Appendix A2

Identifying customer priorities

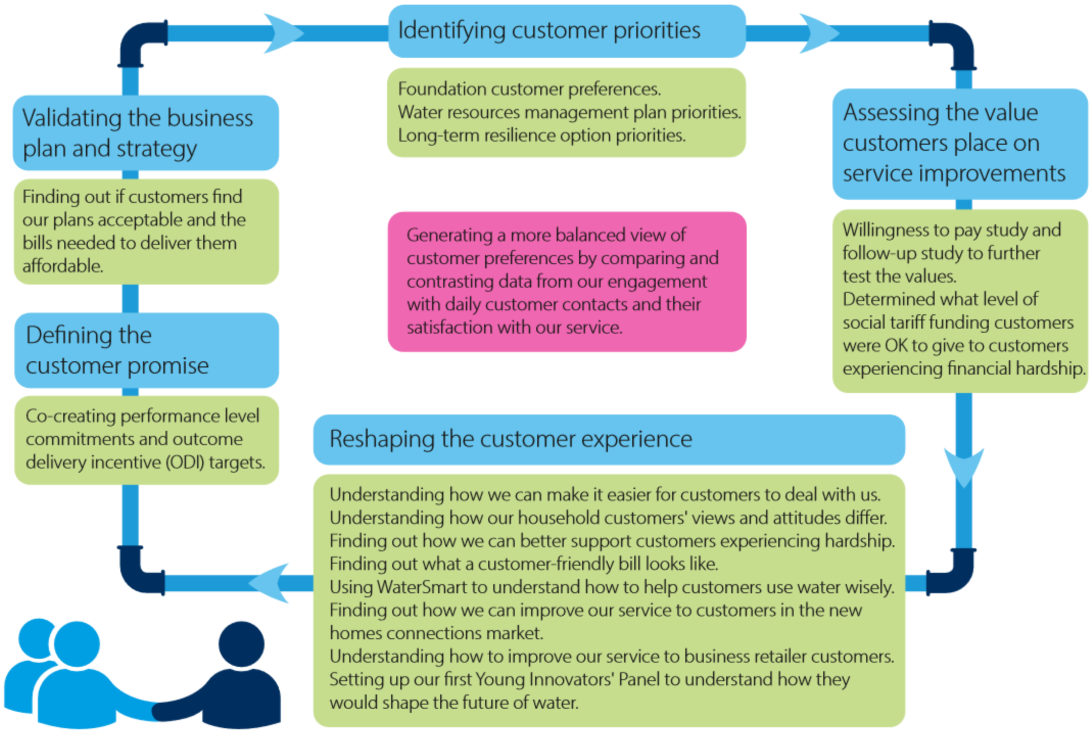
Contents

1. Using a wider range of evidence to identify our customers' priorities

Over the last two years we have fully reviewed how we approach customer engagement to ensure that our customers' priorities are placed at the heart of our business plans. This cultural shift comes from our executive team's view that the customer voice should drive all the key decisions we make, now and in the future.

Our comprehensive customer engagement journey which supports our price review (PR19) business plan has five key elements, which are set out in Figure 1. We are also committed to continuing with this approach throughout 2020 to 2025, so that we can ensure our customers' views are continually at the heart of our plans. This report sets out the key customer insights from the first step of our journey, "identifying customer promises".

Figure 1: Our approach to customer engagement.



An important part of our PR19 customer engagement programme and beyond also focuses on reviewing, comparing and contrasting (or 'triangulating') customer evidence from a wide range of sources. This is the central part of our journey. We have looked at triangulation in a number of ways to develop an approach that truly puts customers at the heart of our plans:

1. Section 3: we review all the customer insight data, relevant to our customers' priorities to interpret what customers have said using a 'common sense' judgement approach and to highlight areas where customer views differ. This process has been central to helping us fully understand our customers' priorities and preferences; and
2. Section 4: we outline how we developed a robust customer priority index, by region, focusing on our water resources management plan (WRMP) supply- and demand- side options. This index is to be used to fully reflect customers' preferences within our Multi Criteria Analysis (MCA) investment tool, which has driven our investment plans in our WRMP for both our supply regions.

2. Customer engagement projects supporting our plans

Our customers' priorities are collated from the wide range of engagement activities we have carried out in preparation to support our business plan submission. Table 1 highlights the engagement activities that are relevant to this section.

It is important to note the following:

- unless otherwise stated, all our customer engagement covers both our supply regions (South Staffs and Cambridge) to allow a robust analysis of the insights as a minimum at a regional level;
- all studies were independently carried out by our preferred agency partners and robustly challenged by our independent customer panel (CCG);
- both waves of our WTP research and our triangulation approach and PR19 data triangulation study have been independently peer reviewed at the start and end of the projects; and
- studies marked with an asterisk (*) in the first column also contain robust samples of hard-to-reach customers. This covers both customers, who are experiencing financial and/or other hardships (vulnerable customers) and future customers, who are not bill payers (the majority of them are aged between 18 and 25).

Please refer to the customer engagement journey appendices and the detailed reports provided by our preferred suppliers for full findings and details of the methodologies used.

Table 1: Overview of customer engagement workstreams.

Engagement work stream	Headline methodology used to engage with customers	Insights collected	Appendix reference
Foundation research to establish customers' priorities*	Qualitative study of 10 facilitated focus groups, covering 91 customers (covering household recruited by life stage and key demographic splits and small and medium-size business customers). Supported with 15 home in-depth interviews with hard-to-reach customers and 4 in-depth phone interviews with large business customers.	May – June 2017	A9
	Quantitative survey of 457 household customers from an online survey run from our website (random, non-representative sample, analysis weighted to regional demographics).	Dec 2018 – Jan 2018	A10
WRMP and long-term plan customer engagement to gain customer views on service levels and where we should invest to meet demand for water*	Stage 1: Qualitative study over two facilitated reconvened workshop events with 62 customers – one event per region (covering household and non-household by key demographic splits). 22 large corporate customers and key industry stakeholders attending round-table discussion events. Stage 2: 512 domestic customers reached through an online survey to quantify stage 1 findings (covering all key demographic splits and	July – Aug 2017	A11 (and supporting documents)

	weighted to regional demographics).		
Willingness to Pay Studies to understand customer priorities and preferences for service charges and investments across a range of 17 attributes*	Wave 1: Six facilitated, reconvened focus groups to co-create a quantitative survey completed by 1,656 household customers and 343 business customers (covering all key demographic splits and weighted to regional demographics). Study included a MaxDiff choice exercise to establish customer preferences for service improvements (without bill impact shown) followed by a Discrete Choice Exercise (DCE).	Aug - Nov 2017	A13 (and supporting documents)
Deep dive study with hard-to-reach customers to understand their priorities and service expectations	Stage 1: Qualitative study involving 20 in-depth home interviews (covering people facing one or more of the following vulnerabilities: limited access; physical disability; mental impairment, financial hardship; and transient vulnerability). Supplemented with in-depth telephone interviews with 5 support organisations. Stage 2: Follow-up qualitative element of 2hr co-creation workshops with a total of 16 customers from the initial phase of in-depth interviews – one workshop held per region.	Nov 2017 – Feb 2018	A15
Customer forums to understand views of our service and discussions around how to build more water efficient homes	Two, half-day forums (one per region) with 22 customers in the new connections market covering developers, self-lay providers, NAV and other key stakeholders. Discussions focused on the new charging mechanism. Full-day forum with 14 customers in the new connections market, covering developers, self-lay providers, NAV, business retailers and other key industry stakeholders. Discussions focused on the customers' service and water efficient homes.	Nov 2017 Jul 2018	A18
Non-household retailer engagement to improve service delivery and define performance commitment	Stage 1: Qualitative study involving 12 in-depth telephone interviews with operational and senior contacts (covering current customers and one non-customer). Stage 2: Follow-up consultation directly with customers on a performance commitment (RMEX) based on the feedback from the in-depth interviews.	Feb – Apr 2018 Jun – Aug 2018	A19 Insights provided where relevant
Young Innovators' Panel to engage direct with non-bill payers	Full-day workshop sessions and preparing ideas in response to a real business challenge: "changing the way their generation thinks about water". 19 sixth form students, drawn from 13 schools across the region, taking part.	Jul – Oct 2018	A21

Customer service tracker to establish customer perceptions of our service performance	Quantitative telephone study, covering 300 household and 100 business customers per year (household quotas based on age and SEG, in line with demographics data for regions. Non-household quotas based on business size and industry sector, in line with market profile).	Apr 2017 – Mar 2018	A24
Daily customer contact data	Analysis of relevant customer contact data, collected via customer call centre, engineer/field teams and other contact point such as the Community Hub. Analysis of written customer complaints data collected through various channels.	2017/18 going back 3 years	Insights provided where relevant
PR19 data triangulation study	Developing a robust customer priority index with respect to water resources management plan (WRMP) supply and demand supply options. Developing a robust and proportionate evidence base for customers' WTP for service improvements. Report draws on • CCWater and ICF - Defining and applying 'triangulation' in the water sector; and a range of external WTP studies from PR14 and PR19 complied by Accent/PJM - Comparative Review of PR19 WTP Results.	Apr – Jun 2018 Jul 2017 June 2018	A7 and A8 A25 (and supporting documents)

3. Identifying our customers' priorities

3.1 Setting the foundations

We started our journey in April 2018 when we commissioned independent, expert support from one of our research agency partners, Accent, to:

- understand customer priorities for service delivery both now and over the longer term (prompted and unprompted); and
- check them against previously established priorities in our PR14 work.

The engagement covered a range of areas, with a focus on:

- understanding customers' attitudes to water;
- brand and service perceptions of our company;
- exploring customers' uniformed views of their priorities for investment, now and in the future;
- revisiting informed priorities for investment, now and in the future; and
- understanding views around whether we offered value for money.

To do this we used an extensive qualitative methodology approach across both our supply regions, comprising:

- 10 extended discussion groups with a representative mix of household and business customers. The main focus of the recruitment for household was by life-stage, which our independent customer Panel supported. They also challenged us to consider a pre-tasked approach to the focus groups, which led to us developing a 'water moments' activity, where customers kept a diary of how and when they used water. As part of this, we also asked them to imagine how they would feel if the water did not come out the tap or was discoloured when they were using it for a particular activity. This helped us to identify how customers relate to water and also showed the power of effective pre-tasking as a way of gaining more customer feedback, which benefited both us and them;
- 15 in-home interviews with customers in vulnerable circumstances; and
- 4 telephone in-depth interviews with larger business customers.

The research revealed that the key priorities identified from 5 years ago (PR14) are now considered to be "hygiene factors" by our customers. They were found to be consistent across all household and business customer groups, including hard-to-reach and future bill payers:

- quality of water;
- continuity of supply;
- customer service;
- fair and accurate billing;
- investment to maintain and improve infrastructure; and
- reducing leakage - especially among older household and larger business customers. Two customer groups which truly resent any water being lost.

Alongside these, other spontaneous key priorities emerged, which customers said they expected to become "hygiene factors" in the future. Importantly, these areas were not spontaneously mentioned in our PR14 research, highlighting the shift in our customers' expectations over the last 5 years:

- investment in innovation, covering three key areas;
    - education, information and advice to help them have more control of their water usage. This includes providing smart meters to allow real-time usage information – an app to deliver this type of service was spontaneously mentioned by future bill payers;
    - built-in water recycling systems for new builds/refurbishments and other rainwater harvesting solutions to reduce demand; and
    - infrastructure and operations, such as more resilient materials for pipes and use of alternative energy sources to power the network;
- addressing environmental factors and the impact of climate change.

Once customers were taken through a process of being informed about our challenges and what areas we are responsible for, we noticed a shift in some customers' priorities as they reconsidered them. In particular, the following areas became more important, although the core "hygiene factors" remained at the top of the list for the vast majority;

- planning for population growth;
- assisting vulnerable customers;
- managing the impact of climate change;
- protecting and enhancing the natural environment;
- managing the impact of increasing energy costs;
- ensuring financial stability; and
- ensuring affordability of bills v ensuring long-term resilience of assets to meet future demand.

In light of discussions around priorities and challenges customers generally considered their water bill good value for money, in part driven by the context that it is one often one of their lowest household or business bills.

There was also often surprise at the relatively-low amount of profit going to our shareholders, particularly when compared to other companies they had read about.

We also uncovered that whilst the majority of customers gave us good feedback for our service performance and positive brand perceptions (such as local, reliable, friendly), we were viewed as a "hidden brand" by the majority.

Please refer to appendix A9 (slide 17) for further details of this in our foundation priorities study.

3.2 Validating our customer priorities

To further explore the results of our foundation priorities qualitative study we conducted an online quantitative survey. The survey started with demographic profiling questions and then asked customers to choose their "top 3" priorities from three areas: water quality and water supply; customer service and bills and; finally, planning for the future. We then asked customers to choose their "top 3" priorities when all of the options were shown together.

Customers who completed the survey were uninformed and they viewed the statements with no context setting (e.g. how much each option might cost). There was also no comparative data provided (e.g. how SSC is performing relative to other water companies). We wanted the survey to provide a response that an uninformed customer in the street would give.

The full questionnaire was completed during December 2017 and January 2018 by 291 South Staffs customers and 166 Cambridge household customers. To ensure a robust analysis:

- the data was reweighted based on the age and gender breakdown of all bill payers reported in our regular Customer Services Tracker engagement; and
- used an econometric model (rank ordered logit) to derive a priorities scale based on all the 3 statement choices. The priority ordering based on the ranked ordered logit model is shown below. Only the top 16 statements are included.

This approach shows that providing safe, high-quality water attracted the highest number of responses from customers – see Table 2. This supports the qualitative foundation findings when this was regularly mentioned as the first spontaneous priority.

"As a water company, that is the minimum expectation of service: to provide safe, drinkable water" – Cambridge Water customer

We then see the other top priorities from the foundation research emerging again (reliability of supply, leakage, fair and accurate billing, planning for the future) at the top of the list, although there is limited variation between them. We also found that:

- customers who've experienced any issues with their water supply are more likely to put water quality as their top priority;
- when it comes to statements relating to planning for the future, South Staffs customers are more likely to place balancing affordable bills against longer-term investment plans as their highest priority, whereas Cambridge customers are more likely to choose reducing leakage;
- when just asked to choose from billing and customer service areas, fair and accurate billing is the top customer priority. However, it is important to note that, as only around 25% of customers contact us each year, customer service is rarely a top of mind priority area. Our qualitative insights clearly show how important it is to customers when prompted; and
- customers who are considering getting a water meter or have asked to have one installed are more likely to put fair and accurate billing as their top priority. This shows a key driver for customers taking up a water meter.

Please refer to appendix A10 for further details of our quantitative priorities study.

Table 2: Priority order index by region from our quantitative priorities engagement.

Statements	SSW Priorities scale	CAM Priorities scale
Providing a high-quality water supply that is always safe to drink	26%	24%
Making sure water always comes out of the tap – i.e. no supply interruptions	6%	8%
Offering fair and accurate billing	6%	8%
Reducing the amount of water that leaks from our pipes	6%	7%
Having plans in place to ensure we have enough water for a growing population	6%	6%
Ensuring water always tastes and smells good	6%	4%
Making sure we fix all leaks as quickly as possible	6%	7%

Making sure we balance offering affordable bills against the need to invest in our network for the long term	5%	3%
Installing systems that capture rainwater and non-toxic used water for use in flushing toilets and the garden	4%	5%
Making sure water is never discoloured / cloudy / has particles in it	4%	2%
Offering great customer service	3%	3%
Investing in new technology and ways of working that help customers better control their water usage: such as smart meters and apps	3%	2%
Managing the impact of climate change – such as increased heavy rainfall leading to flooding, burst pipes due to extreme temperatures	3%	5%
Protecting and improving the natural environment for wildlife and plants	3%	3%
Assisting more customers who need extra support the most: financial and/or special services	3%	1%
Educating customers on how to use water more responsibly (and save money)	2%	2%

In our engagement with customers in the new connection market (such as developers and self-lay providers and NAVs) and with our business retailers, the most important priorities consistently focused on offering great customer service. Specifically:

- ongoing regular and ad hoc communication is vital to keep them updated;
- having a known contact that can be reached quickly; and
- having effective processes that allow efficient administration to avoided wasted time and cost.

Please refer to appendix A18 for further details of our latest Forum.

3.3 Continually testing our customer priorities

Following our qualitative foundation research, we also continued to ask customers about their key priorities throughout our engagement programme to explore their responses by asking the question to them in different ways and using different contexts to see if there were any variations in their expressed priorities.

We started this process in our all-day deliberative Water Resource Management Plan (WRMP) workshops in July 2017. Here we asked household and small business customers in both our supply regions to vote on their priorities at the start and end of the sessions using interactive keypad voting technology.

Provided with a list of the main challenges faced by water companies and asked to rank them in order of importance, the top three priorities were:

- ensuring water quality;
- keeping bills affordable; and
- reducing leakage.

At the end of the first workshop (i.e. after provision of information) their priorities were reassessed. In both regions increased importance was being placed on:

- encouraging people to use less water; and
- installing more meters, particularly in the South Staffs region where customers liked the potential positive impact on water consumption and leak detection. It was also seen by most as the fairer way to pay for what they use and that it would help people to think about and reduce their water use.

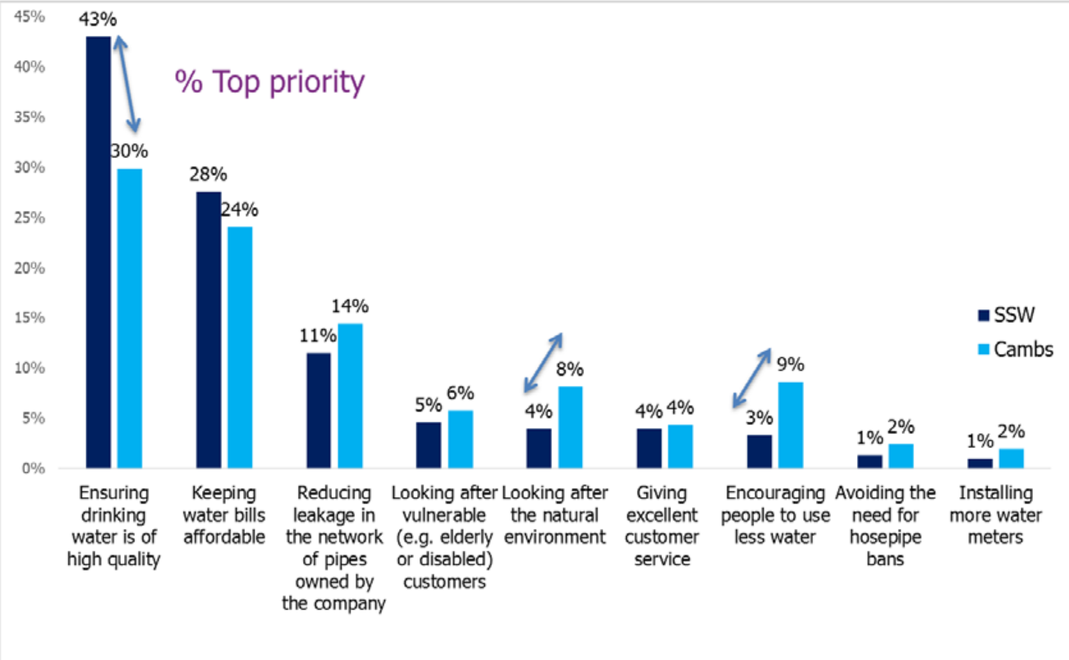
It is important to note that we did not ask about reliability of supply in the list given to customers, however that does not mean it was seen as unimportant. When touching on this area with customers in the WRMP groups, it came through strongly as a key priority area.

In the follow-up WRMP online survey among 512 household customers and future bill payers were asked to pick their top three and then top priority (see Figure 2) from the same list as the one provided in the workshops. We found that water quality and affordable bills dominated the priority ranking, with only reducing leakage receiving over 10% of votes. This mirrored the workshop voting in both regions, providing a high degree of consistency in the initial qualitative response.

Installing more meters received very few votes in the online survey, highlighting the impact of informing customers in depth about a topic can change their views on how much emphasis they place on it as a priority.

There was no significant variation noted in the priorities of hard-to-reach customers, except that they placed more emphasis on looking after vulnerable people. The insights throughout our wider research show that this is driven by the fact that they often know and appreciate the positive impact that the right support, delivered at the right time can have on their lives. Please refer to appendix A11 for full details of our WRMP study.

Figure 2: Customers' top priorities in our WRMP on-line survey, by supply region.



Base: South Staffs 305, Cambridge 207. Household customers.
Arrows show statistically significant differences between the two regions.

At our two roundtable events industry stakeholders and larger business customers' spontaneous priorities were similar to other customers. However, they clearly came from a more informed position and were more concerned from the outset about planning for the future and ensuring resilience of the water supply.

We also observed our customers expressing a clear priority for 'having a safe drinking water supply' in our Wave 1 Willingness to Pay (WTP) quantitative survey, which included a discrete choice experiment (DCE) and a MaxDiff choice exercise.

Almost 2,000 household and business customers took part in Wave 1 during October 2017. Please refer to appendix A13 for full details of our WTP Wave 1 study.

The MaxDiff exercise element of the survey required customers to initially indicate their choices of the highest and lowest priority among different sets of potential service improvements, five at a time from a total of 17 different service measures (15 for business customers). No bill impact information was given to customers during the MaxDiff exercise, so we do not know if they were considering potential costs in their heads when giving their responses.

Customers were given key information through interactive pop-ups to explain the service measures and also comparative data of our performance vs other companies in the industry, where appropriate.

These were co-created in up-front qualitative groups with customers to ensure they were user friendly and clear as to what customers were commenting on. They were also challenged by our customer Panel which led to a number of amendments being made to the wording and visuals used. This steps helps gives us more confidence that customers were giving us considered responses that reflected their true priorities.

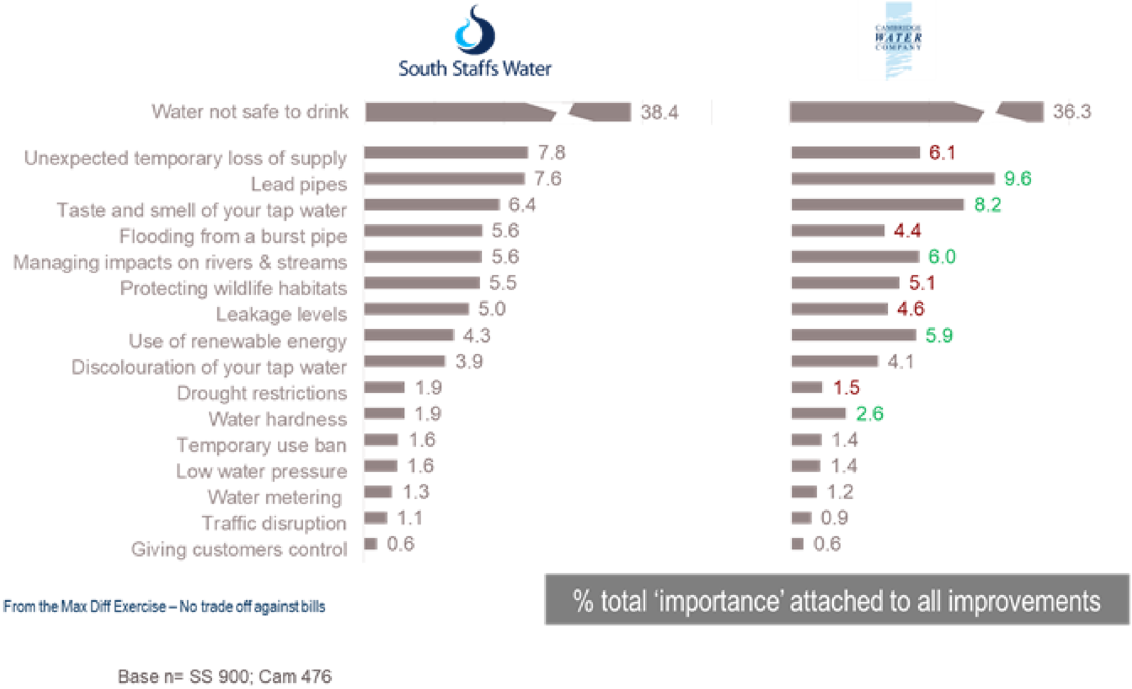
In these groups we also asked customers to start by grouping the 17 attributes into pots, based on how important the area was for prioritising investment. They were given information about what each attribute related to but no comparative or frequency of occurrence information.

The exercise showed that the following ones were placed in the green pot, which was the highest priority area by four or more of the six groups (4 household and 2 small and medium-sized business customers) which again all relate to water quality and a reliable supply:

- avoiding severe drought restrictions – use of standpipes (all 6 groups);
- water not safe to drink for a period of 2 to 4 weeks;
- flooding from a burst pipe of ground floor of property; and
- tap water tastes and smells different (e.g. of chlorine) for a period of 3 days.

Figure 3 shows an index summarising the relative priority given to each service improvement by household customers in the quantitative study, with the sum of the index equal to 100. Significant differences between our two supply regions are highlighted in green and red.

Figure 3: Household customer priority index – MaxDiff exercise.



'Water not safe to drink' stood out in both regions, accounting for over a third of the total priority for improvement. This may illustrate the often-observed research outcome of a particularly severe event raising strong concerns for individuals, even though the likelihood of such an event is very low. This result mirrored the findings from our foundation qualitative and quantitative priorities research, confirming that it is a core "hygiene factor" for our customers.

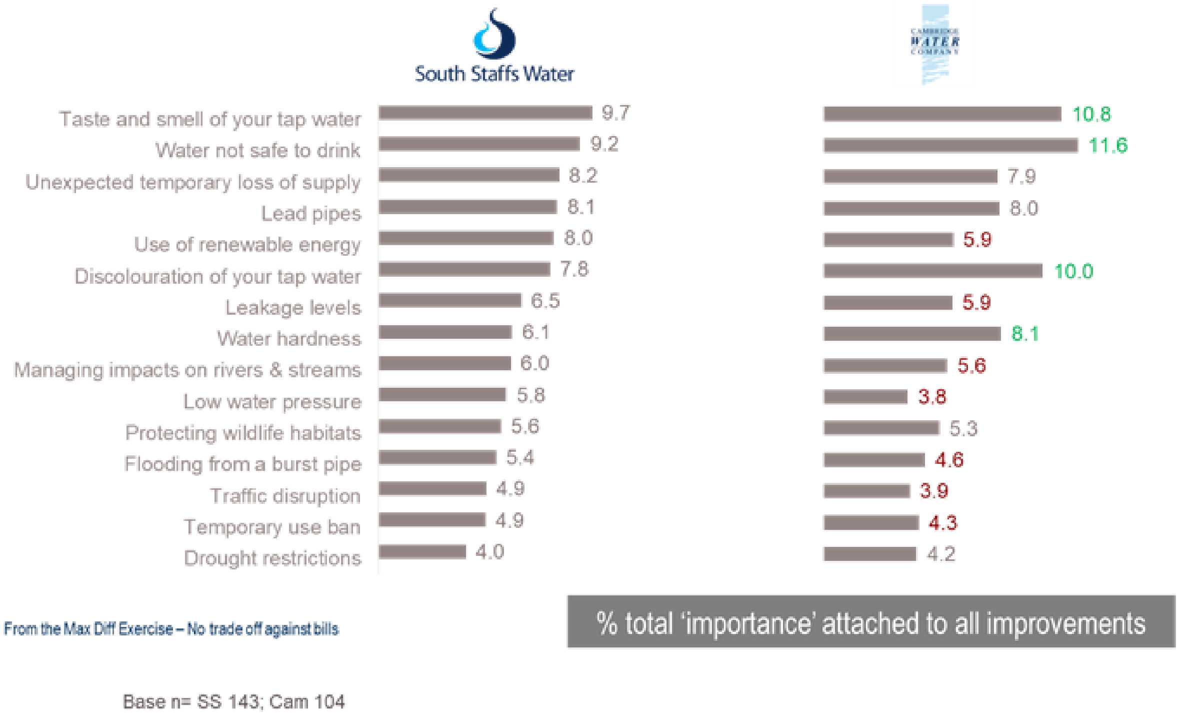
This was followed by 'loss of supply' 'taste and smell' and 'lead pipes', again highlighting the importance of water quality and secure supplies to customers. Lead pipes did not emerge as a priority from the initial foundation qualitative research, highlighting that it is often an 'out of sight' area for customers and that they do attach a higher level of importance to it when informed.

'Giving customers more control of their water supply through increased meter reads', 'water metering' and 'traffic disruption' rated as the "bottom 3" in both regions, highlighting that in this exercise they are not often perceived to be the top priority areas for service improvements. Whilst having more meter readings (via an in-home device) was mentioned spontaneously in all our qualitative groups, the quantitative engagement highlights that it cannot be viewed yet as a "hygiene factor" at this time.

Whilst chosen as a priority area for investment in all six of the qualitative groups, 'Drought restrictions' only received a mid-ranked rating in the MaxDiff. Our conclusion for this is down to the fact that the event happens so infrequently and does not cover the same level of immediate risk to health as 'water not safe to drink', hence many customers did not view it as the top priority area.

In contrast, we found that business customers (working for companies of all sizes and industries) take a more balanced view, with water safety one of a range of top priorities - see figure 4. We have found throughout our engagement that business customers tend to have a more rounded view of priorities given their mind-set.

Figure 4: Business customer priority index – MaxDiff exercise.



The findings show that 'taste and smell', 'loss of supply', 'lead pipes', 'use of renewable energy', 'discolouration' and 'water hardness' have broadly similar levels of importance attached to them by business customers.

Evidence from the MaxDiff element of our WTP study suggested that the inclusion of specific service levels encouraged both household and business respondents to give more considerate thought to each attribute.

3.4 Making use of our satisfaction and daily contacts data

In addition to drawing on our engagement with customers through specific research projects, we have also reviewed our customer service satisfaction data and daily customer contacts to help better understand our customers' priorities.

In our customer service tracker we speak to 400 hundred household and 200 household customers each year to ask them in detail about how they rate various aspects of our customer service and operational performance.

A regression analysis of the data from our 2017 and 2018 tracker insights highlights a number of areas which have the biggest impact on overall customer satisfaction. Whilst this is not a directly expressed priority, we can put forward the assumption that if an improvement to a specific service area increases overall satisfaction, then customers are more likely to be placing a higher level of emphasis on it. These areas correlate closely with our "hygiene factors" indicating a consistent theme:

- safe drinking water (South Staffs region);
- a reliable water supply;
- water that is not discoloured and in the South Staffs region tastes/smells bad;
- fixing visible leaks quickly; and

- offering a value for money service – this in itself is often shown mainly to be driven by the price customers pay for their service against the quality and reliability of the water supplied through their taps.

We can also consider unwanted household customer contacts as a potential source for assessing customer priorities on the basis that it seems reasonable to assume that customers are more likely to contact the company, having experienced a service issue of some kind, if the service issue that affected them was important to them.

We have also run an analysis to show the number of unwanted contacts per affected household properties for operational service areas over the last 3 years. We looked at the 'per property affected' figures to take away the bias that just because service failures happen more often in the network that they are potentially more important to customers. This analysis shows the top areas, in priority order, mainly correlate closely with customers' "hygiene factors":

- unexpected temporary loss of water supply;
- discoloured water;
- bad tasting or smelling water; and
- low water pressure. However, our data shows that often these contacts are not actually related to low pressure when fully investigated by engineers.

Areas relating to retail customer services (such as bills, meter requests, home moves, payment plans and administration) received 7,150 unwanted contacts in 2017/18. 38% of these were related closely to billing queries. When further split down, individual areas do not attract as many unwanted contacts as unexpected loss of supply (we received over 4,500 in 2017/18) or low water pressure, but it does help highlight how important accurate, stable bills and good customer service are to customers.

It is important to note that the unwanted contact data contains a lot of caveats, such as the fact that some customers will simply not report an issue even though it may be important or cause them distress. As a result, unwanted contacts should only be taken as another lens to view customer priorities.

Like unwanted contacts, household customer complaints can also be considered to be a potential indicator of areas that our customer care most about. In the year to date for 2018/19 the most common complaints are linked to the following areas below (taken from our customer contact database). Again, these match closely with customers' expressed priorities in our formal engagement, with a particular emphasis on the importance of ensuring great customer service and accurate bills:

- billing – mainly linked to estimate bills, bills not received and time taken to resolve issues, particularly when a meter reading is needed;
- metering – mainly linked to delays in fitting meters and poor communication;
- training and soft skills – mainly linked to customer service expectations around how customers want to be treated;
- supply issue – mainly linked to no water and low pressure following works;
- rehab – mainly linked to workmanship and shutting of water supply; and
- leakage – mainly linked to how leaks on premises are handled.

3.5 Key conclusions

Our robust new approach to customer engagement has given us a clear view of the areas that matter most to our customers and where they want to hold us to account.

From reviewing all our customer feedback the core "hygiene factors" which our customers have told us that we must deliver on are listed below. Our customers are clear that they will not tolerate any reduction in service levels in these areas and are expecting and trusting us to improve the service over time. The top two areas in particular stand out as the most important to all our customers:

- having a clean, high-quality and reliable water supply;
- having bills that are fair, accurate and affordable with no unexpected changes. They want their water service to represent genuine value for money;
- receiving great customer service whenever we interact with them;
- reducing leakage on our network of pipes;
- protecting the natural environment – habitats and water sources; and
- helping those customers who may need extra support – both through financial support and other support when needed (e.g. bottled water in the event of a supply interruption).

However, within these areas, we have found that there are some noticeable differences across our customer groups when assessing customers' priorities. They can be used to help tailor our plans to better meet customers' expressed priorities in the future:

- South Staffs customers place more emphasis on water quality and affordable bills, in part reflecting the challenges we face in this region;
- Cambridge customers place more emphasis on reducing leakage and protecting the environment, driven by the values and preferences of the customers who live in this region;
- business customers place a higher level of emphasis as a group of customers on reducing leakage;
- vulnerable customers place more emphasis on providing financial and other support to customers, driven by their own experiences of the benefits of having this support on offer; and
- future customers (18 - 25 who are yet to start paying a water bill) have consistently placed more emphasis on protecting the environment and delivering services through digital platforms. These are "hygiene factors" for them now, but they are in part driven by the fact that they are so remote from their day-to-day water supply which bill payers are more able to comment on. This strong level of emphasis on protecting the environment was also shown by the 19, 16-17-year olds, who are taking part in our first Young Innovators' Panel in our South Staffs region. They also placed 'supporting financially vulnerable customers' as their number one priority' when educated about our business plans.

Beneath these core priority areas sit a number of important priorities, which also emerged consistently through our engagement as future "hygiene factors":

- giving customers more control of their water usage (e.g. smart metering) and providing education on how to use water responsibly, particularly for the younger generation (16-25);
- planning for population growth and managing the impact of climate change to ensure resilience of supplies, now and in the future;
- ensuring affordability of bills vs ensuring long-term resilience of assets to meet future demand;
- meeting the challenge of rising energy costs by lowering our carbon footprint; and

- investing in innovation to drive improvements, both operationally and the service experience.

3.6 How the priority insights informed our engagement programme

All our up-front customer priorities research was used to shape the remaining engagement programme to ensure we responded to our customers' priorities. Examples include:

- using the priorities expressed by customers in our foundation and WRMP engagement to select the attributes subsequently tested in our WTP research;
- using the priorities to help shape our customer promises (performance commitments) for 2020 - 2025;
- carrying out follow-up research to better understand customers' general life behaviours and attitudes to water to enable us to offer them more personalised and tailored services. These differences in views were uncovered in our Foundation research but we felt they needed exploring in depth; and
- driving the need to further engage with customers to find out what types of products and services they wanted and how they want us to proactively communicate with them. Customers consistently said in our engagement that we were a "hidden brand" and needed to offer a more proactive, innovative service.

We have also used these and other insights, alongside our day-to-day customer contacts, to support the business decisions to launch in 2018:

  - primary schools outreach education programme;
  - new service channel for customers to communicate with us, with a particular focus on visually impaired customers (our recently launched Alexa, Voice Activated Assistant); and
  - Community hub in our South Staffs region to offer face-to-face support to customers.

4. WRMP priorities: summary of 6 steps and conclusions

In addition to the priorities engagement work detailed in section 3, we also needed to develop a more robust customer priority index, by region to feed into our Multi-criteria Analysis (MCA) investment tool that drives the selection of preferred supply- and demand- side options in our WRMP. This has ensured that our customers' priorities play a key role in shaping our investment plans.

To enable this, in February 2018 we commissioned independent, expert support from one of our research agency partners, Accent and PJM Economics, to review all our customer engagement activity related to our WRMP to develop the index.

Working closely with our partners, we developed a robust approach building upon a key report for CCWater, ICF (2017) *Defining and applying 'triangulation' in the water sector*, which sets out a suggested triangulation framework for PR19 and beyond.

The technical report, analysis s/sheet and supporting academic peer review is found in appendix series A25. This outlines in detail the work activity undertaken for each of these six steps we developed to arrive at our customer priorities index.

The approach was also extensively reviewed throughout by our independent customer Panel and their views on our approach can be found in their report submitted to Ofwat on the 3rd September. An academic expert (Giles Atkinson) also peer reviewed the methodology and final report which is detailed in the supporting materials - appendices A25.2 and A25.3.

Below is a summary of our six step 'SMARTS' triangulation approach developed and the final outputs used in our MCA.

4.1.1 Screen

Our approach works on the principle that a data sources is suitable for triangulation, if it contains relevant information that can provide us with a measure of priority for at least two service measures, such as leakage and metering. For our WRMP priorities, we identified a number of our studies containing customer evidence suitable for triangulation to develop the priority index. These are:

- qualitative and quantitative 'core WRMP priorities' research;
- quantitative 'willingness to pay' (WTP) research; and
- wider quantitative 'customer priorities' research study.

It is also important to note that we worked extensively to gain the views of vulnerable and future bill paying customers in both our core WRMP and WTP studies.

4.1.2 Map

We then converted the evidence from each suitable data source into a form that is comparable to our 'core WRMP' measures. This step is necessarily source-specific and requires assumptions in some cases to enable the comparison.

For example, in order to convert WTP core research output to a comparable measure for the WRMP options the first step involved taking the mean WTP values from the relevant Discrete Choice Exercise (DCE) research for the common service measures (i.e. Leakage, Water metering and Smart metering) for 'S0 to S2' service level improvement and divided by the bill impact per customer for moving from S0 to S2. It is appropriate to scale by cost at this stage to support our triangulation of the WRMP customer engagement as the data within the MCA is not monetised. The approach focuses in on those benefits that are hard to monetise, such as resilience, environment and deliverability. A more qualitative view is taken, supported by an individual maturity matrix for each criteria to ensure consistency in approach. Whilst it is possible to monetise customer preference through WtP, in the WRMP engagement we were purely looking to understand customer preference. There is no traditional CBA being undertaken within the MCA as there are no monetised benefits, as per industry guidance. Therefore, using a MCA approach is appropriate for the scale of the problem we were looking to appraise.

This translated WTP into a benefit-cost ratio, which is a standard economic measure of customer priority. We then rescaled the resulting values so that their sum equalled 100. This priority index was therefore based on the assumption that the WRMP options were equivalent to the S0 to S2 improvement for the corresponding service measure. These important assumptions are all detailed in the full technical report.

4.1.3 Assess

To robustly assess the measures used in our WRMP triangulation approach, we considered each data source in detail against the two areas below. The details of the review of each data source are detailed in the full technical report.

- theoretical robustness:
  - are definitions of the candidate and target measure the same?;
  - are contextual conditions (e.g. type of questions asked) the same between candidate and target measures?; and
  - if no to either of these, what issues do the differences give rise to?
- statistical robustness:
  - how large is the sample?
  - how representative is the sample – a review of any biases, timing of the study, make up of sample?
  - how wide are the confidence intervals within the data?
  - have the results been derived using best practice techniques?

4.1.4 Rate

We then assigned an overall Red/Amber/Green (RAG) rating for each source for WRMP measures, against the above criteria detailed in the previous section. These ratings are based on our best judgment in light of the balance of evidence across all data sources being evaluated.

These judgements are detailed in the full technical report and it is important to note that these ratings are intended to be meaningful in a comparative, rather than an absolute sense. Table 3 summarises the rating of the data sources we used, which included both waves of our WTP studies.

Table 3: List of data sources used in our WRMP triangulation approach

Overall RAG rating	Weight	Data source classification on overall validity
Green	100%	
Green / Amber	50%	WRMP qualitative workshops WRMP quantitative online survey

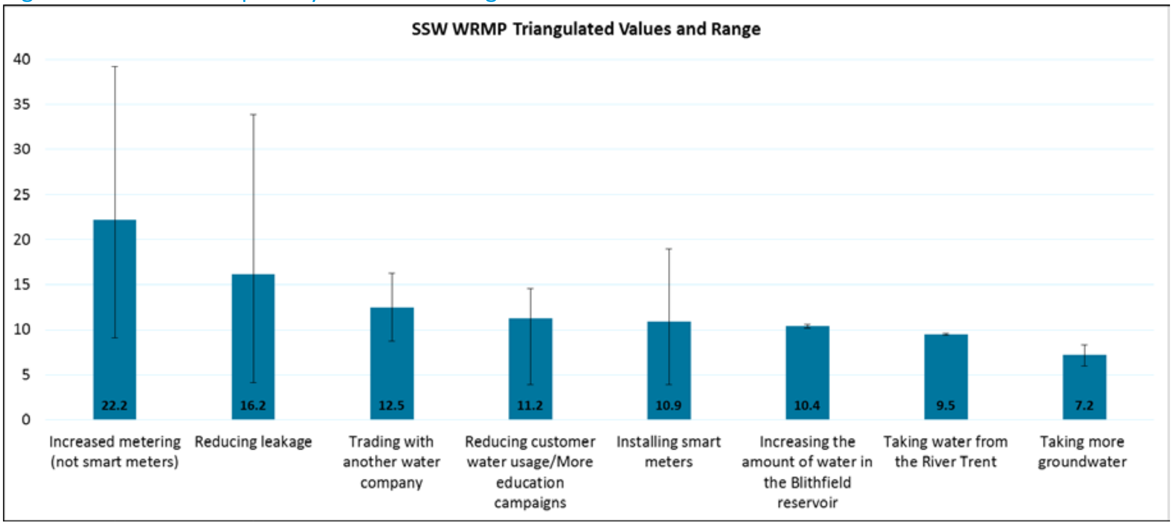
		WTP quantitative online survey – waves 1 and 2 WTP max diff priority trade off exercise in wave 1
Amber	25%	Customer priorities quantitative study
Amber / Red	10%	
Red	0%	

4.1.5 Triangulate

This important step involved applying weights to each of the data sources based on their overall RAG rating and combining the measures to derive a robust priorities index. The charts below shows our final WRMP priority values for both our supply regions, which have been re-scaled to sum to 100, and their associated ranges.

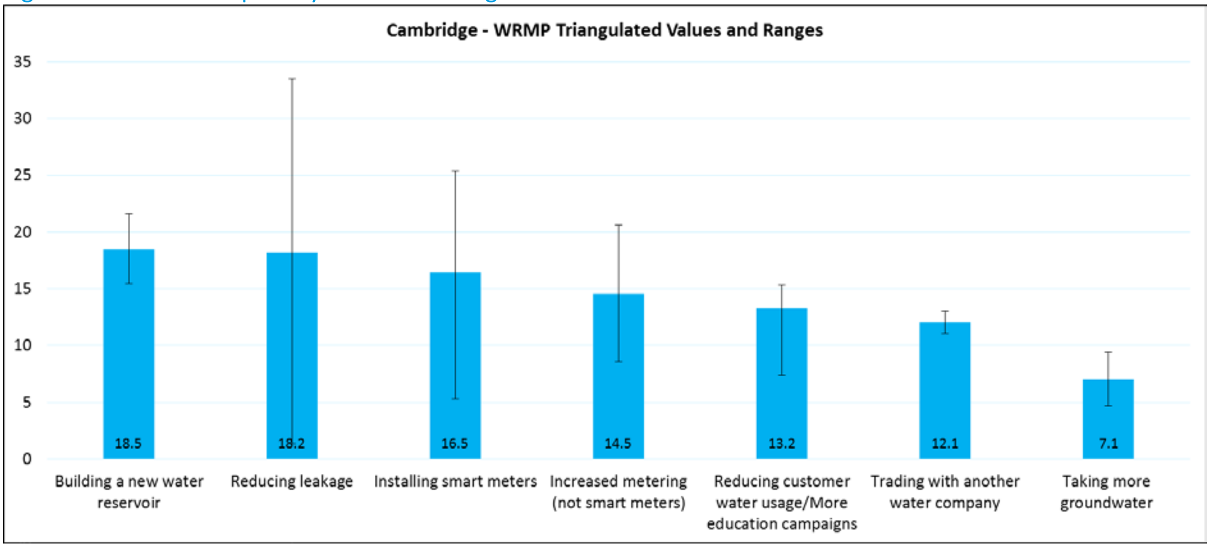
Our customer priorities index in figure 5 shows that 'increased metering' is the highest rated priority among South Staffs customers, followed by 'reducing leakage'.

Figure 5: Final WRMP priority values and ranges – scaled to 100



Our customer priorities index in figure 6 shows that 'building a new reservoir' and 'reducing leakage' are the highest priority among our Cambridge customers with little between the two options. This is followed by the two metering options.

Figure 6: Final WRMP priority values and ranges – scaled to 100



'Taking more groundwater' is the least desired option for customers in both our supply regions, although it is important to note that this is only in the context of drilling new boreholes.

Please refer to:

- appendices A7 and A8 (section 2) for a full, detailed review of our customers' priorities and views on all the supply- and demand- side options we engaged with them with during our core WRMP research; and
- appendix A11 (slides 71 – 74) for an overview of the specific WRMP engagement methodology used (including an innovative gamification approach at our deliberative workshops) which included exposing customers to costs and bill impact of the different supply- and demand-side options.

The data source ranges shown in Figures 5 and 6 for some of the options are much more significant than for the other options, such as 'reducing leakage'. We have therefore taken care to sensitivity test the results in both regions to note the differences this makes to the priority index. This output is detailed in section 4.1.6 below and further details are provided in the full technical report.

4.1.6 Sensitivity testing

Finally, we sensitivity tested our main combined WMRP priority values by considering alternative sets of weights for the RAG ratings as well as alternative overall RAG ratings for the different data sources. Four sensitivity cases were considered and the details of these are laid out in full in the full technical report.

The tests revealed that, overall, in both regions our triangulated WRMP priority indices for all the core service measures showed limited variation across the sensitivity tests. There were no cases where the differences were larger than 20% across the different sensitivity tests, giving us a high degree of confidence in the main cases.

4.1.7 Key conclusions

We have found that customers in both our supply regions prefer demand-side options to supply-side ones. The exceptions being 'trading water' in the South Staffs region, which is already in existence as an option with our neighbours Severn Trent, and 'building a new water reservoir' in the Cambridge region.

However, there was recognition from customers that there would need to be a blend of both demand- and supply-side options to meet the future challenges we face.

Based on our sensitivity testing, the values shown above are the preferred values to use within our MCA as part of the process of setting investment levels for our supply- and demand-side options. It provides the most well-rounded, balanced view of our customers' priorities across all our relevant engagement work to support our WRMPs.

We have also found from sharing and comparing insights from our neighbouring regions, Anglian Water and Severn Trent Water, that their customers also generally prioritise demand options over new water supply resource options.