

Appendix 5a: Customer and Stakeholder Engagement

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Executive Summary

In planning our ongoing approach to customer and stakeholder engagement and participation, we took account of the lessons learnt at PR14 and looked across other sectors for examples of best practice. As a result of this, we have undertaken a step-change in our ongoing and continuous customer engagement which has played a central role in the development of our PR19 Business Plan. From the outset we knew that we wanted a much better understanding of our diverse range of customers and a stronger view on customers financial and emotional position in the current economic climate.

We know that most customers cannot choose who supplies their water. This means that there are high expectations of us to engage with our customers and this engagement is essential to building and maintaining trust and ensuring that we have our customer's interests at heart.

Our approach to customer engagement is also much wider than our PR19 planning process. We continuously talk to customers to know more about them, the things that are important to them, how they interact with water in their day-to-day lives, and what they want, need, and expect from us. These conversations ensure we understand what our customers priorities are, ensuring we are delivering the services which customers expect now and in the future.

We are innovative in the ways that we engage with people, stakeholders and organisations, in how we gather views and analyse outcomes. We work hard to use new and tailored approaches to engagement to gain broad and representative views of what people think and want from us, and their views on our PR19 plan. We are proud of how we work with and talk to our customers and stakeholders in Yorkshire and the results can be seen throughout our PR19 Business Plan.

Our engagement activity has produced quality customer conversations, providing us with in-depth customer insights that drive our service priorities and increase our focus on customer participation. Continuous customer, stakeholder and colleague engagement informs our day-to-day service delivery and this participation has been crucial to the development of our PR19 plan.

Since 2015, the scale of our engagement has become the largest and most continuous we have ever undertaken; we have talked to almost 30,000 customers while developing our PR19 plan, compared to 8,000 customers for PR14. More conversations mean improved insight into the diverse and changing needs of the communities we serve.

One group that has played a significant role throughout PR19 is the Yorkshire Forum for Water Customers (the Forum), we would like to thank the Forum and its various sub-groups for their valued challenge and contribution to our ongoing engagement and participation activity. The Forum has also played a crucial role in ensuring that the insights derived from the programme have been reflected fairly within our PR19 plan.

This report provides an overview of our approach to engagement and participation, and what we have learned is embedded throughout our PR19 Business Plan.

1 Introduction

The 5.4 million people who live in Yorkshire, plus the millions of people who visit Yorkshire each year rely on our services for their basic health needs and lifestyles. 140,000 businesses use our water to provide goods and services that support the economy, not just of Yorkshire, but the whole of the UK. In addition, the non-household retail market was opened up to competition in April 2017, effectively creating a new customer segment of 17 non-household retailers¹ in the region.

This document sets out the key aspects of our ongoing and continuous customer and stakeholder engagement and participation programme that have informed our day to day service delivery to customers, the development of our PR19 business plan and the creation of our long-term strategy. We have looked closely at the current and future economic, social and environmental issues which Yorkshire faces and spoken at length to our varied and diverse customers and stakeholders.

Our extensive programme of activity, which is significantly broader and deeper in scope than what was undertaken for PR14, has explored, tested and evaluated the key themes of PR19 (Customer Service, Affordability, Resilience and Innovation) from multiple perspectives across our diverse customer and stakeholder base. While some of these issues have research projects specifically dedicated to them, our aim has been to maximise the knowledge and output from the programme, and so exploration of these themes frequently cuts across multiple projects.

In addition, we have evolved our programme to incorporate the key elements of, and philosophy behind, Ofwat's customer participation model² as illustrated in Figure 1. To understand how this model has been applied to our ongoing engagement and activity, an example is provided in Table 1 overleaf.

¹ The number of non-household retailers operating in Yorkshire correct at the time of writing (02 May 2018)

² Tapped In – From passive customer to active participant, Ofwat, March 2017

Figure 1 Ofwat's customer participation FACE model**Table 1 Examples of how we have applied the customer participation FACE model**

Category	Participation example
Future	Our ongoing research activity with customers and stakeholders has informed the development of our long-term strategy consultation document. The long-term strategy focusses on the future challenges we face as a business as well as highlighting customers and stakeholders challenges. The consultation occurred during Spring and Summer 2018.
Action	We are forming relationships with open data institutes, local charities and organisations who can provide us with a much more detailed picture about the behaviour of people. We are doing this through data sharing and by working with them to open up a communication channel to people we haven't been able to talk to. This will develop the services we offer and communications campaigns we deliver so that we know they are effective.
Community	Our improved customer knowledge will allow us to better plan for emergencies, arrange planned disruptions to our services in specific areas around customers needs such as religious holidays and ensure we are supporting all the communities in Yorkshire. From discussions prompted by Water Culture, the living with Water partnership was established which brought together Yorkshire Water, Hull City Council, East Riding of Yorkshire Council and the Environment Agency with a joint vision to make the Hull and Haltemprice area an international exemplar for living in harmony with water. In September 2017, the partnership brought local stakeholders together with national and international experts for a two-day charrette to explore this vision and set out an ambitious plan for the

	<p>future. Working together, the partners are now developing innovative solutions to reduce flood risk in the catchment using a jointly owned, integrated flood model.</p> <p>As these solutions are developed the partnership will be working with local communities through further charrettes to ensure they meet the needs of local people, as well as contributing to the overall vision for the city. To inform the long-term approach the partnership will be one of only five cities around the globe to develop and pilot a new City Water Resilience Index working with The Rockefeller Foundation.</p>
Experience	<p>We are tailoring our services to meet the diverse needs of our customers. For example, our Safeguarding Officer is leading our partnerships with local authorities, charities and the police to empower our colleagues to report safeguarding issues. We intend to lead the way in raising awareness of these risks and showing how business can play a part in protecting those who are most vulnerable.</p>

We have also taken care to analyse the pressures we face such as population growth and changing weather patterns and to understand the rich and diverse community that we serve here in Yorkshire. We have looked at how that community is made up now and how that will change in the future³.

We set out to better understand what people value in their lives and the role water plays in that. We've investigated how customers with different lifestyles rely on water in different ways and we've looked at how some people are much more dependent on their water and waste water services for a range of cultural or medical reasons for example.

We have also taken a step back and thought about how we, as a company, impact on Yorkshire's environment, its people and economy as we carry out our activities.

We have asked where we can do better to improve what we do, how we do it and how we can work better with others to make sure that the people of Yorkshire get the best all round value for what they spend on water. We have also realised that people need to have trust in our ability to serve them now and into the future, whatever the conditions, and that they want to be able to trust in us.

³ Not Just Water, Strategic Direction consultation, Yorkshire Water, April 2018

We have also gained invaluable feedback from the Yorkshire Forum for Water Customers⁴, an independent challenge group responsible for ensuring our customers' views are fairly reflected in our business plan and ensuring we meet the performance commitments we have made to customers.

We have combined all our customer and stakeholder insight to develop an affordable plan which fairly reflects the priorities and needs of the Yorkshire region over the next five years. Overall, 86% of household customers and 82% of non-household customers surveyed said they supported our final business plan submission⁵.

⁴ For further information on the Yorkshire Forum for Water Customers, visit <https://www.yorkshirewater.com/customerforum>

⁵ PR19 Business Plan Acceptability Testing, Base: 1,964 household customers, 365 non-household customers (August 2018)

2 Customer engagement and participation programme

This chapter sets out the key aspects of our ongoing and continuous customer and stakeholder engagement and participation programme that has informed our day to day service delivery to customers; the development of our PR19 business plan; and the creation of our long-term strategy.

We have a strong record of involving our customers in our activities. We have dedicated Customer Insight and Brand & Campaigns teams within our Communications directorate that ensures customers are a key focus of the business, both during the development of our business plan and for day to day service to customers.

2.1 Customer insights

We have carried out extensive customer engagement, using new and innovative methods in the development of our business plan, alongside tried and trusted ones, working with customers and stakeholders in lots of different ways.

The scale of the ongoing engagement for PR19 is significantly larger than it was at PR14 (for further detail on all activity undertaken, see Appendix 5b). For the PR19 business planning process we have spoken to almost 30,000 customers and stakeholders, compared to 8,000 at PR14. This engagement activity has produced much deeper customer insights and a higher quality of conversation which have driven our service priorities and an increased focus on customer participation.

The following section provides a number of examples of the innovative ways in which we have undertaken ongoing customer engagement and participation.

2.1.1 Triangulation

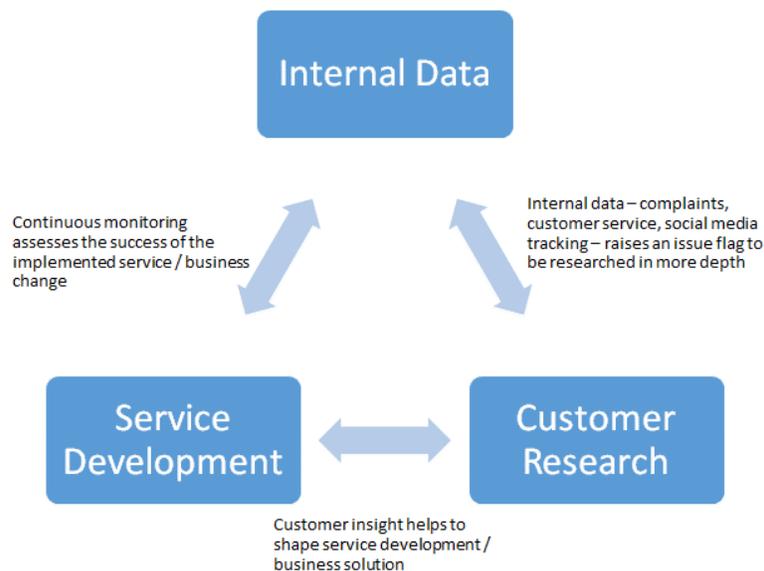
We have established a much more formal link between our internal data, how this flags persistent issues for further research, generating insights that lead to service improvements and

priorities, which are then monitored to gauge success. This represents an ongoing culture change since PR14 and has resulted in some significant and successful initiatives, for example:

- moving away from awareness based customer communication campaigns to a much more participative approach e.g. behavioural led campaigns;
- using customer feedback and insights to develop a more personalised service e.g. the development of our best tariff initiative; and
- reduced sewer flooding incidents due to our Fats to Fuel initiative in an area of Bradford renowned for sewer blockages due to cooking fat being poured down the sink.

From the outset of our research programme, we analysed business data to understand the service areas which caused the largest volume of calls to our contact centre and digital channels. We used these insights to develop a number of research projects which aimed to understand customers' priorities of service, such as Valuing Water and Customer Valuation. Figure 2 below illustrates our approach to triangulation and how this has supported the development of our approach to customer engagement and participation.

Figure 2 Approach to Triangulation



Understanding the diverse needs of our customers

Our ongoing approach to customer and stakeholder engagement has provided us with a better understanding of what people value in their lives and the role water plays in that. We've

investigated how customers with different lifestyles rely on water in different ways and we've looked at how some customers are much more dependent upon their supply for a range of different reasons, for example cultural, religious, wellbeing or medical needs.

We have asked where we can do better to improve what we do, how we do it and how we can work better with others to make sure that our customers get the best all round value for what they spend on water. We have also realised that customers need to have trust in our ability to serve them now and into the future, whatever the conditions.

We now have a more detailed understanding of our customers with specific needs that we've ever had before, ensuring full inclusivity in the delivery of our services to them.

2.1.2 Customer closeness sessions

We have also developed a new approach to customer engagement for PR19 that aimed to provide our Directors and senior management with more meaningful engagement with customers.

We have established a programme of Customer Closeness Sessions with our Directors and customers. These sessions are conducted using a 'speed dating' format whereby our Directors and customers meet face to face to hear first-hand what customers think of our performance on some of their most important areas of service, for example leakage and pollution. We have also held sessions for customers to feedback their views and opinions on our long-term strategy and the PR19 business plan. These discussions along with our wider engagement programme were part of our decision to significantly shift our performance in areas where customers were not happy with our comparative position e.g. leakage and pollution.

We have also set up a social media account, @YWDirectors, which provides customers and stakeholders with news and updates on industry issues our Directors are talking about, as well as providing customers and stakeholders with a direct link to the company's senior management team.

2.1.3 Cross sector working

We have also been working with other organisations to better understand the needs of our future customers. Working with Infrastructure North, we commissioned a joint project with Northern Gas Networks, Northern Powergrid and Northumbrian Water to mutually explore shared issues which will impact, or be of interest to, future customers. The outcome of this activity provided us with a better understanding of future customers priorities including affordability, innovation and environment. The project also explored expectations, needs and wants in terms of communication, engagement and updates from energy and water providers.

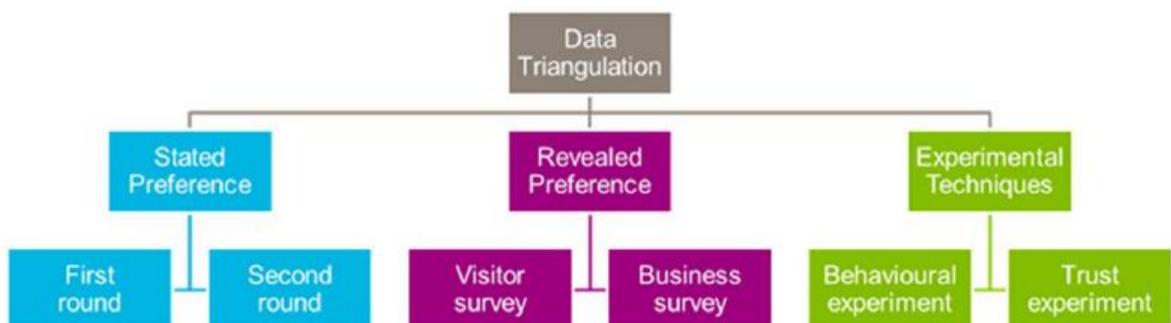
2.1.4 Customer valuation

Following PR14, Ofwat noted a marked variation in the regional willingness to pay values that water companies obtained and used in business plans. For PR19, Ofwat expected water companies to place greater emphasis in building a robust, balanced and proportionate evidence base to better understand customers' needs and preferences.

In light of Ofwat's recommendations for improving the approach to understanding customer valuation, we developed a number of new ways in which to understand the value customers place on those services which are important to them.

Our customer valuation activity was divided into six work packages (see Figure 3). These provided a range of values to allow methodological triangulation. Further detail on each of the work packages can be found in Chapter 7.4.

Figure 3 Overview of the approach to customer valuation



Through the development of our approach to triangulation, we have undertaken a number of innovative ways to derive customer valuation, including:

- improving the way in which we carried out our stated preference willingness to pay survey with customers by introducing a graphic designer to the process to help customers understand the information presented;
- recognising the role of behavioural economics in customer preference surveying, and improving understanding of the factors (e.g. context, framing, design) that may help customers to better understand the information being presented;
- we introduced a new approach to understanding the difference between 'use' and 'non-use' values for environmental measures (e.g. river water quality);
- making more and better use of evidence obtained through day-to-day contact with customers (such as from data generated through complaints, general contacts or social media); and
- moving towards triangulation, whereby different sources of information relating to customer preferences (e.g. that derived from stated preference, revealed preference and experimental techniques, at different time periods, or from different geographies) can be used to cumulatively refine or validate research outputs.

As a result of these improvements to the approach we took to Customer Valuation, 91% of customers surveyed said they understood what was being asked of them, this compares to 74% at PR14.

2.2 Customer participation and engagement

Our insights programme has demonstrated the importance of understanding the individual needs of our customers. Customer feedback at PR14 told us that a 'one size fits all' approach was no longer legitimate. The importance of the role water plays for each of our customers on a daily basis can be very different. Since PR14, we have been analysing feedback from our customer insights programme to develop a more granular level of understanding of Yorkshire and the customers we serve. The following section provides examples of how we are working with customers and stakeholders to encourage engagement and participation in all aspects of our business which matter to them.

2.2.1 Customer service and lifestyles segmentation

A significant strand of our research programme has been aimed at gaining a much deeper understanding of the range of customers we service every second of every day, and the diversity of their needs. We have developed a segmentation model, using Experian's Mosaic segmentation tool, which identified a number of core customer segments by lifestage and location. The segmentation model provided a broad overview of key lifestage preferences e.g. preferred communications channel, propensity to use digital channels, and indications of levels of affordability. This model had immediate benefits particularly when reviewing the most appropriate channels to use during service incidents at a local level, or when reviewing customer journeys on our website.

The segmentation model has also changed the approach we take to ongoing communications. We now have the ability to target specific communications at a local level in a way that is understood. For example, we have piloted a 'flushing wipes blocks pipes' campaign in specific areas of the region to encourage customers to participate in disposing of wet wipes in an appropriate manner. The media has been created in these areas to match the media consumption patterns of the customers that live there. An example of the campaign can be found in Figure 4 below.

Figure 4 Pilot waste water campaign billboard message



The output from this study has provided a local understanding of our customers, their lifestage, lifestyles, their media consumption and how they interact and like to receive messages from companies they deal with. Whilst in its infancy, we hope that improved understanding of our customers will encourage future sustainability of our services through improved customer behavior in affected communities.

We continue to develop our understanding further by working with data scientists to apply service and lifestyle data to the segmentation model. This ongoing development will identify existing service hotspots and provide forecasts of the changing demographics across the region e.g. generational migration from city centres to suburbs which may impact on future service provision at a local level.

2.2.2 Best tariff initiative

Our customers told us they expect us to be more open and transparent in what we deliver to the region, especially given our monopoly status. Compared to other companies they deal with, customers felt they knew very little about how to reduce household costs in relation to their water and sewerage bill.

We listened to this feedback and have introduced a new proactive metering strategy initiative whereby we are targeting 100,000 customers who live in a property with a high rateable value but with a small number of occupants. These 100,000 customers will be contacted by us and offered a two-year trial of a water meter. During the trial period, we will assess if those households have saved money and if not, they can be switched back to their old rateable value tariff. If the pilot project is successful, we are looking at rolling out to all unmetered customers as part of our "price promise" for the next five-year period. This is the first initiative of its kind in the water industry and we are proud to be investigating the benefits of this as a result of our customer engagement.

2.2.3 Citizen regulation and openness charter

Through our insights programme, our customers and stakeholders told us they expect us to be more open and transparent. We have responded to this by developing an openness strategy to become 'open by default' by 2025. We are working with the Leeds Data Mill and Open Data

Institute to support this customer driven initiative. Our first open data participation events were held in 2018, where we discussed issues around leakage and pollution. We are the first in the water sector to commit to an 'open by default' data approach.

By becoming 'open by default', we want to empower citizens to take 'action' and scrutinise data and create a new cohort of "citizens regulators" holding us to account on our performance. In the future, customers may have the ability to create their own service dashboards, giving them control over tracking the company's performance in areas which matter most to them. We also aim to stimulate innovation, by encouraging experts outside of the water sector to look at operational performance and identify new and innovative solutions to traditional industry issues. It is hoped that in future, this could help spur the development of data tools such as water use apps which could be used to incentivise customers to reduce future consumption.

Further to this, we have also committed to strengthening public trust in the water sector through the release of our own 'Openness Charter'. The Openness Charter will mean stakeholders and the public can easily access a variety of company data such as tax arrangements, directors' remuneration packages, gender and ethnicity pay gaps, pollution, sewer flooding and leakage performance etc.

2.2.4 Community charrette

Outside of London, Hull remains the most at-risk city from flooding in the UK, as evidenced by the devastating floods of 2007. Significant investments have been made by Hull City Council, the Environment Agency, East Riding of Yorkshire Council and Yorkshire Water (over £40m alone on pumping stations) to help protect the city. Even so, managing water effectively remains a challenge that could undermine the ongoing transformation of the city and the 10-year regeneration strategy.

In 2016 we published "Water Culture", a catalyst for discussion about an innovative water resilient future for Hull and the East Riding. This led to the Living with Water partnership and a vision to make the Hull and Haltemprice area an international exemplar for living in harmony with water. In September 2017, the partnership brought together local stakeholders together with national and international experts for a two-day charrette to explore the vision and set out an ambitious plan for the future. The partners are now developing innovative solutions to reduce

flood risk using a jointly owned, integrated flood model. To inform the long-term approach the partnership will be one of only five cities globally to develop and pilot a new City Water Resilience Index working with the Rockefeller Foundation.

The success of this approach has meant we are now extending this further to holding customer charrettes in Hull over the next couple of years to ensure our customers have their say on the proposed solutions to reduce the threat of flooding in their area. We also intend to apply the charrette approach to other areas of the region over the coming years.

2.2.5 In summary

Our extensive PR19 engagement and participation programme, alongside our regular interactions with customers and stakeholders, has provided much improved insight into the diverse and changing needs of the community we serve in Yorkshire. This chapter provided a snapshot of our overall approach to customer engagement and participation and the significant progress we have made since PR14. A more in-depth view of the innovative aspects of our ongoing customer and stakeholder engagement and participation activity can be found in Chapter 7.

3 Stakeholder and colleague engagement and participation programme

As well as engaging with our customers, we have also undertaken extensive stakeholder and colleague participation and engagement. Using new and innovative methods, alongside tried and trusted ones, we have engaged our stakeholders and colleagues in the following ways.

3.1 Regulator and stakeholder participation and engagement

We have a strong record of involving our stakeholders in our activities and of keeping them informed of work that may affect them. We have a dedicated Political and Stakeholder Engagement Team within our Communications directorate that ensures that stakeholders are a key focus of the business, both during the development of our business plans and during business as usual.

The team employs a range of engagement approaches to involve stakeholders in our work, including a stakeholder contact programme that means the Leaders and Chief Executives of each local authority in the region meet with a nominated Yorkshire Water Director at least once a year. The team also aims to meet with each of the region's Members of Parliament (MPs) and key Non-Governmental Organisations (NGOs) at least once each year. This contact programme ensures that stakeholders are able to meet with our senior managers at Yorkshire Water on a regular basis to keep up to date on the company's work, explore opportunities for working together and raise any issues that arise as a result of the day to day contact these stakeholders have with the various parts of the business.

During the PR14 business planning process we made use of these ongoing meetings to share key elements of our business plan with our stakeholders and to test whether they supported our approach. We also held a special conference to launch our business plan to our stakeholder audience. Whilst our approach at PR14 meant that a wide range of stakeholders were aware of the key elements of our business plan and broadly supported the decisions we had made within the plan, by the time our plans were shared with them the business planning process was almost complete. This meant that our plans were based primarily on the challenges we faced as

a business, rather than on a wider understanding of the challenges faced by our stakeholders and the region.

Taking these lessons from PR14, we developed a stakeholder engagement strategy for PR19 that aimed to provide earlier, more meaningful engagement for stakeholders and which allowed them to have a more direct impact on the final business plan.

The stakeholder engagement strategy for PR19 involved two phases of engagement as outlined in Figure 5. Phase one, which ran from May to December 2017, was based around early engagement with our stakeholders to understand their challenges, their priorities and their ideas for how we could help them achieve their aims by working together. The focus of the strategy in phase one was very much on listening to what our stakeholders had to say, without shaping their input with our own ideas for what we should be focusing on. By taking this approach, we wanted to get a much better understanding of the challenges faced by our stakeholders, and the wider region, compared to the previous price review when stakeholders were only given the chance to comment on our future strategy and business plan once work was well underway on its development.

The second phase of the strategy was undertaken between January and August 2018 and focussed on returning to the stakeholders we had met during phase one to test our plan with them. These discussions tested whether we had correctly understood their feedback and highlighted where we had incorporated their feedback in to our business plan. We also used this phase to explain to stakeholders where we had not been able to incorporate their priorities into our plans and the reasons why. Finally, as part of phase two we asked stakeholders how supportive they were of the business plan.

Overall our strategy for engaging with our stakeholders for PR19 was to begin earlier, be much more in depth and provide a more significant opportunity to shape our business plan compared to PR14. The section below details how this strategy was applied and the results of the engagement.

Figure 5 Two phased approach to stakeholder engagement



3.1.1 Applying the PR19 stakeholder engagement strategy – Phase one

Phase one of our PR19 stakeholder engagement strategy was implemented as planned between May and December 2017. During this time we held meetings with 110 stakeholders to hear from them about the challenges they face and their views on how we could help support the region by helping them to address those challenges.

Our ongoing stakeholder contact programme means we have a good understanding of our key stakeholders in the region. We have good relationships with all our local authorities, MPs, regulators and the environmental NGO community. However, we wanted to go beyond this regular group of stakeholders for our PR19 engagement. Therefore, during phase one of our engagement we also met with Local Enterprise Partnerships (LEPs), social NGOs, developers and other local infrastructure providers (Northern Gas Networks and Northern Powergrid). We also expanded our engagement beyond the Yorkshire region to talk to national contacts at stakeholder and regulatory organisations including Defra, Environment Agency, Natural England, CCWater and DWI.

To gain as much useful feedback as possible from this engagement we used a number of different engagement methods which are detailed overleaf:

Individual stakeholder meetings

The majority of phase one of the PR19 stakeholder engagement was based around individual meetings with key stakeholders. This method of engagement allows time for a detailed discussion of the views of each stakeholder and helps to build a long-term relationship between key Yorkshire Water colleagues and our stakeholders.

As part of our ongoing stakeholder engagement programme each stakeholder is allocated a Yorkshire Water Director to be their point of contact. Therefore, each stakeholder is able to build a relationship with their contact. The PR19 meetings were carried out by each stakeholder's allocated Director where possible to ensure consistency and to ensure that feedback from stakeholders on our plans for PR19 was given directly to the Director team.

Each stakeholder approached the meetings differently and we left it up to them to give their views in the format that suited them best. For some stakeholders this was a general high-level discussion about our direction. Others chose a more detailed and comprehensive approach, for example Yorkshire Wildlife Trust produced a document entitled 'Our Blueprint for PR19'⁶, outlining their asks for our plan which was based on the Blueprint for Water Coalition's national document⁷ of the same name.

Site visits

Site visits to see our work in action are a good way to engage with stakeholders that have had less exposure to the work of Yorkshire Water, and therefore have less detailed views about our work and future direction.

Site visits are an ongoing part of our stakeholder engagement and are carried out on a regular basis to coincide with customer campaigns or capital investment, but for the PR19 process these visits allowed us to begin a dialogue with stakeholders about the future by explaining the challenges we are facing now.

Of the 110 stakeholders engaged with during phase one of the PR19 contact programme, 25 of the meetings took place on site visits.

⁶ Our Blueprint for Water, Yorkshire Wildlife Trust, June 2017

⁷ Blueprint for PR19, Blueprint for Water, April 2017

Multi-stakeholder roundtable discussions

Individual meetings and site visits provide good opportunities for in depth discussions with individual stakeholders to explore their views but the one-to-one nature of these meetings means that stakeholders do not get to hear first-hand the views of other stakeholders which can often conflict with what they would like to see.

To help get around this issue and to explore some key topic areas in more detail we arranged three roundtable discussions where key stakeholders were invited to share their views. These meetings allowed stakeholders to explore the issues with each other and helped to ensure they understood the competing views that we had to manage whilst developing our plans.

The three roundtables were:

- 6th October 2017 – Safeguarding & vulnerable customers
 - attendees included: West Yorkshire Police, Bradford Council, Carers Leeds, Mind & StepChange
- 15th December 2017 – Flooding & natural flood management
 - attendees included: Shadow Water Minister Holly Lynch MP, Forest Enterprise, Pennine Prospects, Yorkshire Dales National Park, National Farmers Union, North & East Yorkshire LEP & Moors for the Future
- 12th January 2018 – Planning & future development
 - attendees included: Shadow Secretary of State for Housing John Healy MP, Co-Chair of the Water APPG Angela Smith MP, Sheffield City Council, Hull City Council, Barnsley Council, Policy Connect, Home Builders Federation & University of Chester

Project based stakeholder engagement including innovative partnership charrettes

In addition to the broad engagement outlined above, we also carried out a range of stakeholder engagement activities to support individual projects. These used similar methods to those outlined above, but we also took the opportunity to test new methods of working with stakeholders and partners.

The biggest example of this was through the Hull & Haltemprice Living with Water partnership, an innovative new partnership between Yorkshire Water, Hull City Council, East Riding of Yorkshire Council and the Environment Agency to tackle flood risk in the area.

To help the partners develop the vision for the area, a partnership charrette⁸ was held to bring together local and international experts to share knowledge and work together on the forward plan for the partnership.

The Hull and Haltemprice Living with Water charrette took place on 26th and 27th September 2017 and saw local, national and international experts working together to develop a plan for the Hull and Haltemprice catchment. A video of the Hull and Haltemprice Living with Water charrette was created to publicise this innovative approach to customer and stakeholder engagement and participation⁹.

Not only did the event help to move the partnership forward, but it also provided an innovative way of co-developing and co-creating solutions with stakeholders that can be rolled out across special projects or business as usual.

3.1.2 Applying the PR19 stakeholder engagement strategy – Phase two

Phase two of the PR19 stakeholder engagement plan began in January 2018 with the launch of our long-term strategy¹⁰. As explained above, the aim of the second phase of engagement was to return to the stakeholders we had spoken to in phase one to share both our long-term strategy and our PR19 plan and to test with them how well our plans reflected their feedback from phase one.

The methodology was similar to phase one and again included individual meetings, site visits and roundtable discussions. Engaging early with stakeholders around our long-term strategy allowed us to obtain early feedback on how stakeholders felt we had incorporated their views

⁸ A charrette is an intensive collaborative planning workshop concept which is used widely in the USA. The aim is to bring partners together to co-create a plan that meets a wide range of needs and fits with all stakeholder ambitions for the area.

⁹ <https://www.youtube.com/watch?v=3jx0BxwVXWQ>.

¹⁰ <https://www.yorkshirewater.com/biggoals>

into the long-term strategy and allowed us to make any necessary changes to our business plan as it was finalised.

Parliamentary launch of our business plan

In September 2018, we launched our PR19 business plan submission at a special drop in event in Westminster. The event allowed MPs and other stakeholders to come along and view details of our business plan and talk to our Directors about what the plan means for them and their constituents.

3.2 Colleague participation and engagement

Our ongoing engagement with customers and stakeholders are both ambitious and exciting and we took the same approach with our colleagues. Our approach was designed to ensure that all of our colleagues were not only aware of our plans, but understood them and felt they had the opportunity to have their say and get involved.

Rigorous internal communication planning allowed us to identify all the different internal audiences and then understand what we needed to communicate to them and why, which then drove the timing of the communication and the methods and channels we used.

3.2.1 The role of colleagues

Colleagues are customers too and we wanted to help them understand our plans and how these plans affected them, not only as colleagues but as customers. Our colleagues helped to spread the message about PR19 to customers, friends and family by sharing the company's posts and messages on their own social media accounts, for example. Colleagues were involved in the elements of the plan they could influence and where we could use their insight to help shape future behaviour-change campaigns e.g. Fats to Fuel.

We used a wide range of internal communication channels to engage with our colleagues in order to achieve the desired outcomes. For example:

To inform about our plans and raise awareness

- Company intranet and internal social media – we used our intranet (the hive) and our internal social media channel (Yammer) to update colleagues on our plans and talk about progress at key milestones in the process. Both these channels have the capability to allow colleagues to ask questions and for feedback to be given;
- 'The Source' is our quarterly company magazine that is produced in print format and on-line. We regularly publish articles in the magazine on a range of subjects and issues related to PR19;
- video – we produced a number of videos designed to bring the messages to life. These videos were uploaded to our intranet and used as part of presentations at colleague events; and
- podcasts – this is an online, audio communication channel that we have used to share information on PR19 and broadcast discussions on the key issues that has helped to inform and raise awareness.

To build understanding about our plans, educate colleagues, listen to them and create conversations

- Face to face – we held several leadership events with our management population to keep them up to date with progress so they could cascade the key messages to their teams. In addition, we held a series of colleague roadshows to allow people the opportunity to provide feedback on the plans and ask questions;
- Yam Jam – this is an online conversation through our social media network Yammer. We used this channel to engage colleagues in real-time discussions on PR19 related issues which provided the opportunity for feedback and questions; and
- Community ambassadors – we created an online community of colleagues that shared key messages and activity on PR19 issues with family, friends and people in their local communities, through their own social media channels, such as Facebook and Twitter. Examples of topics covered included sewer blockages, saving water and service improvement.

To encourage active involvement and help test and shape future campaigns

- Hull community charrette – as described earlier a charrette is an intensive collaborative planning workshop concept designed to bring partners together to co-create a plan. As well as the partnership charrette, we also held a community charrette which provided the opportunity for residents of Hull & Haltemprice and colleagues, to be involved in and co-create plans for flood alleviation in the area;
- colleague events – as part of our commitment to manage flood risk we ran an initiative to plant 200,000 trees at Gorpley in the Calder Valley to help ‘slow the flow. This provided a great opportunity to get our colleagues involved, through team building activities and working with external partners;
- ‘Soak it Up’ – we launched a major community initiative, in conjunction with the Yorkshire Wildlife Trust, to reduce the pressure on our surface water network by building sustainable urban drainage systems on community assets such as schools and community centres. This provided us with another great opportunity to involve our colleagues in delivering a key business outcome;
- sewer blockages – we ran a targeted customer campaign in our ‘hotspot’ areas to change customer behaviour around what they put down the sewers in order to reduce the number of internal flooding and pollution incidents. Our colleagues that live in the ‘hotspot’ areas were actively involved in delivering these messages into their local communities; and
- ‘Visit and fit’ – this initiative was directly linked to security of supply and water resilience and was designed to provide customers with the advice and resources they needed to change behaviour and reduce water usage. Colleagues living in the ‘pilot’ areas were engaged in the initiative from both a ‘customer’ perspective and in encouraging their local communities to get involved.

As this chapter demonstrates, we have and continue to engage our stakeholders and colleagues using innovative ways to help us evidence and shape the development of our business plan and future behaviour change campaigns.

4 Yorkshire Forum for Water Customers

As well as talking directly to thousands of our customers and stakeholders about what they want and need from us, we've also engaged with the Yorkshire Forum for Water Customers, which has given us valuable insight into what our customers want from us now and into the future.

The Yorkshire Forum for Water Customers (the Forum) is an independent Customer Challenge Group that ensures our customers' views are fairly reflected in our business plan and ensure we are meeting the performance commitments we have made to customers. The Forum has a key role in scrutinising and contributing to our business plans. The Forum is responsible for:

- challenging the quality of our customer engagement process;
- challenging how well our proposed outcomes and outcome delivery incentives reflect our customers' views and priorities;
- monitoring progress against our performance commitments; and
- providing an independent evaluation to Ofwat on how well we have reflected our customers' priorities within our business plans.

The Forum is made up of many customer and stakeholder representative bodies and is independently chaired by Andrea Cook OBE. The full membership of the Forum is provided on our website as are its' terms of reference and the minutes from Forum meetings¹¹. The Forum has been in place since 2011.

The Forum has scrutinised, challenged and contributed to every aspect of the development of the business plan. A comprehensive forward agenda was agreed with the Forum to ensure that sufficient time was available to discuss the subjects the Forum wished to cover. To ensure that the Forum was sufficiently represented across all business plan activity three subgroups were created (Environmental sub-group, Vulnerability and Affordability sub-group, and Customers sub-group).

The Forum plays a crucial role in scrutinising, challenging and shaping the creation of our business plans and the delivery of them once agreed. The Forum currently meets monthly and

¹¹ <https://www.yorkshirewater.com/customerforum>

invites company representatives to attend to cover the agreed agenda items. The Forum Chair also attends YW Board PR19 strategy days to ensure that the Board is sighted on Forum views and to facilitate regular conversation between the YW Board and Forum Chair. YW Independent Non-Executive Directors and Chair attended a Forum meeting. The Director of Finance, Regulation and Markets, Director of Service Delivery, Director of Communications and Chief Executive Officer have all attended Forum meetings.

Every element of our customer research has been designed with input and challenge from the Forum. All the outputs from our customer research has been shared with the Forum. We have developed a customer challenge log which outlines the challenge we have received from the Forum relating to our ongoing customer research programme. This challenge log can be found in Appendix 5c – Table of Forum Challenges on Customer Engagement Activity.

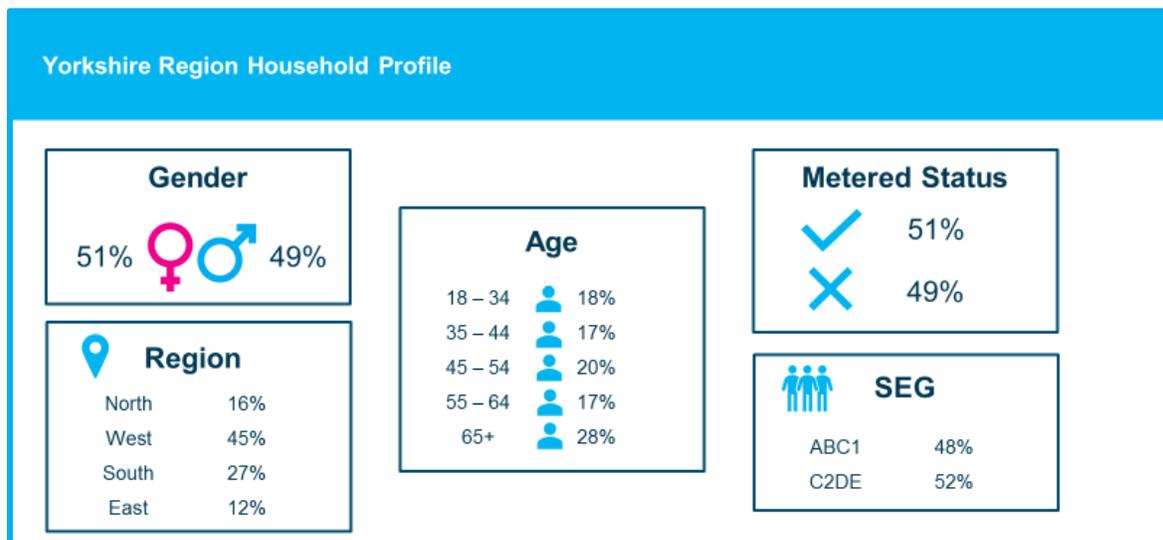
5 Yorkshire Regional Profile

Our ongoing approach to customer participation and engagement is based upon a robust and representative sample of customers. To determine our sample framework for household customers we use the Yorkshire population Census Survey 2011 and for non-household customers we use regional Standard Industrial Classification (SIC) codes.

Household customers

The Yorkshire Water region consists of 5.29 million people and 2.24 million households making up 8.5% of the UK population¹². Yorkshire and the Humber is one of nine official regions of England, and comprises of four sub regions made up of South Yorkshire (27%), West Yorkshire (45%), the East Riding of Yorkshire (12%) and North Yorkshire (16%). Figure 6 outlines the demographic profile for our household customers, this was used to ensure a representative sample of customers took part in our studies.

Figure 6 Household Customers (based on the Census Survey 2011)



¹² Census 2011, Office of National Statistics

The diversity in our region means a 'one size fits all' approach is not always the answer. There are areas of young, old, rural, urban, affluent and poor populations. The population of Yorkshire is diverse, there are significant variations by both the types of people and by the places they live in. In parts of Yorkshire we have areas where English is not the primary language spoken, for example, the 2011 census stated that 27% of the Bradford population were from Asian ethnic groups. In addition, we know that 6% of people in our region do not speak English as their first language, this activates our vulnerability support triggers, especially for customers who live in households with no English-speaking people at all¹³. Our research tells us that these customers are particularly vulnerable in situations where we experience a water quality incident or if we have planned works which might interrupt supply, these customers can miss out on key messages because they do not understand our communications. This is just one example where we must consider our customers unique needs. Understanding these differences has helped us communicate better with our customers, it has allowed us to tailor our services to meet their specific needs and make our customers feel that Yorkshire Water is working for them.

The Office for National Statistics (ONS) Annual Survey of Hours and Earnings (April 2017) highlights another area where Yorkshire is different to the rest of the country. The people of Yorkshire earned roughly 9% less than the UK average weekly wage, in addition, the percentage change from 2016 was 0.8% which is the lowest uplift in the entire country (in 2017, the UK as a whole experienced an average uplift of 2.2% in weekly wages from 2016). Adding more evidence to the plight of customers in our region, analysis completed by Experian on our behalf informs us that, after factoring in housing costs, disposable income, Yorkshire households are on average 12% worse off than other areas of the country. Our findings from the research we have undertaken with customers also support these national and regional statistics that customers are suffering from financial stress and that affordability remains a concern for our customers¹⁴.

Looking at data from the Office for Disability, DWP, 2014 we know that we have over one million people within Yorkshire having an illness or disability causing significant difficulty with day-to-

¹³

<https://www.ons.gov.uk/peoplepopulationandcommunity/culturalidentity/language/articles/languageinenglandanddwales/2013-03-04>

¹⁴ Household Retail Service Level Assessment research, Yorkshire Water, November 2017

day activities. We regard a customer as being vulnerable when circumstances, temporary or permanent, reduce their ability to access or benefit from our services. This is typically due to their physical or mental health, life stage, language, or financial situation. This is another consideration we must take in to account when thinking about our plans and the impact these might have on the lives and pockets of our customers. We estimate that up to 40% of customers on our online community 'Your Water' could be classified as being in circumstances which may make them vulnerable¹⁵.

These regional statistics, not to mention all the evidence gathered through our ongoing customer engagement, paint a very clear picture of the challenges faced in Yorkshire, when compared to the rest of the UK, in particular the affordability challenges that some of our customers are facing every day¹⁶.

5.1 Non-household customers

Yorkshire's economy mirrors its size and diversity, with finance, legal, manufacturing, medical, digital, retail, food, agriculture and nuclear all strong sectors contributing to the region's economy. On top of this, tourism in Yorkshire is worth over £7 billion which is more than the total tourism expenditure of many other countries such as Ireland or Denmark.

With over 140,000 businesses in Yorkshire, the region is home to a number of companies with strong growth and export potential, especially in manufacturing. Yorkshire's economic output of £88 billion is significant, almost 7% of the UK's total economic output.

Yorkshire has a strong industrial legacy and manufacturing remains an important economic powerhouse in the region. At 11.7% of its workforce, the region has the second highest level of manufacturing jobs of any English region. Despite the decline of traditional industries such as coal, steel and textiles, the region has significant industrial capacity, fantastic natural resources and strengths in advanced manufacturing, low carbon, renewable energy, healthcare

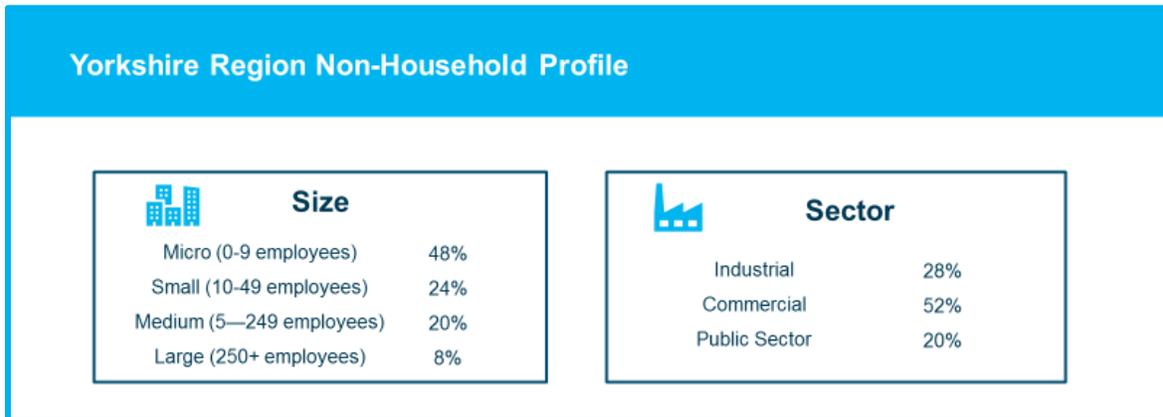
¹⁵ Your Water, Yorkshire Water Online Community

¹⁶

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/bulletins/annualsurveyofhoursandearnings/2017provisionaland2016revisedresults>

technologies financial and business services. Figure 7 provides the regional profile of non-household customers in the region.

Figure 7 Non-Household Customers (based on SIC codes)



6 Innovation in engagement and participation

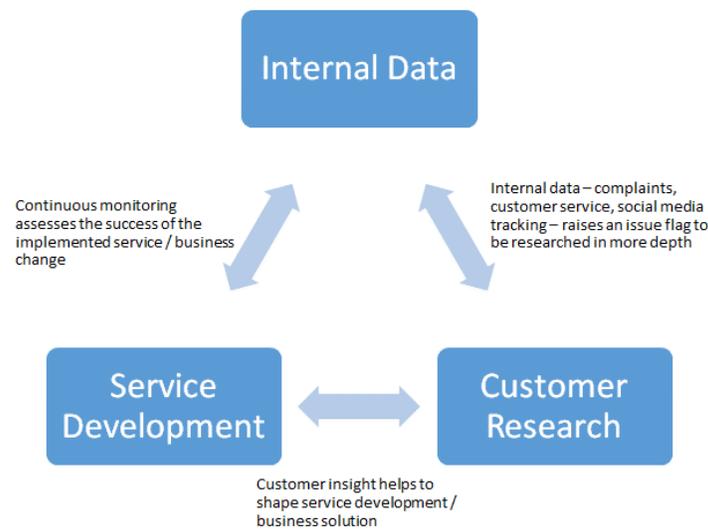
Our customer and stakeholder engagement and participation programme has seen a significant step-change since PR14 and has embraced the FACE model recommended by Ofwat. While much of the programme has employed relatively traditional research approaches, we have introduced a number of distinct ways in which we have evolved and introduced innovative aspects to the way we engage and encourage participation with our diverse customers and stakeholders. Much of our engagement with customers has informed or changed ongoing business activity. The following chapter summarises the innovation in our approach to customer engagement and participation on an ongoing basis and in relation to PR19.

6.1 Triangulation

We have established a much more formal link between our internal data, how this flags persistent issues for further research, generating insights that lead to service improvements and priorities, which are then monitored to gauge success. This represents an ongoing culture change since PR14 and has resulted in some significant and successful initiatives, for example:

- changing campaigns from an awareness focus to a behavioural one;
- the development of our Water Support social tariff; and
- the Fats to Fuel initiative in a problematic area of Bradford which is renowned for sewer blockages caused by pouring significant volumes of cooking fat down the sink.

Our triangulation approach has ensured that all our projects have a customer driven and/or business need. From the outset of our research programme we analysed business data to understand the service areas which caused the largest volume of calls and complaints, and used this data to inform the service areas explored in a number of projects such as Valuing Water and Customer Valuation. Figure 8 overleaf illustrates our approach to triangulation and how this has supported the development of our approach to customer engagement and participation.

Figure 8 Approach to triangulation

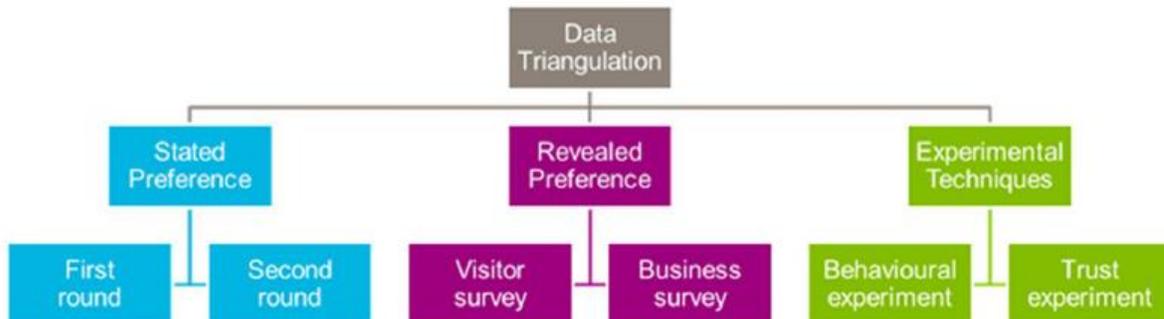
6.2 Customer valuation

Our approach to Willingness to Pay at PR14 followed UKWIR guidelines for undertaking stated preference studies in the water industry. While this approach is valid and respected in the water industry, we felt things had to change this time round namely because of how cogitatively challenging the study was for our customers to undertake in PR14 – interviewers reported that only 74% of domestic customers and 71% of business customers had understood what was being asked of them during the survey.

For validation and to ensure robust values were obtained for our Decision-Making Framework (DMF - see Decision Efficiency Report, Chapter 10 for further information) and our Performance Commitments and Outcome Delivery Incentives (see Performance Commitment and Outcome Delivery Incentives' Appendix), we retained our stated preference studies for Willingness to Pay and Severity studies, however we reinvigorated them and added a much wider dimension to obtaining values for our cost-benefit analysis through triangulation.

Our approach to Customer Valuation included six work packages (see Figure 9) which drew on a range of data to allow for triangulation of results and therefore much more robust values to be included in our DMF for investment planning. All customer valuation reports on how values were obtained from each work package can be found in Appendices 3 to 9.

Figure 9 Approach to Customer Valuation

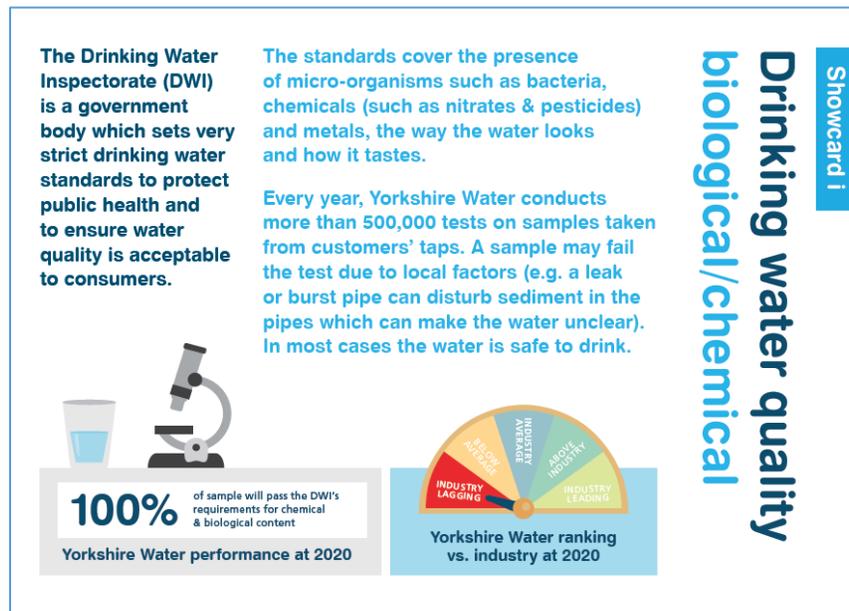


6.3 How innovation has been introduced to Customer Valuation

6.3.1 Stated preference, first round (willingness to pay) and second round (severity study)

- we introduced a new approach to understanding the difference between ‘use’ and ‘non-use’ values for environmental measures (e.g. river water quality);
- the showcard materials used to describe service measures tested we’re created and designed by a graphic-designer to help with cognitive understanding. An example of which can be found in Figure 10;
- in addition, where available, comparative data was provided to customers on these showcards in the form of YW’s ranking in the industry at 2020 (based on PR14 Business Plan submissions); and
- as a result of these improvements to the study, ease of understanding of what was being asked of customers improved from 74% for the Willingness to Pay stated preferences study in PR14, to 91% for this stated preference study.

Figure 10 Example showcard shown to customers in willingness to pay and severity studies



6.3.2 Revealed preference, visitor survey

- simultaneously using revealed (through travel cost data of customers visiting rivers for recreation) and stated preference data (using visual spatial maps with hypothetical water quality differences and asking which is preferred) to inform estimates of the value of river water quality improvements in the Yorkshire region utilising innovative, state-of-the-art analytical methods for estimation purposes; and
- the first of its kind in the UK, this combined data from both customer use (visitors to river water sites) and non-use (non-visitors) values that are derived from river water quality improvements.

6.3.3 Revealed preference, business survey

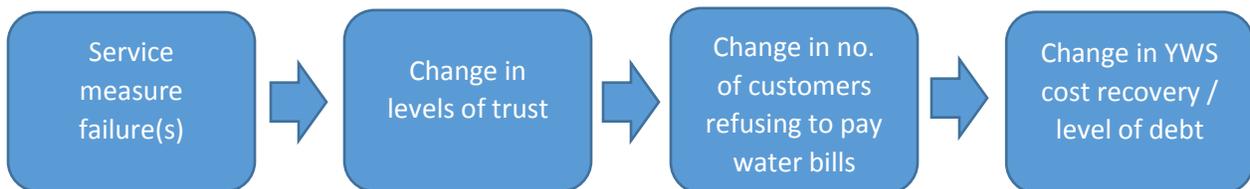
- another innovative methodology, this approach was focused on what businesses actually do when there are issues with Yorkshire Water's service delivery, particularly in terms of the avertive behaviour they carry out and the associated costs incurred to maintain their business operations; and
- these values are based on what businesses pay to compensate or prevent service failure.

6.3.4 Experimental techniques, behavioural experiment

- similar to the stated preference study, the behavioural experiment was a more dynamic and fluid online survey which allowed a number of situational ‘treatments’ or framing effects to be explored with customers. The platform used allowed customers to adjust the performance figures and data using sliders, to select their preferred service level choice, and observe, in real time, the effects this had on their bill;
- the ‘framing effects’ included in the study tested the impact of three alternative ‘treatments’ on the amounts that customers said they were willing to pay. The alternative treatments included:
 - showing customers the impact of bill changes on their disposable income;
 - showing customers comparative information on our performance vs. that of our peers for service levels where data was available; and
 - presenting different ways for the likelihood of events happening e.g. frequencies rather than quantities.
- in addition, customers who undertook this survey were provided with details explaining each of the service level attributes and our current performance on those attributes by using the same showcards created for willingness to pay stated preference study.

6.3.5 Experimental techniques, trust experiment

- following a literature review on the measurement and valuation of trust, it was considered that the most appropriate method was to measure the impact of trust on customer’s payment of water bills. It was felt that this approach would reveal opportunities for us to increase levels of trust amongst our customer base by targeted improvements in service areas, thereby improving cost recovery and reducing debt, as illustrated in the logic chain below:



- Two analytical approaches were used:
 - analysis of company-wide / aggregate data on service measure failures and payment records, essentially modelling service measure failures and bill repayment levels (with trust assumed to be an implicit factor in customers' propensity to pay), then translated into the costs associated with customer payment refusals; and
 - analysis of Customer Tracker survey data, modelling service measure failures on trust and then between levels of trust and numbers of payment refusals, and their value, at a company-wide level.

This six-work package programme of work provided a number of data sources from which to strengthen cost-benefit values entered in to our DMF through a process of triangulation. For a more detailed approach to our customer valuation and triangulation undertaking, please see Section 7.4.

6.4 Customer service and lifestyles segmentation

A significant strand of our research programme has been aimed at gaining a much deeper understanding of the range of customers we service every second of every day and the diversity of their needs.

At the heart of this is Experian's Mosaic segmentation model, which identified 9 core customer segments by lifestage and location. The segmentation provides a broad overview of key lifestage preferences, for example: preferred communications channel, propensity to use digital channels, indications of levels of affordability etc.

The development of our segmentation model has changed the approach we are taking to ongoing customer communications. We are now able to target communications in the right way by understanding who our customers are, and have done so in the case of our goal to reduce sewer blockages caused by incorrect wet wipes disposal in areas where these types of blockages reoccur. As of May 2018, using the learnings from this study, we have a live pilot campaign 'flushing wipes blocks pipes' in very specific 'problem' areas of the region to encourage customers to do their bit and participate in good wipe disposal behavior. The media has been created in these areas to match the media consumption patterns of the customers that

live, for example whether that be via billboards, leaflets or bus stop ads etc. An example of the campaign can be found in Figure 11.

The output from this study has provided a more in-depth understanding of our customers at a local level, including, lifestage and lifestyle factors, media consumption and interaction with companies they deal with. Whilst in its infancy, we hope that improved understanding of our customers will encourage future sustainability of our services through improved customer behavior in affected communities.

Figure 11. Pilot Waste Water Campaign Billboard Message



6.5 Diverse needs

Our ongoing approach to customer and stakeholder engagement has provided us with a better understanding of what people value in their lives and the role water plays in that. We've investigated how customers with different lifestyles rely on water in different ways and we've looked at how some people are much more dependent upon their supply for a range of cultural or medical reasons.

We have asked where we can do better to improve what we do, how we do it and how we can work better with others to make sure that people of Yorkshire get the best all round value for

what they spend on water. We are also aware that people need to have trust in our ability to serve them now and into the future, whatever the conditions.

This is the first time we have been able to engage our customers in this way and has led to the development of our Vulnerable Customer Strategy. It is now undergoing a significant transformation, and as its developed we will continue to consult further with the Yorkshire Forum for Water Customers, CCWater and other stakeholders such as Alzheimer's Society and Citizens Advice Bureau. Customers have actively participated in the development of this and we'll continue to consult with them to ensure we are constantly meeting the diverse needs of our customers both now and in to the future.

6.6 Customer closeness sessions

We have also developed a new approach to customer engagement for PR19 that aimed to provide our Directors and senior management with more meaningful engagement with customers.

We have established a programme of Customer Closeness Sessions with our Directors and customers. These sessions are conducted using a 'speed dating' format whereby our Directors and customers meet face to face to hear first-hand what customers think of our performance their most important areas of service, for example leakage and pollution. We have also held sessions for customers to feedback their views and opinions on our long-term strategy and the PR19 business plan. These discussions along with our wider engagement programme were part of our decision to significantly shift our performance in areas where customers were not happy with our comparative position e.g. leakage and pollution.

We have also set up a social media account, @YWDirectors, which provides customers and stakeholders with news and updates on industry issues our Directors are talking about, as well as providing customers and stakeholders with a direct link to the company's senior management team.

6.7 Community charrette

Outside of London, Hull remains the most at-risk city from flooding in the UK, as evidenced by the devastating floods of 2007. Significant investments have been made by Hull City Council, the Environment Agency, East Riding of Yorkshire Council and Yorkshire Water (over £40m alone on pumping stations) to help protect the city. Even so, managing water effectively remains a challenge that could undermine the ongoing transformation of the city under a 10-year regeneration strategy. In 2016 Yorkshire Water published “Water Culture”, a catalyst for discussion about an innovative water resilient future for Hull and the East Riding. This led to the Living with Water partnership and a vision to make the Hull and Haltemprice area an international exemplar for living in harmony with water.

In September 2017, the partnership brought together local stakeholders together with national and international experts for a two-day charrette to explore the vision and set out an ambitious plan for the future. The partners are now developing innovative solutions to reduce flood risk using a jointly owned, integrated flood model. To inform the long-term approach the partnership will be one of only five cities globally to develop and pilot a new City Water Resilience Index working with the Rockefeller Foundation.

6.8 Cross sector working to understand our future customer priorities

We have also been working with other organisations to better understand the needs of our future customers. Working with Infrastructure North, we commissioned a joint project with Northern Gas Networks, Northern Powergrid and Northumbrian Water to mutually explore shared issues which will impact, or be of interest to, future customers. The outcome of this activity provided us with a better understanding of future customers priorities including affordability, innovation and environment. The project also explored expectations, needs and wants in terms of communication, engagement and updates from energy and water providers.

6.9 Total Impact Value Assessment

Total Impact Value Assessment (TIVA) is the name for our work to enhance our understanding of our impact on customers and the environment, both positive and negative. TIVA goes beyond traditional approaches by applying a mix of best practice accounting, economic and

sustainability techniques to quantify our impact throughout our value chain. This innovative approach is providing a broader view of the risks to our services and the value we create. It is also highlighting opportunities to enhance our impact and value, and the inherent trade-offs that need to be considered when making decisions.

We have already started using this insight to help shape our long-term strategy and current activities¹⁷. We also see opportunities to use this work to engage our customers about their contribution, and to help them better understand us so they can continue to co-create and co-develop our plans to suit their priorities.

6.10 Ownership and nationalisation

In the run up to the general election in June 2017, the water industry became a topic of debate. Despite the significant progress made by the sector since privatisation, part of the Labour party manifesto included promises to the public regarding renationalising water companies (as well as other utilities and the railways). This promise of renationalisation sparked huge public interest and caused customers and stakeholders to question the legitimacy of water company ownership and structures.

Support for renationalising the water sector came from a study on nationalisation of water and utilities more generally. However, whilst the research provided a national view, it did not identify why public opinion was so pro-nationalisation and there were no regional differences drawn out to provide context.

This bespoke project provided a great deal of insight about our customers thoughts on us, our comparative performance, our company and financial structure, director remuneration and our payment of taxes. The findings concluded that, whilst customers are happy with the service they receive (given they have the second lowest bill in the country), they felt they know very little about us and the investment being made by the company, especially locally. Customers felt that an area where we could improve was in openness and transparency, particularly given our monopoly status. Putting customers interests first, and proactively highlighting when switching

¹⁷ Our contribution to Yorkshire, An assessment of the impact we have and the value we create for society, May 2018 (www.yorkshirewater.com/capitals)

to a meter will save customers money was an example whereby customers felt we could be more open and transparent with customers.

An outcome as a direct result of this customer engagement is our new proactive metering strategy initiative whereby we are targeting 100,000 customers who live in a property with a high rateable value but with a small number of occupants. These 100,000 customers will be contacted by us and offered a two-year trial of a water meter. During the trial period, we will assess if those households have saved money and if not, they can be switched back to their old rateable value tariff. If the pilot project is successful, we are looking at rolling out to all unmetered customers as part of our "price promise" for the next five-year period. We have committed to reviewing the accounts of approximately 650,000 unmetered customers to identify those who might be better off on a water meter. This is the first initiative of its kind in the water industry and we are proud to be investigating the benefits of this to its customers all as a result of our customer engagement. The findings of this study have also aided the formation of our Openness and Transparency charter.

6.11 Citizen regulation and openness charter

Our Valuing Water research told us that customers expect more transparency from us than they do with any other organisation they deal with, this is specifically due to the fact that customers cannot go elsewhere like they can for all other household utility suppliers.

Given this, and the participation of our customers in the development of our Big Goals and Performance Commitments 2020-2025, we are opening up access to all our service operation information by 2020. We are currently working with the Leeds Data Mill and Open Data Institute to support this customer driven initiative. One early exercise we undertook to get the initiative off the ground involved holding our first open data event where we discussed issues around leakage and pollution. We are the first in the water sector to commit to an 'open by default' data approach.

By becoming 'open by default', we want to empower citizens to take 'action' and scrutinise data and create a new cohort of "citizens regulators" holding us to account on our performance. In the future, customers may have the ability to create their own service dashboards, giving them control over tracking the company's performance in areas which matters to them the most. We

also aim to stimulate innovation, by encouraging outside experts to look at operational performance and identify new and innovative solutions to traditional industry issues. It is hoped that in the future, this could help spur the development of data tools such as water use apps which could be used to incentivise customers to reduce future consumption.

Working with Leeds Open Data Institute, we introduced a programme of participation events which give users the opportunity to look at our performance data and tell us what the priorities for future data release should be.

Another first for the water sector, we have also committed to strengthening public trust in the water sector through the release of our own 'Openness Charter'. The Openness Charter will mean stakeholders and the public can easily access a variety of company data such as tax arrangements, directors' remuneration packages, gender and ethnicity pay gaps, pollution, sewer flooding and leakage performance etc. As of June 2018, we are publicly consulting with customers and stakeholders to ensure the Charter reflects customers and stakeholder views on the data that should be published.

7 Approach to customer and stakeholder insight

In planning our PR19 customer and stakeholder engagement and participation we took account of the lessons learnt at PR14 and looked across other sectors for examples of best practice. As a result of this activity, we have undertaken a step-change in our ongoing and continuous customer engagement. From the outset we knew that we wanted a much better understanding of our diverse range of customers and a stronger view on customers financial and emotional position in the current economic climate.

Our programme of work incorporates our ongoing engagement and an understanding of the major issues facing our customers today as well as a good understanding of the niggles customers have with our service whether that be understanding the bills the receive or operational failures.

Figure 12 outlines the approach we have taken so far for ongoing and PR19 specific engagement undertaken since the last price review. Figure 12 also highlights the difference in engagement undertaken for PR14 vs. PR19. The boxes highlighted with a red outline provide the extent of the engagement programme at PR14, whilst this was robust, the step-change is very obvious from looking at Figure 12. In fact, the figures speak from themselves, in PR14 we spoke to circa 8,000 customers through our engagement programme, for PR19, we are on course to engage with circa 30,000 customers through the programme of work. This figure includes engagement with our most vulnerable customers in the region – from those who are terminally ill; to those who have long-term illnesses; to those who experience transient illnesses; to our elderly customers; to our ethnic minorities; and, our low-income customers.

The programme also included engagement with our business customers; our future customers; our stakeholders; our customer representative bodies such as Age UK; and finally, with Retailers operating in the region. This engagement programme allows us to be confident that our customers, stakeholders and colleagues wants, and needs are truly at the heart of our business plan.

Figure 12 Visual of programme of work carried out since PR14



This ongoing programme of research has informed the creation and development of our long-term strategy consultation document, our package of Big Goals, Performance Commitments and Outcome Delivery Incentives. For a high-level overview of the approach taken to ongoing customer research see Appendix 5b. For a view of how our engagement has informed the development our Big Goals, Performance Commitments and Outcome Delivery Incentives, please see the 'Performance Commitment and Outcome Delivery Incentives' Appendix.

7.1 Domestic tracker

For almost a decade now, we have been running an independent monthly domestic customer perception tracking survey. The tracker consults 300 customers every month or 3,600 customers across a year.

7.1.1 Methodology

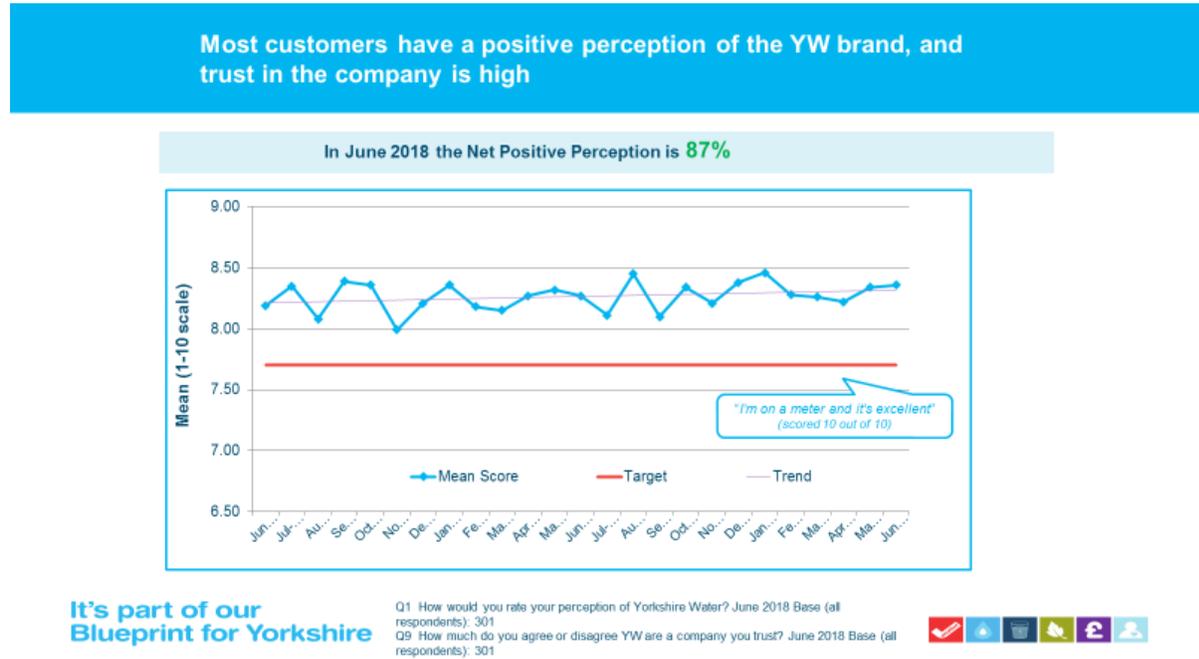
The tracking survey uses a telephone methodology to contact 300 customers on a monthly basis. The survey is 8-10 minutes in length and is undertaken with a representative sample of customers from across Yorkshire. For the most part, questions are kept consistent year on year to ensure longitudinal tracking of key metrics e.g. perception, value for money, trust, satisfaction with services provided.

Often new questions are added to explore customers thoughts on specific business issues or to keep abreast of industry trends.

7.1.2 Key insights

Longitudinal tracking has told us that customers have a very positive perception of the company, Figure 13 from June 2018 demonstrates that company perception rarely falls below 80% positive.

Figure 13 Customer perception June 2018



Consistent tracking allows us to understand changing customer trends either positive or negative. This allows us to identify any decline in satisfaction early which allows us to adjust business processes to improve service provision before it comes a wider problem.

7.2 Valuing Water

Valuing Water was the first view of customers' and stakeholders' priorities for both long and short-term service improvement and direction. The insights derived from the study would help to inform the early co-creation of the long-term strategy, as well as the PR19 business plan.

A multi-method approach was used to explore the value customers place on our services as well as, customers expectations and aspirations for us and the services we deliver as we move in to business planning for 2020-2025 and beyond.

7.2.1 Methodology

Stage 1 – qualitative

We undertook seven focus groups and 14 in-home interviews, including five interviews with vulnerable customers.

Stage 2 – quantitative

The quantitative stage included a 20-minute online survey with 1,500 customers and 50 face-to-face interviews with vulnerable customers. This stage was repeated on Yorkshire Water's online community, Your Water, with 219 customer responses.

7.2.2 Key insights

Customer understanding and engagement

Engagement with and understanding of water provision is generally low, therefore, the challenges we might face are not top of mind for most customers. While few customers have given thought to how their water actually reaches them, most customers are conscious of their water usage.

Engagement with the cost of water services also remains low. We see subtle differences between metered and unmetered customers, with the latter more likely to see water bills as good value compared to other household bills. Customers typically look at bills annually.

More than 8 in 10 customers are satisfied with us overall. Customers cited great quality water and value for money as key areas of satisfaction.

Trust and expectations of big businesses

Customers generally feel that big businesses should make contributions to society. This view is driven by the perception that big businesses make enough money from society, so should help society function. Customers felt that water companies have more of a 'duty' to contribute to society than other businesses, given their pivotal role in society and relationship with the natural environment. This was also influenced by the fact that Yorkshire Water is a monopoly and customers are not able to go elsewhere for their water and waste water services.

Economic outlook is uncertain, even for those who are more optimistic about their financial futures. Post-recession, trust in large businesses has eroded with customers feeling more distant from corporations. Customers commented that for businesses to stand out, they must be transparent and honest. They also expect businesses to be able to engage in genuine dialogue through proactive communication and customer service.

Despite this wider attitudinal shift, Yorkshire Water is well respected and trusted. This is reflected in positive experiences of any interaction, despite interactions being infrequent. Though it should be noted that some customers raised issues with the service, voicing that it can be inconsistent at times e.g. very helpful for some communities, but less so for others.

Overall, customers consider the business to be proactive, provide good communications, deliver a service which is value for money, as well as being respectful of the environment.

Customers prioritised challenges to the water sector

Customers perceive future challenges for water companies to include:

- reducing water wastage and leaks;
- ensuring appropriate plans are in place to service a growing population and cope with climate change;
- focus on flood management and flood defences; and
- working with partners and ensuring measures are in place to protect water quality.

Services that have obvious and tangible benefits to customers are prioritised

When prompted, top-of-mind priorities for customers are the core services of safe, reliable water supply and management of sewers.

For the quantitative element of the research, a trade-off method was used to create a hierarchy of customer priorities. A score of 100 indicates a service of average importance, with increasing scores becoming more and more important. Anything below 100 is less important and is not included Table 2 below.

Table 2 Hierarchy of customer priorities

Areas of importance	Hierarchy of customer priorities
<p>Primary areas of importance</p> <p>Customers feel that prioritising the provision of clean drinking water that tastes good and can meet current and future demands should be of essential importance to Yorkshire Water.</p>	<ul style="list-style-type: none"> • Providing water that is safe to drink - 305 • Ensuring there is enough water to meet demand now, and in the future – 229 • Providing water that tastes and smells good, and is not discoloured - 196
<p>Secondary areas of importance</p> <p>Preventing homes from flooding, preventing accidental pollution and preventing leaks are the next most important priorities.</p>	<ul style="list-style-type: none"> • Preventing homes and businesses from sewer flooding - 147 • Preventing accidental pollution from sewerage pipes – 135 • Preventing leaks from Yorkshire Water’s pipe network - 126
<p>Tertiary areas of importance</p> <p>Capacity for dealing with flood events, prevention of interruptions and providing a good constant water pressure are the final tier of priorities identified.</p>	<ul style="list-style-type: none"> • Providing appropriate sewer capacity and pumping capabilities to cope with flood events - 126 • Prevent interruptions to the supply of water (e.g. planned works, burst pipes, leaks and outages) that cause problems ranging from low pressure to no water – 115 • Providing good and constant water pressure – 105

Water bills

When compared to other household bills, such as rent, electricity and council tax, water is considered to be of lower importance. Just over three quarters of customers feel their bills are reasonable, although half of customers are unwilling to pay extra for service improvements.

If investments are need for future improvements, 70% of customers would want to spread these costs across generations.

7.3 Comparative performance

The Comparability of Data and Long-Term Aspirations research project sought to understand how customers view the performance of our current service levels across a number of service measures vs. the performance of other water and water and waste water companies, and in the context of the average bill value. The overall objective was to understand customer views on current performance and where they would like to see our performance in the future.

7.3.1 Methodology

A qualitative approach was used to explore in depth the views of key customer groups on our performance. This qualitative research was adapted to be repeated and quantified on our online research community, Your Water. This stage of the research provided supportive results based on numerical data. Figure 14 below provides a summary of the methodology:

Figure 14 Approach to undertaking the comparative performance research



7.3.2 Key insights

Customer engagement with Yorkshire Water

Good customer service and value for money drove positive perceptions of the company. We are seen by customers as reliable, good quality, and superior to other utility companies.

Lack of supplier choice was not seen to be an issue, given that customers were generally happy with the service we provide, and they saw no need to shop around. While this is positive, it does point to a lack of customer engagement, with customers admitting to having very little knowledge of us.

Limited knowledge of us contributed to questions around transparency. Although, customers acknowledged that they are not motivated to become informed and did not believe that we

deliberately set out to conceal things from them. All things considered, trust in the company was high.

Customer views on Yorkshire Water's performance commitments

Customers were generally satisfied with our services and Performance Commitments (PCs), with all PCs deemed to be relevant and without omissions. Many customers trusted us to set sensible targets, while Ofwat's involvement offered further reassurance.

Performance commitments could be made more transparent. Suggestions for improvement include:

- using well-designed visual materials to promote engagement;
- better explaining the relevance of PCs to customers; and,
- using a combination of numbers and proportions to contextualise and improve clarity e.g. 1,872 incidents occurred last year, with 3% of customers affected.

As seen in Table 3, customers prioritised PCs related to household service and individual health. Although lower in ranking, looking after the environment, good customer service, and minimising bursts/leaks were still important to customers.

Table 3 Hierarchy of customer performance commitment priorities

Rank	Performance commitment	
1	Drinking water meets quality standards	
2	YW delivers consistently high quality water	
3	YW delivers a consistent amount of clean water	
4	YW keeps major pollution incidents to a minimum	
5	YW keeps internal sewer flooding to a minimum	
6	YW delivers a consistent level of sewage removal	
7	YW keeps external sewer flooding to a minimum	
8	YW customers are satisfied with value for money	
9	YW keeps sewer collapses to a minimum	
10	YW delivers a consistent level of sewage treatment	

Customer views on Yorkshire Water's performance against targets

This research measured customers perceptions of our performance (uninformed) as well as their views on actual performance (informed). To enhance transparency, our data was then shown alongside the performance data of other water and sewage companies and set in the context of the cost of the average customer bill vs. that of other water and sewerage companies¹⁸.

Uninformed views

Customers were initially unaware of our current performance. Customers typically assumed that we were meeting most, if not all of our targets. Just 2% of customers expected our performance to be below average on a number of measures.

¹⁸ Industry performance data obtained from Discover Water website

Informed views

Once informed of our actual performance, 90% of customers were satisfied with current performance. A small number suggested that targets might not be challenging enough, given our positive performance, though most trusted that targets were deemed sensible.

Customers were concerned about the failure to meet drinking water quality standards, given its importance and close association with health. However, on reflection, most agreed the difference was marginal (0.01%) and nothing to worry about. Overall, there was little concern around our underperformance on three measures¹⁹.

Customer perception when compared against industry performance and bills

When compared to the wider industry, our underperformance was seen as more drastic. Even measures that were on target were brought into question and customers were likely to increase support for more stretching PCs. Customers believed that we should be at least industry average across all measures and expected speedy improvement on 'industry-lagging' PCs.

Although disappointed, some customers dismissed the information given that they were happy with the service they receive or acknowledged that they were unable to change supplier anyway.

Customers were more accepting of our performance, upon learning that they received the second lowest bill across the industry. Customers implied that lower bills contributed to the below average status of some measurements but paying more to improve performance received mixed responses (willingness to pay was typically linked to customers' satisfaction with their current services).

Considerations for the future

Although customers were generally happy with our current performance there was a call for improvements across many PCs. Ideally, Yorkshire Water would be industry average or above on most measures, with the majority of customers willing to accept higher bills providing they did not exceed the national average and resulted in real improvements in key measures.

¹⁹ Numbers presented to customers at the time based on 2015/16 performance data

There was strong support for Ofwat to continue setting the targets they currently set as this provided reassurance that an essential service was being regulated. Customers supported Ofwat widening the range of common performance measures to include a measure of resilience (providing this takes into account any regional/geographical variations), and more measures for core services related to health risks and waste e.g. sewer collapses and burst mains.

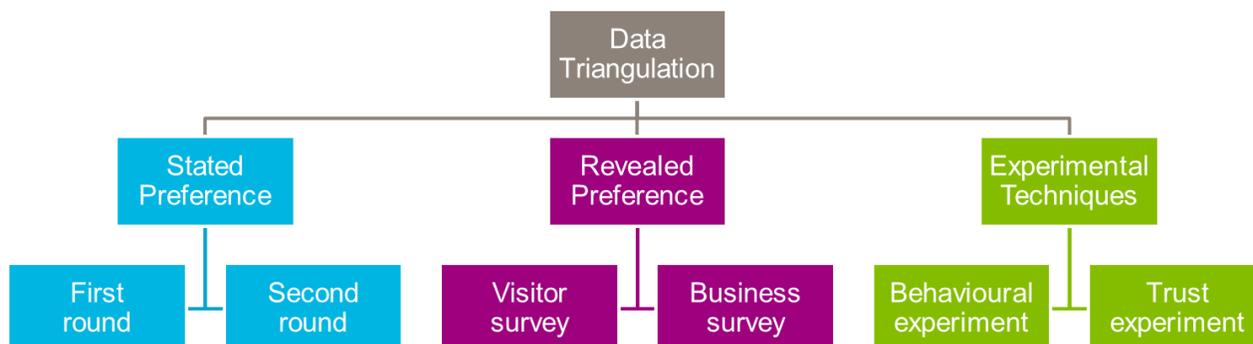
7.4 Customer valuation and triangulation

Our approach to Willingness to Pay at PR14 followed UKWIR guidelines for undertaking stated preference studies in the water industry. While this approach is valid and respected in the water industry, we felt things had to change this time round namely because of how cogitatively challenging the study was for our customers to undertake in PR14 – interviewers reported that 74% of domestic customers and 71% of business customers had understood what was being asked of them during the survey.

For validation and to ensure robust values were obtained for our Decision-Making Framework (DMF - see Decision Efficiency Report, Chapter 10 for further information) and our Performance Commitments and Outcome Delivery Incentives (see Performance Commitment and Outcome Delivery Incentives' Appendix), we retained our stated preference studies for Willingness to Pay and Severity studies, however we reinvigorated them and added a much wider dimension to obtaining values for our cost-benefit analysis through triangulation.

Our approach to Customer Valuation included six work packages (see Figure 15) which drew on a range of data to allow for triangulation of results and therefore much more robust values to be included in our DMF for investment planning. Detail on all work packages, including how triangulation was undertaken can be found in Appendices 3 to 9.

Figure 15 Approach to customer valuation



Each of these six work packages adopts an innovative approach to understanding customer’s values which provide a comprehensive picture of customers’ priorities. A summary of the key aspects of each work package, its innovations and outputs are set out in Tables 4 to 9.

Table 4 Overview of work package 1 - First round stated preference

Aims	Innovations	Outputs
Estimate customer values for 13 service measures (e.g. drinking water quality, internal sewer flood events, and pollution incidents)	<ul style="list-style-type: none"> • New approach to understanding the difference between ‘use’ and ‘non-use’ values for environmental measures (e.g. river water quality) • Use of imagery and more sophisticated presentation of comparative information to allow better understanding of customers’ values 	£ estimates for a unit change in each of the service measures for household and business customers at base level severity

Customer sample size = 1,500

Table 5 Overview of work package 2 - Second round stated preference

Aims	Innovations	Outputs
Estimate customer values for different severity levels across 10 service measures (e.g. 3-6 vs. 24-	<ul style="list-style-type: none"> • Use of imagery and more sophisticated presentation of comparative information to allow • Use of treatment groups to test how framing the questions in different ways impacts customer values 	Odds ratios to be applied to base level values to estimate £ values for different severity levels making, and calibration of Stated Preference values

Customer sample size = 1,200

Table 6 Overview of work package 3 - Revealed preference visitor survey

Aims	Innovations	Outputs
Estimate customer values for 13 service measures (e.g. drinking water quality, internal sewer flood events, and pollution incidents)	<ul style="list-style-type: none"> • New approach to understanding the difference between 'use' and 'non-use' values for environmental measures (e.g. river water quality) • Use of imagery and more sophisticated presentation of comparative information to allow better understanding of customers' values 	£ estimates for a unit change in each of the service measures for household and business customers at base level severity

Customer sample size = 2,000

Table 7 Overview of work package 4 - Second round stated preference

Aims	Innovations	Outputs
Understand the actual expenditure of businesses in Yorkshire on water service related devices e.g. pumps, filters, and back-up supplies to alleviate water services failures	<ul style="list-style-type: none"> • One of the first times data for actual expenditure on service quality/reliability has been analysed for the water sector • First time this approach has been used in investment planning 	Odds ratios to be applied to base level values to estimate £ values for different severity levels making, and calibration of Stated Preference values

Customer sample size = 1,000

Table 8 Overview of work package 5 - Behavioural experiment

Aims	Innovations	Outputs
Pilot a new approach to understanding customer values and explore the impacts of different ways of framing questions	<ul style="list-style-type: none"> • Surveys allow customers to select their preferred level of each service instead of being presented fixed options • Use of treatment groups to test how framing the questions in different ways impacts customer values 	£ estimates for each of the service measures, broader understanding of customer decision making, and calibration of Stated Preference values

Customer sample size = 2,000

Table 9 Overview of work package 6 - Trust experiment

Aims	Innovations	Outputs
Explore whether there is a quantifiable relationship between levels of customer trust in YWS and costs of customer debt	<ul style="list-style-type: none"> • Area of research which has never been explored • Making a contribution to the growing understanding of the importance of 'social capital' 	£ estimate of the value of 'trust' to Yorkshire Water

Customer sample size = 62,000

The results from each work package were brought together for comparison and triangulation in order to provide the most appropriate set of values to be included within the DMF and from which to base our Outcome Delivery Incentives upon. In addition to the value estimates derived through each of the six work packages, the triangulation process also included data from PR14 and PR09, as well as the Benefits Transfer exercise undertaken as part of the DMF work stream.²⁰ Our triangulation report can be found in Appendix 5d.

The framework set out in UKWIR (2016)²¹ was used to triangulate the values from the different data sources (see Table 10).

²⁰ AECOM (2017) Integrating natural social and human capital into the SMF - Valuation Methodology V0.22

²¹ UKWIR (2016) Setting performance commitments and incentives to deliver best value for money, UKWIR Report Ref No 16/RG/07/39

Table 10 Framework for triangulation of values set out in UKWIR (2016)²²

Factor	Value 1 Stated Preference £10.25	Value 2 Revealed Preference £2.00	Value 3 Experimental Approach £7.50
Statistical robustness	High – statistically significant sample	Medium – not clear how widely substitute good is used	High – statistically significant sample
Psychological robustness	Low – answers likely to be affected by loss aversion, social norms	High – substitute purchase	High – observed choices in “real life” situation rather than Stated Preferences
Consistency of track record or time series	Available within £9-11	Reasonably constant over time	Unknown
Correlation with qualitative evidence	Qualitative evidence may suggest lower priority than attributes with lower WTP	Aligned with qualitative evidence	Aligned with qualitative evidence
Implication of using this value	Would lead to CBA and ODI results consistent with previous price control	Would lead to lower target and incentive rate than in previous price control	
Completeness of value	Likely to include some altruistic valuation	Focused on one aspect of service, and the direct impact, may not be complete	Focused on one aspect of service, and the direct impact, may not be complete
Recommended value	Choose a weighted value based on the positives and negatives of each source		

²² UKWIR (2016) Setting performance commitments and incentives to deliver best value for money, UKWIR Report Ref No 16/RG/07/39

This approach therefore used a multi-criteria decision analysis to compare values on the basis of factors such as statistical validity, cognitive validity, track record, relationship with qualitative evidence, and completeness. A view was then taken of the positives and negatives of each method and a recommended value was selected.

Given that this is a new and emerging area with little precedent for setting out the most appropriate techniques to use in practice, it was agreed that the approach to triangulation would be to include as broad a range of values as possible from across the data sources, even though there are significant variances between the results and significant differences in the methodologies used across work packages. We are aware that there are other potential approaches to triangulation of values which would provide different results.

Regarding the values that were selected for the DMF, the rationale for selecting the values and combining them was to do with our capitals approach to investment planning. Given this, it was recommended that we distribute the customer values obtained from triangulation (see the triangulation report in Appendix 5d) across the relevant components of the capitals (e.g. quality of place, local economy, health & safety, etc) for each service measure. Since the DMF does not distinguish between household and business customers, in some cases we also had to derive weighted values to reflect the relative proportion of household vs. business customers in the aggregate value. We have compiled a valuation methodology that sets out in detail how every value in the DMF was derived from the WTP values (see Decision Efficiency Report, Chapter 10 for further information).

7.4.1 Stated Preference study

The aim of this work package was to estimate the value domestic and business customers place on changes in service measures using Stated Preference survey. Service levels were identified for exploration in the study by reviewing call volume and complaints data, business needs and the results of our Valuing Water study. Values were derived for each of the chosen service levels to help determine potential areas for investment in business planning for PR19.

Given our experience of undertaking Stated Preference surveys at PR14, we knew from the outset that we wanted to undertake a traditional Stated Preference for consistency with previous price reviews and to provide an additional data point for triangulation to add to the rich and

robustness of the data submitted in to our DMF for cost-benefit reasons. Our willingness to pay stated preference experienced a significant overhaul vs. that which was undertaken at PR14, and here's how:

- expertly graphically designed show-card stimulus to aid customer understanding of the service measures included;
- introduced 'use' and 'non-use' values; and
- introduced comparative data (where possible) to provide context to the findings.

7.4.1.1 Methodology

The research adopted a quantitative methodology on the whole although a cogitative pilot study was undertaken online (50) and face-to-face (10) with customers upfront to validate the survey design, explore customer understanding and ease of completion. The main quantitative survey was undertaken with a regionally representative sample of domestic customers, these were conducted both face to face and online, 1,020 domestic customers were surveyed in total. Surveys with business customers were undertaken using both face to face and online methodologies also, a total of 542 business customers were surveyed.

7.4.1.2 Key Insights

The below outlines a number of significant findings from the study which will inform future studies undertaken:

- one of the greatest achievements from this study was with customer comprehension of what was being ask of them – in PR14 only 74% of domestic customers and 71% of business customers agreed that they understood what was being asked of them when undertaking the survey, given the improvements made to the survey (outlined above), ease of understanding rose to 91% for domestic customers and 90% for business customers for our PR19 survey;
- the findings outline that levels of WTP are lower than in previous years; with 42% of household customers falling into the financially vulnerable category and high preferences for the status quo, this study is reflective of the current economic climate and such constraints on WTP was taken into account when investment planning;

- analysis of WTP estimates and data by sub-groups including demographics, socio-economic groups, vulnerable definitions, and prior service experience failure, shows the WTP ranking per service measure remaining largely consistent across analysis groups, with taste, colour, and smell of drinking water consistently having the highest WTP estimate value, regardless of group; and
- customers experiencing the following service failures have a higher WTP for this service measure, than those who haven't: sewer flooding inside properties; a leaking water supply pipe close to your property, restriction on how you can use water e.g. a hosepipe ban.

A detailed report outlining our approach to this stated preference study, including the findings and the values obtained can be found in Appendix 5e.

7.4.2 Severity study

This work package follows on from our household and business customer stated preference surveys (Work Package 1). In this work package, different severity levels were tested with a smaller set of 10 key service measures (compared to 13 tested in Work Package 1). This phase focused on household customers only as it was assumed that the values from household customers for the different severity levels will be transferrable to business customers. The work package aimed to quantify customer preferences for service levels by completing choice experiments conducted in a survey format.

7.4.2.1 Methodology

A choice experiment and a MaxDiff approach of stated preference were adopted in this study to prioritise levels within the service delivery. This work package involved undertaking a quantitative survey of household customers, conducted using a combination of face-to-face surveys and an online panel with a representative sample of 1,216 customers with a split of 901 online and 315 face-to-face. The survey was conducted with (three) split samples; with each group tasked with a choice experiment exercise focussing on one of the three key service areas:

- water quality and interruptions;
- sewer flooding and odour; and,
- environmental

7.4.2.2 Key findings

For the water quality and interruptions group, the findings show that the severity level that customers would most wish to avoid is a failure in water quality that leads to health risks, this finding is consistent with customers across other studies we have conducted.

For the sewer flooding and odour group the findings show that the highest levels of avoidance is for sewer flooding which causes social disruption e.g. to hospitals and schools.

For the environmental service areas tested, the highest levels of avoidance was for pollution incidents which have a significant long-term impact on the environment; altering the smell and look of the water affected and having a substantial impact on aquatic life e.g. a loss of over 50% of the fish population and damage to spawning areas for species such as salmon and trout.

The three service levels customers most want to avoid overall are:

- sewer flooding causing social disruption e.g. disruption to hospitals and schools;
- 4 in 10,000 samples of tap water seriously fail government standards affecting public health e.g. causing stomach upsets; and
- a significant long-term impact on the environment altering the smell and look of the water affected and having a substantial impact on aquatic life.

When looking at differences between sub-groups, it becomes apparent that customers who fall into the definitions of vulnerability are more likely to want to avoid the three service level areas that have the highest levels of overall avoidance.

Customers who have experienced a (similar) issue to those top three service levels are more likely to want to avoid than those who haven't had the experience.

A detailed report outlining our approach to this the severity study, including the findings and the values obtained can be found in Appendix 5f.

7.4.3 Revealed Preference Study: River Water Quality

The aim of this Customer Valuation project was to develop estimates of the welfare values of river water quality improvements in the Yorkshire region. The work package focuses particularly on deriving a monetary value for the benefits of river water quality improvements to our customers living in the region. The outputs derived from this study provided a data point which can be triangulated with other work packages from the project to provide a more robust figure for our DMF in investment planning.

There are at least two ways in which individuals might directly benefit from improved rivers. Firstly, improvements might enhance the experience of recreational trips to rivers. Secondly, individuals may value the improvements not because they use those rivers for recreation, but simply because they prefer a world in which the region's rivers are of high water quality. Economists define this distinction as being one between 'use' values (in this case, arising from recreation) and 'non-use' values.

The aim of this work package was to bring together revealed and stated preference data to inform estimates of the value of water quality improvements in the Yorkshire region.

The core of that data derives from a large-scale survey undertaken in the region in 2008 as part of the RELU-funded Catchment Hydrology, Resources, Economics and Management (ChREAM) project.

While the data have been subject to some previous analysis, only recently have the research team developed the analytical methods that allow for the simultaneous analysis of the revealed and stated preference data.

Indeed, one of the major achievements of the research presented in this work package is the estimation of models from the combined data that coherently inform on both the use and non-use values that are derived from water quality improvements.

7.4.3.1 Methodology

This work package involved two approaches to quantifying and valuing the benefits our customers' receive from changes in river water quality:

- a model of recreational choice behaviour was built using a dataset which recorded the observed recreational choices of 1,805 customers. A travel cost model approach was used to determine the trade-offs customers are prepared to make between the quality of the recreational site visited and the cost of travelling to that site. This model informed estimates of how households value environmental qualities and can be used to predict how their welfare might change if, for example, the river water quality at one or more recreational sites were to change; and
- the same 1,805 customers expressed their values for water quality improvements in a stated preference exercise. The approach adopted in this work package was that of a Visual Spatial Choice Experiment (VSCE); where hypothetical scenarios are presented to respondents in the form of colour-coded and annotated maps. In a VSCE, respondents are presented with a selection of such maps each illustrating a different spatial pattern of quality change and each associated with some particular cost. Of those on display, respondents are asked to identify which costly pattern of quality change is their most preferred.

7.4.3.2 Key Findings

The generic values indicate that a one category increase in river water quality over a 1 km extent of river has an annual welfare value of around £85,000 to households in the Yorkshire Water region. Of that total value, around 10% is derived from recreational use of rivers the remainder coming in the form of non-use value.

The generic welfare values scale roughly in proportion to the extent of river improved such that one category improvements to 10 km of river deliver roughly £850,000 of value per year and 50 km of improved river delivers roughly £4 million of value per year.

A detailed report outlining our approach to this revealed preference river water study, including the findings and the values obtained can be found in Appendix 5g.

7.4.4 Revealed Preference Study: Business Customer Avertive Behaviour

The aim of this work package is to quantify the values of a range of metrics for businesses residing in Yorkshire who use water and waste water services using a revealed preference survey. The approach adopted in this work package is focused on what businesses actually do when there are issues with service delivery, particularly in terms of the avertive behaviour they carry out and what costs are incurred. Values are therefore derived based on what people actually do rather than what they say they would do in response to hypothetical scenarios as is the case for stated preference surveys. The outputs derived from this study provided a data point which can be triangulated with other work packages from the wider Customer Valuation project to provide a more robust figure for our DMF in investment planning.

7.4.4.1 Methodology

The first phase of the research involved 15 in-depth interviews with businesses to explore how they perceive water service issues. The results were used to inform a survey of businesses which collected information on the incidence of a range of water supply issues and on what businesses did as a consequence; including whether they contacted us and by what method. The questionnaire looked at a number of service measures which included different types of possible avertive behaviour shown under each measure (see Table 10). Information was then collected regarding how much the business had spent on each measure. Data for the main survey was collected through a telephone survey using a sample from Experian's Business Database which is the most extensive of its type in the UK.

A total of 1,000 businesses completed the survey during September and October 2017. In order to make sure that a robust sample was collected; quotas were set on the basis of Industry Type (SIC), geographical sub-region, and business size. The data was then weighted so that it matched the actual market composition in terms of these variables, as revealed by the Experian Business Database prior to analysis.

Table 11 Avertive Behaviours explored by service measures

Drinking water taste, odour, and appearance	
• Buy bottled water	• Purchase/use fridge with dispenser
• Purchase/use water coolers	• Develop own spring/borehole
• Purchase/use jugs with water filters	• Boil/cool before use (not for use in cooking/hot drinks)
• Purchase/use kettles with water filters	• Use water purification tablets
• Purchase/use tap/under sink filters	• Use water softening products (e.g. tablets)
• Other	
Water quality	
• Purchase insurance to cover losses from disruption	• Invest in measures to monitor water quality
• Other	
Disruptions to water supply	
• Purchase insurance to cover losses from lack of supply	• Develop/purchase water shortage facilities
• Purchase bottled water for emergency use	• Purchase/hire temporary toilet facilities
• Other	
Water pressure	
• Purchase a water pressure booster	• Replace old pipe system
• Other	
Water restrictions e.g. hosepipe/sprinkler bans	
• Purchase insurance to cover losses from restrictions	• Introduce water efficiency measures/devices
• Create/develop water storage facilities as back-up	• Recycle 'grey'/waste water
• Other	
Internal or external sewer flooding	
• Purchase insurance to cover losses from flooding	• Invest in flood resistance and resilience measures

• Other	
Pollution of water supply	
• Purchase insurance to cover losses from disruption	• Invest in measures to monitor water quality
• Other	• Invest in measures to remove pollution

7.4.4.2 Key findings

This work package has, for the first time to our knowledge, provided information on water related avertive behaviour for businesses across a wide range of service measures. These avertive behaviour values are based on what businesses actually pay to compensate them against poor water services and should be seen as minimum values, they may be willing to pay more. It is noticeable that by far the most businesses taking part in avertive behaviour are water critical companies.

The benefit of this work package is that it provides an additional source of data that can be used for the purposes of triangulation and to develop a more accurate understanding of consumers' values of water supply issues.

A detailed report outlining our approach to this revealed preference business customer study, including the findings and the values obtained can be found in Appendix 5h.

7.4.5 Behavioural Experiment

The aim of this work package was to explore customers' preferences over different service levels and the bill impacts using an online behavioural experiment. The purpose of this is to support the triangulation of WTP measures for the DMF and to test the impacts of alternative ways of presenting (or 'framing') the choices presented to respondents.

The alternative 'treatments' or 'framing effects' included in the study were as follows:

- showing the impact of bill changes on disposable income;
- showing comparative information on industry average service levels; and
- changing how the likelihood that unlikely events will occur is presented.

7.4.5.1 Methodology

The behavioural experiment took the form of an interactive online tool, which allowed customers to adjust service levels and observe, in real time, the effects that this has on their bill. Data was collected by hosting the online experiment on YouGov's survey platform and drawing the sample from YouGov's panel. A representative sample of 2,027 respondents living in the YWS area completed the experiment in Autumn 2017.

The experiment was explained to participants and they were asked to make choices regarding their bills and the service levels they would receive from 2020 onwards. They were also provided with details explaining each of the service level attributes and YWS's current performance on those attributes.

Customers were able to adjust service levels for the same 13 service attributes that were examined in the stated preference surveys (see Work Packages 1). The attributes were categorised into four groups (water quality; supply of water; sewerage services; and environment), with each group of attributes presented on a different screen within the experiment. Customer's used a 'slider' on the screen to adjust the level of service for each attribute. As they moved each slider to increase or decrease the service level, they were shown in real time the impact that this would have on their bill. Customers also answered questions about themselves before and after the exercise and were presented with the aggregate impact on their bill of all the changes they had made, at which point they could then to go back and adjust their choices to reflect their preferred package.

Participants were allocated at random to one of four treatment groups. One group received the 'baseline' treatment, while the rest received one of three alternative treatments in which:

- their remaining disposable income was displayed on screen;
- industry averages were displayed for comparison for some attributes; and
- attribute service levels involving low probabilities were presented as frequencies instead of quantities e.g. instead of how many properties are affected per year, respondents were told every how many hours a property is affected.

Participants were also allocated at random to one of three cost level settings.

7.4.5.2 Key findings

For all attributes, the results show that a high proportion of respondents chose not to move the sliders. Across the attributes the proportion who did not move the slider for that attribute ranged from 35% to 50%, indicating that customers are happy with current service levels or do not want to pay more for improvements.

Average chosen bill increases tend to vary as expected according to other respondent characteristics: chosen bills increase with income, household size, and socio-economic group. For the age category, chosen bills are highest, on average, for the youngest age groups and tend to decline with age, with a bigger decline at age 70 and over.

At the aggregate level, the disposable income treatment had no statistically significant impact. However, there is an effect for those who are vulnerable due to disability. The total chosen bill increase for this subgroup was significantly higher (by £4.50) under this treatment. This may be, for example, because displaying their remaining disposable income reassures them that their water bill will not in fact consume a very large share of their disposable income.

Results for the comparative industry positions treatment reveal a higher tendency for participants' chosen service levels to cluster around the industry average when this information is shown.

Reframing the service levels of the relevant attributes as frequencies (rather than quantities) had a statistically significant impact on the service levels chosen for a number of different attributes. In particular, a worse level of service was typically chosen when the levels were reframed in this way.

When the unit costs of changes in service levels were 30% lower than the baseline, the average chosen bill increases were lower, though usually by less than 30%. This suggests that when prices were lower participants chose better service levels. Similarly, when the unit costs of changes in service levels were 30% higher than the baseline, the average chosen bill increases were higher, though again usually less than 30% higher, which suggests that participants chose lower service levels when prices were higher. This appears to show that respondents that were responding in an economically rational manner.

A detailed report outlining our approach to this behavioural experiment study, including the findings and the values obtained can be found in Appendix 5i.

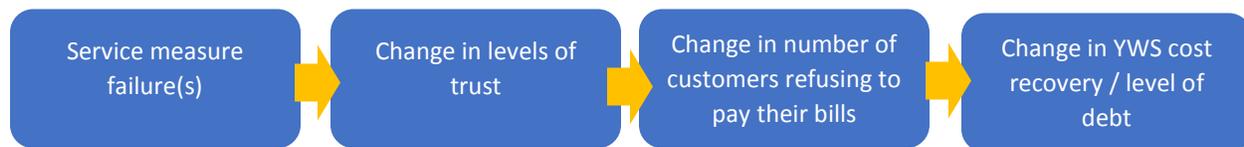
7.4.6 Trust Experiment

The aim of this work package was to assess the extent to which customer trust in us has a measurable impact on the financial performance of the business and to trial an approach to quantifying and valuing this.

7.4.6.1 Methodology

Figure 14 shows the assumed impact pathway (or 'logic chain') that underlies the selected methodology. This hypothesises that a service measure failure impacts on customers' trust in us to provide the expected level of service. This in turn impacts upon customers' propensity to pay their water bills which means that we are not able to recover the costs of the service provided and may incur interest charges on the debt.

Figure 16 Logic chain of assumptions underlying the methodology



We hold numerous datasets that were identified as being potentially useful for implementing the methodology. Based on a high-level review of these datasets, three analytical approaches were tested:

- analysis of company-wide / aggregate data on service measure failures and payment records;
- analysis of Customer Tracker survey data; and
- analysis of individual customer records.

7.4.6.2 Key Findings

The outcomes and outputs of this work package provide a first step towards developing an approach to estimating the value of trust. The findings suggest that, while there are a wide range of factors which impact on trust, there is some evidence that unplanned supply

interruptions, drinking water quality events, internal and external floods, and pollution incidents may have negative impacts on trust in us; with the evidence being strongest for drinking water quality, internal flooding, and odour.

A detailed report outlining our approach to this experimental trust study, including the findings and the values obtained can be found in Appendix 5j.

Outcomes, Performance Commitments and ODIs

Our PR19 Outcomes research project sought to understand whether the Outcomes and associated Performance Commitments (PCs) developed at PR14 are still relevant to our customers, and whether the outcome delivery incentives (ODIs) linked to these measures are deemed appropriate. The aim was to achieve a package of Outcomes, performance commitments and incentives that customers can understand and are happy to support for the five years 2020-2025.

7.4.7 Methodology

The research adopted a qualitative approach, comprising a combination of 5 deliberative workshops, 8 deliberative focus groups and 16 depth interviews. Both household (N=102) and non-household (N=48) customers took part in the research with sessions held for vulnerable customers (N=8) and 1st generation Pakistani customers (N=6) within the household sample.

7.4.8 Key insights

Customer engagement with Yorkshire Water

Customers held largely positive perceptions of the company. Engagement was typically low, given that customers were largely happy with the service provided and unable to change provider either way. The majority of small businesses were unaware of the opening of the retail water market. Those that were aware doubted that the benefits of switching providers would outweigh the required effort.

Review and understanding of the 5 Big Goals and Performance Commitments

There was a positive reaction to distilling PR14's 7 Outcomes into 5 Big Goals. Preferences focussed on the Big Goals being simple and concise. The majority of goals were felt to be fairly clear and straightforward, however, Transparency was raised as being less easy to grasp with the description seen as confusing. Water Supply and Environment garnered the highest levels of support from customers.

Support for the Big Goals tied in with the perceived importance of individual performance commitments. As seen in Table 12, a large number of Water Supply PCs were considered the most important, while Transparency PCs were generally deemed relatively less important.



Table 12 Relative ordering of importance for performance commitments

Rank	Performance commitment	
1	Drinking water quality: compliance risk index	
2	Drinking water quality: event risk management	
3	Taste/smell/colour	
4	Time taken to repair reported customer leaks	
5	Internal sewer flooding	
6	Water recycling	
7	Leakage	
8	Affordability	
9	Bad debt	
10	Helping customers in vulnerable circumstances	

Customers felt 49 PCs was too many who would prefer to see the list reduced and streamlined.

Future targets and improvements

Similar to the Comparability of Data research, customers were disappointed to see that we reported poorer performance compared to the wider water industry. Most had expected us to be in the top half across the board and wanted to see improvements. Where customers considered a PC important to them, they were more likely to opt for improvements (even in the case of PC's with already strong performance). In particular, customers wanted to see consistently high improvements to the commitments related to water supply both in the short term and going forward.

Customers were generally reluctant to select variable improvement levels over time. While most customers were confident selecting PCs for improvement, they believed that Yorkshire Water (and Ofwat) were better placed to make these more nuanced investment decisions.

Customers typically approved of rewards/penalties for commitments relating to water quality, leakages and payment support. Meanwhile, they felt outperformance incentives should focus on

commitments related to environmental outcomes, water saving, and efforts regarding charity, volunteering and apprenticeships. Business customers thoughts on incentives were largely similar, though they were more likely to prioritise rewards/penalties around infrastructure repairs and maintenance than household customers.

An overview of how this has been implemented in to our business plan, please see the 'Performance Commitment and Outcome Delivery Incentives' Appendix.

7.5 Vulnerability and diverse needs of customers

This project sought to understand the unique needs of our vulnerable customer groups to ensure we are meeting their requirements with service provision. This included exploring the different ways in which our vulnerable customers depend on water; what impact a disruption might have on them; if/how they would cope in the event of a disruption; and how they would like Yorkshire Water to support them on an ongoing basis.

7.5.1 Methodology

A qualitative research approach was used to gain an in-depth understanding of the unique needs of our vulnerable customer base and the considerations we need to make to meet all customers' needs. We used a combination of 10 focus groups and 48 depth interviews to engage a wide range of customers in vulnerable circumstances (see Figure 17), as well as key charities that represent their interests and the Consumer Council for Water.

Figure 17 Classifications of vulnerability



7.5.2 Key insights

The vulnerable customer

Customers who participated in the research could not necessarily be defined by just one vulnerability, but usually fell into several categories. Vulnerabilities were rarely straightforward, with many customers presenting diverse, complex and interconnecting needs. While some customers did not feel defined or adversely impacted by their circumstances, others faced a great deal of difficulty. Despite individual needs and unique circumstances, there were some key areas where vulnerabilities often overlapped for customers. For example, the elderly often lived with a physical disability or critical illness, while it appeared that some vulnerable groups were also more likely to be living with a mental disability.

Many customers did not consider themselves vulnerable. Although many admitted they would find it very challenging in the event of a disruption, a large proportion were adamant that they would be able to cope. The elderly, in particular, did not necessarily expect to receive a priority service or special support.

Water usage and key considerations

Whilst water is important to the day to day function of all households, it was especially essential to vulnerable customers for the following reasons:

- administering medications and medical treatments - a significant proportion of vulnerable customers were taking some form of medication to help manage their conditions or for pain relief. Water was vital not only for administration but also to keep well hydrated on some medications;
- hygiene, pain and mood management - Bathing was an essential function for many, with water playing a key role in incontinence care, wound management, pain relief and mental wellbeing;
- household management - In many instances, vulnerable customers were likely use their washing machines and dishwashers more frequently, to launder bedding and soiled clothes or sterilise medical equipment to prevent infections. Simply spending more time in the home due to their circumstances often increased customers' water usage more generally; and
- cultural and religious activities - Water played an important role in many of the cultural and religious activities of our ethnic minority customer groups. Hindu, Sikh and Muslim customers all relied on water for cleansing before prayer, as well as for cleaning and food preparations for cultural celebrations/gatherings.

Our vulnerable customers were more prone to arrears than our average customer. In many cases, their circumstances not only increased their usage but also reduced their household income as they were unable to work. Some customers also found it difficult to seek help or sort out their bills, as a result of their physical or mental health.

Impact of disruption or supply issues

Early warning was key to softening the impact of planned disruptions. Vulnerable customers were largely very understanding of the fact that Yorkshire Water sometimes needs to disrupt the

supply in order to maintain the network or resolve an issue. While customers acknowledged that a disruption would be difficult for them, early notification of the issue would allow them to prepare. That said, some customers would find it difficult to prepare for a supply outage due to physical restrictions, a lack of resources or simply not having the foresight or experience of what to do in such situations. Even with prior notice, most customers would encounter some difficulties, with most issues relating to hygiene bathing/showering.

Vulnerable customers saw unplanned disruptions as especially difficult and distressing as they would be unable to prepare physically or mentally. An immediate and critical concern for many was the inability to take medications, with missed doses potentially leading to complications. Sanitation was a significant worry for customers, especially for those with low immune systems, while those with bowel issues wondered how they would flush the toilet. For many, the psychological and emotional impact of a disruption would be the worst aspect.

Unplanned disruptions can be especially problematic for parents and carers of young or severely disabled dependents. It would not always be practical to bathe them in bottled water as this would be cold and many had concerns about having to heat the water to the right temperature. Since baby formula should not be made up using bottled water, this also creates an additional complication for parents. Some parents were not aware of the advice to not make up baby formula with bottled water, meaning they would be left particularly vulnerable in these circumstances.

The length of a disruption, as well as the time of year, can impact on customers' ability to cope. For vulnerable customers a cut-off of around 6 hours was seen to be largely manageable – if given prior notice - but beyond this point the situation starts to become more problematic. In the case of an unplanned disruption, vulnerable customers felt they could usually cope for an hour or so without water. There are certain times of year when disruptions were seen to be especially problematic for vulnerable customers. Over the summer months many customers need to drink more to stay hydrated, wash more bedding and shower more frequently. In the Winter months customers rely on hot drinks, hot baths and heating (combi-boilers) to stay warm.

Vulnerable customers felt that discolouration would be just as bad as a supply cut-off. The vast majority said that they would not drink or bathe in discoloured water, even if told that it was safe. Many would not even want to wash clothes in it. If the water was unsafe customers would worry about the residual risk of infection or the risk of children/dependents drinking it.

Repair works can create issues with noise and accessibility for vulnerable customers. Loud and sporadic noises can negatively affect those with mental disabilities such as post-traumatic stress disorder. Parked vans or barriers on pavements can make it difficult for wheelchair users to get around, while elderly customers or those with mobility issues may struggle to park close to their homes.

Yorkshire Water's recreational sites were accessed by some of our vulnerable customers and provided them with a sense of wellbeing. An environmental disruption such as pollution would impact upon their ability to enjoy the physical and mental benefits these sites provide. It was seen as important that Yorkshire Water ensures these sites are accessible to all customers, including those with physical disabilities.

Ethnic Minorities were negatively impacted by disruption during religious events for example Eid. Asian ethnic minorities may be distressed if they did not have clean water to wash before prayer or to prepare for important religious celebrations. Ethnic minority customers felt that, even with prior notice, the amount of water needed would require an impractical amount of water bottles – especially during religious festivals.

Desired response and support

Customers expected to have to contact us for help. They did not expect us to pre-emptively safeguard them without being informed of their condition. However, it was felt that we have a responsibility to clearly communicate what help is available to customers in vulnerable circumstances and how they can get in touch.

Communication was the foremost expectation among all customers. Providing explanations of why a disruption is happening and the area the disruption covers would allow customers to make informed arrangements. Customers wanted planned work to be communicated as far in advance as possible and it was important to them that any timings that we gave them would be

accurate. Customers wanted to receive reminder updates, as well as notifications of any changes to planned work, and additional communications were expected for at risk areas where a disruption is highly likely for example flood risk areas.

Surprisingly, vulnerable customers were very open to having us visit them face to face. The idea of a visible local presence in the event of a disruption was welcomed. However, customers would be keen for reassurance that anyone at the door was genuinely from Yorkshire Water.

Providing bottled water was a necessity for some customers and a nice gesture for others. For a disruption of 8 hours or more, water bottles would ideally be provided for all customers to help with sanitation (toilets, washes etc.). In circumstances, where customers may require more water than others or where bottles may not be practical or sufficient, customers suggested we could provide water tanks in community areas or individual water barrels for houses. Customers who were less vulnerable and more mobile suggested access to local showering facilities, such as leisure centres. Discolouration was seen to require the same level of response.

Many customers would expect some form of compensation in the event of a disruption. This was particularly the case for long-term or frequent disruptions. Money off their bill or vouchers/recompense for any additional costs incurred were suggestions made by customers.

Customers felt that it was important for us to provide support to those that struggle to pay their bills during times of hardship. However, this was providing that any support given still placed the onus on the customer to pay for what they use.

Ethnic minority customers, in particular, felt that we should avoid disruption and prioritise response during religious events. There was a general consensus that we should, where possible, consider the needs of different ethnic groups and religions when planning maintenance work or providing alternative water solutions in the event of unplanned outages.

Perceptions and awareness of Yorkshire Water

Vulnerable customers had a positive perception of us, despite mixed levels of awareness about what the company does. While all customers were aware of us, there was a great deal of confusion about the company's remit and responsibilities beyond the supply of clean water.

7.6 Social tariffs

Following customer research in 2014 which supported the introduction of a social tariff, we introduced a new tariff which became known as WaterSupport. In 2017, we undertook further research with customers to ensure customer support for WaterSupport still remained. We also tested whether or not customers would support extending the scheme to a greater number of customers to help address the issue of affordability.

7.6.1 Methodology

An online survey was conducted with a sample of 1,000 customers that were representative of Yorkshire Water bill payers. This enabled us to measure customer support and appetite to pay for social tariffs.

The online survey was supported by up-front tele-depth interviews (pre-survey) to explore customers thoughts on WaterSupport and other initiatives and follow up tele-depths (post-survey) to explore key concerns identified from the online survey.

7.6.2 Key insights

Attitudes towards social tariffs

The majority of customers supported the principle of social tariffs and three quarters agreed that we should offer one. Levels of support dropped slightly once the idea of cross-subsidisation by customers was mentioned, though support was still strong. Customers were happy to know that a social tariff existed in Yorkshire, particularly when preventing struggling customers falling into arrears. This increased their perception that we are a responsible company.

Support for offering a social tariff was significantly higher amongst customers who were more likely to need it. This included low income customers, single occupant households, those receiving benefits, and the long-term sick who have a reliance on water.

Concerns about social tariffs

One third of customers had some concerns about offering a social tariff, primarily whether it is 'fair' to do so. Concerns were voiced around eligibility criteria and the need to 'police' access to prevent social tariffs being open to abuse. Other worries related to whether customers were

expected to fund social tariffs and the potential impact this might have on their bill. A small proportion of customers felt social tariffs fail to incentivise water-saving behaviour or may encourage customers to stay on benefits.

Support for social tariffs increased when they were part-funded through profits, and struggling customers were offered water efficiency advice and metering to reduce their bill in addition to funding to pay their bills. In contrast, support was negatively impacted by the suggestion of only making WaterSupport available to those with a bill value at least £100 greater than the average customer bill.

Customer appetite to pay

A transfer pricing technique was adopted to determine customers' appetite to pay towards the WaterSupport social tariff. Half of the sample were asked based upon part of the funding coming from profits, while the other half were asked based upon all of the funding coming from customers' bills.

Two thirds of all customers asked were willing to pay at least an additional 57p to enable WaterSupport to be extended, with just over half willing to pay up to £1.36. Those unwilling to pay anything were more likely be in need of financial support i.e. low-income customers and those on benefits.

7.7 Household retail service level assessment

Our Household Retail Service Level Assessment project aimed to identify what aspects of our retail services are most important to customers, to explore the service customers currently receive and understand where/how they would like to see this improve.

7.7.1 Methodology

The project adopted a multi-stage mixed method approach, as follows:

- stage 1 - a qualitative approach was used to gain an in-depth understanding of customers' retail service preferences. This stage consisted of 8 focus groups (including sessions for future bill payers and customers who recently contacted us), 12 face-to-face depth interviews with customers in vulnerable circumstances (elderly, BAME and disabled customers) and recent complainants; and
- stage 2 - a quantitative online survey was used to gather views from a regionally representative sample of customers (N=707). Face-to-face interviews captured the views of offline customers (N=113).

7.7.2 Key insights

Perceptions and contact with Yorkshire Water

Most customers rated us highly. Those on meters were particularly positive, while those who spoke English as a second language were less so. Consistent and reliable water supply was the main source of satisfaction. However, some customers believed water bills were too high, which contributed to negative perceptions.

Of those customers that had contacted us, most had done so regarding a retail service. Customers that manage their water online and those that worry about their bill were more likely than others to have contacted regarding a retail service. Direct phone calls were the most common form of contact, with few customers opting to make contact via the website.

Customers were largely satisfied with the service they received when calling. Areas of satisfaction focused on the manner, ability and clarity of the call handler. Dissatisfaction was typically related to the answers/solutions provided by the call handler or the time taken to respond to the customer's query.

Customer priorities and expectations for retail services

Speaking to a clear and knowledgeable call handler is key to good customer service in the eyes of customers. The priorities and expectations are outlined in Table 15, these were relatively consistent across customer groups, although disabled and ill customers were more likely to prioritise getting through to a person first, not an automated machine.

Table 15 Customer priorities for good service

Rank	Performance commitment	Percentage (%) of customers ranking as a top 5 importance factor
1	Dealt with by someone that speaks clearly and understands me	64
2	A knowledgeable call handler	57
3	Get through to a person not an automated system	53
4	Efficient and to-the-point call handler	47
5	Dealt with by someone who treat me as an individual	47
6	My query is dealt with there and then	46
7	My query is dealt with by one point of contact	44
8	Quick answer to my contact	41
9	Friendly and engaging call handler	40
10	Offered a call back/other contact if it's going to take a while	30
11	Offered solutions that suit my needs without having to ask	27

Customers whose first language was not English had different service needs. These customers prioritised a friendly and proactive call handler, while being knowledgeable and to the point was less important.

Online accounts and communication preferences

Almost a quarter of customers managed their water account online. This was a lower proportion than seen across other services, such as banking, energy and telephone. Water had the lowest use of mobile app management compared to other sectors, but the highest website use.

Of those customers that weren't managing their accounts online, more than half said they would be interested in doing so, this increased to two-thirds if bills were then cheaper. Those that didn't already manage online would also prefer to use the website rather than an app.

Phone was considered the most appealing method of contact. Customers were open to the idea of changing to an online account, but were clear that they would expect a phone number for emergencies alongside the self-service option.

The optimum service

Customers were shown 11 retail service attributes and asked to choose the level of service they would like. They could choose to improve the level of service they received by paying more or to save money by decreasing the current level of service they received.

The majority of customers wanted to stick with current levels of service in most areas. The Yorkshire Water App, flexible payments & support tariffs had the most support to remain at current service levels; probably linked to the fact there were no saving options for these areas because we wouldn't reduce service levels in these areas.

Customers would prefer opening hours to include Sunday. The trade-off exercise indicates that customers would accept a small annual increase in their bill to achieve this level of service.

'Keeping me informed' was customer's top priority for change for example to be kept informed, to contact them when they say they will and at a time that suits them. More than half of customers were willing to pay slightly more to see these improvements.

7.8 Lifestyles

We were keen to develop a deeper understanding of our consumers, which was rooted in current expectations and priorities in their lives. This study explored what consumers value in their lives, what is important to them, how their beliefs influence different preferences and what role water has in supporting or maintaining their lifestyles.

The study was designed around our nine MOSAIC customer segments which were created in a separate project undertaken by Experian, as well as a further segment for Future customers. We used a phased qualitative approach to explore and bring to life the customer segments identified in this study.

7.8.1 Methodology

Phase 1 – Consumer reveal workshops

We undertook 10 consumer reveal workshops lasting two hours, including future customers. Prior to the workshops, customers provided video snippets of what was important to them, as well as discuss the role that water plays in their lives. They also simulated water interruption scenarios and discussed how this would impact on them.

Phase 2 – Ethnographic amplification depth interviews

This stage included 20 in-home depth interviews and an ethnographic study of the lifestyles our customers. Every customer recorded an in-depth video diary outlining what is important to them in their lives and how water plays a role in this.

Phase 3 – Consumer anthropology evaluation

For the final phase of this research we employed an industry leading anthropologist to analyse the feedback from both the reveal workshops and ethnographic interviews to determine the key drivers of the role of water in the lives of our customers.

7.8.2 Key insights

Behaviours, attitudes and needs common to all segments

There is a common recognition that households of all types and sizes truly rely on water multiple times a day for activities which are essential to day-to-day life. However, like other studies have shown, engagement with and understanding of water provision is generally low, therefore, many customers make no attempt to save water, especially if not metered. Even customers who try to save water recognise they nevertheless waste it e.g. long showers, running taps.

When customers across segments think about their water use, they tend to focus very much on their own household e.g. washing machine, dishwasher, garden etc. Water use outside the home is not considered much at all, and that's because customers find it difficult to recognise and appreciate water use even when at work or whilst enjoying leisure and recreational activities e.g. river walks, swimming pools etc.

Perceptions of Yorkshire

Overall, customers had a positive perception of the Company. Most felt the service they received, compared to other utilities, offered better value and was very reliable. However, awareness of the services beyond clean water provision was generally low and this is reflected in the views of customers that unless future plans and services directly impacted on them, people were not interested.

Whilst differences in perception exist, this was largely due to personal experience and understanding rather than segment. One specific difference which was a significant differentiator regardless of segment was metered vs non-metered customers. Metered customers tended to be more conscious of how much water they use and hence try not to waste water, however, non-metered customers didn't really worry about wasting water at all.

Key insights across each customer segment

The study looked in-depth at what makes each segment who they are. The following section provides very high-level summary of the lifestyles of each of the ten segments:

Retirement living

- physical activity is vital to wellbeing, want help with access to walks and recreational activities;
- fiercely independent and most definitely not old, do not want to be treated differently to anyone else;
- open to any improvements to homes and services, that offer security and reduced risk; and
- very open to being more efficient users of water.

Urban singles

- don't necessarily have a lot of 'know how', often rely on others (and Google) to get help;
- don't see us as a business, rather as a service provider;
- can cope with disruption which lasts a couple of days; and
- live a fast paced life and expect everything to happen instantly, the Amazon Prime generation!

Affluent families

- hard working and respect this in others;
- like to get a fair deal without having to proactively seek this out;
- open to looking at ways to save water (and money) even though water bills aren't a big concern;
- use and value technology which makes life easier; and
- respond well to information about leisure activities connected with us.

Squeezed singles

- want to interact on own terms;
- don't always want to engage digitally;
- need as much flexibility as possible; and

- open to being more conscientious users of water, but it has to directly benefit, not just be good for society in general.

Urban families

- want to be able to switch off from urban and work lives, so looking out for recreation opportunities;
- hopes for the future centre on children, want local opportunities and want to give kids the right values in life; and
- want us to help improve the local environment.

Starting out

- busy and plenty going on, unlikely to engage with anything we do;
- impressed by the quality of our customer service;
- lots of financial pressures, so priority should be keeping the cost of water as low as possible;
- kids are the priority, so a safe and consistent water service vital; and
- happy with the service, “if it ain’t broke don’t fix it!”.

Empty nesters

- settled with established routines, content with life;
- concerns about the state of the world and the economy, want reassurance that things are going well and are going to be ok; and
- water is so vital, want service to be in the interests of customers, not shareholders.

Rural retirees

- actively enjoying retirement;
- do not embrace new technology;
- fearful around online security; and
- not top of mind to try and conserve water, but want us to deal with leaks quickly.

Grey singles

- looking for ways to save money;
- aware of current affairs and issues;

- use social media in a very practical way;
- not particularly interested in what we do, unless it impacts on bills; and
- want prices to stay low, but would not want an open water market.

Future customers

- responsible when it comes to money and spending;
- would like to hear more about what we do;
- opportunity to educate the younger generation about the 'water journey' and about not wasting water; and
- social media is a preferred media for communication.

7.9 Non-household retailers

In April 2017 the water retail market for non-household customers in England opened up to competition, meaning that non-household customers could shop around for the best deal for their billing and payments, meter reading, and customer services. Following the first anniversary of the market opening, we wanted to understand retailers' perceptions of our current service provision to them, identify current and future challenges for the retail market and to explore how YW could support retailers in providing the best service to their customers.

7.9.1 Methodology

Given the infancy of the retail market, we undertook telephone depth interviews with those retailers who wished to take part. All retailers operating in the Yorkshire region at the time of the survey were invited to participate. In total, five retailers took part in the survey representing over 99% of non-household customers in the Yorkshire region.

7.9.2 Key insights

Perceptions of Yorkshire Water

Overall, opinions are largely positive, with a consensus that we compared favourably to other wholesalers. Many of the negative aspects of the service were seen as industry issues, rather than specific to us e.g. data accuracy and provision. When asked about their relationships with us, retailers spoke mostly about their relationship with their account manager. From this, two distinct responses emerged: those who are wholly positive about the relationship and, those who say the relationship is good, but occasionally overly formal.

Services received from Yorkshire Water

Overall, the services that retailers receive (and expect) are largely the same e.g. billing and invoicing, meter reading, operational requests etc. However, when asked about the most important services they receive, three elements stood out:

- account management: Seen as the key element to keeping information flowing between retailers and wholesalers;
- data: The provision of (accurate) data is mentioned by all as a critical element of the relationship; and
- the portal: Acting as the information hub between retailer and wholesaler.

The challenges for retailers

All retailers surveyed pointed out that the market has been a difficult place to navigate and operate in since it opened. Most were cautiously optimistic about the short-term future of the market, but were conscious of a number of challenges, including data accuracy, portal consistency and non-household customer engagement.

Retailers are confident that the challenges identified in this study will improve overtime, and as they do, they expect other elements of service e.g. account management, to grow in importance. We are generally well placed when it comes to account management, but still have room for improvement.

7.10 Recreation Visitor Survey

Every year, we undertake a recreational site visitor satisfaction survey which seeks to ascertain levels of customer satisfaction with the existing services and facilities available on our recreation land. We also seek to understand what would make customers engage more with the sites to encourage future visits.

7.10.1 Methodology

A short face to face survey is conducted with customers across four of our recreational sites each year, asking visitors for their opinions of the site and its facilities. Sites covered included high, medium and low footfall sites and research is undertaken on weekdays, weekends, bank holidays and school holidays in order to capture a wide and balanced variety of respondents.

The following summary provides the insights derived from the latest survey conducted in 2018. Comparisons to previous surveys are made where applicable.

7.10.2 Key insights

Awareness of Yorkshire Water's recreational sites

Awareness of Yorkshire Water owning the recreation sites was considerably higher than the previous year, at 91% compared to 70% in 2017. This was particularly the case at Swinsty where virtually all visitors were aware. Of those that didn't cite Yorkshire Water as the site owner, most said they 'didn't know' or assumed the site was owned by the National Trust or a leisure organisation.

Customer satisfaction with Yorkshire Water's recreational sites

Satisfaction across the four sites was exceptionally high at 99%. This was up from 96% at last year's sites and 97% the year before. The beauty of the area and the landscape was the top reason for satisfaction. Safety was also raised by customers as a key area of satisfaction. This was most likely driven by an increase in families visiting these sites compared to other sites that Yorkshire Water had surveyed previously.

98% of visitors believed the cost of 90p per year was acceptable for visitor access to these sites. Interestingly, almost a quarter of customers thought this was too little, reflecting the high levels of satisfaction with the sites.

Customer use of Yorkshire Water's recreational sites

Dog walking was the number one reason for visiting the recreation sites. This had increased significantly from the previous year. Swinsty was the exception with more people visiting for a gentle stroll/walk without a dog.

Good location/proximity was a key driver for visiting these sites over anywhere else, while the scenery at sites was another draw for customers. Again, Swinsty was different to the other sites; fewer visitors emphasised the location as a reason for visiting, with many saying they visit the site simply because they like/love it there.

The facilities available at Swinsty made it a 'destination' site drawing in visitors from further afield, while Underbank and Leeming attracted more local visitors. 96% of visitors to Leeming travelled more than 5 miles to get to the site with virtually all getting there by car. In contrast, four fifths of Leeming's visitors travelled less than 5 miles to the site, with three quarters having arrived by foot. Despite Underbank having a similar 'reach' to Leeming, two thirds of visitors chose to drive.

Economic benefit to local communities

Around a third of visitors spent money locally as result of their visit, with more than a quarter spending over £15. Overall, local expenditure as a result of visits to the sites had increased by 18% from the previous year. Swinsty visitors were the most likely to spend money with a local business as a result of their trip. This was unsurprising given that they typically came from further afield.

Suggestions for improvements

The majority of visitors would prefer not to see any additional activities at the sites. While gentle water sports are the least opposed activities, there was generally little desire to have activities that were likely to create noise or attract more visitors, therefore any additions should focus more on upgrades and facilities rather than new activities.

Toilets were the top request from visitors, particularly at Underbank. Although, it is worth considering that the vast majority of visitors travelled less than 2 miles to get to Underbank meaning this site may not necessarily warrant the investment with it being more of a 'nice to have'. Facilities available at Swinsty (toilets, ice cream van etc.) appeared to be greatly appreciated and contributed to the site's perfect satisfaction score. A number of Swinsty's visitors felt it would be nice to have more picnic and catering facilities for the busy summer months, as well as a drinking water tap. Overall, there were fewer changes mentioned by visitors at this year's sites, compared to the previous year.

While visitors appreciate the unspoilt natural beauty of the sites, they welcomed any maintenance works that would help improve accessibility. Boggy conditions in winter months was mentioned as a problem at Embsay Moor. This makes it harder to visit the site particularly for those with mobility issues. There were also comments on a general lack of maintenance at Leeming, as well as a clear demand for more signage e.g. general facts about the site (history, wildlife etc.) to rules & restrictions.

7.11 Customer experience

The Customer Experience research project explored the service experience received by customers across our four key service areas (bill shock, requesting a meter, sewer flooding and water quality issues), and how this might be improved.

7.11.1 Methodology

A qualitative approach was used to gain an in-depth understanding of customers' retail service preferences. This comprised of 8 focus groups with a broadly representative sample of customers and 16 depth interviews with customers in vulnerable circumstances (elderly, BAME and disabled customers) and recent complainants. Customers had made contact with Yorkshire Water through one of the following four key service areas:

- bill shock;
- requesting a meter;
- sewer flooding; and
- water quality issues.

7.11.2 Key insights

Customer service expectations

Customers don't always have particularly high expectations of customer service, in general, and are often surprised when the service they receive is positive. Customers saw the ideal service as creating a hassle free, unscripted customer journey, delivered by knowledgeable staff. Although this was a common vision, there were some differences in where customers placed most value. More affluent customers are more likely to mention proactive, no hassle service, while less affluent customers are more likely to mention an understanding and unhurried service as being a stand out factor.

Yorkshire Water's service delivery

Overwhelmingly, customers recounted positive customer experiences. Speed of response and staff attitude were key areas of satisfaction. Call centre staff, in particular, were praised for their willingness to help. Suggestions for improvements to service focussed on understanding how serious an issue is for the customer, even if it's a regular occurrence for the member of staff.

Telephone was the preferred mode of contact for most customers. Calling was seen as the most efficient means of resolving pressing or concerning issues such as sewer flooding, bill shock and water quality issues. Most customers acknowledged that they are only likely to contact when they have a problem; in which case, short waiting times to get through to a call centre staff member with compassion and an appropriate level of knowledge is vital. While some customers contacted online to request a meter, others preferred to phone for further information and to avoid the hassle of filling out request forms.

Improving customer journeys

Customers completed tasks designed to fuel discussion around our retail service offering, including designing their ideal customer journey and reviewing customer journey maps.

For most customers, the ideal customer journey is a simple process that doesn't unduly impact their busy lives. If customers are dealt with by a polite member of staff, and are kept informed prior to receiving an acceptable resolution, then satisfaction is likely to be high.

Customers were generally happy with the customer journey maps presented and felt that they represented the type of process they had experienced. There were some concerns that customers could 'fall through the gaps' at some points of the process, or that the process could be left open to the interpretation of the staff member using it. Customers drew attention to aftercare as a key component of excellent service, especially for service areas that require work at the customer's property. This reinforces that the company is invested in the customers' needs and cares.

Bill shock

There was broad agreement that customers with financial vulnerabilities might need to take priority. A goodwill gesture (temporarily suspending the account) while investigations take place would be appreciated. For non-financially vulnerable customers the expectation focusses on the delivery of information at key points, by the customer's preferred communication method.

Customers want us to be proactive and offer solutions. Customers expected to be notified of a high bill if their consumption increases 5-10%. Notifications for this could be scaled up (text at 5%, phone call for anything over 10%). Customers also expected that staff would accurately assess means and provide sensible solutions (if it was the customer's responsibility).

Customers wanted a smooth and speedy resolution. There was an expectation that the matter should be dealt with quickly, and by 1 or 2 people to ensure continuity and rapport. In instances where a contact isn't resolved there and then, customers wanted to choose their preferred method of contact for us to get back in touch. Generally, customers expected a bill shock query to be resolved (at least in terms of determining responsibility) within a week.

Requesting a meter

Requesting a meter should be a quick, easy and simple process to avoid deterring customers. Customers who called about a meter installation wanted to get the process in underway immediately. Some were deterred by not being given enough information over the phone and instead being directed to the website or sent forms to fill in. For customers that requested a meter, the gap between the initial call (when they were interested and proactive) and receiving the application pack turned them off, especially if the estimated savings weren't significant. The general expectation was that the process from application to a meter being fitted should take a month or so; a wait of up to 90 days can be off-putting.

Customers valued proactive and honest communication. Customers who did not go through with requesting a meter after their first contact acknowledged that they might benefit from a follow-up to prompt them into action. Those that did, would like to be re-contacted within a few months of a meter installation. This level of aftercare service would likely leave a lasting positive impact. Customers appreciated the honesty of call centre staff who advised them that having a meter installed might not be financially beneficial for them.

Sewer flooding

Customers expected different call out times depending on the location of the flooding incident. Anything within the property or habitable areas was expected to be seen to within 24 hours (less than 6, ideally). For anything outside, there was acceptance it might be a bit longer, but within 2 to 3 days.

Issues arose when communication wasn't consistent and deadlines weren't met. Customers wanted reassurance that their report would be dealt with in a timely manner and to be kept informed at appropriate points via a channel of their choosing. As well as wanting to know when

someone would be out to fix the immediate problem, customers also wanted to know what issues might remain after the repair work had been done.

Water quality issues

Customers found water quality issues very concerning and wanted to be advised on what action to take immediately. However, some customers worried about running taps to flush discoloured water through the system, in these cases, the proactive offer of a rebate or bill credit was seen as service above and beyond normal expectations.

Customers wanted to feel as informed as possible. Providing information about any other similar issues in the area was reassuring. In instances where customers had their water tested and then had a report back, the offer of someone going through the report with them would have been appreciated. For customers who continued to have concerns, providing details of any escalation would be considered good service.

7.12 Participation in Frontiership initiatives

Yorkshire Water have a goal to see a fundamental shift in the way it engages with customers, so that customers become active participants in the business planning process rather than passive receivers.

This project was implemented to:

- identify which aspects of service are most important or of interest to customers;
- to explore the kind of large regional initiatives customers would like us to invest in (frontier initiatives) to safeguard future services;
- to explore the kind of initiatives that would benefit local areas across the region, which over time could be scaled up regionally (statements of intent); and
- to explore other initiatives which would benefit customers socially and/or economically, as well as protect the natural environment (customer priorities).

This research was undertaken using an innovative carousel methodology across two phases of research.

What are 'Carousel' Workshops?

- ✓ Relaxed extended format which allowed sufficient time to explore initiatives in enough detail
- ✓ Initiatives grouped into sets of 6 (i.e. manageable portions) and 'owned' by moderators making it easier for customers to get to grips with them
- ✓ Moving through moderator 'stations' gets participants on their feet and kept energy high

7.12.1 Methodology

Phase 1

This phased was used to explore and identifying initiatives which are important and a priority to customers, this was achieved through the following:

- 3 x immersive 'Carousel' workshop sessions; and
- 10 x vulnerable customer in depth interviews (low income, elderly, ethnic minority, disability, learning difficulties).

Phase 2

This phased was undertaken to discuss and define how Yorkshire Water can promote and develop the most engaging initiatives with customers, through customer participation:

- 8 x in-depth interviews with community leaders and ambassadors; and
- 3 x immersive focus groups with customers.

7.12.2 Key insights

The first phase of research explored 18 initiatives which customers could express their interest in getting involved. Whilst some of these initiatives were at various stages of implementation and others were only concepts, we took the decision to showcase all the initiatives to customers as concepts which could be developed further given customers support/interest to get involved, therefore the current state of development wasn't a factor in favouring one initiative over another.

The outcome of the sessions revealed that there were 7 'gold rated' initiatives which were supported by customers these included:

- reducing the demand for water;
- fats to fuel recycling;
- complete surface water disconnection;
- raising awareness of water management;
- energy generation; and
- recreation strategy.

These initiatives were rated highly because customers believed they were:

- easy to understand;
- provided a clear benefit to the customer (often financial);
- clear environmental benefit; and
- little effort on the part of the customer.

However, we learned through this stage of research that cutting through is difficult because most customers don't have a relationship with YW and don't feel the need to engage until they have a problem. In addition, the findings recommended that we cut our initiatives to 6 for a

deeper, more thorough exploration of initiatives at stage two. Given this, it was decided that 6 initiatives should be carried through to stage 2 for further exploration.

Following phase 1 recommendations on how to layout more detailed information, based on customer feedback, we set about preparing 6 initiatives which, given all the information collected, we believed would achieve the greatest participation from our customers. These were professionally designed and printed to enhance customer engagement in phase 2 sessions, an example of one set of posters can be found below in Figure 18

Figure 18 Fats to Fuel posters created for stage 2 Frontiership initiatives research

OUR INITIATIVE
FATS TO FUEL

THE PROBLEM

- Used cooking fat and grease when poured down the drain solidifies in the sewers and traps other objects (such as wet wipes). These create 'fatbergs' and regularly block sewer pipes
- Sewer flooding can also cause pollution if it enters rivers and streams leading to possible health risks
- and damage to the quality water and the plants and animals who live or rely on the river or stream impacted
- Blockages caused by fatbergs can cause sewage to backup and potentially flood the inside of customers homes or their gardens with sewage

OUR AIM

To reduce fatbergs caused by customers pouring fats and oils down the drain.

WHY IT'S IMPORTANT

- Removing fat and oil from sewers can prevent sewer flooding inside customers' homes or in their gardens
- Avoids health concerns for people and pets, caused by sewer flooding. Contact with sewage could lead to sickness, including Salmonella, E. Coli or Hepatitis A
- Cuts large investment needed to flush out 'Fatbergs' that are blocking pipes (£millions)

THE BENEFITS

- Keeps your water and sewerage bill low – no increased costs from constantly jetting or unblocking sewers
- Reduced sewer flooding and pollution, as well as associated health concerns, and financial and emotional stress when things go wrong
- Can be sold to create renewable energy which will increase income for community projects
- Fewer roadworks and disruption in local areas
- The reputation of businesses could improve in local areas because of participation in fat/oil disposal/recycling scheme, demonstrating businesses commitment to the stability of the local community

YorkshireWater

WHAT WE COULD DO

- Work with local communities to educate on how cooking oil and fat affects sewers, we'll provide materials and talks for schools and community events and visit properties in blockage-prone areas
- Provide Fat Vats for households to store oil and fats
- Collect and replace Fat Vats monthly
- Communities can sell used cooking oil for a profit - used cooking fat and oil can be used as biofuel to produce energy. Just one litre of used cooking oil can generate enough electricity to make 240 cups of tea or power a flat screen television for 3 hours
- For businesses - YW could champion a scheme which promotes good fat disposal behaviour in food outlets. The scheme would highlight the benefits of good kitchen practice. Businesses who have good used fat and oil disposal practice could be given a sticker to display in their window or on their website so the surrounding community can see that they are doing their bit to avoid fatburgs and blockages in their area



HOW CAN YOU GET INVOLVED



- Fill Fat Vats with used cooking oil or fat. The vats seal in fat and oil and any odours so they can be safely stored indoors until collection.



CASE STUDY: YORKSHIRE WATER FAT RECYCLING PILOT IN BRADFORD BD3



- Bradford's BD3 postcode area experienced 85 sewer blockages in just 3 years, costing Yorkshire Water £2.5m to clean and repair
- The area is particularly busy, and roadworks caused to remove blockages created significant disruption
- In BD3, pouring used cooking fat and oil into the sink was a common occurrence and the primary cause of 'Fatbergs', which were blocking the sewers
- To educate the community, Yorkshire Water partnered with Karmand Community Centre and set up a fat collection scheme, they sought a licence for the community centre to become waste oil collectors
- Fat Vats were provided by YW and used by local residents to dispose of their used cooking fat and oil. These were collected and replaced on a monthly basis
- This oil was sold by the community centre to companies who use the oil to create renewable energy. The profits of which was used by community centre for the local community
- The scheme was represented by a Yorkshire Water colleague and a local volunteer known in the community, ensuring both the legitimacy of the scheme and access to the community
- News of the Fat Vats spread leading to more households getting involved - the first collection took place in early 2014 from 85 houses, we now collect from 320 houses in BD3
- Engagement with the community is high, customers understand the problem and want to help prevent it, they are passionate and enthusiastic about preventing blockages, some customers request extra Fat Vats for their friends or relatives who live outside the area
- Since launch, 6,000 litres of cooking oil and fat has been diverted from our sewers and almost 5,000 litres have been sold to bio-diesel producers (not all oil is high enough quality to be sold)
- In August 2017, there was a celebration at Karmand Community Centre to thank the people who took part, and an award of £10,000 and a branded Yorkshire Water van was provided to the community centre, allowing them to expand the Fat Vat scheme

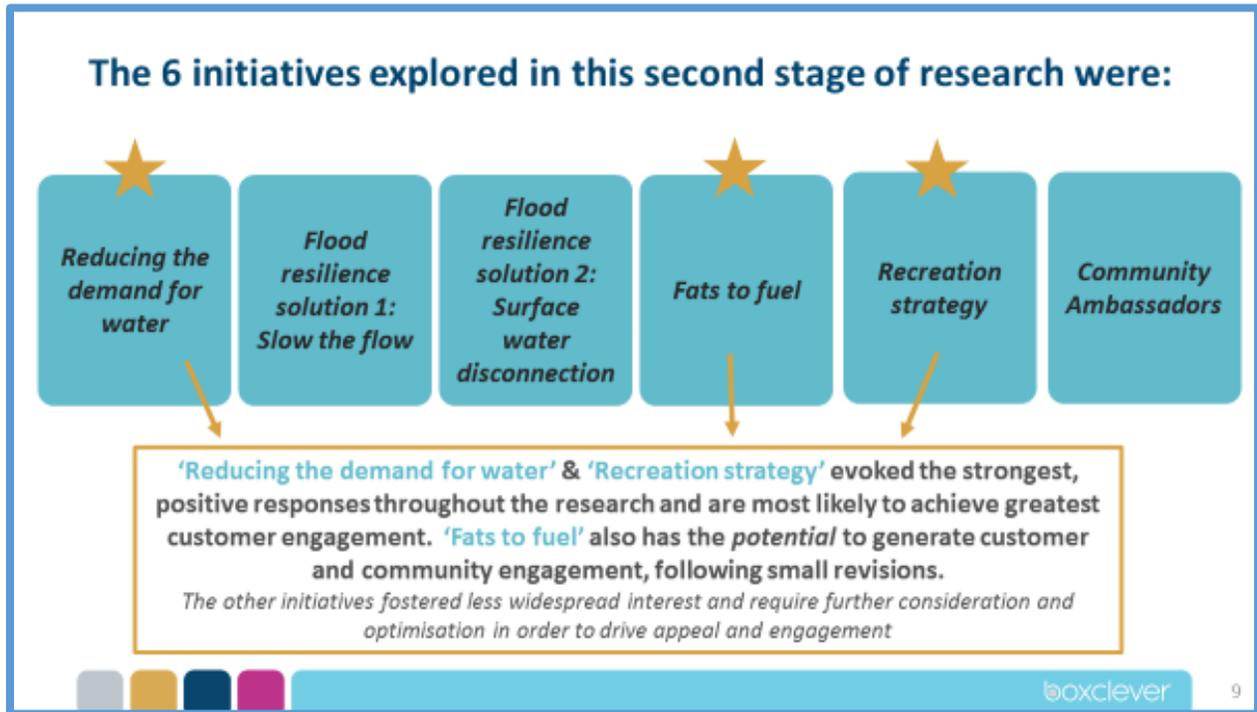


OVER THE PILOT PERIOD
1000 litres of oil were collected from 85 properties, over 2 streets



Figure 19 overleaf, outlines the outcome from stage 2 research. The main motivator for the winning initiative was possibility of saving money for customers.

Figure 19 Winning Frontiership stage 2 initiatives



Interestingly, Millennials appeared more motivated by environmental benefits vs. other generations. For most in the older generations, green issues are typically perceived as secondary benefits and customers will not participate unless environmental benefits are allied to direct benefits to themselves.

In addition, it was clear that in order to engender customer participation, focusing on issues that tackle local issues is likely to be the most effective approach. Locality for customers is all about 'my neighbourhood' in the first instance, then 'my city' as this has a direct benefit to customers at a local level. This is followed by 'my county', because it provides social and environmental benefits for the local area, in some way. Finally, 'my region' because it provides social and environmental benefits for others.

Whilst customers were engaged with the initiatives, it was clear that they will struggle for motivation to engage when they feel their individual efforts will make little difference to the problem or solution - 'a movement' is needed to motivate customers to participate, this was down to local level engagement and an expectation that we need to fix the big things first/as well, then they'll be happier to play their own part too.

7.13 Cost Adjustment Claims and Bill Profile

This study focused on the level of priority and support that customers gave towards 7 proposed cost adjustment claims (CACs). The research gauged customers understanding of cost adjustment claims and the extent to which they supported the rationale for making the proposed claims, as well as providing the reasoning for supporting/not supporting a claim and drivers behind this. We also tested how opinions towards each claim may change once impact on bills are known.

The research was conducted using a combination of quantitative and qualitative research methods with customers throughout the region. The quantitative research provided a statistical assessment of the levels of priority that customers gave to each claim and ranked them in order of importance. The qualitative research provided insight in to customers' attitudes to each of the seven claims and the reasons why they did or did not support each claim.

7.13.1 Methodology

Qualitative stage: The qualitative research included two core methodological approaches, 7 focus groups with domestic customers and 12 in-depth interviews specifically with vulnerable customers.

Quantitative stage: An online survey was carried out with a representative sample of 1,000 customers. The survey mainly consisted of two MaxDiff trade-off models which were used to determine the level of support for each of the proposed CACs. The first version of the model (Model A) included a description of the reasons for each claim, the benefit it would bring and the overall level of investment required. This model was then repeated, but the second time round each CAC included details of the associated cost increase to an average household bill.

Findings from both models were then analysed to determine the level of support respondents had for each CAC (both before and after the bill impact was included)

7.13.2 Key insights

Customer preferences for the proposed Cost Adjustment Claims (without bill impact)

From the responses provided, levels of support were calculated and to make interpretation easier a '% Share of Support' figure was calculated as a proportion of 100%. The % Share of Support score also told us how much more/less support one of the CACs has than the others. Over 50% of the Share of Support score applied to two specific CACs, drinking water quality and reduced leakage.

Customer preferences for the proposed Cost Adjustment Claims (with bill impact)

To evaluate the impact of the likely increase in bills associated with each CAC, a second model was undertaken (Model B). It mirrored Model A in every way except that a short description was included which outlined the increase to the average household bill. By replicating the original exercise but introducing bill impact, the effect of bill increases on support for each claim could be determined.

When comparing the results from Model A and Model B, introducing the bill impact had a minimum impact of the % Share of Support overall. The top ranked CACs in Model A remained in Model B, with only the two least supported swapping round.

However, some small differences were apparent. It was notable that support for drinking water quality increased slightly, which perhaps reflected the fact that the impact on bills for this claim was comparatively low. In contrast, once bill impact was introduced support declined for the 3 claims that had the highest associated bill impact.

Customer preference for bill profiling

As part of the discussion with customers we also explored a number of scenarios in which we showed different ways customers' bills could be phased up until the year 2035. Customers were asked whether they had any preference regarding any of the five scenarios presented. The majority of participants, particularly in the focus groups, were in favour of the scenario which remained consistent for the longest period. Customers in support of this scenario felt more reassured by seeing a bill that would not fluctuate. It would help them to manage their household bills more easily as they were used to so many other bills (such as energy)

fluctuating which made it hard to keep on top of things. If the water bill remained consistent it would be one less bill to have to worry about.

7.14 Consulting on the Long-Term Strategy

Through listening to what our customers have told us about their future service priorities, we have co-created and co-developed our long-term strategy which covers 5 Big Goals that the company has pledged to achieve by 2045-2050 (see Figure 20).

Figure 20 An early view of our 5 Big Goals



Our long-term strategy research project aimed to establish levels of support for our 5 Big Goals, to identify any gaps in the consultation document and to understand any concerns that customers and colleagues might have.

7.14.1 Methodology

Colleague engagement

We held colleague focus groups to gather feedback on the long-term strategy. The focus groups included colleagues from a range of different departments and were conducted by an independent agency to ensure colleagues felt able to have an open and frank discussion.

Customer engagement

Customers' views were collected via an online survey. The majority of our customer responses came through Yorkshire Water's online community, Your Water. A link to the survey was also sent to customers and stakeholders directly and was hosted on the company website. Another approach taken to encourage open consultation of the long-term strategy was to hold 'Customer Closeness' sessions between our customers and directors. This allowed directors to hear customers feedback on the long-term strategy first hand.

7.14.2 Key insights

Colleague feedback

Colleagues welcomed our desire to make important and bold plans for the future. They believed that the issues raised in the long-term strategy document were important for us to focus on, given the impact our work has on society and the environment. The long-term strategy was praised by colleagues for being forward thinking, customer focussed and representing a “whole organisation view”.

Customer feedback

Customers had a positive view of Yorkshire Water. Prior to reading the long-term strategy document, our customers said they felt positive towards us, typically seeing the organisation as trustworthy and ambitious.

The long-term strategy document was well received by customers, with the majority supportive of the direction that we were taking. In particular, customers were pleased with the initiative to be more environmentally conscious. 9 out of 10 customers supported the 5 Big Goals, with the majority believing them to be inclusive and achievable. Customers trusted us to succeed and agreed that the strategy met what they want and need in the long-term.

Generally nothing was seen to be missing from the consultation document. Customers rated the document highly due to its comprehensiveness and level of detail, and found the environmental and diversity sections to be of most interest. Although, some customers called for more transparency around costs.

The long-term strategy document positively impacted customers' views. After being shown the '5 Big Goals', customers were asked to revisit their perceptions of Yorkshire Water. Around half of customers reported a positive change in perception, with an increase seen in those viewing us as ambitious, worthy of admiration and benefitting the overall prosperity of Yorkshire.

7.15 Acceptability testing of the Business Plan

All customer research undertaken to date has gone into developing and informing the business plan. This is the final stage of research was required to gauge the acceptability of the proposed PR19 plan.

The research provides us with a final check that the next five-year plan is in line with customers' wishes (or not) and helps identify any aspects to change in order to make it more acceptable before submitting the final business plan to Ofwat for approval.

7.15.1 Methodology

A mixed method approach was adopted which ensured that the views of a range of different customers types were gathered. In summary, the following were included in this research;

Qualitative research:

- 78 household customers participated in qualitative deliberative events
- 12 household customers defined as being in 'vulnerable circumstances' participated in a qualitative depth interview
- 21 non-household customers took part in a focus group

Quantitative research:

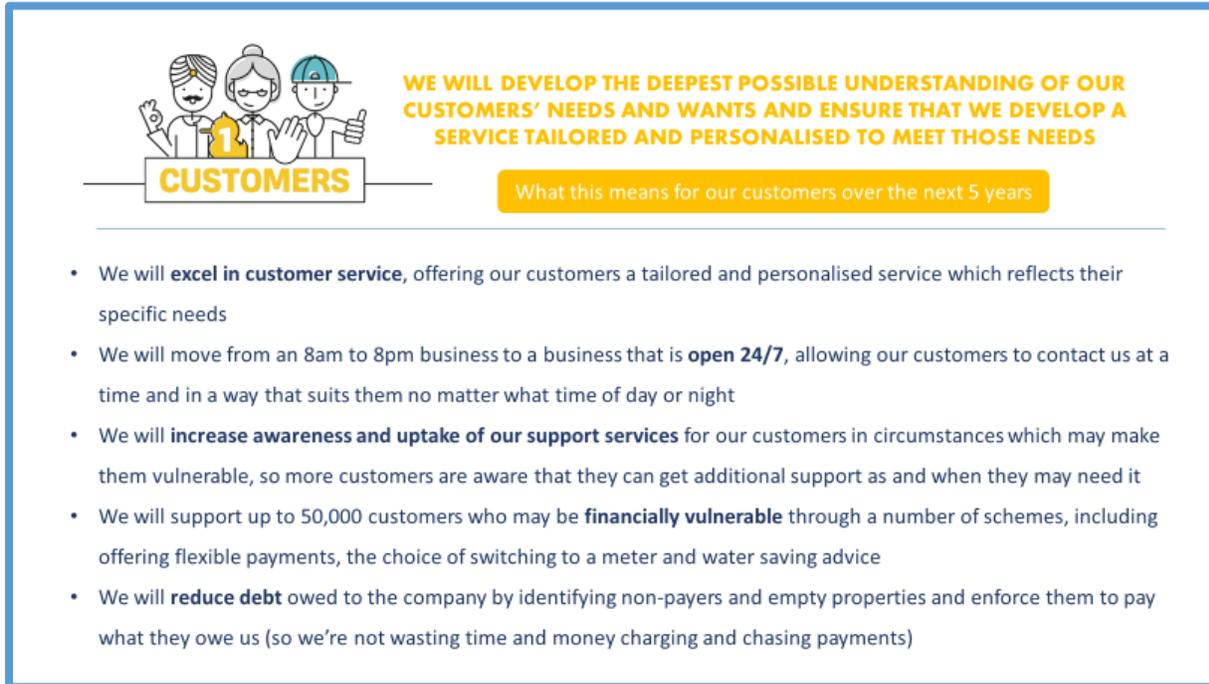
- 1,964 general household customers completed a survey
- 36 Future Bill payers completed a similar survey
- 389 members of the *Your Water* online community completed survey
- 365 non-household customers completed a survey

7.15.2 Key insights

Research learnings

The entire business plan was distilled in to our 5 Big Goals and what would be delivered within these at a high level as seen in Figure 21.

Figure 21 Example of Customer Big Goal and the high-level plan for deliver within this



CUSTOMERS

WE WILL DEVELOP THE DEEPEST POSSIBLE UNDERSTANDING OF OUR CUSTOMERS' NEEDS AND WANTS AND ENSURE THAT WE DEVELOP A SERVICE TAILORED AND PERSONALISED TO MEET THOSE NEEDS

What this means for our customers over the next 5 years

- We will **excel in customer service**, offering our customers a tailored and personalised service which reflects their specific needs
- We will move from an 8am to 8pm business to a business that is **open 24/7**, allowing our customers to contact us at a time and in a way that suits them no matter what time of day or night
- We will **increase awareness and uptake of our support services** for our customers in circumstances which may make them vulnerable, so more customers are aware that they can get additional support as and when they may need it
- We will support up to 50,000 customers who may be **financially vulnerable** through a number of schemes, including offering flexible payments, the choice of switching to a meter and water saving advice
- We will **reduce debt** owed to the company by identifying non-payers and empty properties and enforce them to pay what they owe us (so we're not wasting time and money charging and chasing payments)

For any customers who wanted to understand and read more, they could access additional information which included the performance commitments which sit under each Big Goal, the targets for each of these at 2020 and where these will be in 2025 and indeed the delivery incentive that will be applied for out or under performance. An example of the more detailed information provided to customers can be seen in Figure 22.

Figure 22 Example of Customer Big Goal, additional information



We took guidance on this approach to presenting the plan to customers from our CCG the Yorkshire Forum for Water Customers and our expert research consultants Qa Research. They advised that the tables and PC's were too technical and too much for customers to digest. They suggested that, the majority of the plan needed to be presented in bullet points to improve comprehension and engagement, that the additional information for those customers who wanted it should be provided with a click through option, we followed this approach, hence the way the information is laid out above.

Overall reactions to the Business Plan

After reviewing the 5 Big Goals and predicted bill impacts 86% of household customers said they supported the overall proposed Business Plan for 2020-25 (with only 7% being unsupportive and 8% unsure). The highest level of support was amongst those on the Yorkshire Water online community panel (90% supportive and 5% unsupportive).

The lowest level of support for the Business Plan overall, although still a high majority, was amongst customers who worry or struggle to pay their water bill (76% supportive and 14% unsupportive).

The key reasons for being supportive are related to the plan overall being positive, better for the environment and /or customers being happy to pay the small bill increase for the number of improvements proposed.

Customers are surprised that the average bill will only increase by £3 per year (without inflation) given the number of targets and improvements being promised. Expectation was for a more significant increase. On this basis there was wide spread of support for the Business Plan.

The key reasons amongst the minority who were unsupportive are all related to price increases and affordability.

A similar level of support for the Wholesale Business Plan was given by non-household customers (82% supportive and 15% unsupportive).

Overall value for money and affordability

67% of household customers agreed that the Business Plan represents value for money (with 7% rating it as poor value). There has been an increase in those giving a middle rating (23% neither good nor poor value for money) in comparison to those who were supportive of the Business Plan.

Financially vulnerable customers were least likely to feel it offers good value for money, but even amongst this group, the majority (52%) felt that it offers good value; only 15% said it offered 'poor value for money', interestingly almost a third of customers were indifferent about value money as these customers either said they 'don't know' if it offers good value for money or that it 'neither offered good nor poor value for money.'

A similar percentage rated the Business Plan as affordable for their household (66%, with 10% saying it was unaffordable). It is financially vulnerable households who are most likely to say it is unaffordable (27%). Indeed, this is the only sub-group where the majority did not feel that the plan is affordable (only 38% of this sub-group said it was, almost a quarter of this group were indifferent about the plan being affordable).

Amongst non-household customers 68% thought the wholesale Business Plan represented good value for money (8% poor) and 77% thought it was affordable (6% unaffordable).

Reactions to the 5 Big Goals

Before rating the overall Business Plan or seeing the bill impacts customers were shown information separately on each of the 5 Big Goals and the key performance commitments within each of these:

- Goal 1 customers – 94% of household customers supported this (2% were unsupportive)
- Goal 1 customers – 96% of NHH customers supported this (2% were unsupportive)
- Goal 2 water supply – 96% of household customers supported this (1% unsupportive)
- Goal 2 water supply – 96% of NHH customers supported this (3% unsupportive)
- Goal 3 environment – 95% of household customers supported this (1% unsupportive)
- Goal 3 environment – 96% of NHH customers supported this (2% unsupportive)
- Goal 4 transparency – 92% of household customers supported this (2% unsupportive)
- Goal 4 transparency – 94% of NHH customers supported this (3% unsupportive)
- Goal 5 bills – 95% of household customers supported this (2% unsupportive)
- Goal 5 bills – 95% of NHH customers supported this (4% unsupportive)

Although there are some individual reasons relevant to the specific goals, the general and recurring reasons for the high degree of support for each of the Big Goals tested is due to:

- It is difficult to oppose a long list of positive actions
- The actions proposed appear sensible, useful and customer focussed
- The performance commitments came across as challenging and ambitious
- Few customers could suggest anything that was missing, either as one of the Big Goals or from the lists of activities and targets within each of these
- Customers tended to pick up on one or two bullet points within a goal which catch their attention and focus on these when assessing their support for the plan
- Compared to other utilities, customers felt they were actually getting something tangible in improvements to the infrastructure and environment for the proposed small increases in their water bill.

Bibliography

During the development and delivery of our customer and stakeholder participation and engagement programme, we have reviewed an extensive range of industry publications, speeches, City briefings and academic papers. Whilst not a definitive list, the following bibliography provides a summary of the key publications reviewed during the delivery of our activity.

Ofwat

- Aide Memoire for Customer Challenge Groups, March 2018
- Utility Week Water Customer Conference speech, January 2018
- Delivering Water 2020: Our final methodology for the 2019 price review, December 2017
- Customer Engagement Seminar, November 2017
- Affordability, vulnerability, customer engagement and outcomes, July 2017
- How do our customers benefit from collaboration, June 2017
- Tapped In – From passive customer to active participant, March 2017
- Vulnerability focus report, February 2016
- Sector challenges and Water 2020, October 2015
- Towards Water 2020 – meeting the challenges for water and wastewater services in England and Wales, July 2015
- Towards Water 2020 – policy issues: customer engagement and outcomes, July 2015

Consumer Council for Water

- CCWater's expectations on water companies' testing of customer views on acceptability of their Business Plan for the 2019 Price Review, April 2018
- Defining and applying 'triangulation' in the water sector: How water companies can use different sources of customer evidence in business planning, July 2017
- Improving willingness-to-pay research in the water sector: Final Report by ICF Consulting Services Limited, July 2017
- The Consumer Council for Water's assessment of the 2014 Price Review: A Step In the Right Direction, August 2015

UKWIR

- Setting performance commitments and incentives to deliver best value for money, 2016
- The Future Role of Customer and Stakeholder Engagement in the Water Industry, October 2015
- Post PR14 Customer Engagement, Communications and Education, April 2015

Academic papers

- Bateman, I.J., Day, B.H., Georgiou, S., Lake, I., 2006. The aggregation of environmental benefit values: Welfare measures, distance decay and total WTP. *Ecological Economics* 60, 450-460
- Bateman, I., M. Agarwala, A. Binner, E. Coombes, Day, B. , Ferrini, S., Fezzi, C., Hutchins, M., Lovett, A., and Posen, P., Spatially explicit integrated modelling and economic valuation of climate driven land use change and its indirect effects (2016), *Journal of Environmental Management*, 181, pp 172- 84 Day
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- Schaafsma, M., Brouwer, R., 2013. Testing geographical framing and substitution effects in spatial choice experiments. *Journal of Choice Modelling* 8, 32-48.

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