south east water

Innovation

PR19 Supporting Appendix 16

3 September 2018

Pure know h_2ow

What does this appendix do?

This document supports the submission of South East Water's business plan for 2020-2025 and provides a summary of how we will use innovation to deliver our outcomes and stretching performance commitments.

The evidence you will find in this appendix

The following evidence is included in this document:

- Our track record on innovation
- how that has informed our innovation strategy, areas of focus and the delivery approach we intend to take

The decisions we have made based on this evidence

We have made the following decisions based on this evidence:

- To drive innovation through a Board-led Innovation Steering Group
- to target our innovation to those areas where we can lead the sector – customer satisfaction, vulnerable customers, leakage, demand management, catchment management, improving biodiversity and responsible business approaches – and through a range of toolboxes
- to monitor, adapt and adopt other innovation developments in and out of sector so our water supply service to customer remains efficient and effective

Other evidence and data that supports our decisions

You will find additional evidence in the following documents:

- Appendix 1 Engagement
- Appendix 2 Performance Commitments and Outcome Delivery Incentives
- Appendix 3 Responsible Business
- Appendix 7 Water Resources
- Appendix 8 Vulnerability – Affordable, Accessible and Protective Services
- Appendix 9 Resilience in the Round
- Appendix 10 Environmental Resilience
- Appendix 18 Our Current Performance

Need further information?

Please email yourwateryoursay@southeastwater.co.uk if you require further information or wish to clarify anything in this document.

Contents

Executive summary

Setting the scene

Innovation will form a key element of delivering our promises to customers. Indeed, without innovation we would not be able to deliver many of the stretching performance commitments and improvements we have set out in our 2020 to 2025 business plan.

However, innovation is not a new concept. Like any business facing both downward pressures on cost but a rising expectation on service and what represents value for money, we continue to explore new ways of working so we can do as much, if not more, better and cheaper.

We already have a good track record of innovation around leakage, demand management, catchment management, biodiversity, and have made significant performance improvements as a result.

But it is was the bold move to measure key areas of our performance by customer satisfaction that has delivered the most in terms of our performance in the 2015 to 2020 period. The cultural change has empowered our staff to use their skills and expertise, with confidence, to own and fix customers issues.

What we want to deliver for customers

Our future innovation needs to be consistent with our plan's aspirations to deliver greater satisfaction for our product **and** services; and anchored in what our customers' and stakeholders' priorities are for water.

These aims are rooted in our deliberately focused and targeted strategy, which identifies the areas of our work that represent the most significant opportunities to innovate:

- Customer satisfaction – measuring satisfaction by attitudinal segment (see Appendix 1 Engagement, Appendix 2 Performance Commitments and Outcome Delivery Incentives, and Appendix 3 Responsible Business
- helping vulnerable customers - by extending our social tariff and Priority Services Register support (see Appendix 8 Vulnerability – Affordable, Accessible and Protective Services)
- leakage and demand management activities – reducing leakage and using behavioural science techniques to drive down per capita consumption (see Appendix 7 Water Resources and Appendix 9 Resilience in the Round)

- catchment management and biodiversity improvements – by working with other water abstractors to improve overall resilience during dry spells; and increase biodiversity so that wherever we work wildlife has a resilient place to call home too (see Appendix 10 Environmental Resilience)
- responsible business approach – by developing a suite of 10 additional commitments for key areas which customers and stakeholders have told us represent what being a responsible business is (see Appendix 3 Responsible Business)

What is the impact on customers?

Innovation brings with it increased customer legitimacy and trust in what we do, as we are seen to bring new solutions to old and new problems. Our innovation strategy will:

- improve customers' perception of South East Water and underpin greater satisfaction and confidence in how we operate and behave
- allow us to meet wider societal expectations as the provider of an essential service
- move the industry performance forwards and set new benchmarks which benefits all water customers

How did we make that decision?

It is tempting to innovate across all aspects of business performance and try to drive a culture that delivers that, but our experience demonstrates the results from a more generic approach are ineffective and unfocused.

Instead, we have developed a matrix of innovation opportunity to identify those areas of our work that represent the biggest opportunity to innovate.

This approach does not preclude more innovation in other areas of our business; in fact we remain committed to being an early adapter and adopter of tried and tested innovation where it clearly makes good sense to do so.

How will we deliver?

As important as having a focused innovation strategy is having the ability to deliver it. We have developed a range of toolboxes – the behaviour change toolbox for customers, the partnership toolbox for stakeholders and the innovation toolbox for our business - that are based on researched, trialled, or benchmarked activities so innovation can flourish; and the promises we make in our plan are credible.

1. 2015 to 2020 innovation: our track record

1.1 Introduction

Innovation is not a new concept for our business.

Like any business facing both downward pressures on cost but a rising expectation on service and what represents value for money, we continue to explore new ways of working so we can do as much, if not more, better and cheaper.

The following examples showcase the range of innovation we are delivering in the current five-year period.

1.2 Leakage and interruptions

We have been an early adopter of innovation around leakage, with a focus on comprehensive leakage monitoring techniques to reduce pressure, and prevent and find leaks.

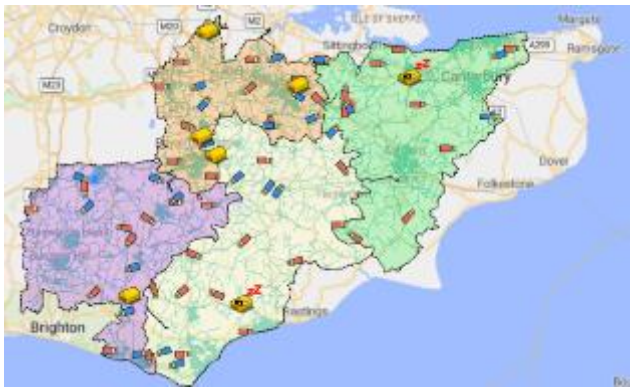
We have created innovative in-house solutions to leakage data management, in particular where we created our own leakage monitoring platform, Aquanet. This strategy has served us well and our position in the upper quartile of the industry's performance on leakage reflects this.

We have also seen continued improvement in our leakage levels, with around a 10 per cent reduction in leakage over recent years, and we are now focussing on a further reduction of 15 per cent by 2025.

We have also recently launched a trial of leak detection using drones and are investigating the feasibility of reducing supply pipe leakage using real-time, in-house sensors.

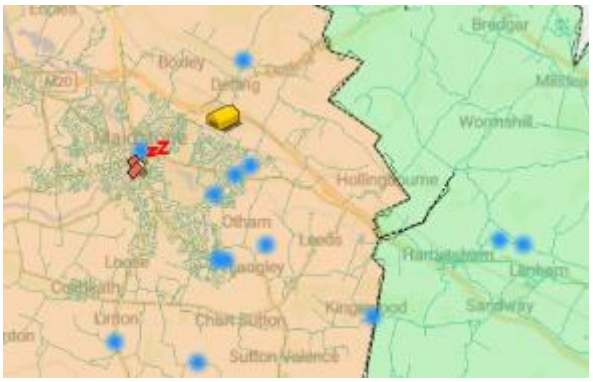
The tools we use to control leakage and interruptions to supply are intrinsically linked - that is, they rely on good understanding and control of the overall system performance and a calm network. The one real difference is that interruptions are often caused by large single events when the key step is the ability to deploy the resources and equipment effectively and quickly to prevent or reduce the interruption to service. We have been working with decisionLab to assist in this deployment.

SEW is now using an **agent-based modelling** technique to understand and gain future insight into current and future performance on responding to water mains



bursts to reduce the number and length of interruptions. We approached decisionLab who had developed a simulation model for the MoD for medical evacuation during conflict, including the major elements such as helicopters, field tents and emergency vehicles. Using the latest information and techniques decisionLab have applied the same approach to determine the best way to improve our performance when we have multiple or large single burst mains.

The model includes modelling of pipe network GIS information, burst seasonality, worker activities and response process.



The user is able to measure response rate, customer lost minutes, inventory level, worker allocation, and many other parameters, on a different set of operational scenarios for the whole SEW network. This enables the user to quickly simulate future activities with the current operational setup or a what-if scenario and is proven to provide powerful prediction ability. This has allowed us to better deploy resource and stock to deal with these kind of events to reduce interruption times.

1.3 Demand management

We have led the way in undertaking behavioural science-based trials to influence customer demand for water – in fact we were the first water company to do so in the UK. Over a multitude of pilots, some of which engaged up to 20,000 customers, we examined the effect of techniques such as social norming to influence customers' behaviour.

Due to the success of this trial we have included ambitious targets for per capita consumption (PCC) reduction within our business plan that rely on further developments to this technique - not only in the area of demand management but also in engaging with customers to be part of the solution that makes our water supply service more resilient (see Appendix 9 Resilience in the Round).

We see further potential benefits from behavioural science techniques around issues such as protecting water quality in the home, coping with freezing conditions, and protecting river catchments that could evolve from our innovative use of behavioural science.

SEW is also using the latest approaches to artificial intelligence to understand customer consumption and behaviour. Now that we are approaching 90 per cent domestic metering and have a good level of other data (DMA, socio-economic, weather etc) we want to understand more about the consumption of our customers, particularly after the warm dry summer of 2018 when we identified demand trends we could not easily explain.

We researched the options with our suppliers and have begun a project using an algorithm called "Sense.I" developed in 2017 by decisionLab for the Royal Navy. This self-learning algorithm uses vast amounts of data from complex datasets. The algorithm is currently deployed on the Royal Navy's Type 45 Destroyer Fleet and Rolls Royce aerospace engines, including Typhoon jets. This use of complex mathematics and the latest learning techniques will help us target water efficiency campaigns in the future and also help us identify quickly any failing assets (e.g. meters and pressure transducers) on the network.

1.4 Customer satisfaction

Following our work to reduce a high level of customer complaints in the 2010 to 2015 period – and which has seen our significant reduction in complaint numbers in the last eight years – we took the bold decision to introduce customer satisfaction as the primary measure of how well we performed.

In fact, we were the only company to create and include a suite of satisfaction measures as Outcome Delivery Incentives for the 2015 to 2020 price review process covering all priority aspects of our service.

It has also been the primary driver of the culture change with our staff that has put customers' satisfaction with our product and services at the heart of all our decision making, and delivered the most in terms of our performance. It has empowered them to use their skills and expertise with confidence to own and fix customers issues before they became complaints.

We continue to evolve our approach by measuring customer satisfaction for attitudinal segments in our 2020 to 2025 plan (see Appendix 1 Engagement).

It has also resulted in an innovative and ground-breaking rebrand (for a business often perceived as a silent utility) to promote our `Pure know $h_2$ow'. During this five year period we have delivered a number of focused initiatives to improve satisfaction with our service and develop the way we engage with customers; this includes a leakage campaign that raised leakage satisfaction from 3.2 out of 5, to 4 out of 5 over a three year period (see Appendix 18 Our Current Performance).

1.5 Vulnerability

We chose to put a clear focus on vulnerable customers for our 2020 to 2025 business plan and that included recruiting a CCG chair with expertise and interest in this area.

Combined with the challenges from our CCG itself, we have created a suite of comprehensive and innovative vulnerability performance commitments, outcome delivery incentives (ODIs) and approaches that, combined, provide excellent coverage of all aspects of vulnerability.

Our performance commitments and ODIs are supported by a definitive vulnerability strategy which is not only built on good tactical performance in this area to date, but which has been genuinely co-created with expert stakeholders in this area (see Appendix 1: Engagement).

That vulnerability strategy (see Appendix 8 Vulnerability - Affordable, Accessible and Protective Services) provides a robust framework against which we can ensure the opportunities to innovate around our services for vulnerable customers are capable of being realised in the future. Indeed, we were the first UK water company to receive British Standard for Inclusive service provision (BS 18477:2010) accreditation for our work in this area.

1.6 Catchment management

Our approach to innovation in this area is founded on partnerships, relationship management, behavioural science techniques and sound science.

Our catchment management work relates to both ground and surface raw water quality and from our own data we are able to monitor the condition of this water. In areas where with a long term decline in raw water quality we have completed a number of investigations to establish the role that catchment management could play in reversing, and in the long term improving, this trend.

That has included our work - across a number of surface and ground water catchments - to pilot partnership and behavioural approaches to improve raw water quality.

We were the first water company in the country to establish a proactive five-year catchment delivery partnership with Natural England's Catchment Sensitive Farming (CSF). Using our raw water data and analysis, CSF officers work with us to target their work where it is most needed in catchments. We have worked together with farmers with a `carrot rather than stick' approach.

Using behavioural science techniques, awareness raising campaigns and education we are starting to see raw water quality improvements. Added to this, CSF officers have delivered wider environmental benefits including improvements to biodiversity.

Successful catchment management is reliant on innovation and as a result we work in partnership with many organisations and universities to trial new methods of land management. To date we have trialled a number of novel methods – for example, maize crop trials, cover crop trial for the management of nitrates in ground waters, or bacterial source pathway trials.

Further information on our catchment management activities are included in Appendix 10 Environmental Resilience.

1.7 Collaboration

We have been at the forefront of collaborative work that drive solutions that are for the greater good of our region and often beyond. Why? Our firm view is if it's in the interest of our business, then it's in the interest of the industry.

There is no better example of this than our work with Water Resources in the South East (WSRE). We have been a founder member of the group since its formation in 1996, collaborating with the region's five other water companies - Southern Water, Portsmouth Water, Affinity Water, Thames Water, and SES Water - to identify opportunities to share resources that benefit customers and the environment. The WRSE does this through dedicated technical working groups which we have routinely chaired and contributed to; while the outputs of that work are strongly reflected in our own water resources management plans.

Our collaborative approach to getting the best outcomes for the sector has continued with our participation in the 2016 Water Resources Long Term Planning Framework, which investigated new opportunities to share water resources on a national scale. The results of this study, considering key national options and drought scenarios, fed into the WRSE's work which, in turn, informed our latest Water Resources Management Plan.

We have also contributed to the National Infrastructure Commission's 2018 report on the country's pressing demand and supply infrastructure needs. As a result of that report, we participated in a strategic round table discussion with government, regulators, consumer champions and water companies to turn the collective ambitions into firm actions.

In 2016 we agreed a 'One Bill' approach with Southern Water for combined billing for water and wastewater services. This included migrating 470,000 Southern Water wastewater customers onto our billing system while keeping customer disruption and contacts to minimum. With Southern Water, we created a joint "One Bill – One Team"

to manage the project, inform customers and implement the change. The first “One Bill” customers received included a closing statement from Southern Water. They impact of "One Bill" has been positive, with customer often praising the initiative, minimal complaints and no negative media coverage. The initiative was shortlisted in the Water Industry Awards 2018 in the Customer Service Initiative of the Year category.

Collaboration goes beyond protecting the quality and security of our product, and into the services we offer too.

A good example of this is the co-creation approach on our vulnerability strategy for the 2020 to 2025 business plan. This has seen our staff, customers and stakeholders involved at every stage of the strategy’s development - co-creation in its purest sense. That, in turn, is ensuring our services to customers in vulnerable circumstances are matched to their evolving needs and expectations; and are always affordable, accessible and protective.

This collaborative, co-creation approach is intended to be the start of an enduring vulnerability journey that will be tested and evolved, based on what we are always learning from listening to and working with our customers and stakeholders. In fact, having started this kind of interaction, we continue to see its benefits as a powerful tool for innovation by providing different perspectives and potential solutions for old and new issues.

1.8 Biodiversity

Our supply area is unusually rich in biological diversity, cultural heritage and protected landscapes. Working within this challenging supply area has, in part, led to our proactive, innovative approach towards the management of biodiversity. This approach hasn’t happened overnight. For over 100 years, the land around a number of our groundwater sources has been proactively managed to prevent land management activities and farming practices (for example the use of pesticides) from impacting the quality of chalk ground water sources.

An incidental result of this innovative land management approach has been that the ecology above our sources is rich in biological diversity. As a result of this innovation, over 500 hectares of our land is designated as Site of Special Scientific Interest (SSSIs).

In 2000 we commenced a survey and active management programme for company-owned SSSIs. All of these sites have active 10 year management plans (signed off by Natural England). The result today is that we are already ahead of Biodiversity 2020 targets as almost 55 per cent of our landholdings are in favourable condition and 98 per cent in favourable/recovering condition:

Table 1: Condition of our landholdings

Company SSSI area (hectares)	Condition assessment	Percentage	Government 2020 Target	Government 2025 target
218.8	Favourable	54.8%	50%	75%
392.72	Favourable / Unfavourable Recovering	98.3%	95%	-
6.87	Unfavourable No Change / Declining	1.7%	n/a	n/a

1.8.1 Reducing the impact of surface water intakes on eel populations

In relation to eel screens and our abstraction intakes, a number of our large abstractions are already Eel Regulation compliant. To minimise the impact of the construction of new intakes on river systems, and to ensure any new screens are more efficient, we have worked in partnership with our framework contractors, potential eel screen suppliers and the Environment Agency.

This approach has led to the delivery of a number of new innovative eel screens demonstrating best practice and protecting rare eel populations. We envisage that the end result will be that all of our abstraction intakes will be Eel Regulation compliant by the end of 2019 (ahead of our regulatory targets).

1.8.2 Wider biodiversity innovation

Our biodiversity innovation goes beyond both SSSIs and the protection of eels. All of our operational landholdings are assessed for their biodiversity value and where possible we work towards net biodiversity gain. One example of this is where we successfully reintroduced a near-extinct species of cricket to the chalk grasslands around one of operational sites in East Sussex.

Our work commenced in 1997 and led to the formation of a delivery team which included local farmers, Natural England, volunteers from the South Downs National Park, Buglife and the Zoological Society of London.

Not many projects include the donation of a flock of 40 Herdwick sheep from Cumbria. But that was one of the innovative steps taken by us to help to ensure we could work with local farmers to create the perfect ground conditions for the return of the wart-biter cricket.

After 10 years of proactive monitoring, conservation work and selective grazing with farmers, site conditions became suitable to reintroduce wart-biter crickets; incredibly, they successfully bred on site in the first year.

Natural England have described our work as "instrumental in securing the future survival of the wart-biter in England." But it has also created the appropriate habitat

for a number of other rare species of birds, butterflies, moths, rodents, insects and grasses to establish themselves at the 70 hectare site.

Our most recent surveys in 2017 have shown that work to enhance the environment has also led to other declining species utilising the site, such as the Skylark and Yellow Hammer, which are on the RSPB's 'Red List'.

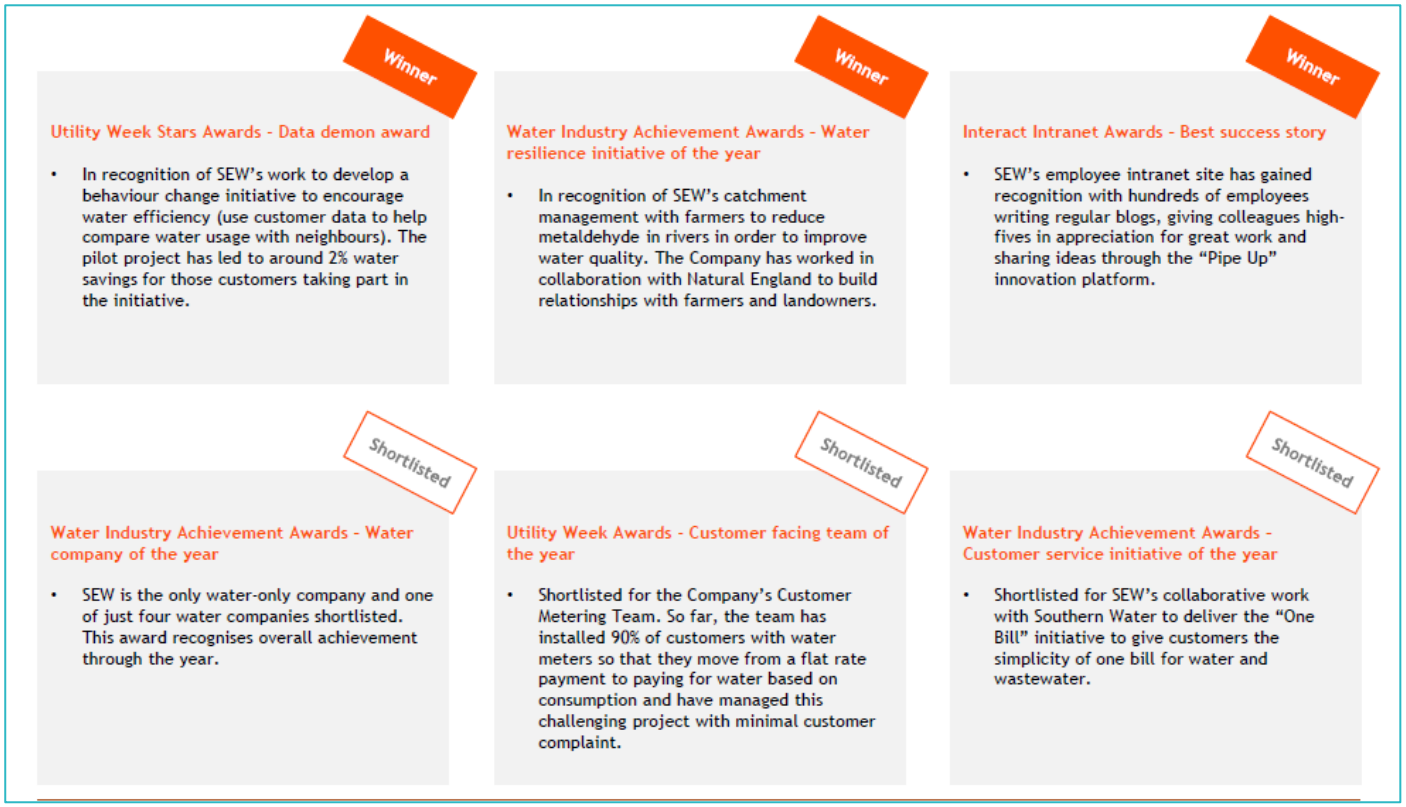
Further details of our biodiversity work can be found in Appendix 10 Environmental Resilience.

1.9 Responsible business approach

We have always been heavily involved in the communities we serve offering support (financial and practical) attending community groups, providing school talks, organising site tours, and water efficiency sponsorships and STEM event participation. This approach has evolved organically in response to requests from stakeholders and customers and opportunities identified by staff.

More recently we have combined our approach and activity together to create a Responsible Business strategy which has been co-created with stakeholders and customers. The creation of this strategy has been recognised as innovative by the stakeholders involved in its co-creation. Details of this strategy can be found in Appendix 1 Engagement.

As a strategic priority the activity is managed through a Board Sub-Committee chaired by a shareholder representative. Current evidence of the scale of innovation that we have achieved in these areas is shown in the following awards:


Winner
Utility Week Stars Awards - Data demon award
• In recognition of SEW's work to develop a behaviour change initiative to encourage water efficiency (use customer data to help compare water usage with neighbours). The pilot project has led to around 2% water savings for those customers taking part in the initiative.
Winner
Water Industry Achievement Awards - Water resilience initiative of the year
• In recognition of SEW's catchment management with farmers to reduce metaldehyde in rivers in order to improve water quality. The Company has worked in collaboration with Natural England to build relationships with farmers and landowners.
Winner
Interact Intranet Awards - Best success story
• SEW's employee intranet site has gained recognition with hundreds of employees writing regular blogs, giving colleagues high-fives in appreciation for great work and sharing ideas through the "Pipe Up" innovation platform.
Shortlisted
Water Industry Achievement Awards - Water company of the year
• SEW is the only water-only company and one of just four water companies shortlisted. This award recognises overall achievement through the year.
Shortlisted
Utility Week Awards - Customer facing team of the year
• Shortlisted for the Company's Customer Metering Team. So far, the team has installed 90% of customers with water meters so that they move from a flat rate payment to paying for water based on consumption and have managed this challenging project with minimal customer complaint.
Shortlisted
Water Industry Achievement Awards - Customer service initiative of the year
• Shortlisted for SEW's collaborative work with Southern Water to deliver the "One Bill" initiative to give customers the simplicity of one bill for water and wastewater.

2. 2020 to 2025 innovation: our approach

2.1 Introduction

Innovation will form a key element of delivering our promises to customer from 2020 onwards. Without innovation, across virtually all our performance commitments we would not be able to deliver the stretching targets and improvements we have set out in our 2020 to 2025 business plan, and so could face financial penalties of £36 million over the period if we do not improve our performance from today's levels.

To support the drive for greater innovation the Board has created a strategy and framework for its governance and delivery.

2.2 Why do we want to innovate?

Innovation is essential to deliver the ambitions and stretching level of performance improvements set out in our 2020 to 2025 business plan.

Innovation also brings with it increased customer legitimacy and trust in what we do, as we are seen to bring new solutions to old and new problems that builds on our `Pure know $h_2$ow' branding that is built into our customer engagement strategy for the current five year period.

We therefore see innovation as having four key outcomes:

- It helps us meet stretching performance and cost commitments in a changing environment
- we can improve customers' perception of South East Water and underpin greater satisfaction and confidence in how we operate and behave
- it will enable us to meet wider societal expectations as the provider of an essential service
- it will move the industry performance forwards and set new benchmarks which benefits all water customers

To make sure our innovation is effective we have created a strategy designed to deliver these outcomes.

2.3 Our innovation strategy

2.3.1 Introduction

Our innovation strategy provides rigour and transparency in our approach to innovation, and means we are able to target and monitor its effectiveness and then communicate progress in the right way.

The strategy is governed by an Innovation Steering Group (ISG) built from selected individuals from across the business and sponsored by the Board. This is chaired by our independent non-executive Director Celia Pronto, who has expertise in developing innovation across blue chip companies and start-ups.

We have used the successful steering group-approach for a number of key transformational programmes within our business including our brand change, the development of our customer-centric culture, for business market development, and our Health and Welfare staff programme.

The Board of South East Water has created the framework so that it is deliberately more focused and targeted; this avoids the pitfalls of having a more generic and unfocused innovation approach, which can include wasting useful resource and having a lack of urgency attached to it.

2.3.2 Focused innovation

Focused innovation has been shown to have some considerable advantages over a more generic approach including:

- Helping to secure buy-in

A focused approach is driven to find solutions to real business needs. This bottom-up approach motivates staff to support the campaign, support which is critical if we are to find the right resources to promote and drive the campaign and/or activity

- Creating focus

Targeted innovation not only makes identifying objectives easier, but makes our communication to the business and stakeholders around those objectives easier too. And when potential participants better understand the ‘why’ and ‘how’ of the campaign and/or activity, the quality of idea submissions increases

- Driving implementation

Having clear objectives, defining a specific problem, and setting up clear parameters, all help increase the quality of idea submissions. A better defined pool of good ideas

increases the chances for funding, project development, and eventual implementation.

- Building a sense of urgency

Start and end dates means working with a definitive deadline. This creates a sense of urgency and sustains a momentum that drives quality collaboration and keeps a steady flow of ideas coming.

2.3.3 Where to focus innovation

It is tempting to innovate across all aspects of business performance and try to drive a culture that delivers that, but our experience is that this more generic approach results in more ineffective, unfocused outcomes with a number of pitfalls). Indeed, the Board of South East Water has positioned the focus for us to innovate in some key selected areas so as to make our strategy both credible and deliverable.

Key factors in deciding where to innovate are:

- If it is a high priority area of our business for customers and stakeholders
- the challenging environment the company operates in (eg water stressed)
- where we have the skills to innovate and the potential to innovate further
- the level of resources we can efficiently deploy to produce real innovation.
- areas where we can drive improvements to benefit the UK water industry

This approach does not preclude more innovation in other areas of our business; in fact we remain committed to being an early adapter and adopter of tried and tested innovation where it clearly makes good sense to do so.

2.3.4 The process of defining our strategy

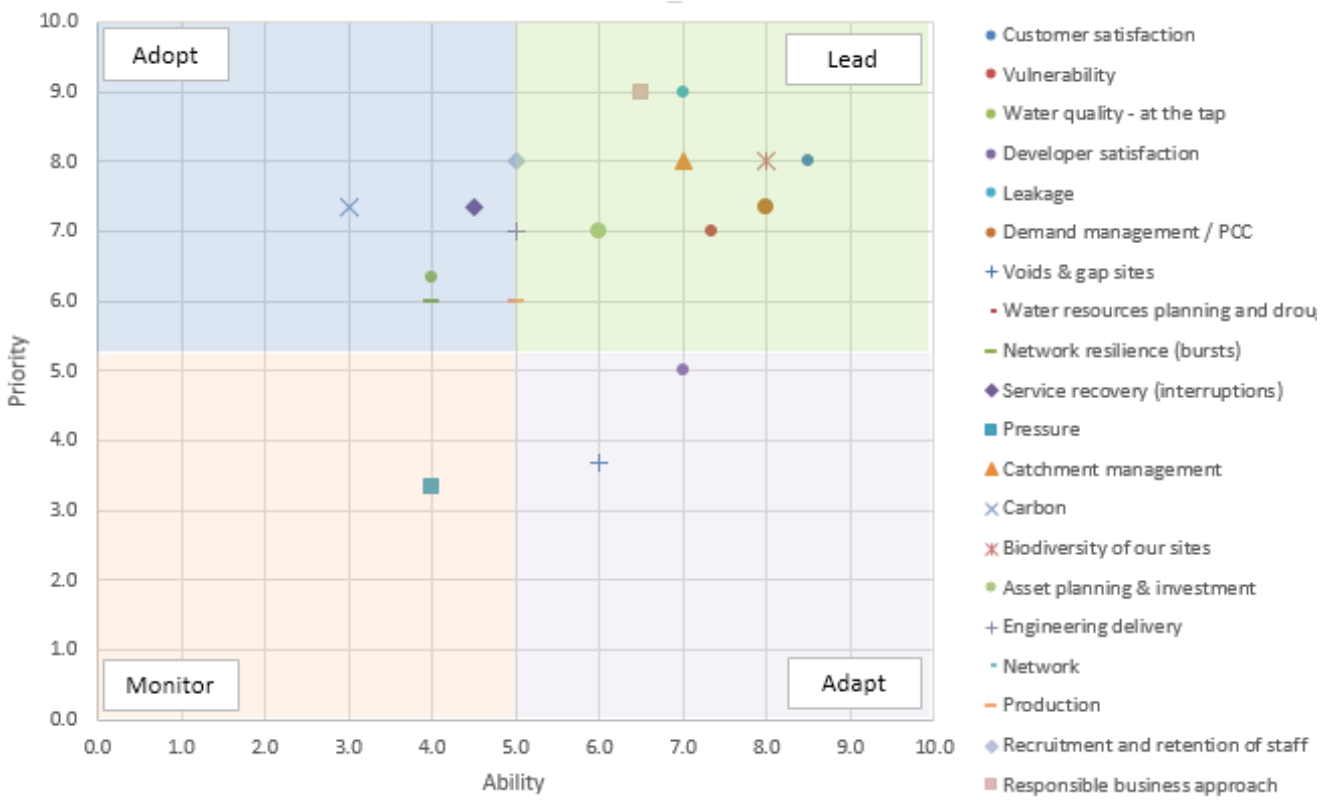
To generate a more focused innovation strategy we examined multiple sources of data, including the findings from our research with customers and stakeholders (see Appendix 1 Engagement) the aspiration of the Board and our staff, as well as our track record to date, to develop a matrix of innovation opportunity.

The scores in Table 2 below are derived from analysing these data sources and were combined to generate both a priority score and an ability score which, in turn, provide a visual representation of the focus of our innovation strategy (see Figure 1).

Table 2: Innovation decision matrix

Key innovation activity		Strategic importance / priority				Ability to innovate		
		Customer *	Stakeholder *	Company	Overall score	Proven track	Potential	Overall score
PCs	Customer satisfaction	6	8	10	8.0	8	9	8.5
	Vulnerability	4	8	10	7.3	5	9	7
	Water quality - at the tap	5	7	7	6.3	4	4	4
	Developer satisfaction	3	6	6	5.0	7	7	7
	Leakage	9	9	9	9.0	7	7	7
	Demand management / PCC	5	8	9	7.3	7	9	8
	Voids & gap sites	1	5	5	3.7	8	4	6
	Water resources planning and drought	7	7	8	7.3	5	4	4.5
	Network resilience (bursts)	4	7	7	6.0	4	4	4
	Service recovery (interruptions)	8	7	7	7.3	5	4	4.5
	Pressure	3	3	4	3.3	4	4	4
	Catchment management	7	8	9	8.0	6	8	7
	Carbon	8	8	6	7.3	3	3	3
	Biodiversity of our sites	7	8	9	8.0	8	8	8
Activity	Asset planning & investment			7	7.0	6	6	6
	Engineering delivery			7	7.0	5	5	5
	Network			6	6.0	5	5	5
	Production			6	6.0	5	5	5
	Responsible business approach			9	9.0	5	8	6.5
	Recruitment and retention of staff			8	8.0	5	5	5

Figure 1: Innovation decision matrix



In addition to the score generated we have placed the innovation activities within a 4 x 4 matrix (Figure 1) that demonstrates the different levels of potential innovation. It ranges from a lower ability to innovate with a low priority, to a high priority with a high ability to innovate.

Each box on the grid has an associated business action:

- Monitor – monitor the priority of the area for trends in priorities changing over time and react if appropriate
- adapt – for the lower priority areas seek to observe the market for new innovation and, if appropriate, look for potential adaptions that may be suited/tailored to our more focused innovation priorities
- adopt – for the higher priority areas monitor the market for innovation so we can be early adopters of techniques that help us meet the innovation priority. This will include encouraging the market in these high priority areas
- lead – proactively look to drive innovation in these areas in terms or products, services and approaches.

As a result of developing this matrix, areas of our work that represent the most significant opportunity to innovate are:

- Customer satisfaction approaches
- vulnerable customer approaches
- leakage activities
- demand management
- catchment management
- improving biodiversity
- responsible business approaches.

Other areas of our work are primarily grouped into the `early adopt or adapt' part of the matrix, with the exception being water pressure management where a monitoring strategy is preferred. As expected, this is consistent with supporting research that reveals water pressure is a relatively low priority in comparison to other areas of service customers receive (see Appendix 1 Engagement).

These areas of innovation are also typically resource intensive with an engineering focus and so less suited to our more targeted and focused innovation strategy. That said the industry and market will continue to be active in these areas and so they provide ongoing opportunities for us to be early adopters and adapters.

To ensure we are able to effectively adopt and adapt in the key areas identified the Innovation Steering Group will monitor markets via various engagement approaches including:

- Market monitoring
- benchmarking
- conference attendance
- supply chain events
- use of forums such as the Technology Approval Group (TAG).

Likewise, our employees are key to identifying innovative solutions and we are developing a more systemised approach to capturing their insight. Our 'Insight Hub' will enable employees to 'log' the insight they gain through internal and external sources of data, intelligence and engagement, and then use this to support the delivery of our plan's ambitions. This approach is innovative in itself and will enable a more collaborative platform on which we can share ideas and solutions. Staff will also

be able to pull on the insight within the hub to better inform their own work providing a much clearer link between the benefits of intelligence-sharing and collaborative engagement to their project outcomes.

3. Delivering the strategy: our techniques

3.1 Using toolboxes to deliver innovation

The ability to effectively deliver innovation is as important as a focused innovation strategy.

In part this is considered in the way we have selected the key areas of our innovation focus; that said, innovation even in these areas will not occur without a number of enabling factors.

We already have a strong shareholder, Board and company commitment to innovation but for it to really succeed we need to put the right tools in place to enable innovation to flourish.

Our approach for our 2020 to 2025 business plan has been to ensure it contains well thought out, and credible promises, around how we will achieve the stretching performance commitments within the plan. A key part of ensuring we have credible promises is the range of techniques we have already researched, trialled, or benchmarked and these form part of our dedicated “toolboxes”. The toolbox approach ensures we have the range of techniques available to drive through the performance and innovation we are committing to.

We have created three key toolboxes to help deliver our 2020 to 2025 business plan. These are:

3.1.1 The behavioural change toolbox for customers

We will be using behavioural science techniques already tested to tap into attitudes and emotional behaviour so customers help us achieve shared goals eg they reduce their water consumption, respond proactively to freeze/thaw events, and support the awareness raising activities for our vulnerability services. This toolbox is also the essential delivery element for the resilient customer concept (see Appendix 9 Resilience in the Round). Specific examples of the content of the behavioural change tool box include:

- We will provide a home water audit report, predominantly by email but also by post, to over 700,000 measured household customers – the report will summarise their water use, enable them to undertake an on-line water audit and to get access to water tips and free water saving devices. The purpose is to raise awareness and motivate changes in water use via comparison with their neighbour, ie a social norming technique. We have seen water savings of approximately 3 per cent using this kind of technique.

- We will provide ongoing performance comparisons of their water use including personal bests, monthly tracking and behaviour awards for extra achievement.
- We intend to work at a community level supplying communities with comparative water use data again using social norming and competitive behavioural tools to improve water efficiency. We have trialled this aspect during the recent dry weather event and will share the results once collated.
- We will promote resilient behaviours using comparisons such as lagging pipes for winter, installing compliant water fittings and storing water safely in the home running these programmes off our existing behavioural science platform.
- Behavioural comparisons don't work for all messaging and we will build on what we have learnt about the effectiveness of campaigns and different channels and tone of voice for delivering other key messages. For example we have tested the effectiveness of delivering messages using two very different magazine styles and discovered a clear winner for technical messages such as those around water quality and we will continue to use this approach for delivering more of the resilient customer concepts where comparisons are not appropriate.
- We have also as part of our drive for increased customer satisfaction trialled an approach using campaigns to tackle the subject of leakage we have learnt how to best run these campaigns and again which channels are most effective.
- Use the latest approaches to artificial intelligence to understand customer consumption and behaviour. We will build on the "Sense.I" approach - a digital learning tool we are using to understand how demand according to different drivers such as weather, day of week, holiday period, or previous or recent rainfall - and feed that back into the behavioural science approach.
- We are already using comparison techniques with farmers by showing which landholdings are having the least negative impact on the catchment to drive a social norming effect to help reduce pollution. We intend to expand on this approach for all our landholding-based ODIs, and our ODI that looks to reduce the impact of non-water company abstractors on the environment.

3.1.2 The partnership toolbox for our stakeholders

Stakeholders have told us they have a strong desire to increase their participation in water issues and activities, and which we also want to tap into. We will build on all the contacts we have made with stakeholders in creating this plan, and seek new alliances across many of our activities but with a focus on environmental and vulnerability areas. For the first time and as a result of engagement stakeholders are more aware of what we are trying to achieve across all elements of the plan but in particular in the areas of vulnerability and responsible business, we have had many offers for joint working across these areas and we will build on these relationships to improve all aspects of our service. Some examples of existing and developing partnerships below:

- **STEM Learning** - We have been developing a partnership with STEM Learning to encourage more young people to consider a career in STEM subjects and give them an insight into the careers available at South East Water. We have worked with the organisation to review our schools engagement programme, support the development of our STEM Ambassadors in the business and provide us with the latest insights into education and STEM to help us keep improving our offering to schools. We now have a number of STEM Ambassadors within the business and last year STEM supported the development of our Know h2ow awards programme.
- **NHS Community Health Trust** - We have developed a close partnership with Kent NHS Community Health Trust through two key projects:
  - Just Water – https://www.kentcht.nhs.uk/2016/12/12/award-flows-just-water/ . This was our first piece of work with them where we worked with secondary school pupils in Faversham to create an advice pack for schools about healthy hydration. Following the successful trial in Faversham the pack was rolled out to all secondary schools in Kent.
  - Don't dry out - https://www.kentcht.nhs.uk/2018/06/29/dont-dry-out/ - we supported the development of special material for community nurses to help them ensure older people were keeping hydrated. Now in its second year it provides wipeable posters and notepads to enable to nurses to keep check on how much someone has been drinking.

These initiatives would be worthwhile just in themselves, but the close partnership meant we have also been able to work together with the organisation to deliver further benefits for South East Water - for example:

- During Freeze/Thaw we briefed the organisation on how to check for leaks in their clients homes when making home visits – and what to do if they had no water. The community nurses were all advised on the checks to make and the

organisation also helped to share our messages via their social media channels.

- We have developed a leaflet for people who are discharged from hospital with advice about the PSR. We are about to trial this in Kent.

We intend to continue to develop our relationship in Kent but also take the learning from these experiences to form partnerships with the Community Health Trusts in other parts of our supply area. We want to build on this partnership for the future as part of our responsible business commitments.

- **Refill** - the water industry is supporting this campaign to encourage people to refill water bottles with tap rather than continue to buy single use plastic bottles. We have begun to develop this partnership and it was a key issue raised via our responsible business research with support from customers, stakeholders and employees. This year we are supporting the launch in Seaford and Whitstable. We will be looking to develop an ongoing partnership programme and together with the industry further plans will be ready for September.

- **Environmental Focus Group** - Another real example of where this has already delivered is our Environmental Focus Group, now considered as a leading best-practice approach to stakeholder involvement in the water resource planning process.

- **Waterwise** and **WaterSafe** - we have begun to develop partnerships with Waterwise and WaterSafe on the safe use of water and water efficiency and other resilient customer attributes as we have developed this concept.

- **Prowater** - we are a partner in the Prowater Interreg project, alongside South East Rivers Trust and Kent County Council. Regional partnerships have been formed in Belgium, the Netherlands and two in the UK comprising of academic institutions, environmental organisations and water companies. The aim of the Prowater project is to build resilience within catchments against droughts and extreme rainfall events through landscape scale change. This is known as Ecosystem based Adaptation measures. A key objective is to develop and implement a Payment for Ecosystem Services model, based on a Natural Capital approach. The project will deliver policy guidance on how to develop a rewarding scheme for ecosystem based adaptation measures that promote infiltration and restoration. A long-term assessment and vision on water demand and supply challenges in the regions will be completed and implemented in three pilot areas on the Little Stour, at our groundwater catchment land at Friston Forest and on the River Beult.

- **Universities** - we have broadened our engagement with the local community in recent years and have started to work with the University of Kent. Our intentions are several-fold. We wish to look for solutions to industry problems in a more innovative and fresh sense, and we believe that bonds with academia can help to achieve this. Further to this there is opportunity to engage with new stakeholders (and potential future ones). The university challenges us in our current and intended methods, giving us a fresh outlook on how we solve problems. For the students (and academics) it broadens their experience in industry and specifically the challenges facing the water industry now and in the future. To this effect, for the past few years, we have been working with the University of Kent on a variety of subjects such as water resources, asset management and customer service. We have supported a number of MSc students over the summer period each year and given them water industry-related problems to solve. Additionally, in 2017, we took on a full-time MSc research student from the University of Kent to review some areas of our work and attempt to innovate our problem-solving methods. We ran MSc placements with Kent Business School at the University of Kent at Canterbury in 2015 (3 students), 2016 (4 students) and 2018 (4 students)'
- Our current WINEP is delivered in partnership with Catchment Sensitive Farming (CSF). Our partnership with CSF started in 2015 and runs until 2020. This proactive and collaborative project has resulted in a number of firsts for the industry - for example we were the first water company to conduct field trials to demonstrate to farmers that there is no difference in slug control outcomes between Metaldehyde and non-Metaldehyde pellets. We are looking to expand the remit and create similar partnerships to deliver the WINEP programme this period.

3.1.3 The innovation toolbox for our business

This toolbox contains techniques from existing initiatives but we are also building new tools such as:

- More supply chain involvement on the problem statement eg our Leakathon and contractor planning and sharing events. This will include using new techniques and resources to support new ways of driving innovating such as hackathons and skunk works; and joint funding of options not looked at previously.
- Partnerships with environmental research groups eg collaborating with the University of Antwerp, South East Rivers Trust, South West Rivers Trust, the Environment Agency, Natural England and Affinity Water in a study to alter

ecosystems to prevent groundwater water flooding and improve groundwater recharge. This is already seen as cutting-edge environmental resilience research.

- Smart network creation – we are trialling a truly smart network (possibly the first in the UK) to use existing mobile technologies to relay customer usage data in real time. We are leveraging off our 90 per cent metering penetration and our experience of data management on semi-smart metering which started in 2005. As 'connected homes' proliferate, we will look to use real-time smart network data to deliver services beyond the provision of water to customers in vulnerable circumstances e.g. alerts to family members about elderly customers with worryingly excessive or limited water consumption.
- Greater insight into the drivers of satisfaction of customers using our new value-based segmentation tracker. New insight delivers the opportunity to evolve our services and products so that we are meeting our customers' needs and expectations as they evolve too
- Stakeholder and/or customer co-creation of solutions – having evolved an approach for this kind of interaction we continue to see its benefits as a powerful tool for innovation by providing different perspectives and potential solutions for old and new issues
- Culture change – we will use our experience of our recent culture change programme centred on customer satisfaction and supplement it with a similar programme to encourage and foster innovation in the areas we want to focus on. We will engage with third party innovation partners who have worked successfully with other organisations in and outside of our sector to cultivate an environment where ideas can be honed, prioritised, funded and trialled rapidly. Leveraging their network will open doors to alternative sources of funding and risk mitigation and enable us to co-create solutions using our existing and new supply chain.

3.2 Measuring our innovation progress

Our innovation steering group will track our innovation progress not only on budget spend on innovation or patents achieved, but momentum maintained using a real innovation index that scores and tracks our innovation by incorporating findings on:

- culture
  - leadership, people and process
- impact
  - projects, launches and breakthroughs
- amplifiers

  - trends, partnerships and world events
- outside
  - the buzz of our customers

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