	●	
Upstream Thinking and ecosystem services			●	●	●	●		●	●	●	●			
Downstream Thinking and ecosystem services			●	●	●	●						●		
Interactive customer account video	●		●	●	●	●			●	●				●
Post event surveys	●			●				●	●		●	●		●
Customer co-creation workshops	●	●	●			●		●	●	●	●	●	●	●
Customer behavioural change - Greenredeem	●			●		●				●	●			●
Customer behavioural change - Advizzo				●		●				●	●			●
Customer behavioural change - Love Your Loo	●			●		●		●				●	●	●
Technology transfer (Mayflower WTW , Lidar leak detection)				●	●	●		●	●	●	●	●		
West Country Water Resources Group				●		●				●	●			
Cross sector partnerships for the environment (e.g. SWEEP and PIONEER programmes)			●			●				●	●	●		
Water resource trading platform to allow better use of water				●		●				●	●			
Internal water resource market						●				●	●			
Retail service offering (AI and bots, WaterCare app)	●					●		●						●
Direct procurement for customers/ third party delivery				●	●	●				●	●		●	
Cross border sludge trial with Wessex and resilience arrangement				●		●							●	
25 Year drainage and wastewater management plan				●		●						●	●	
Eco service market in Axe catchment and PES payments				●		●				●	●	●		
Innovation hub and iOPS						●			●					
Access pricing development ahead of bilateral market						●				●	●			●
Resilient Service Initiative (RSI)				●	●	●			●	●	●	●	●	●
Smarter, healthier homes				●		●								●
Partnership with British Red Cross	●	●		●					●		●			●
ONS data mapping of vulnerability support measures		●				●			●					●
Sustainable green financing				●			●		●					
MIND training		●				●			●					●

## Our approach to innovation, markets and targeted controls

We were set up in 1989 to be the monopoly service provider in the South West. Moving forward the challenges of the future mean adopting new ways of working if we are to deliver on our promises. In our view, that means we may not always be the sole provider and there are different ways of delivering service.

The development of the targeted controls for PR19 unbundles the value chain. In doing so it reveals more information on the cost, performance, risk and opportunity for each of the activities we have historically undertaken since privatisation.

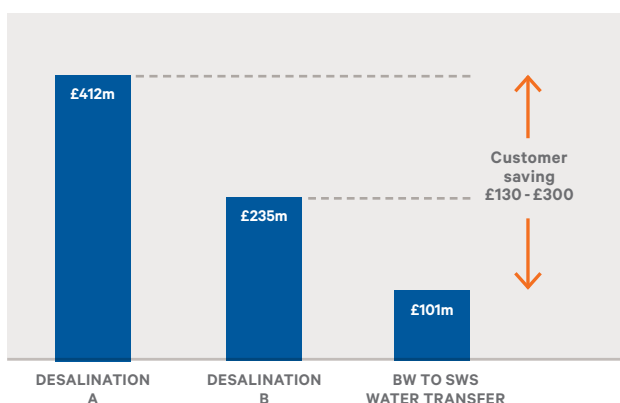
We see this as an opportunity to further improve the service we provide and seek solutions to future challenges using ways different from the past.

We have a sound track record of delivering change. We successfully delivered the business separation for the non-household retail market which opened in 2017. We used this as an opportunity for early business separation being one of the first to truly separate, six months before the market opened. However, we also looked ahead and took the opportunity to embed the need for cultural change for separate markets and wholesale service delivery ethic.

We foresee the need for competitive market growth in the water industry. The publication 'Preparing for a Drier Future' by the National Infrastructure Commission identified at least 1,300MI/d of new infrastructure needs by the 2030s through competitive tendering.

Ofwat identified that there could be significant savings from the development of new markets. The graphic below shows if this was applied to our cost base, what the long-term cost savings to customers could be.

Cost saving (net present value)



Wrapped around this future change for the industry, we are already adapting to how we will need to operate going forward. Ahead of 2020, we have set out four values for our staff to embed how we need to think and operate to deliver for our customers and stakeholders:

- Progressive
- Collaborative
- Trusted
- Responsible

Collectively these set a direction of travel and an expectation against which all staff will be measured. They foster a culture of delivering what customers expect, but also how we need to collaborate to solve future challenges, take ownership of these challenges and promote a change.

This section sets out approach to innovation, markets and targeted controls. It sets out how we have developed our plan so it meets the needs of customers, stakeholders and regulators in these areas.

### Innovation

We have a strong track record on innovation, from being one of the first companies to undertake catchment management to the recent use of ceramic membrane technology for water treatment.

For more information, see



Innovation



Totex, ODIs and innovation submission to Ofwat

Our approach to innovation does not focus on one single activity alone, but is an holistic approach. We use a range of push and pull factors that both force the need for innovation as well as giving staff the space and support to foster innovation.

## Our approach to innovation, markets and targeted controls continued

Central to our approach is to show leadership from the top on pushing the boundaries of delivery. A further central plank is to lever off other organisations to bring in knowledge and expertise from both within and outside the water sector.

We also have a pre-established innovation hub process that underpins the business activities and to find new ways of solving problems and improving the service to customers.

### Markets in action

Our approach has been to use markets where we can to deliver new and improved service. In both water resources and bioresources we have already started the market process for future delivery ahead of the 2020-25 programme.

We have also looked for opportunities within the network plus programme for market based delivery mechanisms. Most notably, we are using this in our extensive catchment management programme.

We set out where and how we are using markets now, and in the future.

### Targeted controls

We recognised early that we need to consider the wholesale activities as different business units within the value chain.

Our business plan is presented as separate plans for network plus, water resources and bioresources. This gives clarity and focus on the costs and performance of each part of the service we provide but also prepares the business for the future markets that may evolve in each part of the value chain.

For more information, see



#### Water Resources Wholesale Revenue Control



#### Network Plus Water Wholesale Revenue Control



#### Network Plus Wastewater Wholesale Revenue Control



#### Bioresources Wholesale Revenue Control



For more information, see  
**Residential Retail Revenue Control**

### Case Study

#### iOPS

**iOPS is South West Water's Wholesale Operations Change programme through which many of our innovation and change projects are taken from concept through to delivery and embedded within the business.**



The iOPS vision is one of enhanced operational capability designed to deliver services efficiently and effectively and to excel in an ever changing business environment.

To do this the programme:

- Draws upon the expertise of our workforce and supply chain to maximise potential opportunity
- Collaboratively delivers and embeds continuous improvement, adopting best practice
- Makes best use of business intelligence systems to influence and understand performance.

The programme improves capability by:

- Realising benefits through improving our performance in managing controllable costs – particularly in the areas of equipment hire and purchasing
- Better understanding and control of our productivity, work demand, work priorities and levels of risk associated with our decisions
- Re-engagement of Work Management systems and tools so that they work for us in a controlled way to achieve our outcomes
- Supporting the workforce to continuously improve the way we do things through enhancing our processes and engagement in this area
- Establish the correct working relationships and commercial terms with our supply chain delivery partners to innovate and achieve targeted efficiency.

Activity is overseen by the iOPS Programme Office which offers the following benefits:

- Creates a centre of excellence for change management expertise
- Offers diverse skills, experience operational knowledge
- Provides a service to capture, explore and manage the development of ideas
- Manages sustainable change delivery and measurement of benefits.

## Innovation

In this section, we set out how we have embedded a culture of innovation, with supporting systems and processes, within our plan. As innovation permeates through all aspects of service, this section also sets out not only some key case studies but also how they translate into innovative elements delivering tangible benefit to customers in the future.

In December 2017, we submitted our response to Ofwat's request for examples of innovation across the value chain.

We have also published an innovation document highlighting the innovation already delivering tangible benefits to our customers and the environment.

For more information, see



**Innovation**



**Totex, ODIs and innovation submission to Ofwat**

### Our people

Innovation starts with our people and the culture of the company. Ahead of 2020 we have already made a set of changes to build on our already strong track record in this area.

#### Setting innovation into our values

Culture is often set by the company values. Ahead of 2020 we have refreshed our values to set the culture and standard we expect from our staff.



#### Trusted

We do the right thing for our customers and stakeholders



#### Collaborative

We forge strong relationships, working together to make a positive impact



#### Responsible

We keep our promises to our customers, communities and each other



#### Progressive

We are always looking for new ways to improve and make life better

#### Recruiting and incentivising the right people

We are recruiting new people into the business to meet future skills gaps and drive our performance improvement culture.

We have an award winning apprentice programme.

#### Case Study

### Workforce / skills / apprentices

**Apprenticeships are a fantastic way to earn a living, gain valuable work experience and sought after qualifications.**

The training of young people through apprenticeships is a key part of ensuring a sustainable supply of talent for the future. Since introducing our apprenticeship programme in 2011, 149 apprentices have joined the company. Getting our workforce on board has been key to the successful introduction of our programme, particularly in areas such as mentoring and coaching.

As our experience and plans have grown, our apprentices and the company have achieved recognition from the wider business community. Around 5% of our workforce is now made up of apprentices and we boast an 80% conversion rate to permanent employment for those in front line roles. Apprenticeships were introduced to help us in our succession plans and they now form a key part of our business planning cycle, and greatly improve skills resilience.

South West Water provides roles in 15 operational and business disciplines and, from April 2017, the way in which apprenticeships are funded has fundamentally changed. To mark this step change South West Water now offers advanced, higher and degree level apprenticeships which are undertaken by new recruits or existing members of staff.

We are currently working alongside EU Skills and other government bodies to develop and deliver a series of trailblazer apprenticeships to reflect the changing requirements in apprenticeship training and in our industry.

We are also spearheading the adoption of similar schemes within the rest of Pennon Group as well as stakeholders such as our H50 alliance.

## Innovation continued

This will continue into post 2020 and is married with broader recruitment of skills based on our resilience assessment.

### Case Study

#### Education University Technical College

We have established a partnership with the South Devon University Technical College (UTC). The UTC is taking an innovative new approach to learning for 14 - 19 year olds which offers specialist programmes alongside traditional subjects, such as English, Maths and Science.

A UTC is different from many schools because it has more support and backing from the local business community and has high profile industry partners involved in the development of the curriculum. Other more traditional academic partners are also involved to make sure that the UTC really can offer the best of both worlds.

We are supporting UTC in developing the next generation of engineers, scientists and environmentalists and are committed to supporting the UTC in delivering a rich programme of work challenges including employability skills, interview practice and an annual cohort of work experience students for Year 10, 12 and 13 students.

Work experience encompasses site visits, project challenges and educational talks. We have also developed a week-long work experience programme focused on:

- Energy and Sustainability in our Environment
- Science and Water Quality
- Clean & Waste Water Cycle
- Exmoor Mires Project
- Forecasting Supply and Demand of Water.

The benefits of the educational enrichment activities and work experience for the UTC students are far reaching. It provides an opportunity to enlighten them to the challenges of our environment and encourages problem-solving in areas such as:

- Reducing our carbon footprint
- Sustainable energy and consumption
- Making use of waste products
- Preventing pollution
- Supply and demand of water resources.



Our Resilient Service Improvement (RSI) project has a specific work programme on skills and staff development. This embeds a people strategy into the business and impartially addresses resilience and service risks we face now and in the future.

To set the right incentives, we back-to-back our business plan targets into staff objectives. Staff are already set objectives linked to the delivery of performance. As we move into the 2020-25 period, this will include the new targets we have and values that now underpin our business.



**“For many years work experience has been a key part of the development of young people who are desperate for an opportunity to experience the world of work. However the truth of the matter is that the model used is fraught with health and safety and risk issues.**

**South West Water and South Devon UTC have been working on a new paradigm for work experience, called Industrial Immersion which enables students to have a structured and more interesting week of learning about how a company operates.”**

Ian Crews, Principal  
UTC



## Innovation continued

### Setting stretching targets

We have used the process of setting stretching targets to create a culture that demands innovation – repeating past solutions or activities will not deliver the outcome for the expenditure available.

We have set ourselves the challenge of delivering stretching performance in the areas which matter most to customers, yet still with bills reducing.

This allows our staff the opportunity to develop new approaches, knowing that they are supported and encouraged to test the boundaries of delivery to find new ways of service delivery.

The measurement and monitoring of performance will be closely scrutinised through our Board led integrated assurance and governance structure and will ensure focus on delivering these targets.

The impact of this challenge is perhaps most pertinent in the area of leakage reduction. We already have one of the lowest levels of leakage in the industry for the length of network we operate, but we have set ourselves a target to deliver a 15% reduction with no increase in expenditure.

This required a complete re-think on how we approach the challenge of leakage in terms of culture, systems and process as well as technology. It has also driven deeper analysis into the risks and opportunities within delivering leakage reduction, allowing us to embed the efficiencies into our plan.

## Case Study

### LIDAR leak detection

**SWEEP is a five-year programme to deliver environmental, economic and social benefits to the South West of the UK. LIDAR leak detection is one of the projects within the overall SWEEP programme.**

It aims to do this by supporting businesses, local authorities and landowners with the decisions they need to make in relation to how they make investments, manage or utilise the natural environment (also known as natural capital – those elements of nature producing value for people).

This innovative project sits firmly within one of the key 'impact themes' of the SWEEP programme, boosting the business sector, new markets for natural capital, that supports businesses in developing schemes that provide benefit to both the business and the natural environment.

The aim of this co-funded project is to develop intelligent geospatial approaches to optimise the detection of leaks from subsurface merged aqueducts and water mains.

Working in collaboration with our SWEEP partners we will pioneer a new research-led operational approach using drone-based thermal imaging surveys in areas where leak detection has a high success rate. These areas will be determined by geospatial modelling using NERC Tellus LIDAR and other remote sensing data from operational satellite missions.

South West Water currently spends over £7 million per year on detecting and tackling leaks within our network. Whilst many leaks are easily detected, for example, by virtue of their proximity to houses or in towns where we are alerted rapidly, there are also many cases of severe leaks occurring in places where mains pipes are buried under agricultural land or in remote areas where they can go unnoticed for prolonged periods of time.

This project aims to reduce the operational costs of leak detection in these more rural areas by using intelligent spatial data analysis to identify places where detectable leaks could be occurring, and using state-of-the-art proximal sensing, incorporating optical, near infra-red and thermal imaging technology, to identify their location. By doing this, we are able to demonstrate that we can detect a single mains water leak, with savings estimated to be, on average, a volumetric benefit of between 0.7 and 1 mega litres in reduction of water lost.

In addition, there are many wider benefits for South West Water and our customers. Further reducing water lost from the distribution network supplements South West Water's active leakage control activities and is significant in preserving water resources, reducing our impact on the environment, reducing abstraction and improving the security of supply to customers.

**LIDAR supports the delivery of a 15% reduction in leakage with no additional expenditure.**



**Innovation** continued

**Creating space for innovation**

We have shown leadership from the top to give teams the space to innovate and look outside our traditional operating area and approaches.

We were instrumental in setting up the West Country Water Resources Group and have been one of the key companies leading the development of the national water resource framework.

Through the 21st Century Drainage Group we have also been instrumental in setting up the need for, and delivery of, long term Drainage and Wastewater Management Plans (DWMP). We have included our long-term plan as part of this business plan.



For more information, see [Drainage and Wastewater Management Planning – Process Overview and Progress](#)

We have set ourselves the leadership goal of delivering smarter, healthier homes. Ultimately all of our customers will have a digital meter by 2050. We have already switched all meter replacements and new installations from analogue to digital. This creates the space for greater customer service innovation including:

- Early identification of customer side leaks – with automatic trigger and alarm to customer service desk
- Meter reading costs reduced to an absolute minimum
- More sophisticated and innovative tariffs to development opportunities to help incentivise water consumption behaviour – aiding demand management and customer bills
- Reduced household water consumption.

South West Water pioneered the introduction of social tariffs in the water industry and our wide range of assistance measures continue to be delivered in partnership through trusted third party organisations.

For more information, see



[Addressing Affordability & Vulnerability](#)



[Tackling Water Affordability in Partnership](#)

**Case Study**

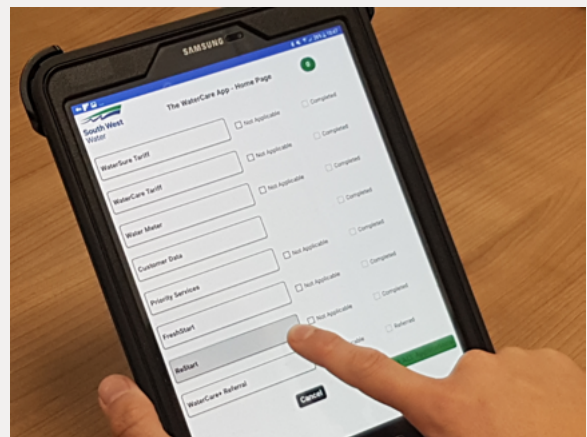
**WaterCare App**

**Our WaterCare App was developed following conversations with customers who would clearly benefit from our affordability schemes, but who have in some way failed to access them.**

Whether due to literacy or numeracy issues or the inability to access help through existing routes, it was clear that there was a group of customers in need of additional support.

Our WaterCare Advisors acted on this feedback and working with our IT department developed a simple APP that allows them to process applications with the customer either at community events or in their own homes. It provides on the spot decision making for the customer with regard to the level of help they are entitled.

More customers now have access because of the introduction of the App. The majority of customers who we visit live chaotic lives, it can take multiple visits – typically around three – for the trust to build up and paperwork to be ready in order for the assessment to take place. We have changed the way we operate the WaterCare Advisor team to incorporate home visits and we have increased the resource.



Another area we are going to build on existing pioneering trends is with the development of our innovative WaterShare+ initiative. This innovation focuses on the customer and continues our trend for sharing success with our customers.

Innovation continued

Case Study

WaterShare and WaterShare+

# WaterShare

The WaterShare principles are being continued post 2020 to include further sharing of gains through a cost of embedded debt sharing mechanism and applying this framework to Bournemouth Water customers.

We are proposing to offer customers the opportunity to receive this benefit in the form of a WaterShare 'share' in 2020. Customers have told us they value the proposition of ownership in our business and this unprecedented step will give them more power and control in our business.

This customer share ownership scheme will be available for the sharing of future WaterShare benefit post 2020.

### Recognising where we have risks

Our customers have told us that they value a resilient service that they can rely upon whenever they need it. Customers want us to provide a reliable, affordable service now and in the future.

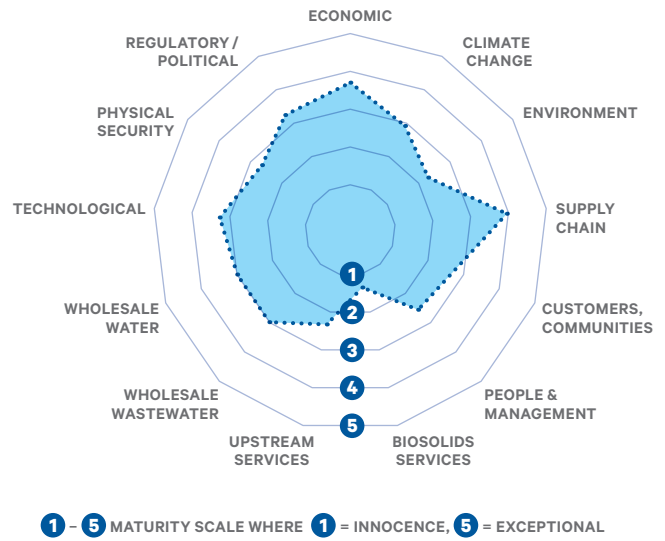
We have created a culture for staff to make visible where we may have long-term risks and to act to understand them.

Our Resilient Service Improvement project has focused on the resilience of all aspects of what we do. This required a cultural shift in opening up about where our strengths and weakness are as a business. But this has also given a platform to focus on where the opportunities for improvement are and make sure we deliver the resilience our customers expect.

As a service provider, we recognise that 1 in 12 of our population will be over 80 by 2039, requiring us to think hard about how that affects the service we need to provide. We are focusing our activities to plan beyond the 5 years and into the long-term. With our focus on being easy to deal with, using a range of different channels and using our 'Voice of the Customer' technology our plan set a sound foundation for the long term.

The diagram opposite shows the result of our assessment on our risks in the different parts of the business. We have used this to change our plans to increase the emphasis and focus to ensure service remains resilient in the future.

### Summary risk assessment



### Our processes

#### Non-household retail services

Our non-household Retailers have told us that what they want from South West Water in particular is:

- Open pro-active communication
- Innovation around water efficiency and water audits, including data flow
- Excellent customer service, for some that means 24 hour availability.

Our proposed retail service offering builds on our already strong performance in this area. A key tenet of our plan is to enhance our core systems to allow for the receipt and transmission of requests using bilateral standards, rather than individual one-off form requests. We see this as a key component as the retail market continues to mature. We will also further integrate our business systems to enhance our speed of resolution, give a holistic review of retailer interactions and real time insight into market performance standards.

We will also continue to contribute towards the overall improvement and development of the market, engaging in a continuous programme of retail customer engagement, system and process through our Retailer Advocacy Programme.



For more information, see **Residential Retail Revenue Control**

**Innovation** continued

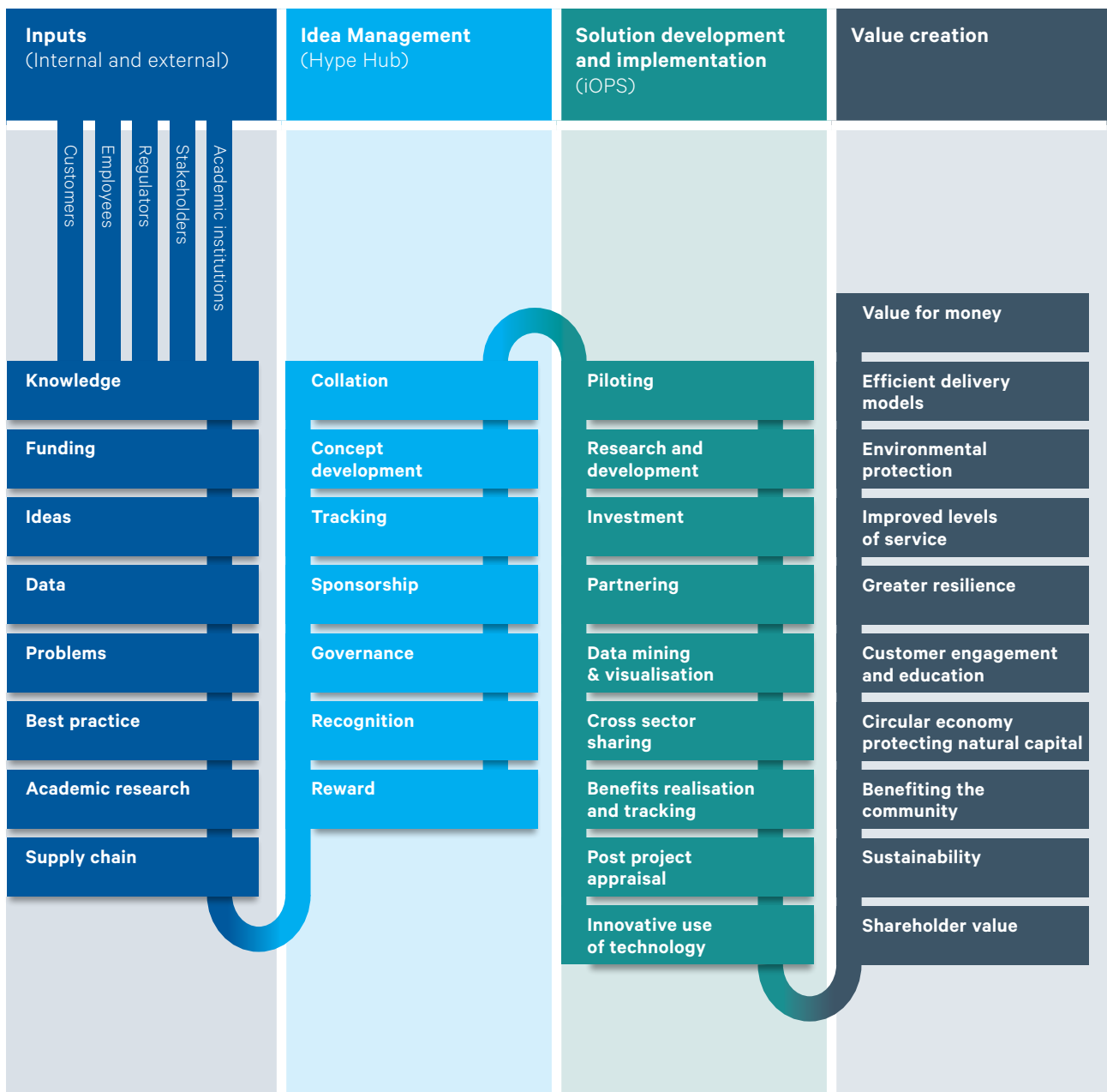
**Innovation**

South West Water has always been committed to driving efficiency through innovation to deliver services our customers and stakeholders' value, at a price they are willing to pay and can afford. We have structured the business to reflect this commitment and the iOPS Board is responsible for overseeing the innovation cycle within the business.

This role includes both internal and external engagement and horizon scanning, to ensure that we are well placed to take advantage of ideas and emerging trends regardless of their origin.

Working alongside academic partners, as well as our technology providers and supply chain, we are firmly committed to embracing innovation across all business areas. As a member of SWEEP, alongside University of Exeter, Plymouth Marine Laboratory and Plymouth University among others, we are tapping into environmental science excellence to address issues in areas such as pollution prevention. Elsewhere, we have embarked on a number of strategic and collaborative partnerships with companies such as Hitachi Consulting to look at how Internet of Things (IoT) technologies and analytics can help deliver a better customer experience and to protect the environment.

**Innovation model**



## Innovation continued

### Operational change

To achieve better performance we need to adapt as a business. We have already created the culture where operational change is the norm.

Our embedded innovation framework and innovation hub is overseen by the Head of Innovation. As part of this iOPS framework, opportunities are identified and fed into the business, selected and programmed with reference to best practice in and outside the sector:

- Within water resources, we have already changed operations with a new Abstraction Incentive Mechanism and new innovative licences at our Park Lake. These have delivered the dual benefits of public water supply resilience and environmental protection at a cost of less than £0.1m p.a. to customers compared to traditional capital programme solutions in excess of £5m
- Within network plus, we have extended catchment management in both our Upstream Thinking and Downstream Thinking programmes to deliver non-engineering solutions for providing long-term resilience
- Within wastewater services, we have started our DWMP process to better plan resilient drainage improvements working with other risk management authorities
- Within our retail activities, we have improved our SIM score from 79 to 85 through organisational change and diligent focus on the people and process that deliver our service.

We have a comprehensive long-term plan and investment strategy for our wastewater service. As a result, we have recently achieved our best ever performance in some areas, however there is still work to be done. Furthermore, we understand the limits of traditional 'hard' engineering in coping with the challenges over the next 25 years.

Service issues, such as flooding, are often caused by a combination of factors, with responsibility spread across disparate agencies – but from a customer's perspective the outcome is no less distressing.

A sustainable long-term solution requires partnership working with other agencies and the community, which we are implementing via our Downstream Thinking initiative.

### Case Study

#### Upstream Thinking and market mechanisms

##### **Upstream Thinking adds to the natural capital of our region, providing restored habitats for wildlife and preserving the quality of existing ecosystems.**

The cleaner water is when it arrives at a treatment works, the less intensive and costly the treatment that is required to make it drinkable.

Therefore, we are always looking for ways to reduce the amount of pollutants entering rivers and streams across catchments.

Taking a holistic view of the water management of entire catchment areas, we launched Upstream Thinking in 2007 (following a pilot programme) alongside a number of partner agencies including Westcountry Rivers Trust and Exmoor National Park.

Through our innovative paid ecosystem services market, Upstream Thinking focuses on achieving improved raw water quality and water storage in the natural landscape to make the provision of drinking water more sustainable.

In turn, this will help to control the rate of bill increases in the future and, as a linked benefit, it also restores the natural environment and the ecosystems within it.



For more information, see  
**Upstream Thinking**

## Case Study

## Downstream Thinking

**Downstream Thinking is South West Water's catchment-based approach to alleviating sewer flooding and reducing the risk of pollution of watercourses.**

Downstream Thinking incorporates a variety of elements including the sewer network, pumping stations, sustainable drainage systems (SuDS) and wastewater treatment sites. Activities within the project include retro-fitting Sustainable Drainage Systems (SuDS), Natural Flood Management (NFM), targeting sewer misconnections, and tackling sewer misuse. Real time data gathering at a catchment level is also being explored as a way of predicting where and when network issues may be experienced. To make sure we have the data needed to make informed intervention decisions, we have invested in a network of Ultrasonic Doppler Flow measurement units.

By using the landscape as a natural store for storm water during heavy rainfall, we can alleviate sewer flooding whilst also creating attractive urban habitats. A wide range of partners are consulted in a Downstream Thinking approach to ensure all potential sources of flood water – from highway drainage to flooding from watercourses – are fully considered.

Engagement with customers and communities is pivotal to our approach. Unlike traditional infrastructure, which is buried in the ground, green infrastructure might change land-use in places like parks, pavements and even farmland.

It is vital to understand how the land in question is used so that solutions can be implemented in a way that communities and landowners agree with and which enhance amenity, recreation and biodiversity.



Downstream Thinking

**Looking outside the water sector for a better environment**

We have recognised that innovation is not going to be delivered solely by the traditional supply chain alone.

With Exeter University we are developing an Innovation Centre for Water, Waste and Environment Resilience.

This draws together business and research in a way that has not been undertaken before to tackle the problems we face be it from pollutants in the environment such as micro-plastics and microbial resistance to upskill and retrain in new AI and augmented reality technology.

The opportunities go beyond private business. A cutting edge facility such as this could provide benefits and cost savings to government agencies also undertaking research to ensure we have a better environment.

Whilst South West Water customers will benefit from the development of the centre, the bigger prize is perhaps a more national focus. That prize will not only be lower costs to customers or taxpayers, but also through better research and development of solutions to ensure a better, more resilient, environment.

We understand this partnership working however goes much deeper as many of the issues such as climate change are multi-agency issues. It requires an intelligent, integrated and innovative approach to understand how to deliver wider benefits. We are developing through the SIM4NEXUS research project, [www.sim4nexus.eu](http://www.sim4nexus.eu), a way to deliver this outcome. This project shows our leadership in taking a strategic, multi-stakeholder partnership and systems level approach to resilience planning.



Case Study

Delivering a better environment through innovation

**Why do we need change?**

The environment is the foundation of our business. In the UK, it is estimated that annual costs of water and wastewater management exceed £8bn per annum; problems caused by flooding and water pollution cost taxpayers, in the face of climate change, an additional £3bn per annum; and the potential costs of emergency water restrictions could amount to tens of billions per annum. Thus, water and wastewater management is costly and these costs will rise if business as usual approaches continue. On a global scale, these challenges are even more acute.

A resilient and cost-effective water and waste sector is fundamental for a prosperous and sustainable future, and research and innovation will play a critical role in addressing both existing and future challenges.

**How do we deliver change?**

Currently, research and development in the sector is dominated by ‘engineering’ projects, focusing primarily on the built environment and development of technological solutions for management of water in urban and semi-urban areas. However, we argue that, in order to understand the ‘whole water system’, to optimise the benefits of better utilisation of the natural environment, and reduce the negative environmental consequences of water and waste management, the future must be holistic and involve expertise from (but not limited to); physical geography, environmental economics, behavioural psychology, biosciences, engineering and the social sciences.

In partnership with the University of Exeter, we are promoting a new approach that brings these disciplines together with an investment of over £20m.

The Innovation Centre for Water, Waste and Environmental Resilience will deliver integrated and world-leading, transdisciplinary research with the water and waste sector, and its supply chain. The centre will pioneer holistic approaches to complex challenges, and ‘whole systems’ understanding to develop cost-effective and future proof solutions for the sector. Initial research objectives have been co-created by University of Exeter and our staff within themes and programmes of research and innovation.

**Why do our customers benefit?**

The future is raising a range of new questions we need to answer. How do we deal with micro-plastics in the environment? How will water quality change under climate change? How do we meet the government’s new 25 Year Environment Plan? By drawing the research together we can reduce costs of understanding the linked issues and use that to help develop integrated win-win solutions that don’t just focus on traditional engineering.

The customer benefits however go much deeper. To meet the future challenges requires different future skill sets in the water sector. The centre allows us to train staff on new technology such as robotics or artificial intelligence. It allows us to unlock the potential for use of socio-behavioural solutions for example to promote water efficiency, or reduce chemicals entering the environment.

**What opportunities does the centre have for the whole water sector?**

The opportunities for the Innovation Centre go beyond our own customers and apply to the whole water sector. The scale of the opportunity for the sector is significant.



For more information, see **UK research partnership investment fund: Innovation Centre for Water, Waste and Environmental Resilience**

**Innovation Centre**  
for water, waste &  
environmental resilience



<b>Research Programmes</b>	<b>Managing Pollutants &amp; Risks</b> e.g. micro-plastics, anti-microbial resistance, soil contamination, flood risk reduction
	<b>Managing Supply</b> e.g. catchment management, climate change adaptation
	<b>Managing Demand</b> e.g. consumer behaviour, agricultural irrigation, abstraction
	<b>Improving Efficiency &amp; Productivity</b> e.g. leak detection, bio-remediation, water treatment
<b>Research &amp; Innovation Principles and Approaches</b>	<b>Enhanced Experimentation &amp; Automation</b>
	<b>Environmental Monitoring &amp; Modelling</b>
	<b>Circular Economy &amp; Ecosystem Modelling</b>

## Innovation continued

### Leading partnership working

We have been pioneers in leading the understanding of our impact on the environment.



For more information, see  
**Environment Plan to 2050**

We started catchment management back in 2003 and by the end of the next 2025, we will be active in over 80% of the catchments in which we operate. This follows our ethical broker model that uses local partnerships to target improvements.



For more information, see  
**Upstream Thinking**

This programme includes on-going partnership with the research team at Exeter University from the Natural Capital Committee. They have assessed our natural capital impacts from catchment management and we will be assessing this each year as part of our performance commitments.

We continue to play a leading role in the Defra North Devon PIONEER catchment (both marine and land based) understanding how expenditure in catchments affects the environment. This offers significant long-term benefits within our region, but also to other water companies, as it examines how to bring different expenditure in a catchment together to get greater benefits.

We have used the same principle of partnership working on wastewater, with our fully integrated downstream thinking programme. Working across government, private, environment and educational sectors this programme implements 'catchment based' solutions to mitigate or reduce long term wastewater risks from areas such as flooding.

### Market testing

We have already set up a water trading platform for third parties to bid in possible future schemes for our plans.

We have also set up our bid assessment framework and are looking for third party entrants who can help deliver our future services.

Our bioresources strategy has within it a full market testing post 2020. This is explained further in the 'Markets in Action' section.

## Case Study

### SWEEP partnership working



South West Water joined the South West Partnership for Environmental & Economic Prosperity (SWEEP), with partners University of Exeter, Plymouth Marine Laboratory and Plymouth University.

SWEEP is built upon an internationally-leading base of excellence from across the environmental sciences, including the fields of ecology, hydrology, flood and coastal risks, marine and freshwater sciences, geographical and spatial analysis including remote sensing, climate change and greenhouse gases, agricultural, aquaculture and fisheries sciences and renewable energy.

Crucially, given the impact focus of the programme, the academic team also includes world-leading experts in natural capital economics, social sciences, health, wellbeing, and policy to ensure translation from research excellence to transformational impact.

The partnership will deliver value for money while building environmental resilience in the South West. South West Water will be working with academics, government and communities to co-develop understanding of natural capital challenges and opportunities.

This work will include exploring new markets opportunities and incentives for change, identifying cost-savings, risk reduction and the generation of value and wellbeing.

In addition to the LIDAR leak detection initiative (see earlier case study), the SWEEP whole-catchment project team will work with South West Water to develop innovative extensions to their existing catchment management initiatives.

Those innovations will take numerous forms; for example, in identifying emerging pollution problems and in the spatial and temporal targeting of catchment interventions. Another aspect of the programme will look at the design, implementation and evaluation of the mechanism used to deliver catchment-based interventions.

In essence, the mechanism helps determine how farmers are selected into the scheme and how much each gets paid for the activities they commit to undertake. There are numerous possible mechanism designs, each presenting farmers with different incentives and each resulting in potentially very different outcomes.



**Innovation** continued

**Systems**

**Making new technology the norm**

From the new ceramic membrane filtration plant to LIDAR detection for leakage, we have used the challenges we face now to instill a culture of developing new technology to solve problems.

Case Study

**Mayflower Water Treatment Works**

A substantial proportion of Plymouth’s water supply is provided by the Crownhill Water Treatment works. Originally constructed in open fields during the 1950s it has been overtaken in the 21st century by construction, housing development and technology.

To meet the long-term water needs of one of our fastest growing cities, a new works was required. Resilient by design and the first plant of its kind in the UK, the Mayflower works at Roborough is due to open in 2018. The treatment works uses ceramic filtration technology, coupled with resin ion exchange processes designed to produce more water, more efficiently and at a lower cost than traditional technology. This followed the deployment of a £2m research and pilot project with our partners partly funded by EU Interreg.

**But what does this mean for customers?**

- Keeping bills down in the long term – the plant will cost less to maintain, use less raw materials and require fewer staff to operate it
- Compact process therefore lower construction costs.
- Requires less chemicals than traditional water treatment processes, reducing the environmental impact
- Ion exchange process captures hard to remove pesticides, colour and taste providing consistent high quality water
- The ceramic filters provide an absolute barrier to cryptosporidium and harmful viruses
- Located on a hill away from the city – reduces congestion from company vehicles and is safe from flooding.



This approach continues with our plans post 2020. We are extending the advancement of water treatment processes into the proposed new WTW at Knapp Mill and will be moving customers onto digital Automatic Meter Read (AMR) meters.



Knapp Mill

Sewer blockages account for more than three quarters of all flooding incidents and around one third of pollution incidents. It was with the aim of better and earlier blockage detection that we introduced the use of innovative SewerBatt technology to improve sewer cleansing efficiency. SewerBatt is a lightweight and portable acoustic device which can identify blockages and structural defects in sewers to determine their serviceability. The unit rate for SewerBatt is c.£1.75/m compared to a typical proactive cleansing unit rate of £12/m.

Our online retail services will be enhanced by the use of Artificial Intelligence (AI) in the form of Bots and Natural Language Processing which can service the most simple activities but which can also intelligently route to one of our people if the conversation becomes more complex.

While we will be mindful of advances in technology, we will always be considerate of how customers think and feel about all the services we provide. Though our customers are increasingly using internet and other digital services the telephone will continue to be a major channel. Our intelligent telephony platform will integrate with our customer portal and will make it easier for customers to contact us and receive the support they need.

Our focus on innovation extends into the supply-chain including testing through a workshop with British Water. In bringing in new supply chain for 2020, we have focused explicitly on the use of innovation to make new technology the norm.

**Innovation** continued

**Behavioural economics**

In our opinion, to meet the future challenges is not just about building more infrastructure, rather we need to work with customers and stakeholders on how we change our relationship with water.

In this period, we have been using behavioural economics in our water efficiency Greenredeem programme to create changes in how water is used.

These pilots have shown positive results in changing customer behaviour to defer the need for investment. As a result, our plan is to roll out these initiatives across our region and embed them in our business.

Case Study

**Behavioural Economics**

**Using behavioural economics to help us connect with our customers and motivate them to save water, money and time.**

**Influencing customers to save money and water through behavioural economics**

There are many areas where customers could be helped to save water – this may be purely by providing them with the information about how much they consume, or by providing incentives for customers who do actually use less. We have been working with two partner agencies, Greenredeem and Advizzo, to conduct pilots across our region with our customers.



**Advizzo**

Advizzo uses company data to help guide customers towards a more efficient use of water through personalised engagement via a number of routes (email, apps etc.).

The company specialises in using big data and behavioural science, and has reported reductions in usage of between 4% and 7%. The system works by taking information, tailoring it to individual customers and then providing it to them in a digestible format, with easy navigation hints and tips for water saving.

Customers can view their usage and, crucially, see how they compare with other people in their area or with similar profiles. This use of descriptive and injunctive norms has been proven to incentivise customers to change behaviours to bring them back to the peer group average.

If the customer decides they would like to reduce their consumption there are tools and tips they can access on the Advizzo platforms.

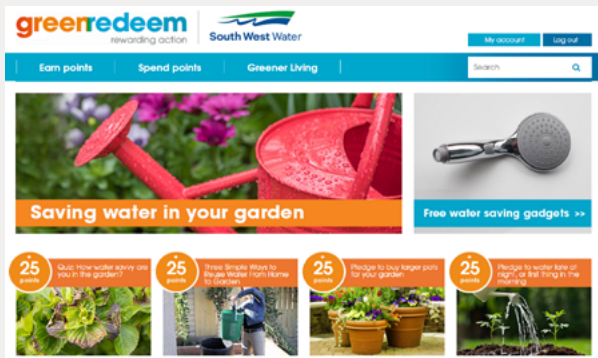
There is an additional benefit for more vulnerable customers, as the information provided to South West Water can be used to ensure that customers eligible for a special tariff have been placed on it.



**Greenredeem**

Greenredeem is an incentive scheme, through which people can earn points for pledging to undertake activities that will reduce their water usage.

Customers can access the scheme online and via mobile, where they can see the points earned, the money they have saved or compare their consumption to others in their area. The variety of information and the incentives are designed to engage a wide range of customers. The reward points can be redeemed with partner companies, donated to the overall community score or used to enter a prize draw. In effect, water consumption will be reduced through incentives and information provision including volume/cost and comparative data.





**Innovation** continued

Our award winning 'Love Your Loo' campaign follows a similar behavioural incentive approach. This has created a culture and business acceptance of the importance of behavioural economics in what we do.

Looking forward, both of these behavioural approaches continue and we are adding to them with additional work on social norms information on billing regarding water use to nudge changes in customer behaviour, as well as help reduce their bills.

Incentivising behavioural change extends into the wastewater service. Our 'Love you Loo' is a multi-award winning behavioural customer programme to protect the wastewater system. A campaign urging customers to think before they flush has been crowned the winner of the Institute of Water National Innovation Award.

We also have a linked project 'Think Sink' to reduce pollutant loads into the sewers via sinks.

Given the success of these projects we will be increasing our programme in both of these areas to further deliver better service to customers.

**Innovation model**

In this period, we developed an integrated innovation process focused through our iOPS framework.

This lifecycle process follows from initial inputs on problem identification through to idea management, solution delivery and value creation.

Our process links to "The Water Network" which is the largest online knowledge sharing platform for the global water professionals, researchers, technicians, private sector employees, policy makers. Again embedding a partnership ethic to reach out for solutions to the challenges we face.

The maturity of the process which we have developed, places our business well for the future and delivering what our customers and stakeholders expect.

**Case Study**

**Love Your Loo**

**It costs South West Water, and its customers, c. £5million each year to clear around 8,500 blockages on the sewerage network. About 65% of these blockages are caused by baby wipes, hygiene wipes, moist toilet tissue, cleaning wipes, cleansing pads and sanitary products being flushed down the toilet.**

In August 2015 the 12-month 'Love Your Loo' campaign was launched in six areas to encourage customers to flush only the 3Ps – pee, paper and poo. The objectives were to understand which engagement and communication tools work best to change behaviours and reduce blockages and sewer flooding.



Our strategy was to change customer flushing behaviour in six towns with above average blockage and flooding rates.

A pan-regional profile, via website, customer newspaper and social media, was supplemented by a communications toolkit, for use across all six towns, which included a training module for staff, leaflets, postcards, posters, infographic rich media and branded disposal bags to be given free-of-charge to customers.

The campaign provided clear evidence that positive changes in behaviours around the disposal of wipes, sanitary products and non-sewer debris down the toilet can be effected through positive face-to-face engagement with customers.

The programme has delivered tangible benefits with over a 10% reduction in blockages to date.

Customers benefit from an improved local environment with less risk of blockages leading to internal and external flooding.

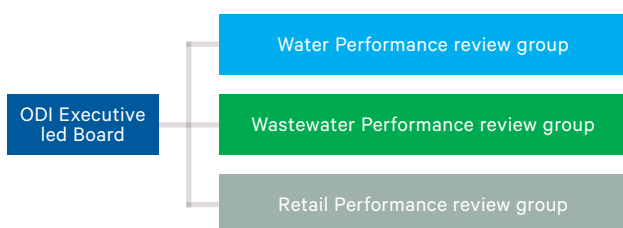

For more information, see **Innovation**

## Measurement and monitoring of performance

Following the change from output to outcomes regulation we adapted our already strong governance structure to include new forums with a dedicated focus on ODIs, totex and innovation.

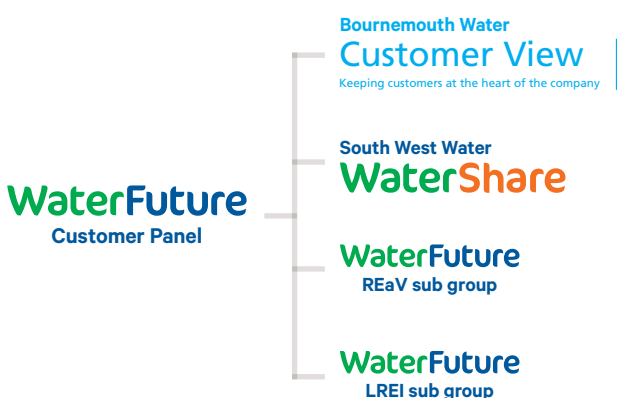
### Outcome Delivery Incentives (ODIs)

South West Water introduced a new governance structure to review and challenge the company's ODI performance. Performance review groups (as shown below) meet monthly, identifying how improvements can be made to meet customers' priorities.



Overall ODI performance is reviewed by the ODI Board sub-committee which also meets monthly and reports to South West Water's Executive Management and Board. This governance process ensures that performance against customers' priorities, through the ODIs, are reviewed and challenged at all levels of the organisation.

Further independent scrutiny and challenge on ODI performance has also been enhanced by the challenge provided by the independent South West WaterShare panel and Bournemouth Water Customer View group which has been in operation since the submission of the PR14 business plan.



Furthermore, a WaterShare scorecard is published annually, transparently reporting performance across all aspects of our business, used to test with customer's different options over sharing in-period financial incentives resulting from service performance and other factors within the WaterShare mechanism.

2019/20	TOTAL	CUSTOMER	SHAREHOLDER
	Cum. £m	Cum. £m	Cum. £m
<b>PERFORMANCE</b>			
Driving cost base efficiency	300	150	150
Delivering outcomes	20	10	10
Other factors	20	20	-
<b>Total</b>	<b>340</b>	<b>180</b>	<b>160</b>
<b>SHARE</b>			
Net costs carried forward	-	-	-
Benefits available	340	180	160
<b>Total</b>	<b>340</b>	<b>180</b>	<b>160</b>



For more information, see [Engaging Customers](#)

As a result, customer surveys and engagement are routinely undertaken throughout the year on performance and options for sharing of benefits resulting from our performance.



## Measurement and monitoring of performance *continued*

This engagement has transformed the relationship with our customers and held us to account on our performance. Looking towards post 2020, we are enhancing the WaterShare reporting and governance framework to introduce a customer share ownership scheme to provide customers with more control and power over our service delivery.

## WaterShare+

This framework will be applied to Bournemouth Water operations and the Isles of Scilly for the first time from 2020.

### Customer share ownership scheme



For more information, see [Aligning Risk & Return](#)

The strong governance and assurance framework embedded in our business has ensured consistent and reliable delivery of the stretching PR14 commitments agreed with customers. We have made significant improvements in performance and are on track to deliver 39 out of 40 ODIs in South West Water and 14 out of 15 in Bournemouth Water.

### Totex

The governance framework for investment decisions and operating costs did not change as a result of the move to totex based regulation in PR14 – this is because expenditure decisions were already scrutinised on a whole life cost basis through already established Investment Planning Committees and rigorous quarterly review process led by the Executive.

However, the change of focus, and additional flexibility, allowed for in the PR14 methodology resulted in the creation of an iOPS Board whose focus was on identifying and implementing operational service improvement and /or cost efficiency change projects. The iOPS Board has overseen the development of c. 50 projects costing £5m, resulting in over £2m per annum operating cost savings and numerous improved service levels.

The effectiveness of our service and cost chain culture are assessed annually as part of our internal budget and target setting process. Targets for service and cost are then updated to be disseminated across the business in order to remain at the forefront of the industry.

## Markets in action

Not only have we used markets in all parts of the value chain to deliver greater efficiency, innovation resilience enhancement, we envisage using markets in the future.

In this section we set out a summary of the market work across our plan. There is cross-over here with our work on targeted controls and so the two sections should be read together.

The most significant area we have used markets to deliver tangible benefits to customers is through the Bournemouth Water integration.

### Water resources

Markets for water are an opportunity to reduce the long-term cost to customers. Our Water Resource Management Plan (WRMP) sets out our strategy to seek out and review potential new sources, including water trades.



For more information, see [Draft Water Resources Management Plan](#)

We have published our water resource market data. Ahead of the potential new bilateral market in 2020 we have already set up a water trading website for potential third parties to “bid” in to options that could form part of future service.

We used our learning from the non-household market opening to create a website that gives information for potential new trades and ensures that all third parties follow a repeatable, transparent process.



This is linked to our bid assessment framework to give a cohesive platform for new solutions and prepare the business for potential future bilateral trades and our WRMP.

We have also worked across our region with Bristol, Wessex and Southern Water to review the co-opportunity for a water transfer into the Southern Water network. In the section below we set out how this could feature as a potential new Direct Procurement scheme.



For more information, see [Water Resources Wholesale Revenue Control](#)

### Case Study

#### Bournemouth Water

**Following the acquisition and subsequent integration of Bournemouth Water a number of efficiency savings, service improvements and innovation benefits have been delivered as planned, on time, and as set out at the time.**

#### Cost efficiency

The merger has given rise to significant efficiency benefits including the removal of the small company premium from 2016/17, and the reduction of corporate costs of operating two separate companies, which will be shared with customers at PR19 lowering customer bills.

#### Service improvements

The merger has allowed for an optimised customer service package from the best of both companies practice and result in improved service for both South West Water and Bournemouth Water customers.

The merger brought together two successful, customer oriented businesses that will provide even better customer service as a combined entity.

The Bournemouth Customer View Group allows stakeholders and customer representatives to scrutinise performance of their local water company. As a result, Bournemouth customers have not seen any deterioration in the local service they currently receive. On the contrary, the merger has given rise to even higher customer service levels due to the opportunities for knowledge-sharing and greater innovation.

One particular source of improved service quality of the combined entity, is its ability to respond more effectively during emergencies or peak periods. We are able to transfer skilled labour between the two regions to ensure the security of the water supply.

Even in times of normal operation, the combined entity is better placed to cope with any unexpected incidents or system failures. This all contributes to an improved customer experience.

#### Innovation

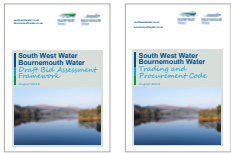
The merger has presented opportunities for greater innovation leading to increased efficiency. In particular, the merger has allowed the sharing of knowledge and the adoption of best practice between two well-run businesses.

The initiatives above, which are built on the best practice means that SIM performance for the combined company is converging toward the upper quartile level.

**Markets in action** continued

**Water network plus**

We have published our bid assessment framework setting out our processes for future third party delivery. This is directly linked to the activity in our WRMP.



For more information, see **Draft Bid Assessment Framework and Draft Trading and Procurement Code**

We also set out which activities we are particularly interested in from third parties – this includes water efficiency to help deliver our PCC target.

To prepare for the future bilateral trade framework and drive efficiency to reveal the true value of water, our plan includes an in-house trading approach that mimics the wider regulatory regime. This sets out how water is bought and sold between the water resources, network plus and retail activities we undertake. This is a precursor for developing approaches for any new markets that may arise in this area.

Our extensive catchment management programme includes the development of new natural capital led investments with partners in our catchments in the Defra North Devon Pioneer Area. These will be farmer-led outcome-based incentive schemes to deliver water quality improvements through natural capital improvements.

We have also included PES payments for improved land-use management in the upland Exmoor catchment. This incentivises a shift from traditional agriculture to land restoration bringing customer benefits of cleaner, slower water in the Exe catchment, a key water resource for Exeter and the surrounding area.



For more information, see **Network Plus Water Wholesale Revenue Control**

**Residential retail**

South West Water embarked upon a ‘market ready’ change programme, involving the entire business, well in advance of market opening to enable successful entry into the market. All policies and procedures were reviewed and streamlined prior to shadow operation in October 2016. This enabled many processes to be updated and optimised realising benefits for household customers as well as non-household customers. A good example of this was the reduction in ‘hand offs’ between functions for responding to leaks and bursts out of hours.

We continue to see improvements from performance resulting from the transparency and visibility of performance from the management of strict SLAs driven by market codes that have been applied to household operations as well.



For more information, see **Residential Retail Revenue Control**

**Wastewater network plus**

The Axe catchment faces an environmental improvement programme to reduce the amount of phosphorus in the river. Rather than adopt a traditional end-of-pipe solution, our plan is collaborating with the Wessex Water Entrade platform to deliver a market based solution for phosphate removal, following catchment investigations.

This will be the first of its kind application in our operating area and utilises other water company sister companies to deliver in our operational area. We would further look to develop catchment based solutions to wastewater improvement projects subject to Environment Agency approval.



For more information, see **Network Plus Wastewater Wholesale Revenue Control**

**Bioresources**

Our long-term strategic approach is to maximise use of agricultural recycling of treated sludges, coupled with formal assessment of market solutions to deliver any enhancement of service.

Market approaches are already underway and we have ensured that the current contracts do not stifle future competitive contracts. We have set up the principles of a shared resilience pilot arrangement with Wessex Water to avoid duplicating resilience provision to cope with asset downtime.

We have also undertaken a cross border tankering pilot with Wessex Water to understand the logistics of transfers and compliance matters which can be applied to future arrangements with any suitable third parties.

Looking ahead, we consider the market may offer long-term value for customers and the environment. We do not plan to do any enhancement of our bioresource assets from 2020, but will undertake a formal large-scale approach to the market to seek regional, site specific and /or service level solutions.

We will assess market offers against internal service provision and use the most cost-effective solutions for customers to refine and evolve our longer-term strategic approach.



For more information, see **Bioresources Wholesale Revenue Control**

**Markets in action** continued

**Direct Procurement for Customers (DPC)**

We have undertaken a third party review on the potential opportunities for DPC.



For more information, see [KPMG Direct Procurement for Customers](#)

This set out a process of defined tests to understand the opportunity for DPC. Two schemes were identified as potential options – Knapp Mill Water Treatment Works and Alderney Water Treatment Works.

The work concluded that whilst both investments meet some traits needed for DPC it was not recommended overall due to either value for money or overriding delivery risks.

However, we have identified a potential third option – a treated water transfer from Bournemouth Water to Southern Water. This is still under review as part of the Southern Water Final WRMP but could be a future option for DPC. The table below shows three preferred options. The capital cost alone of any option would be in excess of the proposed threshold for DPC.

The National Infrastructure Commission report ‘Preparing for a drier future’ highlighted the need for a new network of future transfers and recommended that Ofwat consider a competitive process for a national water network and new infrastructure.

We have not included costs for this scheme in our plan, but instead consider it could be part of this future competitive bidding process or DPC as it would in a traditional competitive market.

Water transfer options to Southern Water			
Scenario	Maximum transfer volume (MI/d)	Assumption	Capital Cost Estimate (£m)
1	20	20 MI/d from Bournemouth Water	101
2	35	20 MI/d from Bournemouth Water + 15 MI/d from Wessex Water	144
3	45	20 MI/d from Bournemouth Water + 15 MI/d from Wessex Water + 10 MI/d from additional surplus	167

**Case Study**

**Internal water resource market**

We have taken Ofwat’s PR19 model whereby the Network Plus function makes a payment to the Water Resource function to compensate it for distribution losses and applied it to our water resources business plan.

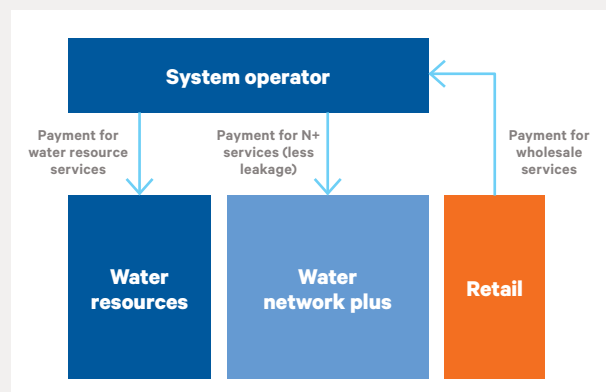
The benefit of this model includes the revealing of a price for water despite being a vertically integrated business.

We have already established a System Operator function that undertakes long-term water resource planning, and advises on short-term system optimisation (for example, which resource to abstract from and when).

The internal model we are in the process of developing is illustrated opposite.

The model differs from Ofwat’s hypothetical price review model in one key respect; the System Operator procures the upstream services rather than the retailer – the retailer simply receives a bundled wholesale price from the System Operator. This model is part of our preparations for a future bilateral market.

**South West Water internal model**



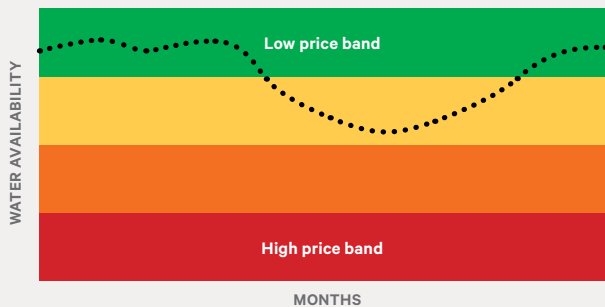
**Pricing structure**

We intend to set a price for each resource on a monthly basis, based on the forecast amount of water that will be available over that month and for the following three months. For water resources where there is a large amount of water available, the price of water will be relatively low. As water becomes scarcer, the price will increase.

Markets in action continued

Case Study continued

This pricing framework is illustrated below. We already manage our resources to minimise cost taking from the lowest cost sources first and those that refill the quickest. This pricing model however will send specific scarcity pricing signals to Network Plus. In doing so it will more explicitly reveal the value of water and in turn the relative cost or benefit of distribution losses or water efficiency actions.



Summary of initial approach to resource pricing

Price band	Price of water	
Low	Marginal cost of abstraction	10-15p/m <sup>3</sup> (marginal cost of water)
Low-medium	Cost of leakage reduction alternative within the WRZ"	35-45p/m <sup>3</sup> (marginal cost of leakage)
Medium-high	Customer willingness to pay for restrictions	100-120p/m <sup>3</sup> (mid point of leakage marginal cost and customer WTP)
High	GVA of customer restrictions or WTP whichever is higher	>200p/m <sup>3</sup> (customer WTP)

Having these prices available will help inform our System Operator in optimising resource use in the short term. These prices will also enable us to calculate an average scarcity price of water per Water Resource Zone based on forecast position – akin to an electricity forward price curve in the table are the indicative values based on this pricing approach.

Actual pricing

For 2020/21, we will use the establishment of shadow budgets within the Water Resources, Water Network Plus, System Operator, and Retail functions for the purposes of internal trading to begin with.

As the charges levied between business units will be based on the pricing system described above, this may not align to the regulated revenue controls.

The internal charging system will therefore need to be separate to the notional charges that we will publish for the purposes of demonstrating compliance with the controls.

Roles and responsibilities

We are in the process of defining roles and responsibilities for the trading system. The table below, summarises these at a high level.

Water resources

- Manages the daily maintenance and operation of water resources
- Provides water as instructed (procured) by the System Operator
- Receives revenue from the System Operator.

Network plus

- Manages the daily maintenance and operation of Network Plus assets
- Facilitates water flows, as instructed by the System Operator
- Responsible for hitting the company’s leakage target (and going beyond where it is economic to do so)
- Receives revenue from the System Operator.

Residential Retail

- Owns the client relationship
- Manages retail activities
- Procures wholesale services.
- Receives revenue from customers
- Procures wholesale services from the System Operator.

System Operator

- Responsible for directing system balancing (both long- and short-term)
- Owns the WRMP process
- Instructs the Water Resource function on which sources to use when (which are charged for based on the internal pricing framework)
- Procures water from third parties where appropriate.
- Receives revenue from Retail
- Procures water from the Water Resource function, and network services from the Network Plus function (minus leakage).

## Targeted controls

We recognised early that we need to consider the wholesale activities as different business units within the value chain.

Our business plan is presented as separate plans for network plus, water resources and bioresources. This gives clarity and focus on the costs and performance of each part of the service we provide, but also to prepare the business early for the future markets that may evolve in each part of the value chain.

For more information, see



### Delivering Outcomes for Customers



### Securing Cost Efficiency

#### Water resources revenue control

Our water resource revenue control sets out the strategy, outcomes and activities that we will deliver to meet the expectations of customers, stakeholders and government policy for water resource resilience and service.

It is underpinned by our WRMP which sets out a clear and concise strategy for resilient and sustainable water resources, this is:

- Reduce leakage and the future demand for water
- Ensure availability of existing sources and their resilience to future droughts
- Develop our planning tools and understanding of future options.



For more information, see [Draft Water Resources Management Plan](#)



Our interactive water resources video

#### Case Study

#### Interactive EngageOne video

**The EngageOne Video tool allows us to provide a personalised, interactive video to engage with, educate and inform customers and in turn seek their views about the long term resilience of our water resources and planning for the future – a subject that can be difficult to engage with customers on given that we have not had water restrictions in our region for over 20 year. Customers choose what parts of the video they want to access and we can learn about what is important to our customers through those choices.**

This approach works well for water resources as we can cross-check results from this new type of engagement with other research undertaken. Results feed directly into the development of the Water Resource Management Plan (WRMP) and also into the 2020-2025 business plan.

Through the use of this tool customers are able to make choices based on an understanding of the possible future if we do not take action. The interactivity puts customers in control of the experience; they can choose what elements are important to them. The video's personalisation based on location means that customers see information relevant to their Water Resource Zone, making the issues local to the customer and their community. At the end of the video there are calls to action linked to issues raised within the video, e.g. water saving, metering, WaterFuture, enabling customers to take action now.

The video provides an opportunity for us to educate and inform customers about long term issues around the resilience of our future water resources and their attitude to risk in this area. We can gather customer feedback on the direction of travel that they'd like us to take in delivering solutions. The video is personalised with the customer's location (street name and postcode) enabling us to provide them with relevant information about water resources where they live.

We give customers a summary of what the 'do nothing' future could look like and then explain the supply side and demand side options that are available, along with some information about the timing of taking action and the associated risks.

Customers then select the options that they would like us to take in terms of strategy and timescale.

We began deployment of the video on 26 September to South West Water customers. Personalised links were created for all customers with email addresses.

The first analysis of results, which fed into the draft WRMP, covered over 2,500 responses to the end of October. The vast majority of customers expressed a preference for demand side solutions and for the company to begin taking action to address potential issues in the short to medium term (within the next ten years)



## Targeted controls continued

Our approach delivers synergies across the value chain by looking at solutions from government policy and performance commitments within water network plus and retail to deliver and support water resource resilience. Specifically, our strategy includes:

- Focus on demand-side responses first, with a 15% leakage reduction by 2025, increasing to 25% by 2045
- Increasing meter penetration to 85% by 2025 and at least 90% in the longer term
- The roll out of Automatic Meter Read meters that will give more accurate customer bills and better information to help reduce leakage and target water efficiency
- A six fold increase in water efficiency activity to reduce PCC by over 11l/p/day down to 127l/p/d by 2025 and then continue down to at least 120l/p/d by 2045.

However, our water resource revenue control focuses more broadly on how the water resource business needs to develop going forward. It includes our plans around people and the direction of travel on building water markets in our area to reveal the true value of water (for example, our water resource trading platform). We have also developed an internal company water trading platform to mimic the potential new bilateral market for water resources.

To that end our water resource revenue control sets out the activities as if it were a standalone business but within the overall water control.

In doing so, specific focus is given to the financial costs and risks of operating a water resource business. This includes:

- An unfocused approach to RCV separation
- Independent assurance of our RCV allocation
- Assessment of the impact of the RCV allocation on charges
- The process for totex cost allocation we have adopted
- An assessment of the forecasting risk on demand
- Indicative future access prices under the new regulatory framework.

We have no new water resource yield schemes in our plan and therefore no new adjustment is required in our RCV forecast. We have no new water transfers and therefore no cost sharing mechanisms.

Our approach of separating out this part of the value chain is also driving a cultural shift in how we value and operate water resources. We consider this an important part of the next five years so that we are prepared culturally and commercially for any future changes in this area.

The activity in this plan is linked to the network plus revenue control and uses activity such as catchment management to deliver dual benefits to raw water value and quality, thereby benefiting customers from increased long term resilience in both parts of the value chain.



For more information, see [Water Resources Wholesale Revenue Control](#)

## Bioresources control

Like the water resources control, we have also developed a separate element plan for the bioresources service we provide.

We have adopted the same underlying approach and principles to this part of the value chain.

We have a clear, concise bioresources strategy to maximise use of agricultural recycling of treated sludges, coupled with formal assessment of market solutions to deliver any enhancement of service.

Our plan sets out what we have already completed on markets but also what we plan to do post 2020.

It sets out clearly our costs for operating this service including:

- Focused approach to RCV separation based on economic value:
  - External consultant review of bioresources processes
  - Energy generation output forecasts
- Totex cost allocations.

As with water resources, our approach goes more broadly and looks at how we need to operate going forward in terms of the people and process we need to deliver a resilient service now and in the future. This includes the adoption of the market based approaches which are outlined above.



For more information, see [Bioresources Wholesale Revenue Control](#)

## Targeted controls continued

### Case Study

#### Isles of Scilly Community Venture



**The Isles of Scilly Community Venture is a Community Interest Company which aims to serve its community purpose ‘to carry on activities which benefit the community and, in particular, to deliver products and services to business and residents on the Isles of Scilly, that share the benefits of a range of projects, that are targeted at achieving the aims of the Smart Islands programme and are in line with a low-carbon and sustainable future for the Isles of Scilly’.**

Since its creation, the Community Venture has been funded through the European Regional Development Fund to develop renewable energy sources on the islands and provide this low-cost electricity to customers on the islands through an ‘Energy Share’ electricity tariff. Solar panels have been installed across the islands, with other renewable sources, such as waste to energy and intelligent smart grid technology to optimise renewable generation being developed and explored. Over time, the vision is for the Smart Islands programme, Smart Energy Islands to provide a range of services to allow the residents of the Isles of Scilly to use renewable, cheap electricity including the use of electric vehicles as low carbon car share and community transport.

The Smart Islands venture has a number of touch points with the proposed investment South West Water will be delivering on the islands over the coming years and in particular:

- Smart network operations for water and sewerage
- Smart Metering and water efficiency incentivisation
- Household and non-household smart metering and tariffs
- Bioresources anaerobic digestion and / or gasifier
- Treatment energy (clean and waste) and PV generation
- Electric vehicles for operational teams on St Mary’s.

The Smart Islands programme and the Isles of Scilly Community Venture offer a unique opportunity of a multi-utility model of assets managed by a community interest company and with mechanisms in place to share the benefits back to the community. This approach offers a rapid transition to a low carbon future, creating resilience in providing products and services while delivering sustainable value for the community being served in meeting its own needs – all delivered locally. The potential for other communities is significant; whether it is another island community, rural communities, urban communities or new build towns and communities.

South West Water supports the development of the Smart Islands programme and the Isles of Scilly Community Venture and looks forward to working with these innovative projects as part of our delivery of water and wastewater services on the islands.



## Summary – Initial assessment of plan questions

In developing our plans we have looked carefully at how we need to operate as a business going forward to deliver what customers and stakeholders want at a price that is acceptable.

Rather than shy away from change, we have embedded it within our plan. As an early pioneer in catchment management and use of new technology for water treatment, we have taken our innovation as a key enabler but importantly we have focused on the culture of innovation as without that we do not consider it will truly embed itself within what we do, day in day out.

We recognised early the need to consider the different parts of the value chain as key parts of an overall service we provide. Specifically, we have considered the water resource and bioresources parts of our service as potential standalone businesses that sit within the overall wholesale function. In doing so, this reinforces the culture of change. Importantly this has better revealed the cost structure and risks in these areas in a more transparent manner for crisper decision making.

We have also embraced the role of markets, with practical trials on bioresources already complete and setting up our own water trading platform. We also see some potential opportunity for wider market delivery in a potential new water transfer scheme to Southern Water from the collaboration as part of the West Country Water Resources Group.

By looking at the overall changes as part of the PR19 process we have been able to thread this through each part of our business plan and are confident that it delivers the correct focus and balance for our customers, stakeholders and wider environment within which we operate.

Many of the activities we are doing and plan to undertake, fall cross across different parts of the initial assessment of plans test areas. We have, therefore, set these out to give transparency on where we have included the activities in our plan.

### **CM 1 How well does the company's business plan demonstrate that it has the right culture for innovation which enables it, through systems, process and people, to deliver results for customers and the environment through innovation?**

This is answered in the 'innovation' section of this document. Whilst we have a strong track record in innovation, we are not complacent. In our opinion, to have a culture of innovation it needs to permeate across all aspects of what we do – it is not just a traditional 'engineering' aspect – and is as much about 'how' we deliver the service as well as the 'what'. Our holistic approach drives an innovation culture, through all aspects of our work. Key elements are given below and expanded on in this report.

#### **People**

- Setting innovation into our values
- Recruiting and incentivising the right people
- Setting stretching targets aligned to objectives
- Creating space for innovation
- Recognising where we have risks
- Smart healthier homes
- Developing innovative apprenticeships programmes
- Supporting the establishment of a UTC specialising in the environment.

#### **Processes**

- Operational change
- Looking outside the water sector
- Leading partnership working (water and wastewater)
- Market testing
- Innovation hub
- iOPS framework
- Head of innovation.

#### **Systems**

- Making new technology the norm
- Behavioural economics
- Non-household retail offering
- Innovation model.

This report summarises the activity in our plan and cross references further detail in our individual element plans.

## Summary – Initial assessment of plan questions continued

### CM 2 How well does the company use and engage with markets to deliver greater efficiency and innovation and to enhance resilience in the provision of wholesale and retail water and wastewater services to secure value for customers, the environment and the wider economy; and to support ambitious performance for the 2020-25 period?

This is answered in the 'markets in action' section of this document. In developing our plan, we have used markets in all parts of the value chain to deliver greater efficiency, innovation and enhancement of resilience during 2020-25.

#### Water resources

- Part of our water resource strategy includes understanding future third party options
- We have published our water resource market data to give transparency on our water resource position
- We have introduced our new bid assessment framework. This includes particular focus on markets for water efficiency
- We have also developed a new water resource website to allow third parties to 'bid' in options as part of our day-to-day and future water resource planning
- In our water resource revenue control, we set out how the new future water market could drive future benefits to the customers in our region. This will also be included in our Final WRMP
- We have worked with Wessex Water, Bristol Water and Southern Water to develop a potential water transfer to Hampshire
- Continue to operate our Wimbleball reservoir for our customers and those of Wessex Water.

#### Water network plus

- We have commissioned a third party review
- We have had a third party review of our plan for Direct Procurement for Customers (DPC) opportunities (see also CMI 6)
- We have developed an in-company trading approach that mimics the wider regulatory regime for the buying and selling of water between 'retailer' and 'water resources'
- We have used payment for ecosystem services for the delivery of part of our environmental improvements in land use in the Exe catchment – a key river catchment that supplies one of our largest urban areas.

#### Wastewater network plus

- We have used the EnTrade nutrient trading model to use market approaches for reducing phosphates in the River Axe catchment as an alternative to traditional asset improvements. This mitigates the need for potential end of pipe solutions and delivers wider environmental benefits.

#### Bioresources (see also CMI 4)

- We have ensured existing sludge contracts do not stifle opportunities post 2020
- We have undertaken sludge trading trials with Wessex Water to learn how a future market could operate
- We have trialled shared non-exclusive contingency approaches with Wessex Water to improve our respective resilience arrangements
- We are delivering sludge measurement ahead of Ofwat requirements, and as early as possible, so as to maximise market opportunities
- Looking to 2020, we will extend market contract options for existing assets to include opportunities to tender for South West Water run treatment elements
- We will package drinking water and wastewater sludge recycling within contracting options
- We will assess market opportunities for strategic storage and non-agricultural outlets
- We will undertake a formal market approach to seek regional, site specific and / or service level solutions for 2025 and beyond.

#### Residential retail

- Data improvements of non-household market improving visibility of performance
- Non household market SLA's improving household SLA's
- Non household streamlined processes benefiting household process
- Water poverty addressed by 2024/25
- Co-creation of water customer survey
- Industry leading affordability and vulnerability package of support measures
- WaterCare affordability app
- Sharing of best practice debt collection practices.

## Summary – Initial assessment of plan questions continued

**CM 3 To what extent has the company set out a well evidenced long-term strategy for securing resilient and sustainable water resources, considering a twin track approach of supply-side and demand-side options and integrating third party options where appropriate, to meet the needs of customers and the environment in the 2020-25 period and over the longer term?**

### Long-term strategy for resilience

- We have a clear and concise strategy for resilient and sustainable water resources:
  - Reduce leakage and the future demand for water
  - Ensure availability of existing sources and their resilience to future droughts
  - Develop our planning tools and understanding of future options.
- Our plan focuses on demand-side responses first, with a 15% leakage reduction by 2025, increasing to 25% by 2045 (from our 2020 starting position)
- All unmetered properties to receive dual bill
- All customers in vulnerable circumstances to receive smart meter
- The metering programme includes the roll out of Automatic Meter Read meters that will give more accurate customer bills and better information to help reduce leakage and target water efficiency
- Reducing the demand for water is key to long term resilience. Despite our high level of existing metering, we plan a six fold increase in water efficiency activity to reduce per capita consumption by over 11l/p/day down to 127l/p/d by 2025 and then continue down to industry leading levels of at least 120l/p/d by 2045
- We do not propose any new supply side options to increase capacity. Instead, we have focused on improving the reliability of existing sources to improve our resilience and preparing for future resource options should they be needed
- We are using catchment management to manage long-term risks on raw water quality deterioration and flood risk mitigation, as well as operating in 80% of the catchments we abstract water from
- Our work is net beneficial to the environment. Our Draft Water Resource Management Plan had a net benefit to natural capital of between £11m-£43m over the period 2020 to 2045; our catchment management plan has a net natural capital benefit of £40m NPV.

### Engaging with markets

- Our work on internal markets and our website for market trading gives us the platform to bring in and engage with potential new third parties for water supply
- We have a clear bid assessment framework and internal processes that ensure that third parties are treated transparently and equally for any potential new options
- We have taken learning from the non-household market opening on the importance of CA98 compliance in developing our approach.

**CM 4 To what extent does the company have a well evidenced long-term strategy for delivering bioresources services, integrating an assessment of the value from the delivery of bioresources services by third parties for the 2020-25 period and over the longer term?**

- Our long-term strategic approach is to maximise use of agricultural recycling of treated sludges, coupled with formal assessment of market solutions to deliver any enhancement of service
- We have set-up the principles of a shared (non-exclusive) resilience pilot arrangement with Wessex Water to avoid duplicating resilience provision to cope with asset downtime
- We have also undertaken a cross-border tankering pilot with Wessex Water to understand the logistics of transfers and compliance matters which can be applied to future arrangements with any suitable third parties
- We do not plan to invest in new sludge assets during 2020-25, but rather we will undertake a formal large-scale approach to the market to seek regional, site specific and / or service level solutions
- We will assess market offers against internal service provision (where applicable) and use the most cost-effective solutions for customers to refine and evolve our longer-term strategic approach.

**CM 5** How appropriate is the company's proposed pre-2020 RCV allocation between water resources and water network plus – and, if relevant, between bioresources and wastewater network plus – taking into account the guidance and/or feedback we have provided?

#### Water resources

- We have used the unfocused approach for the allocation of the RCV. The Ofwat review of our allocation showed no specific actions for South West Water. However, we have undertaken:
  - Independent assurance of our RCV allocation.
  - Assessment of the impact of the RCV allocation on charges
- We have no new water resource yield schemes in our plan. No adjustment has therefore been required in our RCV forecast.

#### Bioresources

- We have followed Ofwat's prescribed approach in undertaking a focused RCV valuation for bioresources as set out in the Economic Asset Valuation for the Bioresources RCV Methodology (April 2017)
- External consultants were engaged to review existing bioresource processes and provide detailed process level information for each site to allow the valuation to be undertaken. This information, together with the expected output for energy generation and bioresources product available for sale, has been used as part of the economic valuation
- We have had independent assurance our RCV allocation.

**CM 6** To what extent has the company produced a company bid assessment framework for water resources, demand management and leakage services that demonstrates a clear commitment to the key procurement principles of transparency, equality/non-discrimination and proportionality and the best practice recommendations?

- We have produced a bid assessment framework based on the principles of transparency, equality and proportionality. This is already published on our website:
  - This sets out clearly our process and procedure to promote new entry
  - It is linked directly to our Draft WRMP and sets out clearly the activities within it
  - It also includes a check list of what the code should cover and where it is in the document
  - The bid assessment framework is directly linked to our water trading platform that we have developed.

**CM 7** To what extent has the company clearly demonstrated that it has considered whether all relevant projects are technically suitable for direct procurement for customers? Where it has one or more such projects, to what extent has the company provided a well-reasoned and well-evidenced value for money assessment supporting its decision on whether or not to take forward each technically suitable project using direct procurement for customers?

- We have undertaken a third party review of direct procurement for customers opportunities. This set out a process with defined tests to understand the opportunity for DPC
- Two specific schemes were identified and assessed – Alderney and Knapp Mill Water Treatment Works upgrades
- The work concluded whilst both investments meet some traits needed for direct procurement it was not recommended overall due to either value for money or overriding risk issues
- We have identified a potential third option which is a treated water transfer from Bournemouth Water to Southern Water. This is under review as part of the development of the Southern Water Final WRMP
- As the timing of the scheme is not yet confirmed in the Southern Water plan this could form part of a future competitive process as set out in the National Infrastructure Commission 'Preparing for a drier future'. As such we have chosen not to include any investigation or construction costs for this scheme. Instead we consider this will follow a separate commercial arrangement as it would in a traditional competitive market.

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#### High quality, ambitious and innovative plan

In addition to the summary responses to each of the initial assessment of plan questions noted above, in the following section we have provided further information evidencing the high quality, ambitious and innovative nature of our plan.

All of the information is included in the documents directly from the document map or indirectly from links embedded in documents within the document map.

- Click on these documents to access them through the document map.
- These documents can be found in the reference folder on the sharepoint site.



## Summary – High quality, ambitious and innovative plan

High quality plan features	Evidence & activities	Evidence location within plan
<p><b>The company will show it is capable and effective at embedding innovation into its business to deliver for customers and the environment.</b></p>	<p>Track record of delivering innovation – Mayflower WTW technology, Upstream thinking catchment management, Downstream thinking wastewater management, sector leading customer research.</p> <p>Innovative solutions to share benefits of innovation cost savings with customers part of our culture – WaterShare and WaterShare+</p> <p>Innovation set within company values and staff objectives to embed innovation</p> <p>Setting of stretching targets to further drive innovation (e.g. zero pollution events, biodiversity and INNS performance commitments)</p> <p>SWW leadership on West Country Water Resources Group, and development of sewerage and drainage management plans</p> <p>Delivery of organisational change to improve the environment e.g. innovative abstraction incentive mechanism, Environment Plan 2050</p> <p>Cross sector partnership working to find better solutions for the environment – e.g. natural capital assessments, PIONEER projects, catchment management, SWEEP</p> <p>Use of behavioural economics solutions for water efficiency</p> <p>Technology transfer – Mayflower WTW to Knapp Mill WTW, LIDAR detection for leaks</p> <p>Water resource trading platform to reduce long term costs of service</p> <p>Retail service on-line service offering (AI and bots)</p> <p>Roll out of AMR meters and digital service</p> <p>Extensive, innovative programme for affordability and vulnerability</p> <p>Well developed apprentice programme to employ new skills and partnership with South Devon UTC to driver managerial change</p> <p>Engagement with third parties to drive innovation and deliver better service e.g. Isles of Scilly Community Venture</p>	<ul style="list-style-type: none"> <li>● <b>Business plan 2020-25</b></li> <li>● <b>Accounting for past delivery</b></li> <li>● <b>Targeted controls, markets and innovation</b></li> <li>● <b>Delivering outcomes for customers</b></li> <li>● <b>Securing cost efficiency</b></li> <li>● <b>Securing long-term resilience</b></li> <li>● <b>Addressing affordability and vulnerability</b></li> <li>● <b>Environment plan 2050</b></li> <li>● <b>Draft Water Resources Management Plan</b></li> <li>● <b>Drainage And Wastewater Management Plan</b></li> <li>● <b>Network plus water wholesale revenue control</b></li> <li>● <b>Residential retail revenue control</b></li> <li>● <b>Network plus wastewater wholesale revenue control</b></li> <li>● <b>Water resources wholesale revenue control</b></li> <li>○ <b>Totex ODI innovation submission to ofwat</b></li> <li>○ <b>Innovation</b></li> </ul>

Summary – High quality, ambitious and innovative plan continued

High quality plan features	Evidence & activities	Evidence location within plan
<p><b>The company has integrated its WRMP processes into its mainstream business planning and reflected as far as possible its WRMP into its business plan.</b></p>	<p>WRMP and Business Plan are fully integrated - leakage, water efficiency, resilience schemes</p> <p>Projects included in WRMP are exactly mapped into Water Resources revenue control</p> <p>Alignment of capital maintenance on metering linked directly into WRMP forecasts</p> <p>Links with managing a control are in place e.g. RCV alignment, access pricing for bilateral market</p>	<ul style="list-style-type: none"> <li>● <b>Draft Water Resources Management Plan</b></li> <li>● <b>Water resources wholesale revenue control + WR6, WR7</b></li> <li>○ <b>Draft Water Resources Management Plan – statement of response</b></li> </ul>
<p><b>The company will actively and effectively consider markets and third-party delivery options for water resources and bioresources for both this review period and the longer term.</b></p> <p><b>Strong evidence to support this should include details of third party engagement, a strategy for maximising the use of third party resources where it is economic to do so, and to demonstrate an understanding of how the future bilateral market for water resources will affect future supply requirements.</b></p>	<p>Water resources</p> <p>Despite our plans having no requirement for future new water resources we have:</p> <p>Clear strategy developed for future markets - A water trading platform already set-up on our website</p> <p>Third party engagement for WRMP</p> <p>Water efficiency and leakage projects for WRMP delivery presented on our website</p> <p>WRMP process evaluated programme selections for opportunity for market development to maximise third party development</p> <p>WRMP assessment of water trades with Wessex and Southern Water. Southern Water trade included in final plan.</p> <p>Indicative access pricing for bilateral markets</p> <p>Notional charging for bilateral markets</p> <p>Bioresources</p> <p>Clear market strategy - Formal market approach in AMP7 to seek regional, site specific or service level solutions.</p> <p>Extension of market contract options for existing assets</p> <p>Resilience and cross border trial with Wessex Water</p>	<ul style="list-style-type: none"> <li>● <b>Targeted controls, markets and innovation</b></li> <li>● <b>Draft Water Resources Management Plan</b></li> <li>● <b>Water resources wholesale revenue control</b></li> <li>● <b>Bioresources wholesale revenue control</b></li> <li>○ <b>Bid assessment framework</b></li> <li>○ <b>Draft Water Resource Management Plan – statement of response</b></li> </ul>
<p><b>The company will show a long-term strategy for managing drainage and wastewater in an integrated and sustainable way.</b></p>	<p>25 Year drainage and wastewater plans produced</p> <p>Downstream thinking programme</p>	<ul style="list-style-type: none"> <li>● <b>Drainage And Wastewater Management Plan</b></li> <li>● <b>Network plus wastewater wholesale revenue control</b></li> </ul>
<p><b>The company will set out the bioresources volumes it expects to treat on behalf of other wastewater companies. Strong evidence to support this should include information about how costs vary with volumes and how the company will determine the appropriate share of benefit between the appointed and non-appointed businesses.</b></p>	<p>Separate bioresources element plan produced</p> <p>Forecast cost volumes provided</p> <p>Cost model for bioresources produced (sludge treatment efficiency model)</p>	<ul style="list-style-type: none"> <li>● <b>Bioresources wholesale revenue control</b></li> </ul>

## Summary – High quality, ambitious and innovative plan continued

High quality plan features	Evidence & activities	Evidence location within plan
<b>The company should include transparent, well evidenced and acceptable proposals on pre-2020 RCV allocation.</b>	Water resources and bioresources plans set out RCV allocation process Impact of RCV change on water charges	<ul style="list-style-type: none"> <li>● <b>Water resources wholesale revenue control</b></li> <li>○ <b>Tables WS12 and 12a</b></li> <li>○ <b>Table WWS</b></li> </ul>
<b>The company will make efficient and effective use of ecoservice markets.</b>	Ecoservice markets for water and wastewater catchment management solutions including: Entrade – for river Axe catchment for P removal PES payments for Exe catchment management	<ul style="list-style-type: none"> <li>○ <b>Upstream Thinking</b></li> </ul>
<b>The company will explain their level of voids; and their plan will make proposals to identify and manage voids and gap sites.</b>	Included in our retail plan.	<ul style="list-style-type: none"> <li>● <b>Delivering outcomes for customers</b></li> <li>● <b>Residential retail revenue control</b></li> </ul>
<b>The company bid assessment framework for water resources, demand management and leakage services that provides clarity and confidence to third party bidders about the procurement process and that their bid will be assessed fairly against the company's own in-house solution.</b>	Bid assessment produced and published on website for comment. Details of schemes and scheme value included as schedule to bid assessment framework	<ul style="list-style-type: none"> <li>○ <b>Bid assessment framework</b></li> </ul>
<b>The company will take a high-quality approach to direct procurement. It will consider whether relevant projects are suitable for DPC, assessing against our technical guidance, and supporting its conclusions with strong evidence. For each suitable project, to support its decision whether or not take it forward by DPC, it will use a best practice business case assessment framework to undertake a well-reasoned and well-evidenced.</b>	Detailed third party review of DPC opportunities produced. Clear and transparent process produced and followed. All tests built on best practice. Additional tests produced to increase rigour from overall industry methodology. Potential for new Bournemouth Water to Southern Water transfer. Could form part of NIC competitive market for transfers in 2019 or future DPC scheme	<ul style="list-style-type: none"> <li>● <b>Targeted controls, markets and innovation</b></li> <li>● <b>Draft Water Resources Management Plan</b></li> <li>○ <b>KPMG direct procurement for customers</b></li> </ul>

**Summary – High quality, ambitious and innovative plan** continued

High quality plan features	Evidence & activities	Evidence location within plan
<p><b>In its appraisal of the options, the company will demonstrate innovative and sector leading strategies for delivering water resource and bioresources services, aligned with the use of third party options.</b></p>	<p>Water</p> <p>WRMP options appraisal included opportunity for market development in selection criteria.</p> <p>Planned water efficiency and leakage projects included on SWW markets website.</p> <p>Planned leakage and water efficiency projects included in Bid Assessment Framework.</p> <p>Bioresources</p> <p>Formal market approach in AMP7 to seek regional, site specific or service level solutions.</p> <p>Extension of market contract options for existing assets</p> <p>Resilience and cross border trial with Wessex Water</p>	<ul style="list-style-type: none"> <li>● Targeted controls, markets and innovation</li> <li>● Draft Water Resources Management Plan</li> <li>● Bioresources wholesale revenue control</li> <li>○ Bid assessment framework</li> </ul>
<p><b>The company will have a sector leading strategy and plan (supported by strong evidence) for delivering qualifying projects through direct procurement for customers, where value for money assessment indicates a direct procurement approach will provide value for customers.</b></p>	<p>Detailed third party review of DPC opportunities produced.</p> <p>Clear and transparent process produced and followed.</p> <p>All tests built on best practice. Additional tests produced to increase rigour from overall industry methodology.</p> <p>Potential for new Bournemouth Water to Southern Water transfer.</p> <p>Could form part of NIC competitive market for transfers in 2019 or future DPC scheme</p>	<ul style="list-style-type: none"> <li>● Targeted controls, markets and innovation</li> <li>● Draft Water Resources Management Plan</li> <li>○ KPMG direct procurement for customers</li> </ul>

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## Customer research and engagement

We have discussed with customers how we respond to future challenges, such as population growth, changing weather patterns, and potentially growing affordability concerns through the region. Do we do more of the same? Or do we do something different?

Our customers have told us consistently that we need to find better ways to conserve precious resources, and to promote sustainability and biodiversity if we are to meet customers increasing expectations, address future challenges, and deliver our vision to 2050.

Customers – especially younger and future customers in particular – welcome innovation and new technologies to support our ways of working or reducing costs (now or in the future) and see this as the way to continue to deliver excellent service as challenges present themselves.

Future customers want us to open our minds and consider what is possible – they challenge us to consider the scope for increasing water recycling, harvesting more rainwater, and finding more efficient ways to source and treat water more cost effectively.



**“Couldn’t we use the water from the shower and recycle it. Like having your own filter in your house.”**

Bournemouth, 16-17 year olds

**“In 30 years they could have a scheme (like in London) building bio-houses that have water containers on roof and these deal with toilets. Collect rainwater to use and recycle.”**

Exeter, 16-17 year old boy

**“Can they not build more water collection places for rainwater so that it would be easy to treat and not so expensive?”**

Barnstaple, workshop 19-24 years

**“You could use it for watering plants and other stuff as well. Isn’t it called grey water? Perhaps use that for washing clothes and showering. It’s clean enough to do these functions.”**

Barnstaple, workshop 19-24 years

Our customers are only too aware that all around us there are ground breaking innovations in technology across all industries. They want us to embrace this. For example, many of our younger future customers told us that they consider it a given that by the time they are bill payers all meters will be Smart meters; and there will be the telemetry and monitoring in place to detect leaks, and identify issues arising before they impact on customers and costs. The idea that we learn about issues on our network because customers call to let us know will be increasingly unacceptable in the future.

In terms of the expected timing of technological advancements, many struggled to put a timeframe upon this; however the overriding feeling was that technology is evolving quickly and constantly, and hence innovation such as Smart technology is a handful of years away – and certainly not much longer.

Innovation is one of the reasons our WaterShare+ scheme is so important to us. Our customers tell us it will build trust and encourage them and other households to be more careful about using water and what they put down sewers and drains. We can therefore improve our performance and reduce costs by simply engaging customers better. If we share success today with our customers - they will be the source of our success in the future.

We have high levels of support for financial ODIs across our customer base. For most this will encourage us to find quicker and better ways to do things we already do. In our Balancing risk and reward survey 68% of customers told us that they support ODIs in part as they will encourage innovation and lower bills in the future.

**“I think it is good to show this kind of innovation and to involve customer's views.”**

South West Water, Female, Aged 60+, SEG C1C2

Throughout our engagement with customers, they tell us that cost and innovation are inextricably linked. We need to innovate to ensure stretching targets and to keep bills low now and in the future. We have worked hard to ensure that our costs are as low as they can be. Wherever possible we have challenged ourselves to more effective ways to make service improvements without expensive investment in assets.



For more information, see [Engaging Customers](#)



## WaterFuture Customer Panel engagement and assurance

The WaterFuture Customer Panel (WFCP) is made up of representatives from customer, business, stakeholder and regulatory organisations and its role is to provide the independent challenge to companies and independent assurance to Ofwat on:

- The quality of a company's customer engagement; and
- The extent to which the results of this engagement are driving decision making and are reflected in the company's plan.

The Panel also set up two sub-groups to work more closely with the company on research, engagement and vulnerability activities; the Research, Engagement and Vulnerability (REaV) sub group, and on legislative and statutory obligations; the Legislative, Resilience and Environmental Investment (LREI sub group) with both chaired by a member of the WaterFuture Customer Panel.

We communicated with the WFCP and both sub groups our ambition to deliver an innovative plan that delivers for our customers, communities and the environment and we appointed members of the LREI sub group based on their broad range of experience. This enabled them to provide challenge and expertise on our proposals from the outset. The group, chaired by the Chief Executive of Devon Wildlife Trust, also included representatives from Devon Wildlife Trust and Westcountry Rivers Trust, as well as key regulatory bodies.

In discussing our plans for 2020-25 we shared case studies with the LREI sub group in areas including Upstream Thinking, delivered in partnership with Devon Wildlife Trust; Downstream Thinking, delivered in partnership with Westcountry Rivers Trust, and we invited Professor Ian Bateman, Director of the South West Partnership for Environment and Economic Prosperity (SWEET) to share the innovative solutions being developed in partnership with South West Water, along with his work as part of the government's the Natural Capital Committee.

We have a strong track record of delivering innovative solutions, from being a pioneer of catchment management starting back in 2003, with catchment management now operating in 80% of the catchments we abstract from, through to the development of Mayflower water treatment works, delivered using innovative ceramic membrane technology to further increase resilience whilst reducing costs.

The Panel were engaged in the development of our WaterShare+ mechanism, understanding our intention to deliver something that would further empower our customers by giving them a stake in the business. The Panel challenged our engagement with customers in this area, wanting to understand how the views of all customers would be considered. We shared the customer research that confirmed broad for shares, with customers wanting to share in our success, and provided assurance that the package itself would provide a range of options for customers. The WFCP were wholly supportive of the WaterShare+ proposal, providing their full endorsement.

We shared with the Panel how our Resilience Service Improvement (RSI) project, developed with input from over 200 attendees from across the whole business from Board members through to apprentices, would increase our resilience along with delivering an improved customers experience. The WFCP challenged whether the company had carried out a review of resilience service risks to inform the project, which we confirmed we had, through commissioning an external consultancy to undertake this activity as to provide a fair, unbiased view. We then ensured that the outputs and recommendations from this review fed directly into the development of the RSI project, which the WFCP were satisfied with.

The WFCP and the LREI sub group were also engaged in the development of our draft water resources management plan (WRMP) which engaged customers on understanding the options for ensuring a safe and reliable supply of water to meet future demand, considering both supply and demand side solutions. As part of this engagement customers shared their support for demand side solutions, such as tackling leakage, which we're addressing in a number of ways, including our partnership with SWEET, which will enable us to meet the needs of current and future customers now and in the longer term. The WFCP challenged whether our plan would propose any inter-regional water transfers, stating that customers in the South West should not be any worse off as a result of this. We advised that whilst we are working in collaboration with other water and sewerage companies to develop a mechanism that would enable the transfer of water from our region to more water stressed regions, this was a long term activity and would not be delivered within the 2020-25 period.

In considering direct procurement for customers (DPC), the Panel were satisfied that we had undertaken a full and comprehensive review of all schemes to understand where DPC would be appropriate, and that no schemes were deemed to be suitable.

In sharing with the Panel and sub groups our customer engagement approach including the methods and techniques involved for PR19 and as part of our business as usual activities, such as the use of behavioural economics, we were challenged not to overlook where we had already embedded innovation in our day to day business. We confirmed that innovation was central to all of our plans for PR19, as reflected in our vision to 2050 and our standalone innovation document, published in June 2017 which provided an insight into how we have embraced innovation to find new ways of working to deliver improvements across the business, along with how we will use our innovation strategy to ensure that we do not just harvest novel ideas, but have in place the agile model and infrastructure to develop an idea and realise the maximum benefit from it.



For more information, see  
**WaterFuture Customer Panel Report to Ofwat**



**“I am wholly supportive of the WaterShare+ idea and think it’s very exciting.”**

Steve Meakin  
Chair, REaV sub group

**“South West Water should be proud of the way that they’ve embedded innovation into their culture and day to day activities.”**

Nick Buckland  
Chair, WaterFuture Customer Panel

”

## Board assurance

South West Water's plan has considered the longer term in the areas of targeted controls, markets and innovation.

The company has an established and successful model of delivering its services utilising partners, whether in wholesale and retail operations or in capital and engineering projects.

During 2015-20 we worked with overseas experts in water treatment membrane technology to develop the design, test the process and construct the Mayflower Water Treatment Works in North Plymouth. Building on this, the plan for 2020-25 includes similar partnerships for example in the development of two new treatment works in the Bournemouth Water area.

Longer term plans include delivery of water trading schemes, which form part of the Board's longer term strategy and, we are putting in place the frameworks and processes necessary to operate such schemes.

This has enabled the Board to be confident that the plan is embracing markets and has an embedded culture for innovation.

This is included in our signed Board assurance statement.

[For more information, see](#)



### **Board assurance statement**



### **Securing Trust, Confidence & Assurance**

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## Professional credentials of third parties

### ICS Consulting

ICS Consulting was established in 2000 and specialises in providing consultancy and support services to infrastructure businesses and regulators in the UK, Europe and Middle East. Their expertise covers:

- Customer and stakeholder engagement
- Regulatory economics, covering policy analysis and development
- Economics analysis, including assessing monetary benefits of investment and cost-benefit analysis
- Investment appraisal and optimisation, covering the design and implementation of bespoke asset management systems.

ICS is highly experienced in all aspects of the regulatory and business planning processes in the water industry and supports a number of key periodic review activities, namely:

- Customer research (priorities, willingness to pay, acceptability testing)
- Regulatory analyses (outcomes and incentives design, tariff formulation)
- Investment optimisation and business plan development (cost benefit analyses, scenario planning, business case development)
- Risk assessment (risk appraisal and assessment).

### eftec

eftec was established in 1992 and is a leading environmental economics consultancy across the UK and Europe. Services are provided in four key areas:

- Economic valuation – primary research using revealed preference and stated preference methods and value transfer methods
- Policy and project appraisal – cost benefit analysis, cost effectiveness analysis, impact assessment
- Design and evaluation of policy instruments – taxes, tradable permits, voluntary agreements, payments for ecosystem services
- Training and guidance – providing bespoke training course and guidance handbooks for students, economists and non-economists in public and private sectors.

eftec's are experts in:

- Understanding and practical application of all valuation methods (stated preference methods, revealed preference methods, value transfer)
- Design, implementation and analysis of stated preference methods)
- Value transfer studies, helping water companies maximise the use of the academic and government literature, particularly around environmental improvements and including the inter-generational valuation of resources

- Expertise in providing training to water industry clients to assist staff in understanding the application and use of valuation methods and CBA
- Support to water industry clients in engaging with external stakeholders
- Application of natural capital accounting methods in the water sector.

### Turquoise Thinking Ltd

Turquoise Thinking Ltd is a full-service market research agency delivering research insight to clients across both the private and public sector. They have been operating since 1987 and as a group of passionate market research professionals, they have over 75 years of experience helping a diverse range of UK and International clients achieve their research goals.

Turquoise works across some 14 different sectors including: Automotive, Charities, Consumer, Finance, FMCG, Food and Drink, Government, Healthcare, Travel and Tourism, Skills & Education, with Utilities being one of our leading sectors.

Working across such diverse sectors they are able to apply more holistic and innovative approaches to the research projects undertaken.

Over the last 30 years they have amassed a wealth of experience and understanding of customers, both consumer and B2B. They have also amassed an abundance of experience, knowledge and understanding of research methodologies, both old and new.

Insight from our surveys is being used by clients to target customers more effectively and tailor both communications and strategies and hence increase positive customer engagement.

### KPMG

KPMG is a leading provider of professional services, including audit and advisory solutions integrating innovative approaches and deep expertise to deliver real results. They have extensive water industry experience.

They have worked with South West Water over a number of years, acting as financial advisor at PR14 as well as reviewing retail margins, default tariffs and providing retail modelling advice.

They have provided expertise in a range of relevant areas including analysis in respect of options for direct procurement and supporting the development of South West Water's approach to trading in the Water Resources market, including reviewing South West Water's market and procurement code. This follows extensive involvement with multiple companies within the industry providing advice ahead of the opening of the non-household retail market.

Their team includes members who have previously been involved in the development of market frameworks in the industry as well as policy for PR19.





**South West  
Water**



**Bournemouth  
Water**

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