

11 July 2017

Trust in water

Delivering Water 2020: consultation on PR19 methodology

Appendix 2: Delivering outcomes for customers

**Appendix to chapter 4:
Delivering outcomes for
customers**

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Contents

1. Summary	2
2. Our proposals on performance commitments	3
3. Our proposals on outcome delivery incentives	57
4. Our proposals for new customer experience measures	74

1 Summary

This appendix provides further detail on our proposals for the outcomes framework discussed in the Outcomes chapter of the 2019 price review (PR19) methodology consultation document. For each area, we set out the issues that we are seeking to address, the options we have considered and the reasons for our proposed approach.

Section 2 describes our proposals to make performance commitments more stretching, so that customers benefit from an improved quality of service.

Section 3 sets out our proposals to make outcome delivery incentives (ODIs) more powerful, increasing the incentive on companies to deliver on their performance commitments to customers. Our proposals aim to better align the interests of company management and investors with those of customers.

Section 4 describes our proposed new customer experience measure (C-MeX) and developer services experience measure (D-MeX). These are designed to stretch companies to deliver a better overall service to a wider range of customers.

2 Our proposals on performance commitments

Performance commitments are the pledges companies make to their customers and stakeholders about service levels to make progress towards their outcomes. They are developed through customer engagement to reflect the priorities of customers and other stakeholders.

In this appendix, we are distinguishing between a **performance commitment** and the **performance commitment level**. A **performance commitment**, is the indicator the company is measuring itself against (for example, the average length of supply interruptions that last more than 3 hours). The **performance commitment level**, is typically a particular value on the indicator (for example, we commit to achieve a reduction in supply interruptions to a level of 10 minutes per property per year).

What we want to achieve

We want companies to develop a balanced, challenging package of performance commitments with stretching performance commitment levels, so that:

- stakeholders can more easily compare and challenge the stretch in companies' proposals in key areas;
- companies are able to develop innovative performance commitments that reflect their customers' priorities; and
- stakeholders trust and have confidence in the outcomes framework.

In order to deliver this balanced package, we consider that companies need to have both common and bespoke performance commitments. Common performance commitments are commitments with standardised definitions that all companies must have. Bespoke performance commitments, are proposed by each company that reflect their own circumstances and their customers' particular preferences.

What options have we considered for the performance commitments?

We have considered four options. The first option reflects the 2014 price review (PR14) with the necessary minimum improvements to reflect the lessons learned at PR14¹. It is the base case against which we have assessed all the other options.

¹ For example, in the May 2016 Customer engagement policy statement we highlighted that we expect companies to place a greater weight on building a robust, balanced and proportionate evidence base. We also stated that companies should be considering other valuation methods than stated preferences WTP (such as, revealed preferences and behavioural economics approaches).

Option 1: Base case - PR14 with improvements to the cost benefit analysis

This option has seven common performance commitments covering many of the outcomes that customers value, based on companies' customer engagement at PR14. All companies' other performance commitments would be bespoke. We would set common performance commitment levels for five of the common performance commitments. For the remaining performance commitments, companies would use a cost benefit analysis (CBA) to set their service levels. Companies would use a richer evidence base in their CBA than at PR14.

Option 2: All performance commitments are bespoke with a fully flexible approach to setting their levels

This option involves companies only having bespoke performance commitments. Companies would have full flexibility to set their performance commitment levels using any approach that they chose, but which must reflect customer engagement and challenges from their CCGs.

Option 3: All performance commitments are common with a prescriptive approach to setting their levels

This option involves us requiring all performance commitments to be common, with no scope for companies to propose their own performance commitments. We would issue prescriptive rules on setting performance commitment levels for all the common performance commitments.

Option 4: Balance of common and bespoke performance commitments

This option involves us requiring companies to have a number of common performance commitments (considerably more than in Option 1) to cover the issues that matter to customers. However, there is still scope for companies to propose bespoke performance commitments that reflect their local customer engagement. This option includes expectations for companies to set stretching service levels using robust evidence and justifying them against a range of approaches.

Our assessment of the potential options for performance commitments

Table 2.1 below, describes our assessment of the options relating to performance commitments.

Table 2.1 – Our options assessment for performance commitments²

	Option 1 PR14+ (base line)	Option 2 All bespoke	Option 3 All common	Option 4 Balance of common and bespoke - Preferred option
Achieving our objectives	Common PCs enable comparability and hence stretch, but us setting common levels reduces the role of customer engagement. These common PCs do not cover all areas that customers consider important e.g. resilience. ✓	Limited comparability does not promote stretching PCs and companies may not address issues of importance to customers in their PCs. x	Comparability between PCs would promote stretch, but all common PCs would not allow companies to reflect their customers' local priorities. ✓	Common PCs enable comparability and promote stretching PCs. Our 14 common PCs cover customer priorities. This option allows customer engagement to inform the common PC levels and bespoke PCs. ✓✓
How our objectives are achieved	Option 1 involves a lack of flexibility for companies in proposing their PC levels, e.g. a focus on CBA only, which will make it harder for them to use wider customer evidence. ✓	Only bespoke PCs does not promote improved customer impacts because the lack of comparability between all PCs makes it difficult to ensure they are appropriately stretching ✓	Only common PCs does not promote better regulation as it does not allow companies to own their plans and engage with their customers on their priorities. This option does not foster innovation. x	Option 4 promotes better regulation by proportionately balancing the need for stretching PC levels for common PCs and the need for bespoke PCs to reflect customer engagement. ✓✓
Practicality	Common PCs mean that customers, CCGs	It is very hard for customers, CCGs and us to assess	Having all common PCs is easier for us, CCGs and	Common PCs mean that customers, CCGs

² In the table we use PC to mean performance commitments due to space constraints.

	Option 1 PR14+ (base line)	Option 2 All bespoke	Option 3 All common	Option 4 Balance of common and bespoke - Preferred option
	and we can be sure the levels are stretching. It is difficult for us to set the common PC levels centrally without customer views. ✓	the level of stretch it companies' PCs when they are all different x	customers to assess. But it is difficult for us to set the common PC levels centrally without customer views. x	and we can be sure the levels are stretching. Option 4 allows for customer research to inform setting of PC levels and choice of bespoke PCs This will be relatively complex to assess ✓

Our preferred option is Option 4. Option 4 has a core set of common performance commitments, with common definitions, valued highly by all customers (including resilience). These common performance commitments allow stakeholders to compare and challenge companies on the ambition in their proposed performance commitment levels. There is still scope for companies to set their own bespoke performance commitments. This allows companies to reflect their particular customers' preferences and innovate in the design of their performance commitments.

Under Option 4, we expect companies to challenge the level of stretch in their performance commitment levels against a range of approaches, using the information available (for example, against comparative and historical information). The guidance gives CCGs, customers and other stakeholders the tools to challenge the degree of stretch in companies' proposed performance commitment levels. However, we retain the flexibility for companies to reflect their customers' preferences when proposing their commitment levels.

2.1 Common performance commitments

This section sets out our proposals on common performance commitments.

Background

At PR14 we required all companies to have common performance commitments on leakage and the service incentive mechanism (SIM). Companies defined the rest of their performance commitments, leading to a number of similar, but not identical, definitions of their performance commitments. Several stakeholders, including some companies, were concerned that this variety of definitions made comparing the ambition in companies' commitments difficult. At PR14, we identified that most companies had performance commitments related to similar aspects of service delivery. These were:

- duration of water supply interruptions;
- number of contacts from customers regarding water quality;
- compliance with the Drinking Water Inspectorate (DWI)'s water quality standards;
- number of sewerage pollution incidents; and
- number of properties impacted by internal sewer flooding.

Together with leakage and the SIM, these five performance commitments effectively became a set of common performance commitments, although companies did not all use the same definitions for them.

Our November 2016 consultation

In our November 2016 consultation, we put forward a list of common performance commitments which all companies had to have.

We proposed that a core set of common performance commitments with common definitions would make it much easier for customers, CCGs and us to assess the degree of stretch in companies' proposed performance commitment levels. It would also remove the need for us to intervene on the definitions of the common performance commitments at PR19.

We proposed that all companies would use these common performance commitments at PR19 based on standard definitions. However, we would still allow companies plenty of scope to propose their own bespoke performance commitments reflecting their own customers' particular preferences. Our proposed common performance commitments covered:

- customer satisfaction;
- current performance and resilience; and
- future performance.

Consultation responses

In response to the November 2016 consultation, there was broad support from companies, for a limited set of common performance commitments. Only a small number of companies disagreed with having any common performance commitments, since they thought that all commitments should be based on local customer engagement. The majority of respondents agreed with the principle of having common performance commitments, while differing on which particular common performance commitments they supported.

Of the common performance commitments we consulted on, respondents expressed the most support for:

- supply interruptions;
- the new customer experience measure;
- water quality compliance;
- leakage;
- resilience;
- internal sewer flooding; and
- pollution incidents.

Respondents expressed less support for the abstraction incentive mechanism, sewer collapses and distribution input.

Our proposed approach to common performance commitments for PR19

We have taken into account the responses on the common performance commitments we proposed in our November 2016 outcomes consultation.

To be a common performance commitment, the metric should be:

- relevant to customers of all companies
- able to be used to engage effectively with customers
- relevant to what is trying to be measured so that the metric can be used to drive company behaviour in the right direction;
- able to be used to track a company's progress;
- quantifiable, with available data and a clear definition;
- comparable;
- reproducible³; and

³ Reproducible means it yields a consistent result if the correct method is followed.

- able to be used to set stretching performance commitment levels

The common performance commitments rely on good-quality, consistent definitions. We have supported companies working together, co-ordinated by Water UK, and working with UKWIR to agree common definitions on leakage, supply interruptions and sewer flooding. We propose to use these definitions for setting performance commitments at PR19. We are aware that some companies need to make changes to how they collect performance data to align to new definitions and that in some cases, it will take some time to have robust data. We expect companies to implement the common definitions to enable them to be used in final determinations. We will take into account companies' progress in the outcomes tests in the initial assessment of plans.

We are consulting on a list of 14 core common performance commitments, as described in the Outcomes chapter of the main consultation document. Eight of these relate to customers' day-to-day experience of service; four, relate to the health of the assets underpinning services to customers; and two, are focused on the forward-looking resilience of the services customers receive.

The following table shows our proposed 14 common performance commitments for PR19. The table shows the area each one covers, the reasons why we think each should be a common performance commitment, and its current definition. More information on the definitions is in Appendix 3 on the Outcomes technical definitions.

Table 2.2 - Our 14 proposed common performance commitments for PR19

No.	Proposed common performance commitment for PR19	Reasons why it should be a common performance commitment at PR19	Current definition (more details in Appendix 3 on the Outcomes technical definitions)
1	Customer measure of experience (C-MeX)	C-MeX will incentivise companies to improve the broader customer experience across the retail and wholesale parts of the value chain. The overall customer experience matters to customers of all companies. Strong stakeholder support for this measure.	We are consulting on the definition of C-MeX. See section 4 below.
2	Developer measure of experience (D-MeX)	It is important for companies to improve their service to developer services and new connection customers. These are a key group of customers with different service requirements to retail customers for whom C-MeX might not sufficiently incentivise companies.	Currently being developed by us.
3	Water quality compliance	Water safety and quality are a top customer priority.	The DWI's Compliance Risk Index (CRI).
4	Water supply interruptions	Customers view long interruptions to supply as one of the worst failures in service. Supply interruptions are an indicator of the resilience of the water network, in particular how well a company can recover from an incident.	Supply interruptions greater than three hours (expressed in minutes per property). This metric is based on the new consistent definition developed by UKWIR
5	Leakage	Reducing leakage is a high priority for customers. It also indicates how well a company maintains and manages its network. Leakage is an indicator of the resilience of the water network.	Leakage in mega-litres per day (Ml/d). Three-year average. This metric is based on the new consistent definition of leakage developed by UKWIR.

No.	Proposed common performance commitment for PR19	Reasons why it should be a common performance commitment at PR19	Current definition (more details in Appendix 3 on the Outcomes technical definitions)
6	Per capita consumption	Per capita consumption, is an indicator of resilience and the success of measures to reduce or limit demand. Reducing per capita consumption, can help the companies address many of the resilience and environmental pressures facing the sector. Priority for a number of companies' customers at PR14.	Average amount of water used by each customer that lives in a household property (litres per head per day). Using the same definition as for WRMP reporting.
7	Internal sewer flooding (sewerage companies only)	Sewer flooding of a customers' building is one of the most distressing service failures for customers and reducing it is a customer priority. It is an indicator of sewerage network resilience.	The number of internal flooding incidents per year. This metric is based on the new consistent definition developed by UKWIR
8	Pollution incidents (sewerage companies only)	Pollution incidents is a key metric of the impact of a company on the environment. Reducing pollution incidents is important for customers and several key stakeholders. Pollution incidents is an indicator of sewerage network resilience.	Category 3 pollution incidents per 1,000km of sewerage network, as reported to the Environment Agency.
9	Risk of severe restrictions in a drought New risk-based resilience metric - water	The risk of restrictions in a future drought is important to customers. Measuring it will provide a comparison between companies.	Percentage of the population the company serves, that would experience severe supply restrictions (e.g. standpipes or rota cuts) in a 1 in 200 year drought.
10	Risk of flooding of wastewater systems New risk-based	The risk of flooding to wastewater systems and the consequent impact on the environment, is important to customers.	We are consulting on three options that look at different aspects of how this risk could be measured.

No.	Proposed common performance commitment for PR19	Reasons why it should be a common performance commitment at PR19	Current definition (more details in Appendix 3 on the Outcomes technical definitions)
	resilience metric – wastewater		
11	Mains bursts (asset health metric 1 - water)	<p>This common performance commitment covers the asset health of water infrastructure.</p> <p>Current performance on mains bursts should help to inform companies' future capability of providing service to customers.</p>	We propose to use the definition of mains bursts currently included in Discover Water.
12	Unplanned outage (asset health metric 2 - water)	<p>Unplanned outage provides a good measure of asset health for water non-infrastructure (above-ground assets) which vary significantly in their type and function.</p> <p>The metric provides an insight into key elements of resilience of the water system supplying customers.</p>	<p>Unplanned outage is a temporary loss of maximum production capacity.</p> <p>This will be reported as lost capacity (flow rate) as a proportion of total company maximum production capacity.</p>
13	Sewer collapses (asset health metric 3 - wastewater) (sewerage companies only)	<p>This is a good indicator of wastewater infrastructure asset health.</p> <p>Current performance on sewer collapses should help to inform companies' future capability of providing service to customers.</p>	This metric includes collapses of gravity sewers and repairs to rising mains, even where failures are accidental rather than weakness in pipe condition. It does not include third party damage, where costs may be recovered from a third party.
14	Pollution incidents caused by non-infrastructure (above ground) assets (asset health metric 4 - wastewater)	This is a good indicator of asset health for wastewater non-infrastructure (above-ground) assets.	<p>This metric includes those pollution incidents caused by non-infrastructure assets, based on the EA classification of pollution incidents.</p> <p>Reporting for this metric will include category 3 and 4 (minor and no impact) pollution incidents.</p>

No.	Proposed common performance commitment for PR19	Reasons why it should be a common performance commitment at PR19	Current definition (more details in Appendix 3 on the Outcomes technical definitions)
	(sewerage companies only)		

There are differences between the 12 common performance commitments we considered in our November 2016 consultation and the 14 we are proposing now. We have:

- removed distribution input and the Abstraction Incentive Mechanism (AIM); and
- added a second resilience metric, D-MeX, unplanned outages and wastewater asset failures causing pollution incidents.

This list of 14 common performance commitments ensures that there is a strong focus in our framework on the issues that matter to customers. It includes, the quality and reliability of the water and wastewater supply, customer service and the environment. By measuring and incentivising companies to reduce service failures, these performance commitments motivate water company management to identify and mitigate risks to their services to customers.

Companies should expect us to continue to incentivise metrics that are the same or similar to these common performance commitments in the long term. This will incentivise companies to plan to improve their performance on these measures to ensure they can deliver good-quality services to customers over the long term.

We provide further detail on the four asset health common performance commitments and the two forward-looking resilience metrics below.

2.2 Proposals for the resilience common performance commitments

In the outcomes chapter of the main PR19 methodology consultation document we explain that we have worked to embed resilience in performance commitments by:

- working with the Water and Wastewater Resilience Action Group (WWRAG) Task & Finish sub-group and UKWIR and companies on the definitions of the common performance commitments to ensure that they do not include exemptions, for example, for extreme weather events;
- developing C-MeX which captures customers' views on their wider experience of water companies' performance; and
- deciding that companies' performance commitments for 2020-25 should be supported by long-term projections for at least a further ten years.

We consider that, in addition to the eight common performance commitments that reflect customers' day-to-day experience of service, and the four asset health

commitments (discussed below), we require some additional metrics to better reflect the Cabinet Office's definition of the four aspects of resilience⁴:

- resistance - focused on providing protection;
- reliability – focused on flexible infrastructure that can mitigate damage or loss;
- redundancy – availability of backup or spare capacity; and
- response/recovery - fast and effective response / recovery from disruption

It would also be helpful to include leading as well as lagging indicators of resilience:

- lagging indicators, such as the number of actual system failures; and
- leading indicators, such as the current risk of future system failures.

There are also different threats to which the sector needs to be resilient. These include, drought, flooding, cyber-security, terrorism, asset failures, power failures and operating error.

We are consulting on introducing two common resilience performance commitments for all companies: one for water and one for wastewater. These would supplement the twelve other common performance commitments. Our aim is for these performance commitments to fill the main gaps in our current measurement of resilience. Our current resilience metrics are more focused on reliability and response / recovery, and less on resistance and redundancy. They also measure past and current performance rather than trying to measure current exposure to future risks.

The Water and Wastewater Resilience Action Group (WWRAG) Task & Finish sub-group, and the UKWIR project on resilience, have been working intensively with us over the last six months to develop resilience metrics, which could be used as common performance commitments or which companies could use as their bespoke performance commitments. They have found that resilience metrics can be difficult to develop. We appreciate the efforts made and the complexity of the task, especially to deliver a comprehensive metric on the resilience of water and wastewater services. We expect work to develop such metrics to continue.

We are not currently convinced that the wastewater resilience metrics available are sufficiently developed to achieve the standard required to be a common performance commitments. However, in some cases, the wastewater resilience metrics may have

⁴ The Cabinet Office's "Keeping the country running – Natural hazards and infrastructure" (2011)

value as comparative performance information and bespoke performance commitments.

For a **water** resilience metric, we are proposing a simplified form of the one developed by the WWRAG sub-group. This will look at the risk of severe restrictions for customers in a drought. It would be, on a company basis, the percentage of population at risk of experiencing severe restrictions (such as standpipes or rota cuts) in a 1 in 200-year drought. The population is considered to be ‘at risk’ if the available supply is less than the likely demand plus a measure of uncertainty. More details on the calculation and reporting of this metric are provided in Appendix 3 on Outcomes technical definitions.

The data used for this metric should be consistent with that reported for the water resources management plans (WRMPs). These have their own technical guidance and assurance from the Environment Agency and Natural Resources Wales. We would also expect to see evidence of the company’s assurance for the data and calculations used in this metric.

The “risk of severe restrictions in a drought” metric, has the following advantages:

- it is a forward-looking assessment of future risk;
- the data used in this metric is being used in WRMPs and is assured through that process; and
- a company should be able to improve performance on this metric by reducing its outage, reducing its demand or increasing its available supplies in a drought (deployable output). This metric therefore covers three of the four resilience aspects (redundancy, reliability and resistance).

We are interested in views on this metric (and any potential improvements to it) and alternative water resilience metrics.

For a **wastewater** metric, we are proposing to look at the risk of flooding, which is a particularly relevant risk for wastewater systems in the context of population growth and climate change. The common performance commitments of pollution incidents and internal sewer flooding, look at current failures of the wastewater system. They do not look at risks to, or the vulnerability of, the wastewater system to future flooding.

The work on wastewater resilience metrics found a lack of accurate wastewater data for below-ground assets and surface water. As a result, we are consulting on three options for the wastewater resilience metrics. These metrics require further development to meet the standard required to be a common performance

commitment. We expect work to develop the wastewater resilience metrics to continue.

Table 2.3 – Options for a common wastewater resilience performance commitment

Metric Description	Comment (more detail in Appendix 3 on the Outcomes technical definitions)								
<p>1) Percentage of population served by a wastewater system at risk of flooding</p>	<p>This metric was partially developed by the 21st Century Drainage Programme (21st CDP). It captures the risk of a company’s wastewater system flooding. It can be improved by improving data, increasing sewer capacity or reducing surface water entering combined sewers.</p> <p>This metric has several steps and we propose two high-level options for how it could work. Step 1 is the same for both of these options.</p> <p>Step 1: Assign a level of risk (1 to 5) for each catchment in question using the 21st CDP’s categorisation table. Then, assign this level of risk to the population in that catchment.</p> <p><u>Option 1a</u></p> <p>Step 2: Calculate the residual population at risk in each catchment at risk to rainfall with a return period of 1 in 50 years.</p> <p>Factors such as new development, impermeable paving of land and population growth would act to increase risk. Companies’ actions to remove surface water/ground water ingress from sewers or to increase sewer capacity would act to reduce risk. We would expect companies to show a stable or improving trend over the five year period.</p> <p><u>Option 1b</u></p> <p>Step 2: use the risk grade from step 1 to dictate the rainfall return period. Use this as an input into a drainage capacity model for the pipes in the catchment.</p> <p>For example, a level 5 of risk from step 1 means a company should assess its assets in that catchment against a 1 in 50 year flood return period. Companies can include catchments in the lowest risk category, but this is not mandatory for practical reasons due to lower need to prioritise getting data for low risk catchments.</p> <table border="1" data-bbox="595 1251 1529 1375"> <thead> <tr> <th data-bbox="595 1251 990 1281">Risk of catchment</th> <th data-bbox="990 1251 1529 1281">Rainfall return period (1 in X years)</th> </tr> </thead> <tbody> <tr> <td data-bbox="595 1281 990 1311">Highest risk – level 5</td> <td data-bbox="990 1281 1529 1311">1 in 50</td> </tr> <tr> <td data-bbox="595 1311 990 1342">Level 4</td> <td data-bbox="990 1311 1529 1342">1 in 30</td> </tr> <tr> <td data-bbox="595 1342 990 1375">Levels 3 and 2</td> <td data-bbox="990 1342 1529 1375">1 in 20</td> </tr> </tbody> </table>	Risk of catchment	Rainfall return period (1 in X years)	Highest risk – level 5	1 in 50	Level 4	1 in 30	Levels 3 and 2	1 in 20
Risk of catchment	Rainfall return period (1 in X years)								
Highest risk – level 5	1 in 50								
Level 4	1 in 30								
Levels 3 and 2	1 in 20								

Metric Description	Comment (more detail in Appendix 3 on the Outcomes technical definitions)		
	<table border="1" data-bbox="600 320 1529 347"> <tr> <td data-bbox="600 320 987 347">Lowest risk – level 1</td> <td data-bbox="987 320 1529 347">1 in 10</td> </tr> </table> <p data-bbox="600 392 2002 448">Step 3: For each catchment determine the pipes that surcharge in the critical storm. A variety of durations must be used to determine the critical storm. For all pipes in a catchment that surcharge weight results using population equivalent:</p> $\frac{\text{Population equivalent upstream of all pipes that surcharge} \times 100}{\text{Population equivalent upstream of all pipes}}$ <p data-bbox="600 632 2002 687">Where there is no data, and the risk grade of the catchment is 2 to 5, the pipes in that catchment should be assumed to surcharge. This will highlight where companies do not have good models or data.</p> <p data-bbox="600 732 1989 852">Factors such as new development, impermeable paving of land and population growth would act to increase risk. Companies' actions to increase the number of catchments with enhanced models, remove surface water/ground water ingress from sewers or to increase sewer capacity would act to reduce risk. We would expect companies to show a stable or improving trend over the five year period.</p> <p data-bbox="600 896 1962 987">We would expect companies to be able to disclose the metric based on those catchments for which it had enhanced models when submitting its business plans. This would show the actual change in resilience, as opposed to just improvements in the understanding of resilience.</p> <p data-bbox="600 1032 2002 1088">This model is in relatively early stages of development and companies will be improving the data entered into the model on an ongoing basis.</p>	Lowest risk – level 1	1 in 10
Lowest risk – level 1	1 in 10		
2) Vulnerability of combined sewer overflows (CSOs) to flooding from high intensity rainfall	<p data-bbox="600 1114 1984 1182">This metric captures a company's resistance to flooding. This metric would measure the frequency of combined sewer overflows.</p> $\frac{\text{Number of high frequency spills CSO} \times 100}{\text{Number of all measured CSOs}}$ <p data-bbox="600 1318 1189 1345">It can be improved by reducing the spill frequency.</p>		

Metric Description	Comment (more detail in Appendix 3 on the Outcomes technical definitions)
	<p>The UKWIR report, proposed this metric as an output-type metric that is more relevant for day-to-day operations, than to resilience against very-high-intensity rainfall events. However, the two are likely to be strongly related.</p> <p>Installing event duration monitoring is an ongoing process. The vast majority should be installed by 2020. Data will only start arriving from this time and could be considered unreliable for the first few years.</p>
3) Reduction in surface water going into combined sewers	<p>This metric looks at the size of the area disconnected from combined sewers, by retrofitting sustainable drainage systems. It captures a company's actions to improve resistance to future floods.</p> <p>This metrics looks at direct activity to improve resilience. A small number of companies had similar performance commitments in PR14. However, it is a narrow metric, only focused on one solution to improving resilience - reducing surface water going into combined sewers.</p>

Adopting two resilience metrics as common performance commitments at PR19 will help ensure that the common performance commitments provide a view of all four aspects of the Cabinet Office definition of resilience. They will also enable customers and other stakeholders to better understand the resilience of the water and wastewater services provided by their monopoly water company.

If we conclude that none of the wastewater resilience metrics are sufficiently developed to use as a common wastewater resilience metric for PR19 we would still expect the sector to continue developing metrics for future use. We invite views on our proposals for resilience common performance commitments as well as suggestions for alternatives.

We have covered the issue of requiring companies to have financial ODIs on these resilience metrics in the Outcomes chapter of the PR19 methodology consultation document. We explain that we are cautious about requiring companies to have financial ODIs on these resilience metrics for several reasons at present, including that they are at relatively early stages of development.

2.3 Asset health performance commitments

Background to asset health performance commitments

A key area of network and service resilience is asset health. Asset health is an indicator of a company's ability to continue to perform its functions for the benefit of customers and the environment. Poor asset health is when assets are allowed to deteriorate to a point where the risk of failures (which will impact on customers and the environment) becomes unacceptably high. The health of companies' assets is a crucial element of achieving resilience in the water and wastewater sector in England and Wales.

Asset health contributes particularly to the reliability and response / recovery elements, of infrastructure resilience (as described by the Cabinet Office). Asset health is difficult to measure, particularly with so many assets located underground, and the wide variety of above-ground assets. Metrics of asset health are imperfect. It is, therefore, appropriate that asset health outcomes are only part of our and other stakeholders' approach to ensure companies maintain asset health. For example, our initial assessment of business plans will test companies on their assurance around long-term operational resilience, including their approach to asset health. We can also carry out targeted reviews of asset health issues, as we did earlier this year (see below).

PR14 approach to asset health

At PR14, we did not prescribe that companies should adopt any particular approach to asset health. This change at PR14 enabled companies to take full ownership of their approaches in business plans. This made them accountable to their customers and allowed for innovation in this area.

Companies used the opportunity to develop business plans that reflected their customers' and stakeholders' preferences. However, the variety of approaches companies took to asset health performance commitments, meant there was a lack of consistency in the definitions and types of indicators. This made it difficult to compare cross-industry performance. In addition, many companies combined asset health measures into aggregated performance commitments. This was less transparent to stakeholders. It also made it possible for companies to offset poor performance on one measure, with better performance on another measure.

Our November 2016 consultation

In November 2016, we consulted on asset health performance commitments for PR19 as part of our outcomes consultation. We proposed:

- two asset health common performance commitments - mains bursts and sewer collapses. These had consistent definitions so that stakeholders could compare companies' performance on two key asset health metrics;
- asset health expectations for PR19, which would improve the information that customers, CCGs and other stakeholders would have available on asset health performance commitments and ODIs; and
- reporting requirements to compel companies to provide more clarity on their approaches to asset health.

We also discussed and considered:

- whether we should move towards some, or full, standardisation of companies' approaches to asset health; and
- when ODI rewards might be appropriate for asset health performance commitments.

The main points from the responses to the consultation were:

- many stakeholders did not support the common performance commitments on mains bursts and sewer collapses. This was mainly because they thought the performance commitments were unsuited to the setting of common commitment levels, rather than an objection to including the measures;

- there was support for the asset health expectations and reporting requirements; and
- a majority of respondents supported the partial standardisation of asset health. They considered that standardisation was particularly helpful for increasing transparency, comparing companies' performance and reducing information asymmetry.

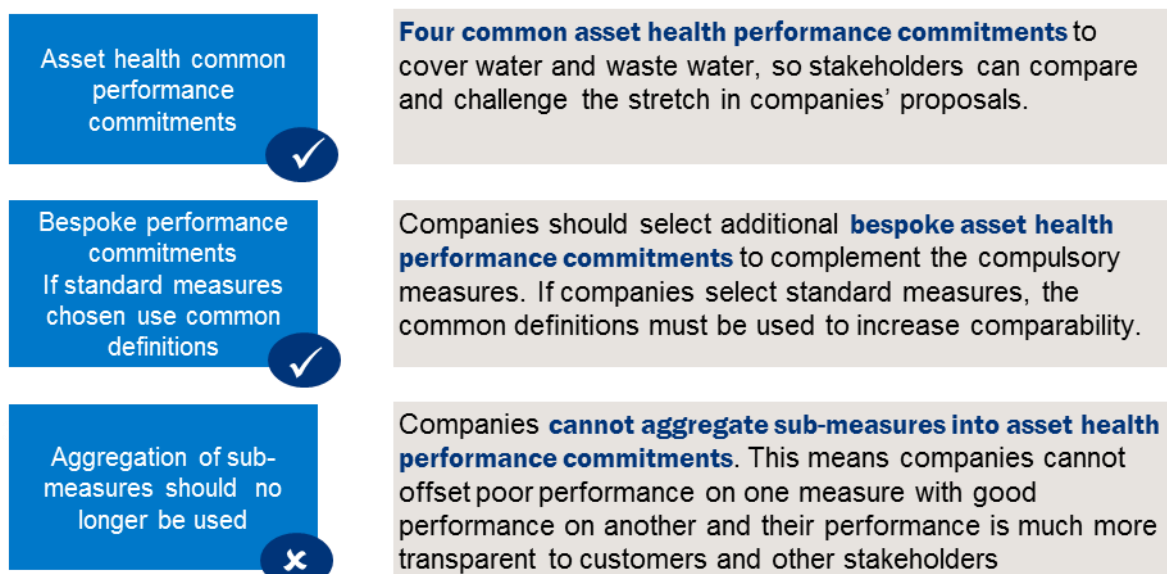
Targeted review of asset health

Earlier this year, we commissioned a targeted review of asset health and resilience in the water industry. This targeted review aimed to discover how well companies understood the risks associated with poor asset health, how they identified and measured those risks, and what they did to mitigate them. It also looked at what assurance processes the companies have in place, and how they respond to failures when these occur. The findings of the targeted review have informed our proposals for asset health performance commitments. We plan to publish the targeted review in September.

Our approach to asset health for PR19

Following consultation on our outcomes framework, we held a workshop. We invited, all companies, quality regulators and CCWater, to highlight the consultation findings. We subsequently created an email group with workshop participants to work on the list of asset health indicators and their definitions. We have taken these views into account when developing the following proposals. We have summarised our approach in the figure below and the following sections.

Figure 2.1 – our proposed approach to asset health for PR19



Common asset health performance commitments

We propose that companies must have four common performance commitments for asset health (two for **water** and two for **wastewater**):

- mains bursts;
- unplanned outage;
- sewer collapses; and
- pollution incidents caused by non-infrastructure assets.

More detailed definitions are in Appendix 3 on the Outcomes technical definitions. We think common performance commitments are necessary for asset health so that customers can be assured that companies are maintaining their asset base appropriately to continue to be able deliver services effectively in the future. The common performance commitments, with standardised definitions, also provide customers, CCGs and us, with comparable information. We can use this to inform our assessment of how stretching companies' performance commitments are.

Building on responses to our consultation, the common performance commitments now covers above-ground assets as well as below-ground assets.

Our approach to asset health, focuses on the intermediate services assets can deliver, rather than the age or condition of assets. We consider that this approach gives a better indication of the ability of assets to provide services into the future, which is what matters to customers.

A majority of our asset health email group respondents, supported these metrics, but they asked for clarification on their definitions. We provide these in Appendix 3 on Outcomes technical definitions. We expect to agree the final definitions between now and the publication of the final PR19 methodology document.

Permitting companies to choose their own asset health metrics

The second element of our preferred approach to asset health is that companies can select additional asset health performance commitments from a long list of metrics with standard definitions or others not on the list. The standard asset health measures provide customers, CCGs and us with comparable information for the companies who select the same metrics. Allowing companies to propose measures not on the long list allows them to innovate and to reflect their customers' preferences and their particular asset health challenges.

We are allowing companies to choose from the long list, rather than making the asset health metrics requirements. This allows companies to engage with their customers and CCGs to propose performance commitments that reflect the particular asset health challenges they face.

Table 2.4 - Long list of asset health performance commitments that companies can choose from

Water asset health metrics	Wastewater asset health metrics
Properties at risk of receiving low pressure	Sewer blockages
Percentage mean zonal compliance with the Prescribed Concentration or Value (PCV) for iron at the tap	External sewer flooding
Water quality – discolouration customer contacts	Percentage of wastewater treatment works discharges failing numeric consents
Distribution index Turbidity, Iron and Manganese (TIM) ⁵	Percentage of total population equivalent served by wastewater treatment works in breach of Water Resources Act, or, Urban Wastewater Treatment Directive consent.
Water treatment works coliform non-compliance	Unplanned wastewater non-infrastructure maintenance
Service reservoir coliform non-compliance	Pollution incidents (categories 1 and 2)
Number of Water Treatment Works, where turbidity 95 percentile greater than, or equal to, 0.5 Nephelometric Turbidity Unit ⁶	Pollution incidents (category 4)
Enforcement actions considered for microbiological standards	
Unplanned water non-infrastructure maintenance	

The definitions of the asset health metrics long list are in Appendix 3 on Outcomes technical definitions.

Under our preferred approach to asset health, companies can propose other asset health performance commitments that are not in the long list. This is to encourage companies to innovate and develop new asset health measures to reflect their customers' preferences and their particular asset health challenges. If companies

⁵ Sampling to show turbidity, iron and manganese reflects the age, condition and maintenance status of the pipes (mains). Iron and manganese are common in groundwater supplies and can lead to objectionable colour and turbidity (cloudiness) of drinking water as well as staining of laundry and fixtures.

⁶ The Nephelometric Turbidity Unit measures concentration of suspended particles in a liquid by looking at scattered white light at 90 degrees from the incident light beam.

are using their own bespoke asset health performance commitments, these must be clear and well defined.

No aggregation of asset health metrics

The third proposal of our preferred approach, is to disallow companies from aggregating asset health performance commitments, for example, into basket or matrix metrics. We are proposing this for all performance commitments. Aggregation enables companies to offset poor performance in one area, with good performance in other areas. This means that a company may not deliver as effectively as it would against individual performance commitments on asset health. Aggregated asset health performance commitments are also less transparent to stakeholders about performance on particular metrics.

As a result of our proposal on the aggregation of asset health metrics, we no longer need to take forward the asset health reporting requirements for sub-measures that we consulted on in the November 2016 outcomes consultation.

Clear expectations on asset health outcomes

We consulted on asset health expectations in the November 2016 outcomes consultation. Following responses to that consultation, we are proposing to update our expectations for asset health outcomes for PR19, as set out in the box below.

By providing clear expectations about companies' asset health performance commitments and their engagement with customers, CCGs and other stakeholders, we expect companies to submit good-quality asset health proposals.

Draft asset health outcomes expectations for PR19

- 1.** Companies should clearly present in their business plans, their approach to asset health and which of their performance commitments and ODIs relate to it.
- 2.** Companies should engage with their customers and CCGs on how their asset health metrics protect current and future customers and the environment.
- 3.** Companies should ensure their asset health performance commitments are easy to understand.

4. Companies should ensure that their asset health performance commitment levels are stretching.
5. Companies should explain to their customers, CCGs and us, how their asset health penalties (and any rewards) relate to their return on regulated equity.
6. Companies should submit their asset health performance commitment definitions to us ahead of business plans.
7. Companies must include our four common performance commitments as part of their asset health commitments.

2.4 Bespoke performance commitments

Bespoke performance commitments are an important element of the outcomes framework for PR19. As well as the common performance commitments, we expect companies to propose bespoke commitments as part of their outcomes package for PR19. Companies have the freedom to engage widely with their customers and local stakeholders, to propose bespoke performance commitments that reflect their **customers' particular preferences. Bespoke performance commitments also enable** companies to be innovative and to propose commitments relating to particular issues that affect their operating area (for example, clean beaches or local environmental concerns).

Companies should ensure that the definitions for bespoke performance commitments are clear. There should be no, or very few, exemptions included in the definitions and any exemptions would need to be well justified and supported by their customers. Companies will need to justify why they do not intend to continue with any of their PR14 performance commitments. We will expect strong evidence and reasoning for removing a performance commitment, particularly if the company was performing badly on the performance commitment during the last control period.

Areas bespoke performance commitments should cover

At PR14, some companies had a comprehensive coverage of their services, while others restricted themselves to a narrower set of outcomes. In a few instances, we intervened to require companies to include performance commitments in specific areas, in particular, drinking water quality and environment, which stakeholders and customers in other regions, considered important.

In November, we consulted about whether bespoke performance commitments should cover important areas, such as, vulnerability and the new bioresources and water resources price controls. We wanted to make sure that all companies not only covered areas that we consider important to customers, but that they could also reflect local preferences and allow for innovation where measures or data did not yet exist. Some respondents suggested that environmental issues should be covered by bespoke performance commitments.

The areas we consider it is important all companies cover with their bespoke performance commitments are:

- the different price controls (water resources, wastewater network plus etc.)⁷;
- vulnerability;
- environment;
- resilience; and
- abstraction, using the AIM.

The table below sets out our rationale for each area. If a company chooses not to cover one of these areas with its bespoke performance commitments, it will need to provide a strong justification for its approach.

Table 2.5 Areas bespoke performance commitments must cover

Areas	Rationale	Example metrics
The different price controls	Companies need to show what they will deliver for the revenue they receive from customers under each price control. This does not necessarily need to be a performance commitment specific to each control. It could be one that is split across price controls.	Bioresources examples: compliance with sludge standard. Water resources examples: restrictions on use of water; resilience of impounding reservoirs, abstraction licence compliance.
Vulnerability	We want companies to provide sensitive, well-designed and flexible support and services for customers in circumstances that make them vulnerable. After engaging with their customers and local stakeholders, companies can propose bespoke	Proportion of eligible customers receiving support through vulnerability assistance option(s); The number of customers contacted by the company about eligibility for vulnerability assistance options; The percentage of customers receiving vulnerability assistance option(s) who are satisfied with the assistance.

⁷ For the residential retail control we are not expecting many bespoke performance commitments because C-MeX will incentivise companies to improve their customer service.

Areas	Rationale	Example metrics
	performance commitments to address vulnerability issues.	
Environment	<p>A company's actions can impact on the environment.</p> <p>Companies' customer research at PR14 showed that customers value the protection of the environment.</p>	<p>Category 1 and 2 pollution incidents</p> <p>Operational carbon emissions (ktCO₂e)</p> <p><u>Examples suggested by Natural Resources Wales:</u></p> <p>Kilometres of river with water quality improved as a result of wastewater investment.</p> <p>Volume or proportion of surface water diverted/removed from the public sewer system</p> <p>Number of permit breaches or CSO discharges in Shellfish and Bathing Water</p> <p><u>Examples suggested by the Environment Agency:</u></p> <p>Discharges compliant with numeric permits in each calendar year as reported in the Environment Agency's Environmental Performance Assessment (EPA).</p> <p>Percentage of schemes incorporating sustainable urban drainage (SuDs)</p> <p>Number of water bodies improved or protected by catchment management.</p> <p><u>Examples suggested by Natural England:</u></p> <p>Water company progress on actions needed to restore or maintain sites of special scientific interest (SSSIs) where it is responsible.</p> <p>Number of catchment management actions that provide significant natural capital increase, in particular for priority habitat, pollinator habitat, soil carbon or flood management that also has biodiversity benefits.</p> <p>A metric to enable the water company to demonstrate biodiversity gain through its actions.</p> <p><u>Examples suggested by Blueprint for Water⁸:</u></p> <p>Water Framework Directive water body status improvement.</p> <p>Proportion (%) of total investment delivered through third sector partnership projects or number of partnerships</p> <p>Natural capital account created and commitment to grow it through investment period.</p>
Resilience	While we propose two common performance commitments for resilience, we recognise that resilience has many facets and that the two common metrics do	<p>UKWIR and the WWRAG sub-group have been working on resilience metrics. These can be found in the UKWIR report. Examples are:</p> <p>Expected average number of customers affected by large scale interruptions > 12 hours (number per year).</p>

⁸ <http://blueprintforwater.org.uk/wp-content/uploads/bfw-publications/Blueprint%20for%20PR19%20-%20Environmental%20Manifesto%20%5b2017%2004%5d.pdf>

Areas	Rationale	Example metrics
	<p>not fully cover resilience issues.</p> <p>We expect companies to reflect the resilience issues that are most relevant to their region and customers in their bespoke performance commitments.</p>	<p>Percentage of population supplied by single supply system >25,000.</p> <p>Unprotected works within flood risk zones (number or population served).</p> <p>Wastewater treatment works sites made resilient to future extreme rainfall events.</p> <p>Number of customers affected by loss of containment from the wastewater system (over a given time), possibly limited to events excluded from 'DG5 - properties at risk of sewer flooding' due to extreme weather.</p> <p>Percentage of pipes under capacity for a 1-in-30 or 1-in-50 year rainfall event.</p>
<p>Abstraction Incentive Mechanism (AIM)</p>	<p>Reducing abstraction at environmentally-sensitive sites at times of low flows is important to protect the environment, especially given the challenges of climate change and population growth.</p> <p>We agree with the responses to the outcomes consultation that the AIM should not be a common performance commitment because AIM abstraction sites are unique for each company, but is an important issue that all companies should cover as appropriate to their region.</p>	<p>We propose that each company should suggest a bespoke performance commitment in line with the AIM guidelines we published in February 2016, updated for improvements to site identification.</p> <p>We also require companies to propose financial incentives to accompany their AIM performance commitments.</p> <p>There is more detail in the following section.</p>

Abstraction incentive mechanism (AIM)

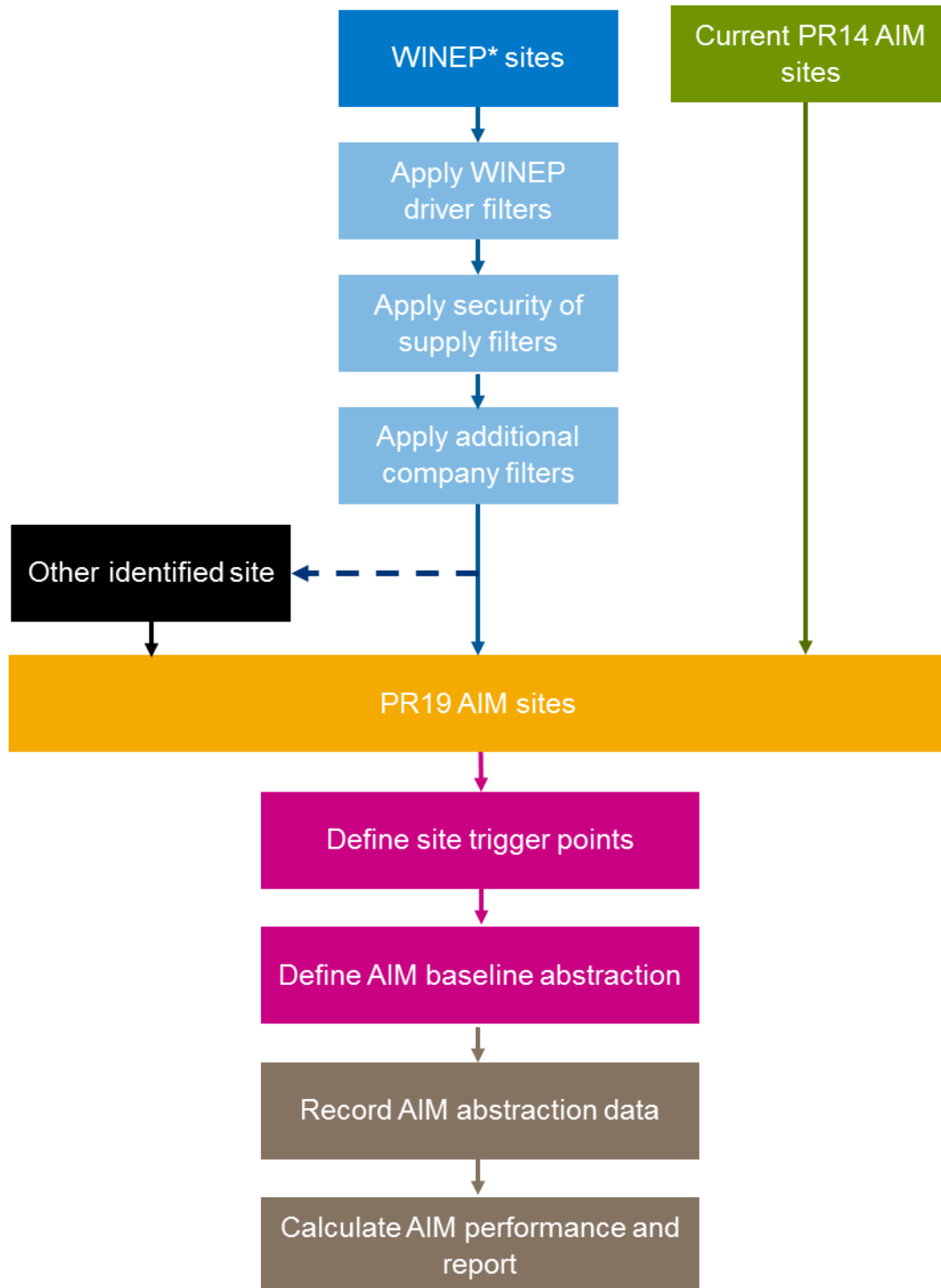
We expect all companies to have a bespoke performance commitment related to the AIM for PR19. The AIM intends to encourage water companies to reduce the environmental impact of abstracting water at environmentally-sensitive sites during defined periods of low surface water flows. This will help to improve the resilience of water supply and ensure that it is provided in a more sustainable way. Our environmental stakeholders have provided positive feedback on the AIM.

The AIM can support the formal abstraction licence process where reductions in licence quantities may be necessary for a range of environmental drivers. AIM can help identify temporary and voluntary solutions that benefit the environment while more permanent solutions (including licence change) are investigated and implemented.

The AIM, in its current form, has not been adopted by all companies. We propose that all companies should adopt the AIM at PR19, given that companies will be able to engage with their customers and stakeholders to design an appropriate version of the AIM for them. We have not yet seen the first results from the AIM (expected on 15 July 2017). We will reflect on what they show, as well as the responses to our PR19 methodology consultation proposals (below), when finalising our approach to AIM in December.

The proposed process for the PR19 AIM is summarised in the figure below.

Figure 2.2 - The process for the Abstraction Incentive Mechanism



* WINEP (Water Industry National Environment Programme)

We expect that companies will continue with their current AIM sites at PR19, unless they can justify why this should not be the case. Companies should also justify if they make any changes to how the AIM applies to existing AIM sites (for example, the AIM trigger points).

We also expect all companies, including those currently without AIM sites, to identify new potential sites. We propose that companies use the Environment Agency's Water Industry National Environment Programme (WINEP), or Natural Resources Wales' National Environment Programme (NEP) lists, as starting points for AIM site identification and selection. Given the progress made in Wales in terms of identifying and resolving sites that are potentially at risk of environmental harm due to over abstraction, it is unlikely that the NEP list will identify any further new sites.

It is expected that the suitable WINEP/NEP driver and security of supply filters, will be identified by the Environment Agency/Natural Resources Wales and reviewed by companies with further support from Ofwat, and will:

- identify those sites where it is likely that there will be an environmental benefit from reducing abstraction;
- identify the sites where a solution will be in place by 2020, which would mean there is no reason for them to be included in the AIM; and
- identify sites with an existing alternative source of water or bulk supply, readily available to meet the demand that would normally come from the AIM site. This could also be some other means of reducing abstraction from the AIM site, for example, demand management. This should remove any sites where the replacement water will be taken from the same source, thus, having the same environmental impact.

Companies can apply their own additional filters where necessary to remove sites, but should engage with the local environmental stakeholders, including the Environment Agency or Natural Resources Wales when doing so. We would expect companies to apply these additional filters, only in exceptional circumstances.

If, following the application of reasonable filters, a company still does not have any suitable sites for AIM, a company should consider sites not identified in the WINEP lists for inclusion in the AIM. For example, sites where there is evidence that current abstraction rates are causing harm and that reductions in abstraction at low flows will provide environmental benefit. Companies should also engage with their local stakeholders on such sites.

We propose that the AIM trigger point (the low flow or low ground water level below which the AIM applies), the baseline abstraction calculations and the AIM performance reporting, will closely follow those defined in the [AIM guidelines](#).

Financial incentives on AIM

At PR14 we originally expected the AIM to have financial incentives attached during this price control period. This was to give companies a greater incentive to reduce their abstraction at environmentally-sensitive sites, low flows. Two companies, United Utilities and Wessex Water, currently have versions of the AIM, which include financial incentives.

We propose that AIM has in-period financial incentives applied for PR19.

Based on the AIM taskforce findings⁹, we are proposing three options that companies could use to set their AIM rewards and penalties. These are outlined in the table below. We have presented the approaches in our order of preference, from the ideal approach (the incentive relates to the environmental benefit delivered), to less ideal approaches, which might be more practical, in some cases. However, it is for companies to propose their AIM incentives, following engagement with their local stakeholders, and assurance from the CCG.

Table 2.6 Methods for setting rewards and penalties for the AIM

Preference	Approach	Description
First	The environmental value of abstraction reduction relative to baseline abstraction	The incentive would be calculated based on an assessment of the value of the environmental gains (including natural capital value) delivered by the revised abstraction policy.
Second	Customer willingness to pay for abstraction reduction relative to baseline abstraction	The incentive would be calculated based on customers' willingness to pay for the environmental improvement delivered by the AIM.
Third	Short run marginal cost to use an alternative source (or a multiple of this cost)	The incentive would be calculated by the difference in operating cost between the AIM source and the cost of alternative sources. These costs will generally reflect marginal operating costs but may include other cost differences. A multiple of the difference in operating costs (e.g. 1.2) could be used to provide an incentive beyond cost recovery. Alternatively, a multiplier of less than 1.0 could be used to only part-fund the additional financial cost of reducing abstraction at the AIM site.

Companies should include their information on the AIM in table App 3.

⁹ <http://www.ofwat.gov.uk/regulated-companies/resilience-2/abstraction/>

2.5 Transparency of performance commitments

The outcomes framework and its associated performance commitments are one of the most customer-facing elements of the price review. For the engagement process to be effective it is important that outcomes, and the performance commitments that support them, should be easy for customers and other stakeholders to understand. It is also important that the performance commitments relate clearly to the outcomes that companies are pursuing.

More transparent performance commitments will increase the reputational incentive for companies to improve their performance. This is because customers and CCGs can more easily challenge a company's performance when its performance commitments are easy to understand. Effective dissemination of companies' performance information will also increase the reputational impact of performance commitments. We propose the following to promote more transparent performance commitments at PR19:

- principles to make performance commitments easier to understand;
- disallowing aggregation of sub-measures, for example into basket, matrix or index performance commitments;
- encouraging companies to explain in their business plans how they will disseminate their performance information to ensure it is visible to customers, CCGs and other stakeholders; and
- making performance commitments more focussed on customers' preferred outcomes, through reviewing the approach to scheme-specific performance commitments.

Transparency principles

We are minded to confirm the principles we outlined in the outcomes consultation which can help guide companies when defining their performance commitments:

- **Clear** – use plain English as much as possible, avoid jargon, and use technical terms only if they are well explained;
- **Unambiguous** – definitions should leave no room for doubt about what is being proposed or measured;
- **Complete** – the definitions should describe any material points of relevance which a company might later rely on when reporting its performance; and
- **Concise** – the definitions should be as short as reasonably possible, to enable customers, CCGs and us, to engage effectively with the definitions.

Aggregation

As described above on asset health, at PR14 some companies adopted performance commitments which were aggregated from a number of sub-measures, many of which related to asset health. In an aggregated performance commitment a failure to reach a particular level on one sub-measure, can be offset by a good performance on another sub-measure. As a result, aggregated performance commitments do not hold companies to account as effectively as individual performance commitments on specific metrics. Aggregated performance commitments also do not give a clear picture to stakeholders about a company's performance.

In our November consultation, we proposed reporting requirements to increase the transparency and clarity around aggregated measures, including those for asset health. A majority of consultation respondents supported the principles of increased transparency, but did not comment on whether or not to keep aggregation.

We are proposing not to allow any aggregated performance commitments in PR19. This is to increase the transparency of all performance commitments so that they will be easier for:

- customers to engage with;
- CCGs to challenge; and
- us to evaluate.

It will also increase the incentive for a company to deliver against its commitments.

We acknowledge that C-MeX, the DWI's Compliance Risk Assessment and AIM involve aggregation to some extent. However, these are distinct cases because they aggregate together very similar elements (customer surveys, water quality compliance failures and different abstraction sites) rather than different measures and so hold companies to account for performance on a particular issue. They are also produced by, or under guidance from, regulatory bodies after consultation with stakeholders so customers can have confidence in their design.

Disseminating performance information effectively

An important way of making performance commitments more transparent to customers is to disseminate the information on their performance effectively. As we stated in the outcomes consultation, we strongly encourage companies to explain in their business plans, how they will disseminate their performance information during

the 2020-2025 period. Information should be visible to customers, CCGs and other stakeholders.

We expect companies' proposed approaches to take account of new communication channels and tools, a recent example being the [Discover Water](#) dashboard.

We will assess companies' approaches to disseminating information as part of our initial assessment of business plans.

Scheme-specific performance commitments

Scheme-specific performance commitments are performance commitments related to the delivery of a particular scheme, rather than a service aspect that matters to customers. We agreed a number of these performance commitments at PR14. This was a way of ensuring customers were refunded if the particular scheme covered by the commitment, was not delivered. In effect, these scheme-specific performance commitments, acted more as cost adjustment mechanisms, than customer-facing performance commitments.

In our chapter on cost assessment (in the PR19 methodology consultation document), we are consulting on a unit cost adjustment mechanism. Under this option, we would set a cost allowance to fund a particular programme of enhancement expenditure. The unit cost adjustment mechanism would adjust the cost allowances based on the schemes that were actually confirmed, as required and delivered. If we go forward with this option, this could remove the need for companies to propose scheme-specific performance commitments.

Where companies propose any scheme-specific performance commitments, we are minded to confirm the principles and process improvements relating to them in the outcomes consultation. In summary, these were:

- we want to see companies focusing on delivering what really matters to their customers, rather than the delivery of certain outputs and schemes; and
- we propose that companies could use more customer and environment-focused performance commitments, than scheme-specific performance commitments, in most circumstances.

There are some situations where it might be appropriate to set scheme-specific performance commitments. These include:

- schemes with extended delivery times, beyond 2025, or that deliver inter-generational benefits to customers;

- schemes where the companies' existing performance commitments do not sufficiently cover the benefits of the schemes and therefore would not compensate customers sufficiently for delay and/or non-delivery;
- schemes where the companies' existing performance commitments could be adjusted to sufficiently cover the benefits of the scheme, but doing so would move the existing performance commitments too far away from the original engagement with customers; and
- schemes where there is a high degree of uncertainty (legal or technical) associated with completion.

However, in all such cases companies should consider whether their customer- and environment-focused performance commitments could capture the benefits of such schemes instead.

We recognise that we developed scheme-specific performance commitments and their associated ODIs relatively late in the PR14 process. We suggest that this process could be improved if companies accompanied applications for special cost claims, with their proposed approach to protect customers (in the event of delay or non-delivery of the scheme).

If a company considered a scheme-specific performance commitment was necessary to protect customers, we propose the following approach should apply.

- A company would engage with its customers and CCGs on any scheme-specific performance commitments, as part of its engagement process on all its performance commitments;
- A company would submit the details of scheme-specific performance commitments, alongside any special cost claims. This should include an explanation of how their performance commitments and ODIs will ensure customers will be compensated in the event of non-delivery or delay. The proposed compensation would be relative to the costs they would be paying, and relative to the benefits of the scheme the customers would be foregoing.
- A company would explain what alternatives to scheme-specific performance commitments and ODIs it had considered, including how it engaged with customers and the CCG on the alternatives. It will also explain why the company did not consider these were appropriate.

These process improvements would enable us to scrutinise any scheme-specific performance commitments and ODIs as part of the assessment of companies' special cost claims; and to do so earlier in the price review process than at PR14.

2.6 Setting stretching performance commitments

It is important for customers' trust in the outcomes regime that they can be sure that companies' performance commitment levels are appropriately stretching and that any rewards are only given for outperformance of challenging levels. Stretching performance commitment levels challenge companies to achieve higher and more resilient service performance and to improve their services to current customers, future customers and the environment. Working together with our cost assessment tests, more stretching performance commitment levels should help drive greater efficiency in service provision.

We will assess the level of stretch in all companies' proposed service levels in the initial assessment of business plans. We will retain the ability to intervene to set service levels if companies' proposals are insufficiently stretching, or if their justification is not well evidenced.

We recognise that other things being equal, more stretching service levels for bespoke performance commitments could lead to an upwards pressure on costs, either now, or at future price reviews. However, this should be offset by companies becoming more efficient in 2020-25 and the longer term. Given the scope for efficiency improvements at PR19, we consider that affordable bills **and** better service can be achieved for customers.

Background

At PR14, companies set their performance commitments at service levels that balanced costs and benefits - a CBA approach. This relied heavily on stated preference¹⁰ willingness to pay data. In some cases it was difficult for companies to identify robust information, resulting in a lack of confidence in some proposed service levels. The approach also did not explicitly require companies to take account of potential cost efficiency improvements.

We had concerns about the lack of stretch in some companies' performance commitments at PR14. It reflected, in part, a lack of comparative information being available to customers and CCGs. As a result, we carried out "comparative assessments" for five performance commitments:

- water quality compliance;
- water quality contacts;

¹⁰ This is where people are asked to state their valuations in surveys, rather than inferring those valuations from actual choices as "revealed preference" methods do.

- water supply interruptions;
- wastewater pollution incidents; and
- internal sewer flooding.

This was because there were considerable differences in companies' proposed commitment levels for very similar performance commitments. A number of stakeholders also identified this. We intervened to set upper quartile performance commitment levels. This intervention was for companies who had not set themselves a performance commitment that was at least as good as the upper quartile performance level. We used historical data from 2011-12 to 2013-14 to set the upper quartile.

Since PR14, we have new data on 2014-15 and 2015-16 performance. There were a number of cases in which a company had outperformed its performance commitment (for some, or all, of the next five years) either before the price control started, or in the first year of the price control period. This was the case for 15% of performance commitments in 2014-15 and 21% in 2015-16.

This made some performance commitments for the rest of the period much less stretching than expected. This might reflect companies making early progress on their performance commitments in 2014-15. However, it could also mean that the initial performance commitment levels were too generous for companies, despite customer engagement, challenge from CCGs and our review at PR14.

The outcomes consultation

In our November outcomes consultation, we also discussed our guidance on setting bespoke performance commitments and how it could promote more stretching performance commitment levels. However, we did not make firm proposals, as we were commissioning consultancy work to develop our proposals. However, we did state that we expect companies to set more stretching performance commitment levels in the future, by using:

- a wider set of information on customer preferences;
- comparative performance information; and
- forecasts of what delivery improvements companies should be able to make in the future, with high levels of effort.

We also said that the wider evidence base and greater scope for judgment in setting performance commitments at PR19 would mean companies would need to engage with their customers to discover what is important to them, and describe how these

factors have been taken into account when setting bespoke performance commitments.

We explained that the role of CCGs will be important in assuring us how companies have engaged with their customers when setting performance commitment levels. We also considered how we could provide more information to customers and CCGs, on companies' marginal costs, so that they could better challenge companies.

Most respondents to the consultation, agreed that using a wider evidence base would be helpful in setting performance commitment levels using cost benefit analysis. However, most respondents thought using comparative information on companies' marginal costs (to enable customer and CCG challenges), was not a good idea. This is because those costs are unlikely to be consistent between companies. They were concerned that the marginal cost data information could, therefore, be misleading. Respondents did think that additional clarity around calculating marginal costs would be helpful.

In our May 2016 [Customer engagement policy statement and expectations for PR19](#) we recognised issues associated with 'willingness to pay' (WTP) data, and highlighted that we expect companies to place a greater weight on building a robust, balanced and proportionate evidence base. We also stated that companies should be considering other valuation methods (such as, revealed preference WTP and behavioural economics approaches). We consulted on this as part of the November outcomes consultation. Most stakeholders agreed with this approach.

The Frontier Economics report

Frontier Economics reviewed the approach to setting bespoke performance commitments and ODIs for us in the context of the outcomes consultation and the customer engagement policy statement. Their report supports a role for WTP and customer valuations as a key input when setting performance commitments. The report identifies a number of other possible approaches (set out below), which companies should use to challenge the level of stretch in their proposed performance commitment levels. Further details of this work is set out in Frontier Economics' report: "[Performance commitments and outcome delivery incentives at PR19](#)", which should not be seen as Ofwat guidance.

Our proposed approach to setting stretching performance commitment levels

We want to ensure that companies set stretching levels for all of their performance commitments, both bespoke and common.

As can be seen in our impact assessment on performance commitments at the start of the appendix, we have considered four options for how service levels should be set. In doing so we took account of consultation responses and the Frontier Economics' report. We considered the balance between prescription and flexibility in setting service levels.

In addition to the base case of PR14 (with the necessary minimum improvements to reflect the lessons learned at PR14) we considered a further three options. These were allowing companies full flexibility in setting performance commitment levels (Option 2), us prescribing how the levels should be set (Option 3) and us providing expectations about approaches companies should use to ensure their proposed service levels are sufficiently stretching (Option 4).

Our preferred approach is Option 4. It provides companies with the flexibility to take account of their customer engagement and their particular circumstances, while providing CCG, customers and other stakeholders with the tools to challenge the degree of stretch in companies' proposed performance commitments. This approach also reduces the reliance on marginal stated preference WTP and marginal cost data for cost benefit analysis by allowing companies to use wider information and other methods to inform their performance commitment levels. This approach means we do not have to set requirements covering the wide variety of bespoke performance commitments, which would be difficult to do effectively. Our proposed approach is also in line with the responses to the outcomes consultation.

The sections below give more detail on our expectations of service levels for: bespoke performance commitments; common performance commitments; and leakage. Our proposed expectations for setting levels for common performance commitments and leakage build on, and are consistent with, our proposed approach to bespoke performance commitment service levels.

As described in the Outcomes chapter in the main consultation document, our expectation is that companies will use all the relevant information they have, to propose service levels. For performance commitments that have statutory obligations, companies should set service levels in line with those statutory obligations, unless they have evidence to show that customers would prefer a more stretching commitment level.

Stretching levels for the bespoke performance commitment levels

For bespoke performance commitments, we expect companies to challenge their performance commitment levels using the following approaches:

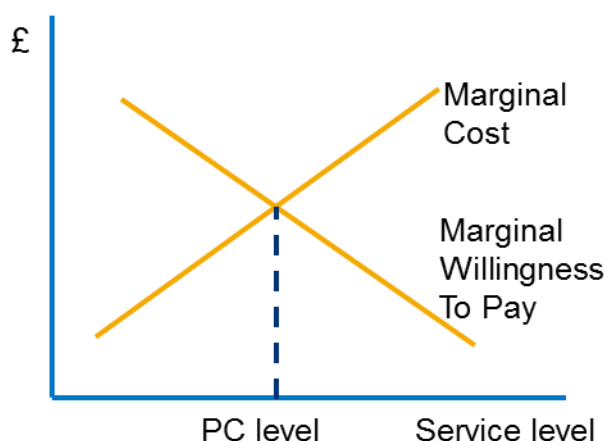
- cost benefit analysis (CBA);
- comparative information;
- historical information;
- minimum improvement;
- maximum level attainable; and
- expert knowledge.

If a company has not challenged its proposed level against each of these approaches, it will need to explain why it has not done so. We describe these approaches in the following sections. Companies can propose their own approaches to challenge their performance commitments in addition to these.

Cost benefit analysis (CBA)

At PR14 we prescribed a default approach for companies to set service levels. To deliver this, companies needed to identify and understand their marginal costs (MC) and marginal benefits, in particular customers' marginal willingness to pay (WTP). The service level was set where the two lines intersected (see diagram below). This method is called the cost benefit analysis method (CBA).

Figure 2.3 - The cost benefit analysis method



The aim of our guidance was to ensure the performance commitment level was set at the economic level of service. Our methodology allowed for cases where service levels might be set below the economic level for reasons of affordability. Companies also cross-checked this economic service level against historical data. Companies took into account impacts on the environment, biodiversity and natural capital in their assessment of marginal costs and marginal benefits and should continue to do so.

We have identified some difficulties with the CBA approach to setting performance commitment levels. When using the CBA method to set service levels for PR19, we have proposed an improved approach where companies should:

- use multiple sources of customer research, where proportionate;
- improve the quality of their cost data; and
- include forecast efficiencies.

Multiple sources for CBA

Using multiple data sources should enable companies to set more stretching performance commitment levels. In our customer engagement statement for PR19, we proposed that companies should not rely solely on stated preference WTP methods to inform their service levels. Companies should use a wider range of methods, where it is proportionate to do so. This might be for performance commitments that are associated with large ODI rewards and penalties, or where companies are planning large improvements in performance or innovative approaches.

When companies use multiple data sources of customer research, companies might have differing information from the different sources. There are many methodologies for producing an answer from multiple data sources, some of which may be more suited to particular data or performance commitments than others.

Companies should test how sensitive their performance commitments are to changing the customer valuation in the CBA. Frontier Economics have proposed one way of doing this by using a “multi-input CBA”.

Using multiple data sources will lead to greater scope for judgment in setting performance commitments at PR19. Companies will need to engage with their customers on the factors they take into account. They will then need to explain, how they have balanced these factors when setting their performance commitment levels, based on multiple data sources. The role of CCGs will be important in assuring how companies have engaged with their customers on this issue. Independent assurance of how companies have made their judgments based on multiple data sources will also be important.

CCWater is holding an event on the “triangulation” of multiple information sources for customer valuations on 13 July and will be publishing a consultancy report around the same time.

Marginal costs and forecast efficiencies

On the costs side, it can be difficult for customers and CCGs to challenge a company's estimate of its marginal or incremental cost. We are requiring companies to report their marginal cost data in the business plan tables and give supporting evidence for their estimates. We expect companies to provide information to their CCGs, about how they have calculated their marginal costs.

With more common performance commitments and more comparable data available at PR19, we will compare companies' marginal cost data for the same and similar performance commitments and challenge companies where their marginal costs look high. We propose to share information on the average and/or range of companies' marginal costs, to provide a tool for CCGs to challenge companies on their marginal cost estimates. This would have to take place after companies have submitted their business plans.

One of the main issues with companies' marginal costs at PR14, was that they reflected current marginal costs to set performance commitment levels for the future. Companies should include forecast efficiencies in their marginal costs for PR19 and explain how they have done so. Companies should also explain how they have treated common costs in their marginal cost estimates.

Comparative information

A key improvement to the outcomes framework for PR19, is that there will be comparative information much more easily available for many metrics, not just common performance commitments (for example, via the Discover Water dashboard). Companies might also be able to use comparative data from other sectors or countries, in some cases.

Companies should use the comparative information to look at the upper quartile level of performance, and forecast it for in 2024-25 for their proposed performance commitments. If companies do not propose at least a forecast upper quartile level of performance for their performance commitment, they will need to justify why they have not done this. Customers, CCG and we, can also use this information to provide challenges to companies' proposed performance commitments levels.

Historical information

For all performance commitments that are not new, historical information should be available. For performance commitments where the definition has changed, historical

data (based on a similar definition) can sometimes be used to assess the degree of stretch in a company's performance commitment.

Companies should use information on their best past performance, to inform their proposed performance commitment levels. Companies should also use historical information on their past improvements, to forecast what their best past performance would be in the year 2024-25. This will inform the setting of their performance commitment levels. If this historical information is available, we would expect companies to use this approach to inform their service levels, or justify why they have not done so.

Minimum improvement

Companies should define a minimum improvement for themselves in their performance commitment levels. This could be based on evidence from the previous performance of the company, or, from other companies, taking into account any innovation that took place in the previous price control period. The minimum improvement should also take into account forecasts of future technological improvements. An example of a minimum improvement, would be a performance commitment level 20% better than the company's current performance commitment, or performance in the previous price control period (whichever was better).

Maximum level attainable

Companies should define the maximum possible level achievable for a given measure and then work backwards from that level to propose their performance commitment levels.

An example would be for the performance commitment "Percentage of population supplied by single supply system". The maximum possible level for this would be zero per cent. A company would then justify why this level was not appropriate or achievable, and what level was. This approach is described in more detail for leakage, below.

Expert knowledge

For some performance commitments, such as those for asset health, companies might have expert knowledge about possible improvements that are not captured in the comparative or historical information for the measure. In such cases, companies should inform their commitment levels with engineering expertise and/or models of what stretching improvements can be made in the future.

Additional information on setting stretching performance commitment levels

Setting the initial service level (2019-20)

Companies have to estimate their initial service level (2019-20) at PR19 before data is available for the year. At PR14, there were many instances of companies outperforming, sometimes considerably, their 2014-15 estimates. This resulted in their performance commitments for the price control period looking over-generous to companies.

At PR19, we expect companies to forecast appropriate initial service levels for 2019-20, and for these to influence the level of their performance commitments. CCGs will challenge companies on their forecasts for 2019-20, as well as their performance commitment levels. We will scrutinise the initial service levels at PR19. If we consider them to be inappropriate, after assessing business plans, we will intervene to change them.

Multi-year average or annual data

Some companies' current performance commitments are averaged over more than one year, typically three years. At PR19, companies should consider whether single year data is more appropriate than multi-year average data.

Where companies are proposing in-period ODIs, we generally prefer that companies use annual data. This is because, one of the main purposes of in-period ODIs is that they bring rewards and penalties closer in time to the performance that generated them. Using a three-year average means that there is a greater lag between performance and the associated rewards and penalties.

An exception to this is leakage. In November, we proposed that companies should use a three-year average for their leakage performance commitments levels and we do so again below. A majority of respondents to the November consultation supported this approach. We consider there is a case for treating leakage differently because it is a high-profile measure which can be affected by the weather. It might be better to focus discussions on the trend in leakage rather than annual changes.

Performance commitment length

We expect companies to set performance commitment levels for all performance commitments for five years and projections for at least a further ten years. If we take forward a three-year price control for residential retail activities the performance

commitments for that price control would apply from 2020-21 to 2022-23 with long-term projections after that.

Glide-paths

Since companies are now familiar with the outcomes framework, we expect all companies to propose efficient service levels from the start of the 2020-2025 period. Therefore, we propose that companies do not include any transition periods or “glide-paths” to their stretching performance commitment levels, unless they have a strong justification for this.

Companies broadly supported glide-paths in response to the outcomes consultation, especially for new performance commitments. However, we do not consider that glide-paths are in the interest of customers, as customers have to wait for the levels of service they have funded companies to deliver.

Affordability

Given the scope for efficiency improvements at PR19, we consider that better service can be achieved, at the same time as keeping bills affordable for customers.

Companies should take account of the impact on bills when proposing their stretching performance commitments. Companies can constrain their performance commitment levels to take account of affordability. However, we strongly expect companies to propose stretching performance commitment levels within these constraints.

2.7 Stretching levels for the common performance commitments

Background

As described above, at PR14 draft determinations, we set common service levels for five common performance commitments.

These were based on historical upper quartile performance and were fixed for the five year price control period.

Our approach reflected concerns from several of our stakeholders at PR14. Their concerns highlighted that the variation in service levels and ODIs for similar performance commitments, was unfair to customers whose companies had

proposed less stretching levels, and to companies that had proposed more stretching levels.

The outcomes consultation

In our November outcomes consultation, we consulted on whether to set common levels for the common performance commitments, and if so, what methodology we should apply. While respondents differed in their views on the individual elements of comparative assessment (such as, the use of the upper quartile and dynamic adjustments to commitment levels), there were only a few companies who disagreed with us setting common performance levels at all. This was because they considered that performance levels should be set by companies based on their customer engagement.

Our expectations for common performance commitment levels

We want companies to engage with their customers on the appropriate performance commitment levels for the common performance commitments. We propose that companies use the above approaches (cost benefit analysis, comparative information etc.), to set stretching performance commitment levels for their common performance commitments.

However, the common performance commitments are of particular importance to all customers, and are supported by good quality comparative information. Therefore, we expect for the following common performance commitments, that companies should propose their commitment levels to be at least the forecast upper quartile in 2024-25:

- water quality compliance;
- water supply interruptions;
- internal sewer flooding; and
- pollution incidents.

We also expect companies to meet their performance commitment levels in the first year i.e. they should not propose any transition period (or glide-path).

During our initial assessment of business plans, we will review how well companies' proposed performance commitment levels meet our expectations.

An alternative approach based on dynamically adjusting commitment levels

We invite views on an alternative option, in which the performance commitment levels for the common performance commitments would be updated during 2020-25. This would ensure that they reflect improvements in upper quartile performance over time.

The benefits of dynamic adjustments to the commitment levels, is that they can be made more stretching as new information about companies' performance becomes available. This will allow companies to deliver a better service quality for customers over time. Customers, CCGs and we, know less than companies about what improvements they can deliver. Dynamic adjustment helps by making the commitments more demanding when information about improvements becomes available.

However, this is not our preferred approach because dynamic adjustments could dampen incentives for the best performing companies to improve. This is because, companies will know that any improvement will lead to a tightening of the commitment and a reduction in rewards for outperformance. This approach would discourage companies from shifting the frontier of performance so better services are delivered for all customers in the future.

2.8 Stretching performance commitment levels for leakage

Background

Reducing leakage continues to remain a top priority for customers and the UK and Welsh governments. Managing leakage is important for delivering a resilient network in the long-term, and reducing the risk of the over abstraction of water resources. This will be important in managing future challenges, such as population increases and climate change. A Water UK report, "[Water resources long-term planning framework \(2015-2065\)](#)", identifies the need for more ambitious leakage reduction to respond to the increased risk of droughts. Reducing leakage can also have a positive behavioural shift in customers' attitudes to their own usage.

Historically, leakage targets and performance commitment levels, were informed by the sustainable-economic levels of leakage (SELL¹¹), which in theory delivers the most benefits to customers. We are concerned that this approach has not driven

¹¹ SELL requires companies to repair leaks where the marginal cost of doing so is less than the marginal cost of not fixing the leak e.g. the marginal cost of leakage repairs is less than the marginal cost of developing new water resources to compensate for the water lost through leaks.

sufficient efficiency improvements or innovation in leakage reduction. In 2012, we commissioned [Strategic Management Consultants](#) (SMC) to review SELL. They found that:

- **SELL tends to maintain the status quo.** This is the result of SELL being based on data that relates to the current knowledge of leakage components and leakage management costs.
- **SELL does not incentivise efficiency or innovation.** If companies' current active leakage control is inefficient, it will lead to a higher SELL and a less stretching target. This does not incentivise inefficient companies to become more efficient. It also does not drive innovation.
- **companies are risk adverse.** They found that due to companies' risk adverse nature in relation to water resource planning, companies are reluctant to plan for lower levels of leakage for the long-term, resulting in inertia.

SELL, as an approach, allows for leakage to increase when new resources are built, because the value of reducing leakage decreases as more water is available.

In the November outcomes consultation, we set out our concerns that leakage targets and performance commitments have not been stretching in recent years. At PR14, company leakage performance commitments ranged from no reduction to a 14% reduction in leakage. Generally, companies who were already operating below their SELL and who had no strong support from customers to reduce leakage further, proposed no reductions in leakage.

In 2015-16, all but one company outperformed their leakage performance commitments. Some companies, in response to our November consultation, suggested that this was mainly due to mild weather conditions in 2015-16. However, the figure in the Outcomes chapter of the main consultation document, shows that reductions in leakage have been very modest since 2000 in England and Wales. This suggests that leakage targets and commitment levels might not have been sufficiently stretching over that period.

We also consider that there is significant potential to innovate in leakage reduction. Innovation could make it easier and faster to identify and fix leakages, including, for example, through acoustic or vibration detection sensors to identify and locate leaks.

The outcomes consultation

In November, we discussed some ideas for how leakage performance commitments could be made more stretching. These included, companies reporting leakage on a consistent basis, companies committing to a downward trend in leakage and

companies considering comparative information on other companies' performance when setting their leakage commitment level is appropriate.

In general, stakeholders were supportive of our approach in their responses to the consultation. However, a number of respondents were concerned our proposals implied that companies should set leakage performance commitments beyond the SELL. These respondents felt that companies should only set performance commitments beyond the SELL where there was strong customer support.

Other respondents considered that we should be more ambitious in our approach to leakage. These respondents suggested that we should move away from the SELL, since it had not driven improvements in leakage in recent years and customers generally support going below the SELL.

Some stakeholders raised specific concerns over some elements of our proposed approach to leakage. In particular, some stakeholders raised concerns around the difficulty and uncertainty in taking into account long-term expectations of the future value of water, the scope for water trading and the resilience of their supplies when setting leakage performance commitments.

We have considered further options for stretching leakage performance commitments at PR19 beyond those for setting stretching performance commitment levels for other common and bespoke performance commitments.

- **Base case: Using the same approach as for other performance commitments.** Companies would simply apply the challenges for all performance commitments (set out above), when proposing their performance commitments for leakage (for example, CBA, comparative information and historical information).
- **Option 1: A prescriptive approach.** This would apply the same approach to all companies. Examples include, applying the same percentage reduction to all companies, or, requiring all companies to achieve (or make progress towards) the forecast upper quartile level of performance in 2024-25.
- **Option 2: Expecting companies to justify their proposed leakage performance commitment levels against a specific set of challenges.** This builds on our November consultation approach by introducing a set of challenges that companies will need to consider and justify their proposals against (for example, asking companies to justify why they should not commit to achieving a 15% reduction in leakage). It differs from the approach to other performance commitments, in that we add some challenges specific to leakage.

Our preferred approach is option 2, which is a development of the approach for setting stretching levels for all performance commitments. We propose, to require

the industry to address a number of challenges on reducing leakage. These should give companies the flexibility to engage with customers on leakage performance commitments, while requiring companies to consider whether they are sufficiently stretching.

A prescriptive approach would be transparent and easy to apply to companies, but it would not take account of an individual company's circumstances or their customers' particular preferences.

Only applying the standard challenges, in the base case, to setting performance commitment levels, would not take account of the specific issues relating to leakage. It would also not take account of the importance that customers and other stakeholders attach to reducing leakage.

How our proposed approach to leakage will work in practice

The definition of leakage performance commitments

We are aware that some companies need to make changes to how they collect performance data to align to the new consistent leakage definition and that in some cases, it will take some time to have robust data. We expect companies to implement and report against the consistent definition, so it can be used in final determinations. We will take into account companies' progress towards the consistent definition in the outcomes tests in the initial assessment of plans.

- The service levels that companies report for the common performance commitment, should be measured on a consistent basis in total megalitres. This should be based on financial years, using a three-year average.
- The technical definition of 'leakage', is set out in Appendix 3 on Outcomes technical definitions. We propose that companies report leakage using the new consistent definition that has been developed by Water UK, UKWIR and companies. Companies will start shadow reporting on this new definition from 2016-17 onwards.
- We are also requiring companies to provide information on their leakage levels using the old definition of leakage in table App2. This will allow us to understand the impact of moving to a new metric when assessing companies' proposed performance commitments.
- We are not specifying whether leakage performance commitments should be set at a regional, or whole company, level. Companies will need to provide information in their business plan tables at the geographical level they are proposing performance commitments for. We expect companies to justify why they have adopted their preferred approach and the benefits of doing so. If a

company adopts regional leakage performance commitments, they should together cover the whole of the company's area.

Time period for leakage performance commitment levels

- Companies should provide projections for leakage levels for a minimum of 25 years in table App1. This is consistent with the time period in the water resource management plans (WRMPs).

Factors companies should take into account when setting their leakage performance commitments

Companies should set out how their proposed leakage performance commitment levels:

- take account of the views of their customers, local stakeholders and CCGs;
- relate to their water resource management plans (WRMPs);
- relate to their sustainable economic levels of leakage (SELL), including the upper and lower limits;
- take into account the future value of water, water trading and resilience;
- take into account the additional benefit that reducing leakage can have in encouraging customers to reduce their water usage; and
- take into account expectations for improvement and innovation in efficiency of reducing leakage.

We acknowledge that some of these elements are difficult to estimate, especially over the long-term. Companies will need to explain what assumptions they have made, as well as the key uncertainties and sensitivities.

In relation to WRMPs, companies should report the leakage performance in their water resource management plans (WRMPs), in business plan table App2. Companies must explain any differences between the data in table App2 and in the data in their WRMPs. Companies must report the SELL and its range, to us, in table App 2. SELL should be reported using both the old definition of leakage, as well as the new consistent measure of leakage. This allows us to understand the impact of moving to the new metric. The company should explain what factors it has taken into account in calculating SELL.

How to achieve stretching performance commitment levels for leakage

We expect companies to set ambitious service levels for leakage. Companies should justify their proposed performance commitment levels against the following approaches and justify why they have not adopted them:

- companies should commit to achieving at least the forecast 2024-25 upper quartile levels of performance on leakage per property per day and leakage per km of main per day;
- companies should commit to achieving reductions of at least:
 - a 15% reduction (one percentage point more than largest commitment reduction at PR14);
 - the largest actual percentage reduction achieved by a company since PR14; and
- companies should justify their performance commitments relative to the minimum level of leakage achievable (Unavoidable Annual Real Losses). The UARL is a measure defined in the [EU good practice for leakage management](#) of measuring 'how low you can go'¹².

Companies should also consider how to innovate in reducing leakage. They could include an enhanced reward in their ODI to incentivise a major improvement in leakage performance, for example.

2.9 Other ways of setting stretching performance commitments

There are ways in which performance commitments can be made more challenging, other than through setting more stretching commitment levels. We consulted on some of these in our November consultation. There was support for the approaches we suggested.

We therefore propose that companies should consider the following in developing a challenging package of performance commitments:

¹² The UARL is calculated for a given system taking into account what is technically achievable. It is derived using the following equation: $UARL (m^3/year) = (6.57 \times Lm + 0.256 \times Nc + 9.13 \times Lt) \times Pc$
Where: Lm = mains length (km); Nc = number of underground service connections; Lt = total length (km) of underground service connections (main to meter); Pc = current average operating pressure (metres).

- setting performance commitments for new, innovative metrics, which represent a genuine challenge to a company. These might involve significant changes in operating practices or culture for the genuine benefit of customers and / or the environment;
- developing a broad range of performance commitments, which, taken as a package, represent a stretching challenge across a wide range of the company's services and a number of price control areas;
- definitions for performance commitments, which allow for fewer (or no) exceptions;
- performance commitments jointly owned by more than one company to achieve shared outcomes, for example, companies working together to achieve the best, lowest cost or most sustainable outcome for a catchment;
- performance commitments that involve engagement with people, groups and stakeholders from across society to help deliver what matters to customers and the environment; and
- committing to delivering commitment levels through best practice, rather than finding work-arounds to meet them.

3 Our proposals on outcome delivery incentives

What issue are we seeking to address?

Outcome delivery incentives (ODIs) are the reputational and financial incentives that companies have to deliver on their performance commitments to customers. ODIs help to align the interests of investors and companies, with those of their customers, by incentivising them to improve services. ODIs can encourage dynamic effects, similar to a market, as companies strive to improve their service performance to earn rewards. This then shifts the frontier of industry performance to the benefit of all customers

We want to build on the success of the ODI framework for PR19. In November 2016, we consulted on a number of ways to do this, including strengthening ODIs. This section provides detail on our proposed changes to enhance the reputational and financial strength of ODIs. Our changes mean there will be more incentive for companies to fulfil their service commitments to customers, and more penalties for those that do not. Our proposed package will:

- enhance the reputational impact of ODIs to strengthen the focus on service delivery, complementing financial incentives;
- mean that companies (and customers) experience the incentive closer in time to when the service was delivered;
- offer enhanced rewards (and penalties) for companies that deliver a step-change in performance;
- strengthen financial incentives for efficient companies, where there is customer support for them; and
- challenge companies to justify why incentives cannot be strengthened to increase incentives to improve service performance.

What options have been considered

We have considered three options in relation to improving ODIs. These aim to improve on PR14 by using a wider evidence base on customer preferences, drive frontier-shifting performance and increase the incentive on companies to deliver on their service commitments to customers. Under all three options we have assumed companies use a wider evidence base on customer preferences than at PR14. This is in keeping with our Customer engagement policy statement for PR19.

Option 1: Base case - PR14+ approach

Option 1 is the PR14 approach but with a wider evidence base on customer preferences. Under option 1, companies:

- would still be subject to an aggregate cap of $\pm 2\%$ of their Return on regulated equity (RoRE) on their ODIs;
- there would be no enhanced ODI rewards or penalties; and
- there would be no guidance on linking rewards and penalties to revenue, rather than the Regulatory Capital Value (RCV), the use of in-period ODIs and the use of financial versus reputational ODIs.

Option 2: Prescriptive approach

Under Option 2, we would continue to prescribe a RoRE range, albeit a wider one than at PR14. Additionally, we would set common ODIs for the common performance commitments, with enhanced rewards and penalties. We would set the balance between in- and end-of-period ODIs, between RCV-based and revenue-based ODIs and between financial and non-financial ODIs.

Option 3: Guided approach

Under this option, we would set our expectations, and then ask companies to justify proposals which differ from them. We would remove the RoRE cap, but provide an indicative RoRE range of $\pm 1-3\%$ for companies' ODI rewards and penalties. We will expect all ODIs to be in-period, and linked to revenue, rather than RCV by default. We would also put a greater onus on companies having financial ODIs, where there is a robust metric and customer support for this.

Our assessment of the options for improving ODIs

Table 3.1 below sets out our assessment of the three options related to ODIs.

Table 3.1 Assessment of ODI proposals

	Option 1 PR14+ approach	Option 2 Prescriptive approach	Option 3 Guided approach Preferred option
Achieving our objectives	The PR14 framework will incentivise some incremental	Mandating approaches severely restricts the ability of	Setting expectations for more powerful ODIs will incentivise

	Option 1 PR14+ approach	Option 2 Prescriptive approach	Option 3 Guided approach Preferred option
	improvements, but does not incentivise frontier-shifting performance which can benefit all customers. ✓	companies to take into account their customers' preferences. ✗	frontier-shifting performance. Requiring in-period and revenue-based ODIs as the default increases the incentive for companies to deliver for their customers ✓✓
How our objectives are achieved	This approach is flexible and gives companies ownership. However, it does not promote innovation or challenge companies to shift the frontier of service performance sufficiently. ✓	Does not promote better regulation as Option 2 places a lot of restrictions on companies' ODI proposals. ✗✗	Promotes innovation and proportionate regulation as companies are able to tailor ODIs to their customers' preferences, while companies' incentives are strengthened ✓✓
Practicality	Relatively easy to implement as builds on PR14 approach. ✓✓	Difficult for us to implement as requires us to decide aspects of companies' ODIs without customer engagement to inform our decisions May be more straightforward for companies to implement as involves less customer engagement. ✓	Developing appropriate guidance involves more effort from us and the companies. Companies have to respond to a number of challenges and engage with customers on them. ✓

We propose Option 3 because it best aligns the interests of shareholders and management with those of customers for very little added implementation cost.

Removing the aggregate cap on ODIs and providing a wider indicative RoRE range, means companies are able to increase rewards and penalties, where this is supported by customer valuations. Also, Option 3 sets expectations on in-period ODIs, the link to revenue rather than RCV, and having financial ODIs, which should sharpen the management focus on delivery. However, the key benefit of Option 3,

over Option 2, is that it gives companies the discretion not to follow our expectations where they can provide evidence of why this might not be in the interests of their customers.

Option 3 also allows companies to propose enhanced rewards and penalties, which have the potential to incentivise companies to deliver step changes in service delivery that will benefit customers across all companies.

3.1 Strengthening reputational ODIs

Background

The PwC report on incentives¹³, highlighted the important role reputational incentives can play in any package of incentives. We want to increase the reputational impact of all ODIs to increase the focus on, and scrutiny of, performance.

There is a strong reputational incentive for companies to achieve or outperform their performance commitment levels. This is because companies have to report their performance in their annual performance reports. The reports are publicly available, which enable customers and CCGs to challenge companies on their performance. We consider that financial incentives can also enhance the reputational impact of ODIs. The December 2016 in-period financial ODI draft determinations, which attracted considerable media coverage, illustrated the power of financial ODIs to create reputational effects.

It is not just regulatory processes that impact on the reputation of ODIs. The Discover Water dashboard enhances the reputational impact of ODIs by making information publicly available on companies' performance. On Discover Water performance is presented relative to a company's performance commitments and relative performance on standard metrics. Discover Water will develop over time, with input from all its contributors, including: companies, CCWater, regulators and government. We are strongly encouraging the next phase of development to take account of the reputational incentive of reporting on performance and comparative performance, for driving improvements in the quality of service provided by companies

¹³ PwC, 'Refining the balance of incentives for PR19', March 2017

November outcomes consultation

In November 2016, we discussed the actions we had already taken to enhance the reputational impact of ODIs. These included, [publishing information on companies' performance against their commitments](#) and a [database which includes companies' performance against all their commitments](#), in mid-December 2016. We invited views on what further steps we should take to enhance the reputational impact of ODIs, either ahead of or at PR19.

Most respondents considered that the reputational impacts of all ODIs were important, and thought we could strengthen existing channels, particularly Discover Water. However, a small number of respondents raised concerns with the further strengthening of reputational ODIs. They considered that the existing tools provide sufficient incentive and thought any additional measures to increase the strength of reputational ODIs, risked further complicating the regulatory framework.

Our proposal

There are three areas in which we are proposing to encourage or strengthen the reputational impact of ODIs (in addition to steps we are already taking ahead of PR19).

- **Initial assessment of business plans tests.** Companies must propose approaches for their reputational ODIs in business plans. As part of the outcomes tests for the initial assessment of business plans, we will assess the quality and ambition in companies' reporting on ODIs, including how they plan to enhance their reputational effects. Our approach should incentivise companies to propose more stretching approaches to reputational ODIs.
- **Context.** Companies should provide contextual information to enhance the reputational impact of their ODIs. For common performance commitments, this could involve league tables of performance, perhaps delivered through Discover Water. Companies could present their performance against forecasts of upper quartile performance and / or stretching forecasts of performance, to enhance the effect of their reputational ODI with stakeholders.
- **Link to financial ODIs.** Our proposals to increase the financial strength and timeliness of ODIs (see below) will enhance the stakeholder and media focus on ODIs and increase their reputational impact.

We invite comments on our proposed approaches to strengthening reputational ODIs.

3.2 The timing of ODIs

As set out in the main PR19 methodology consultation document, we are proposing two changes to bring the impact of ODI rewards and penalties closer in time to the service performance which generated them. The purpose of these proposals is to sharpen the focus of company management on service delivery.

In-period ODIs

In-period ODIs (i.e. rewards and penalties that are paid between price reviews, rather than at price reviews) ensure that future customers do not pay for the service performance received by current customers. In-period ODIs also require companies to compensate their customers for poor performance more quickly.

In-period ODIs require companies to explain their performance to customers and how it impacts on their bills more frequently. This enhances the reputational impacts of ODIs.

At PR14, three companies proposed in-period ODIs. These companies agreed to change their licences to enable this to happen. For PR19, we want to strengthen the incentives for service delivery by enabling all companies the option for having in-period ODIs. In order to achieve this, we consulted on, and subsequently made changes to, all company licence conditions.

Company licence changes

[In November 2016, we consulted on changes to company licences](#) that would enable in-period ODIs to operate for every company, from 1 April 2020 onwards. All companies subsequently agreed to this licence change and it was made in April 2017. Full details of the licence changes have been published on our website, but we summarise the main details below.

- We need to notify companies of the specific performance commitments that will be subject to in-period ODIs by the 31 December of the year before the new price control starts.
- A company can ask us no later than 15 August in any year, to make a determination. We can also initiate a determination when a company has not requested one. We will determine any change to the level of price controls no later than the following 15 November.
- Years 4 and 5 of the in-period ODI determination process will be implemented differently (assuming a 5-year price control period). Year 4 in-period ODIs will be dealt with as part of the next price review. Year 5 in-period ODIs will be

determined in the year following the next price review, because Year 5 performance will not be known when we set the next price control.

- We expect companies to propose approaches to smooth bills where it is in customers' interests, as part of their application for an in-period ODI determination. Where appropriate, we will be able to smooth the bill impacts of the in-period ODI rewards and penalties.

November consultation

In November, we explained the main benefits that in-period ODIs would deliver. These include, sharpening companies' incentives to deliver on their service commitments to customers and making companies' performance more transparent to their customers.

We acknowledged that there was a balance to be made between bringing rewards and penalties closer in time and the bill stability that customers prefer. We recognised that in some cases it might be appropriate to apply in-period ODIs over several years to smooth bills. We also said that there might be some cases where end-of-period ODIs are more suitable than in-period ODIs.

We invited views from stakeholders on our proposed approach to in-period ODIs at PR19, and whether we should require the common performance commitments to have in-period ODIs attached to them.

Stakeholder feedback

In response to the outcomes consultation, most respondents agreed with the benefits of bringing rewards and penalties closer in time to the performance that generated them.

A number of respondents considered that in-period ODIs should not be applied to all performance commitments and that there might be cases where end-of-period ODIs are appropriate.

A number of respondents suggested that it should be up to the company, its customers and its CCG, which performance commitments should have in-period ODIs.

A number of respondents were concerned that the increased application of in-period ODIs would lead to bill volatility due to, for example, the effects of weather on performance. CCWater considered that to reduce bill volatility, in-period ODIs might need to be applied over a number of years.

A number of companies raised concerns about having an increased number of in-period ODIs. Their concerns related to the potential regulatory burden of the in-period ODI determinations and the growing complexity of the ODI framework.

Proposal

We want companies to strengthen the incentives for improving service performance by increasing the number of in-period ODIs. For PR19, we propose that:

- companies should adopt in-period ODIs as a default for all their ODIs and will need to justify why an in-period ODI is not appropriate against the criteria set out below;
- all the common performance commitments should have in-period ODIs attached to them with the exception of the two resilience common performance commitments, because they are at relatively early stages of development;
- companies will need to explain their overall balance between in-period and end-of-period ODIs in their business plans;
- companies must set out how they propose to manage bill volatility over the period; and
- we will set out our process for assessing in-period ODIs for PR19 in an information notice, learning from the 2015-20 experience. We will ensure that this approach is proportionate and transparent.

Criteria for assessing when an in-period ODI might not be appropriate

Our policy for PR19 is that companies should adopt in-period ODIs for all their performance commitments as the default position, with the exception of the two resilience common performance commitments (as mentioned above). However, we recognise there might be instances where the use of in-period ODIs is not appropriate. Some examples of when an in-period ODI might not be appropriate are given below.

- **Customer impacts.** Companies would need to justify, with evidence, why in-period ODIs are not in customers' interests, including why future customers should pay/benefit from incentives related to the service performance affecting current customers. The evidence should include customer research and views of the CCG.
- **Limited benefit of annual incentives for performance.** A company would need to justify why annual incentives would not be appropriate to incentivise improved performance for customers. This might be because a performance commitment relates to a long-term objective with significant uncontrollable variation in annual performance. It may also occur in cases where annual incentives will limit a

company's ability to innovate, or might discourage a company from developing new and innovative ODIs.

For the common performance commitments, we will be requiring particularly strong justifications and evidence for any cases where companies are proposing not to adopt in-period ODIs, with the exception of the resilience common performance commitments.

A greater proportion of ODIs linked to revenue rather than RCV

As with in-period ODIs, linking end-of-period ODIs to revenue, rather than the RCV, brings rewards and penalties closer in time to the performance that generated them. It also strengthens the incentive for companies to fulfil their service commitments to customers. At the moment, 28% of ODIs are linked to the RCV rather than revenue. Adjustments to the RCV can take more than 20 years to have a full financial effect on a company. This means that the impact of current performance is felt far in the future, when the customer base will have changed considerably.

All in-period financial ODIs are linked to revenue.

November 2016 Consultation

In the November 2016 outcomes consultation, we consulted on the benefit of end-of-period ODIs being linked to revenue, rather than adjustments to the RCV. We explained that linking end-of-period ODIs to revenue instead of the RCV means rewards and penalties are felt closer in time to the performance that generated them.

Most respondents supported end-of-period ODIs being linked to revenue rather than the RCV. However, some respondents asked for there to be flexibility depending on the type of performance commitment. For example, an ODI linked to the RCV might be appropriate for a performance commitment that delivers benefits to customers over a long period and for schemes which cover more than one price review period.

Proposal

We propose that end-of-period ODIs, by default, should be linked to revenue, unless companies can justify why this should not be the case, and provide evidence.

We also consider that adjustments to revenue are more appropriate than ODI penalties being applied through re-investment, as ODI penalties have a stronger impact on reputation.

3.3 Enhanced rewards and penalties

Our proposal

Calculating rewards and penalties based purely on customer valuations does not take into account the wider benefits that customers should obtain from shifts in performance that set a new benchmark for industry performance.

We propose to incentivise a step change in performance. We are encouraging companies to propose higher rewards for very high levels of performance for their common performance commitments. We can then set new leading performance levels in future price controls to benefit customers of all companies. The enhanced reward would compensate companies for the extra effort and risk involved in delivering a major improvement in performance.

This is a new proposal that was not consulted on in November 2016, and we invite views on it through this consultation.

Guidance

Building on the information in the Outcomes chapter of the main consultation document our proposal is:

- that the enhanced reward and enhanced penalty would apply only to common performance commitments which have metrics that can be compared between companies;
- we would expect the enhanced reward rate to be accompanied by an enhanced penalty rate for below-standard, poor and unacceptable performance;
- the enhanced reward threshold is set at least at the performance level of the current leading company, or preferably higher (for example, including a forecast improvement in addition to that performance level);
- companies, which are already the leading company (or close to its performance), will need to demonstrate stretch in the enhanced reward threshold levels they are proposing. The company should assume an improvement greater than historical improvements for that metric;
- companies should justify how their enhanced reward threshold takes them towards hitting the maximum level possible for this metric and how the threshold will improve benchmarks for all companies;
- the enhanced reward threshold is not dynamic, but set out in advance at PR19. The threshold could be set in advance, to increase year by year. This is consistent with our preferred option for setting performance commitment levels

- and ensures there is sufficient incentive for companies to outperform current leading performance;
- companies' enhanced rewards will be cumulative after the threshold point. The first unit of outperformance will incur one unit of the enhanced reward. Subsequent units of outperformance will incur additional units of the enhanced rewards. We will not allow companies to have one-off tranches of reward that become due at the threshold point;
 - companies proposing enhanced rewards and penalties should explain in their business plans how they plan to achieve their service improvements and how they will share any success with the industry after the price review. Receiving the enhanced reward will depend on whether the company has a credible plan for sharing its approach with the sector; and
 - we expect that enhanced penalties would apply at least at the current lower quartile company performance. This assumes a forecast improvement in the lower quartile performance. Poor performing companies, that achieve worse than the enhanced penalty threshold and incur enhanced penalties, will be required to submit an action plan to their CCGs setting out how they will improve their performance.

The enhanced rewards that apply beyond the threshold include wider externalities that may not be captured in customer valuations. One such externality is the benefit to customers from the sector benchmarks of performance improving. Companies will therefore need to justify, using customer and economic evidence, why the enhanced reward rate they have chosen is appropriate. Similarly, the enhanced penalties include wider externalities that may not be captured in customer valuations. One such example is the need to incentivise companies not to take undue risks to achieve the enhanced rewards.

3.4 A greater onus on having financial ODIs

Currently, around 40% of all ODIs are reputational only. Increasing the proportion of financial ODIs can provide benefits to customers. Putting more of companies' revenue at risk through service performance better aligns the interests of investors and company management, with those of customers. It also focuses management on improving service performance for customers.

Our analysis of the PR14 financial ODIs shows that the rewards and penalties are concentrated on a relatively small number of performance commitments. In particular, they are concentrated on the five performance commitments we applied upper quartile targets to at PR14. While companies found these to be priorities for customers at PR14, there is a risk that concentrating a relatively high proportion of

potential revenue from ODIs on these metrics causes companies to focus on these disproportionately. A higher proportion of performance commitments with financial ODIs might, therefore, help companies balance customers' wider service priorities, as well as increase the overall power of ODIs.

There are, however, potential drawbacks to increasing the proportion of financial ODIs. Companies might use them to diversify their performance risk across a large number of ODIs so that failure on any individual metric would not have a large impact on revenue. In addition, having a large number of financial ODIs might dilute management focus on service performance altogether, because of the difficulty of concentrating on so many metrics at once. However, if customers value a wide range of service measures, it would still be appropriate for companies to be incentivised to deliver them.

November 2016 consultation

In November 2016, we consulted on encouraging companies to increase the proportion of ODIs with financial rewards. Respondents were, in general, supportive of this approach. However, most respondents thought some flexibility was needed to consider whether a financial ODI is appropriate on a case-by-case basis. One respondent noted that when some companies were proposing a financial ODI for a metric, and other companies were not for the same metric, that we had a role to challenge companies as to why their approach was appropriate.

Proposal

We are putting an onus on companies having financial ODIs in order to strengthen the incentive on companies to deliver on their performance commitments to customers.

For PR19, we propose that companies should justify, with supporting evidence, whenever a performance commitment is not supported by a financial ODI.

However, our onus of financial ODIs does not mean we will not be requiring companies to provide evidence that a financial incentive (either penalty only, or reward and penalty) is appropriate and supported by customer engagement. For a financial ODI to be appropriate the company must at least:

- be proposing a stretching performance commitment level (as explained above) so that rewards are for strong outperformance and not for carrying out the “day job”; and
- must have customer support for its proposed financial ODIs (see below).

3.5 Removing the RoRE cap on ODIs and an indicative range for ODIs

At PR14, we applied an aggregate cap and collar on companies' ODIs of $\pm 2\%$ of RoRE. We now consider that there is scope to learn from PR14 and further incentivise companies to innovate in the delivery of service performance (where supported by customers), while sharpening the incentives to avoid underperformance. We consider that this should be reflected in the range of returns for out- or under-performance in 2020-25.

November 2016 Consultation

In November we consulted on removing the aggregate cap and collar of $\pm 2\%$ of RoRE, and encouraging companies to hit an overall range for rewards and penalties that was higher than the ranges for companies' PR14 ODIs ($\pm 1\%$ to $\pm 2\%$ of RoRE).

In response to the consultation, there were mixed views on removing or increasing the RoRE cap and collar. Some respondents expressed concerns about whether customer valuations would support an increased RoRE range and the risk to shareholders from uncapped penalties. However, some respondents felt that removing the cap and collar would allow companies to show their risk appetite in delivering service improvements. Others felt it would enable customer valuations and engagement to drive the appropriate range.

Proposal

We propose to remove the aggregate cap and collar on ODIs and to provide an indicative range of ± 1 to $\pm 3\%$ of RoRE. This will enable companies to propose ODIs that better align customer, management and shareholder interests. Companies will be able to propose stronger rewards and penalties (where they are supported by customer valuations) to incentivise them to deliver on their performance commitments to customers.

Companies' overall RoRE range will be built bottom-up, from individual customer valuations on individual ODIs. Removing the aggregate cap allows companies to meet our challenges to them. This includes: adopting enhanced rewards and penalties, having a greater emphasis on financial ODIs, and being able to use a wider range of customer information to set higher rewards and penalties.

As well as bottom-up valuations, companies will need to test the overall acceptability and affordability of their business plan proposals with customers.

As at PR14, we expect companies to base their RoRE range for ODIs on a high and low probability of events occurring. At PR14, we specified these as the P10/P90 range of probabilities¹⁴. We are seeking views on this approach, which is set out in more detail in Appendix 13 on Aligning Risk and Return and associated guidance.

3.6 Asset health penalties and rewards

At PR14, we had to intervene during the determination process for three companies because the proposed penalties associated with not achieving their asset health performance commitments were too low. In addition, because we allowed companies to adopt innovative, bespoke approaches to asset health, it was difficult for stakeholders to identify the scale of penalties associated with companies' asset health performance commitments. This is because those ODIs relating to asset health were not clearly identified.

Consultation responses

At our June 2016 outcomes workshop, we asked stakeholders to help shape our approach to asset health for PR19. Most said that guidance on asset health penalties would be useful.

In the November 2016 outcomes consultation, we said companies should explain to their customers, CCGs and us, how their asset health penalties (and any rewards) relate to revenue and RoRE. We also consulted on setting ranges for asset health penalties (and maybe rewards) as a percentage of revenue and/or RoRE. There were no specific comments on this issue.

In the November consultation, we invited views on when ODI rewards might be appropriate for asset health performance commitments. Respondents generally did not support ODI rewards for asset health, because they felt customers would not support them. They also felt that companies were trying to achieve stable asset health, rather than large improvements.

At our February 2017 outcomes workshop, most attendees supported a RoRE range for asset health ODIs. Some attendees supported some rewards associated with asset health, but a few respondents disagreed. They argued that asset health is

¹⁴ The P90 and P10 are points on a risk distribution. The P90 points means there is only a 10% chance that the outturn RoRE will be above the threshold provided.

associated with long-term stability, and rewards might encourage a short-term approach.

Our proposed approach

We are proposing for PR19 that, in line with our approach to ODI rewards and penalties generally, companies should set their asset health penalties using a wide variety of customer research so that they can strengthen their incentives in line with customer preferences. Companies should explain to their customers, CCGs and us how their asset health penalties (and any rewards) relate to their past performance and the asset health challenges they face. Companies should report their proposed asset health penalties as a percentage of RoRE so that they are comparable across companies. This will provide clarity on whether companies are sufficiently incentivised to maintain their asset health. We will intervene to increase the asset health penalties at PR19 if we consider the proposed penalties are too low compared across companies and compared to the level needed to incentivise a company to deliver asset health.

We suggest that companies can propose rewards for asset health performance commitments if they can show there are benefits to customers and have customer support for improvements.

3.7 Setting ODI penalties and rewards

At PR14, we prescribed an approach to how companies should set their ODI reward and penalty rates.

To deliver this approach, companies needed to identify and understand their marginal costs, as well as customers' marginal willingness to pay. Companies carried out extensive customer engagement in order to understand their customers' priorities and the price they were willing to pay for service improvements, to meet their priorities. This was mainly done using stated preference willingness-to-pay analysis.

This bottom-up approach, is grounded in economic theory and therefore should produce efficient outcomes. However, many companies told us they found it hard to find reliable values to use in the formulas. We also found that stated preference WTP values varied significantly across companies. This potentially limits the robustness of the approach.

The Frontier Economics report and our planned approach for the PR19 methodology consultation document

In our May 2016 Customer engagement policy statement for PR19, we recognised the issues with stated preference WTP, and highlighted that we expect companies to build a robust, balanced and proportionate evidence base. We also stated that companies should be considering other valuation methods (such as revealed preference WTP and behavioural economics) and consulted on this as part of the November outcomes consultation. Most stakeholders agreed with this approach.

We asked Frontier Economics to review the approach to setting performance commitments and ODIs between December and February. Frontier Economics' work supports using WTP and customer valuations as a key input when setting ODIs. They also identified other approaches, set out below.

Frontier Economics proposed that ODI penalties could be based on:

- The PR14 formula, using WTP supplemented by other customer research, where appropriate;
- Costs, marginal cost, or even the highest marginal costs of all the companies; and
- A top-down approach with the total penalty being divided between performance commitments, based on customer preferences.

Frontier Economics suggested removing the WTP link from penalties and using marginal cost, as this increases robustness.

Frontier Economics proposed that ODI rewards could be based on:

- The PR14 formula, using WTP supplemented by other customer research, where appropriate; and
- A top-down approach with the total reward being divided between performance commitments, based on customer preferences.

Our proposed approach

Our proposals for setting ODI reward and penalty rates, are:

- companies can base their ODI penalty and reward rates on the existing penalty and reward formulas (see figure 3.1 below) but companies should cross check the marginal WTP input with alternative customer valuations;

- companies can use other customer evidence to propose changes to the ODI penalty and reward rates calculated according to the existing formulas, provided they are well grounded in customer evidence;
- companies should include future cost improvements in their estimates of incremental cost in the penalty formula;
- companies should not propose top-down calculated penalty and reward rates derived from a pre-set starting RoRE range, or amount of revenue and should use a bottom-up approach, which is based on customer evidence;
- however, companies will need to ensure the bottom-up approach is in line with the expected RoRE range and if not, should provide information on why they believe the strength of their proposed ODI package is in line with their customers' views and how it provides sufficient and appropriate incentive to deliver stretching service performance.
- CCGs will challenge companies on their proposed ODI penalty and reward rates and how well companies have used a wider range of approaches and customer research to set them;
- we will compare companies' marginal WTP, marginal cost information, and reward and penalty rates for the same performance commitments at PR19. We will challenge companies on their proposed reward and penalty rates where appropriate; and
- as with PR14, companies should calibrate their financial ODIs with total expenditure (totex) efficiency sharing and any other incentives that might apply to their performance.

Figure 3.1 - Reward and penalty formulas

$$\text{ODI}_{\text{penalty}} = \text{Incremental WTP} - (\text{incremental cost} \times p)$$

$$\text{ODI}_{\text{reward}} = \text{Incremental WTP} \times (1-p)$$

Where:

- Incremental willingness to pay (WTP) for penalties, is the value foregone by customers for a given level of under-delivery. For rewards, it is the value customers gain from a given level of over-delivery. Companies can also include other marginal benefits in the incremental WTP part of the formula, such as benefits to the environment, biodiversity and natural capital that are not captured in the incremental WTP and which are appropriate to add to it.

- Incremental cost for penalties, is an estimate of expenditure which can be avoided by the company for the given level of under-delivery. For rewards, it is an estimate of the additional expenditure needed for a given level of over-delivery.
- p = the customer share of expenditure performance (derived from the totex efficiency sharing incentive).

Companies can use marginal or incremental values in these formulas as appropriate¹⁵.

The business plan tables we are consulting on, collect information on companies' marginal stated preference WTP and marginal cost. Companies can provide information on the other customer evidence they have used and their approach to setting ODI rewards and penalties. They can present this information in their business plan table commentaries and the sections of their business plans on ODIs.

The penalty formula is designed to compensate customers for the economic loss associated with the company's failure to deliver its relevant performance commitment. It compensates customers for the value they have lost (incremental WTP) less the reduced costs they will have to pay through totex efficiency sharing (the customer share of the cost savings the company has made, or incremental cost times ' p ').

The reward formula is calibrated to provide companies with a reward no greater than customers' valuation for the improvement (their incremental WTP) less the additional costs customers have to pay for the improved performance (incremental cost times p). The reward rate formula is simpler than the penalty rate formula as we intentionally assume that incremental cost is equal to incremental WTP¹⁶. The reward rate formula means that customers cannot be worse off and will be better off if a company can deliver its service improvements at a lower cost than customers' incremental WTP.

Any adjustments, such as adapting the results of the formula for wider forms of customer valuation, should be clearly explained, grounded in customer evidence and quantified transparently in business plans.

¹⁵ Marginal refers to changes resulting from an additional unit of output. Incremental refers to changes resulting from a given change in output (which might be more than one unit).

¹⁶ The reason why we assume marginal cost (MC) = marginal WTP (MWTP) is that typically you would expect beyond the performance commitment for marginal cost > marginal WTP. Assuming MC = MWTP means that the reward rate is higher than it otherwise would be, but it allows for the fact that in reality a company is only likely to outperform its performance commitment if it reduces its marginal cost in which case the formula provides too low a reward. As we cannot predict what future marginal cost might be we assume MC = MWTP which allows for future cost improvements but ensures customer are always better off.

As set out in the Cost Assessment chapter of the main consultation document, we are consulting on asymmetric cost sharing rates as part of this draft methodology consultation. If this approach is adopted, companies will not be aware of their rates at the time they submit their business plan. For the purposes of these calculations, a cost performance (sharing rate) of 50% should be assumed. We invite views on whether companies should recalibrate their rewards and penalties for the difference between the 50% cost sharing rate assumed in business plans and the final cost sharing rate, as occurred shortly after PR14.

We have covered the approach to setting enhanced rewards and penalties in the section on Enhanced rewards and penalties above.

We invite comments on our proposed approach to setting ODI penalty and reward rates.

3.8 Other ODI issues

The Outcomes chapter in the main consultation document also sets out our views on a range of other ODI-related issues, some of which we consulted on in November 2016.

Deadbands

Deadbands are zones of performance close to the performance commitment level, for which no financial ODI applies, even though the performance commitment has a financial ODI. At PR14, companies proposed deadbands to protect companies and customers from small variances in performance that may drive a reward or penalty. This means that fluctuations that may be the result of events outside of management control are not financially rewarded or penalised.

There were mixed views on the continued use of dead bands in response to the November 2016 consultation. Some respondents felt the use of deadbands was not necessary and it weakened incentives. Others felt they offered protection to customers from small variations in performance.

For PR19, we are discouraging companies from proposing deadbands, because they remove the incentive for companies to improve their performance. Companies that wish to propose deadbands will need to produce clear evidence as to why their proposals are appropriate, and in the interests of their customers.

Caps and collars on individual ODIs

As already set out above, we are proposing to remove the overall RoRE cap on rewards and penalties. However, companies can propose reward caps and penalty collars on individual ODIs if supported by their customer engagement. In doing so companies will need to consider the costs and benefits of such caps and collars.

The main cost is that these individual caps and collars reduce the incentives for companies to improve their performance near, at and beyond the cap and collar.

There are benefits of such caps and collars, which include avoiding the exposure of companies and customers to unlimited rewards and penalties on individual ODIs and allowing companies to have higher reward or penalty rates focussed over a smaller performance range.

We consider that individual caps and collars are also likely to be more appropriate where data quality is lower or there is less comparative or historical information on performance so it is hard to know that the performance commitment level is stretching. There might also be a stronger case for them where the potential for enforcement action is more appropriate than higher penalties for very poor performance.

Gated ODIs

We have considered whether there is a case for “gated ODIs”, where earning a reward on one ODI depends on the performance on another ODI. A benefit of gated ODIs is that they avoid a situation in which a company performs very poorly on one or more performance commitments, but still earns rewards for good performance on other commitments. However, gated ODIs can reduce or distort the incentive for companies to improve their performance, to the detriment of their customers. For example, if a company was performing poorly on sewer flooding, it might not lead to the best outcome for customers to then remove the company’s incentive to improve its performance on leakage or supply interruptions.

We consulted on gated ODIs in the November outcomes consultation. Most respondents were against the idea of gated ODIs, believing that they can reduce the incentive for companies to improve their services to customers in other areas, if they have poor performance in a particular area. However, some respondents considered gated ODIs might have a role and that companies should have the flexibility to propose them.

We are discouraging the use of gated ODIs. However, we consider companies need to take a responsible attitude to claiming ODI rewards when they have performed poorly in some areas. Some companies have already chosen not to take their full ODI rewards for this reason. Where a company has performed so poorly on a performance commitment that it might be in breach of its duties, we can consider using our enforcement powers.

Common ODIs

Common ODIs could be used on common performance commitments to ensure companies and customers face the same rewards and penalties for the same performance levels. However, they do not allow for companies to take account of local customer preferences.

We consulted on common ODIs in November. Most respondents disagreed with us setting common ODIs. The main reason respondents disagreed was because common ODIs would remove the scope for customer engagement to inform ODI rewards and penalties for the common performance commitments. Common ODIs, would also not allow for different customer valuations in different company regions.

We are, therefore, not proposing common ODIs for common performance commitments for PR19 so that companies can set their ODIs based on their customer engagement. However, if companies' proposed ODIs for the common performance commitments vary widely, and this is not supported by good evidence, we will consider intervening to protect customers' interests by ensuring that ODIs have a robust basis and that customers are not exposed to risk from outlier incentive levels.

Trigger ODIs

"Trigger ODIs" occur when an ODI is designed so that when a company's performance goes over a certain threshold, a lump sum reward or penalty becomes applicable. Currently, most ODIs are "cumulative" (i.e. for each unit of performance beyond a threshold, the reward or penalty increases). The difficulty with trigger ODIs is that they generate very strong incentives at the threshold point (which might be too strong), but no incentive beyond the threshold. Both too strong and too weak incentives could drive inefficient behaviour by companies to the detriment of customers. We are discouraging trigger ODIs at PR19.

We invite consultation responses on our proposed approach to the ODI issues discussed above.

4 Two new customer experience incentives

Introduction

A truly excellent customer experience is fundamental for establishing trust and confidence, and for the continued legitimacy of the water sector.

We introduced the Service Incentive Mechanism (SIM) in 2010, which incentivises water companies to provide excellent customer service to residential (household) customers. A company's SIM score is 25% based on a quantitative measure of written complaints and 'unwanted'¹⁷ phone contacts that a company receives, and 75% based on a survey of customer satisfaction with the company's handling of a recent operational (wholesale) or billing (retail) matter. SIM combines reputational and financial incentives: we rank and publish SIM scores annually and we will determine rewards of up to 6% and penalties of up to 12% of residential retail revenue, at the end of the control period (see chapter on Accounting for past delivery of the main PR19 methodology consultation document).

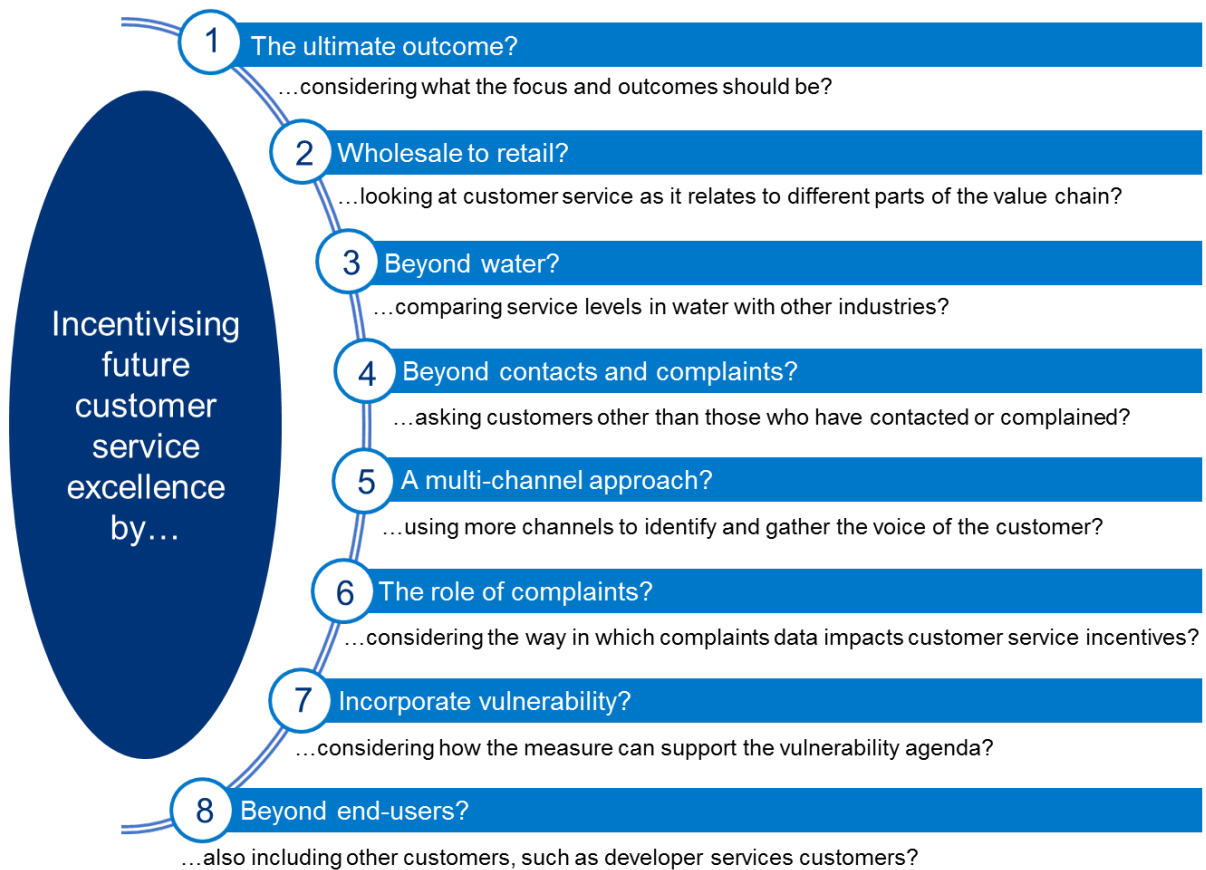
Stakeholders agree that SIM has driven customer service improvements since its introduction. However, to remain fit for purpose, SIM needs to change at PR19, for the reasons explained in the Outcomes chapter of the main consultation document. In 2016, we commissioned a report from Economic Insight¹⁸ on how best to identify, measure and benchmark customer service outcomes. This work, which we published alongside the November 2016 outcomes consultation, informed our thinking about the replacement for SIM at PR19.

[Appendix 5 of the November consultation](#) asked eight key questions about a future customer experience measure for PR19, as set out in Figure 4.1, below:

¹⁷ That is, where the customer's phone contact is 'unwanted' from the customer's point of view.

¹⁸ A Future Customer Incentive for Water, Economic Insight, November 2016:
<http://www.ofwat.gov.uk/wp-content/uploads/2016/11/Future-customer-service-incentive-for-water-1.pdf>

Figure 4.1 – Key questions in November consultation for a future customer experience incentive



Taking account of responses to the November outcomes consultation and subsequent stakeholder engagement (including a workshop¹⁹), as well as our principles for the design of the new incentive (see the main PR19 methodology consultation document), we propose to replace SIM at PR19 with **WaterworCX**. This is an umbrella term for a mechanism comprising two new measures:

- the Customer Measure of Experience (C-MeX); and
- the Developer Measure of Experience (D-MeX).

We consider that replacing SIM with WaterworCX will stretch companies to improve the customer experience across the value chain for both residential and developer services customers. C-MeX will incentivise the water sector to catch up with the higher levels of customer service found in some other sectors, address the convergence of SIM scores, remove the incentive in SIM to discourage customer contact and reflect changing customer behaviours and attitude towards interacting

¹⁹ Slides 10-18 of this document cover the future customer experience measures: Outcomes – Water 2020 Stakeholder Workshop: <http://www.ofwat.gov.uk/wp-content/uploads/2016/11/Outcomes-Water-2020-stakeholder-workshop-slides-Feb-17.pdf>

with service providers. D-MeX will encourage water companies to improve the customer experience for developer services customers.

In the main PR19 methodology consultation document, we presented three options for the design of C-MeX, and four options for our approach to D-MeX. We explained our preferred option for each measure. We did not include a 'do nothing' option for the future customer experience incentives, because we consider that SIM needs to change (as explained in the main PR19 methodology consultation document). In this appendix for each incentive, we describe and assess all the options, explain our rationale for our preferred option, and discuss the practical application.

4.1 Customer Experience Incentive (C-MeX)

C-MeX Options for consultation

We have considered three C-MeX options, as set out in Figure 4.2, and described below²⁰.

²⁰ All options compare C-MeX scores against the Institute of Customer Services' UK Customer Satisfaction Index (UKCSI). UKCSI is based on data from a six-monthly online survey of consumers in 13 sectors of the economy. See here for further information:
<https://www.instituteofcustomerservice.com/research-insight/uk-customer-satisfaction-index>

Figure 4.2 – Summary of C-MeX options for consultation

	Customer service quarterly satisfaction survey via online channels, of contacts based on the handling and resolution of a recent matter or complaint	Customer experience quarterly satisfaction survey via phone, of customers who have not contacted their company	Net promoter score using monthly data submitted by companies of the net proportion of customers who would recommend their water company	Complaints volumes based on application of updated guidance (includes complaints made via social media)
Option 1	50% weighting	50% weighting	Not applicable	Reputational incentive
Option 2	40% weighting	40% weighting	Not applicable	20% weighting
Option 3	40% weighting	40% weighting	20% weighting	Reputational incentive

All options: Combined into a single C-MeX score benchmarked against an upper quartile UKCSI all-sector threshold

C-MeX Option 1: Customer surveys only

Under option 1, 50% of the financial incentive is based on an online customer service satisfaction survey of customers who have contacted their companies (a contact survey). It is based on the average of the customer’s satisfaction with the company’s handling **and** the resolution of a recent matter or complaint – this is different to the SIM which only surveys satisfaction with handling. The other 50% of the financial incentive, is accounted for by a telephone survey of satisfaction with customer experience for customers who have not contacted their company (an experience survey). There is also a reputational incentive on companies to reduce the number of complaints they receive.

C-MeX Option 2: Customer surveys and complaints

Option 2 reduces the weighting of the two satisfaction surveys in Option 1 to 40% and includes a 20% weighting for complaints in the financial incentive. Option 2 reflects some responses to the November outcomes consultation, which said that complaints are an important measure of customer service, and that there needs to be a financial incentive to reduce them.

The 20% complaints element would be based on updated complaints guidance (see below). In particular, the ‘complaint’ numbers will include those made through any channel, including via social media, where attributable to the customer. We will require companies to provide at least four communication channels, including at least two online channels, for customers to contact them and make complaints. We

propose to apply a downwards adjustment to a company’s C-MeX score if they do not adhere to this requirement.

Under Option 2, the 20% complaints element would not include unwanted phone contacts as SIM does. It would also remove the contact weightings present in SIM, to treat all complaints in the same way, regardless of the channel through which the customer contacted the company.

C-MeX Option 3: Customer surveys and Net Promoter Score

Option 3 reduces the weighting of the two satisfaction surveys in Option 1 to 40% and includes a 20% weighting for a Net Promoter Score (NPS) component, provided by companies, in the financial incentive.

NPS is a widely used measure in other sectors. It is based on a single question that asks customers how likely they would be to recommend a particular product or service following an interaction, and is often sent by text message. NPS results reveal the proportion of respondents that would recommend a company less the proportion that would not²¹.

Our assessment of the options for C-MeX

We consider that all three options have their merit, although option 1 seems to us the most appropriate. See table 4.1 for a detailed appraisal.

Table 4.1 - Assessment of C-MeX options

	Option 1 Customer surveys only Preferred option	Option 2 Customer surveys and complaints	Option 3 Customer surveys and Net Promoter Score
Achieving our objectives	Adds non-contacts and new channels to the satisfaction survey, incentivises improvements across the whole customer journey, and introduces a cross-sector challenge.	Adds non-contacts and new channels to the satisfaction survey, incentivises improvements across the whole customer journey, and introduces a cross-sector challenge.	Adds non-contacts and new channels to the satisfaction survey, incentivises improvements across the whole customer journey, and introduces a cross-sector challenge.

²¹ Responses are scored on a scale from 1 to 10, where scores of 9 and 10 are classified as “promoters”, 0 to 6 are “detractors” and 7 and 8 are deemed “passives”. The NPS score is calculated by subtracting the percentage of detractors from the percentage of promoters.

	Option 1 Customer surveys only Preferred option	Option 2 Customer surveys and complaints	Option 3 Customer surveys and Net Promoter Score
	<p>Removing complaints / unwanted contacts from the financial incentive addresses the regulatory financial disincentive for companies to proactively engage with their customers.</p> <p>✓✓</p>	<p>Including an updated complaints measure in the financial incentive does not address the regulatory financial disincentive for companies to proactively engage with their customers, as effectively as option 1.</p> <p>✗</p>	<p>Removing complaints / unwanted contacts from the financial incentive addresses the regulatory financial disincentive for companies to proactively engage with their customers. NPS adds a further channel (text message) so brings C-MeX more up to date than SIM, and captures immediate feedback. However NPS is prone to unexplained variations so may not be as reliable as a pure measure of surveyed satisfaction, as in option 1.</p> <p>✓✓</p>
How our objectives are achieved	<p>Pro-market insofar as ranking companies, mimics aspects of a competitive market. Applies better regulation principles. Fosters innovation the most, by putting most weight (50%) on measuring the broader customer experience, rather than just contact handling.</p> <p>✓</p>	<p>Pro-market insofar as ranking companies, mimics aspects of a competitive market. Applies better regulation principles. Including complaints, focuses more on an output rather than a customer outcome. Fosters innovation by measuring the broader customer experience rather than just contact handling, but at a slightly lower weighting than option 1, of 40%.</p> <p>✓</p>	<p>Pro-market insofar as ranking companies, mimics aspects of a competitive market. Applies better regulation principles. Including NPS scores/ focuses more on an output rather than a customer outcome. Fosters innovation by measuring the broader customer experience rather than just contact handling, but at a slightly lower weighting than option 1, of 40%.</p> <p>✓</p>
Practicality	<p>Contact survey builds on the established PR14 methodology.</p>	<p>Contact survey builds on established PR14 methodology, and maintains the</p>	<p>Contact survey builds on the established PR14 methodology,</p>

	Option 1 Customer surveys only Preferred option	Option 2 Customer surveys and complaints	Option 3 Customer surveys and Net Promoter Score
	<p>The addition of the customer experience survey increases resource requirements, but option 1 is the simplest and least resource-intensive of the options.</p> <p>Relies solely on data gathered by us to ensure consistency across companies.</p> <p>✓ ✓</p>	<p>requirement for companies to calculate the complaints-based element of the incentive.</p> <p>The addition of the customer experience while maintaining the complaints increases resource requirements overall.</p> <p>The complaints data is not collected by us, which risks inconsistency.</p> <p>✓</p>	<p>but adds a new NPS component.</p> <p>The addition of the customer experience survey and NPS increases resource requirements overall.</p> <p>All companies will have to implement NPS in a consistent way which will require extra guidance about how it should be carried out.</p> <p>The NPS data is not collected by us, which risks inconsistency.</p> <p>✓</p>

All three C-MeX options incentivise leading water companies to make improvements by benchmarking them against companies outside the sector, which the current SIM does not do. All three options also apply rewards and penalties in-period, to incentivise companies to deliver performance improvements more quickly than the SIM does. All three options maintain SIM's successful approach of ranking company performance annually, which harnesses reputational incentives and encourages companies to compete with one another.

All three options use at least two surveys (by phone and online), rather than a single survey under the current SIM. All three options also apply updated complaints guidance, which recognises changing customer behaviour, and is an improvement on SIM.

Option 3 replaces the complaints element with NPS scores. Asking a customer whether they would recommend their company is arguably a more demanding test than asking whether they are satisfied with it. Customers will also likely be accustomed to this process from their interactions with suppliers in other sectors. Economic Insight concluded that while NPS is credible and widely used, it has shown evidence of unexplained fluctuations and may not be suitable where customers cannot choose their supplier. However, we note that NPS is used in such situations in other sectors. For example, since 2013 the NHS has been collecting

feedback using its [Friends and Family Test \(FFT\)](#). This is based on NPS methodology, and asks patients whether they would recommend the services they have used. The FFT receives over a million responses each month, and is used to highlight areas in need of NHS service improvements.

Options 1 and 3 most effectively address the regulatory financial disincentive for companies to proactively engage with, and receive contacts from, their customers. They also ensure that companies still have a reputational and procedural incentive to reduce the number of complaints they receive.

Option 1 is our preferred option because, in addition to these benefits, it is the only option to use only data that we collect for the financial incentive, which ensures consistency across companies. While all options are costlier than SIM (due to having at least two surveys), option 1 is the least costly of all the three. In addition, relative to options 2 and 3, option 1 is most comparable with the UKCSI main measure, which facilitates cross-sector comparison.

We invite views, with supporting evidence, on our preferred option for C-MeX.

The scope and ultimate outcome measured by C-MeX

An important element of C-MeX is what it ultimately measures and incentivises. The SIM surveys customers who have had direct contact with their company about a recent retail (billing) or operational (wholesale) issue, and asks how satisfied they are with the supplier's handling of the matter²².

While some November consultation respondents suggested that the future incentive should include alternative outcomes and measures (such as trust and NPS), most agreed that it should maintain a focus on customer satisfaction. Economic Insight noted that **surveyed satisfaction** is a broad outcome likely to capture the various aspects of service that customers care about. As it tends to relate to companies' actual performance, and is more in their control than other outcomes (such as loyalty, trust and value for money), the report supported a focus on satisfaction as the key outcome.

Additionally, as we propose to include cross-sector comparisons using UKCSI, which primarily measures customer satisfaction, basing C-MeX on customer satisfaction will provide a more consistent basis of comparison. Customer satisfaction is a well-

²² The customer satisfaction survey sample is based on customers who have made contact with their company typically in the previous 7 days. For smaller companies with fewer weekly operational contacts, the customer will have contacted the company in the previous two to three weeks.

established metric, so we propose that the contact and experience survey components of C-MeX continue to measure this.

Since SIM focuses on handling of contacts it only measures the performance of the customer service element of customers' interactions with water companies' (e.g. billing, complaints handling). Research suggests that utilities customers are now expecting more from their utilities providers²³. The responses to the November outcomes consultation generally agreed with incentivising companies to improve their full service, across the wholesale and retail parts of the value chain, rather than just their customer service. Therefore, we propose that C-MeX will continue to incentivise companies to improve their **full retail and wholesale service experience** for customers.

We propose to do this by including the 'silent majority' of **customers who do not contact their water company**. The November outcomes consultation responses revealed wide support for the incentive to capture this group, who could include, for example:

- self-serve customers using a company's website for information;
- those whose only interaction with their water company is through receiving a paper bill; and
- those who may have wanted to contact their company but found it difficult to do so.

As the purpose of C-MeX is to incentivise excellence for the whole customer journey (not solely in contact handling), the knowledge that any customer could be surveyed through C-MeX about their satisfaction should incentivise companies to improve their services to all their customers. Therefore, we propose surveying bill payers who have not had a direct interaction with their water company through a customer experience survey, as a component of the financial incentive of C-MeX.

In the customer service (contact) survey part of C-MeX, we propose to measure customer satisfaction with both the **company's handling and resolution** of the customer's matter or complaint, rather than just the company's handling (as the SIM currently does). This is because we consider satisfaction with the resolution of a matter or complaint, as well as the handling, is important to customers.

²³ In the July 2016 UKCSI Utilities sector report, 22% of utilities customers expressed a preference for excellent service, even if it costs them more, compared to 18% in 2014. There was also a decline in the numbers of those who prioritised basic, lowest-priced service compared with 2014.

We note that the SIM only surveys contacts where the company had resolved the matter. This posed challenges for interpreting what constituted a 'resolved' contact and we changed SIM after PR14²⁴ to survey all customer contacts (i.e. including those where companies are still in the process of resolving a customer's issue or complaint). We intend for the PR19 C-MeX to survey all contacts including those who have ongoing issues to encourage an excellent experience service across all parts of the customer contact journey. However, we recognise that asking customers about their satisfaction with the resolution as well as with the handling of the complaint may require restricting the contact survey sample to those customers who consider their issues to be resolved to ensure a sufficient sample size of resolved contacts. We invite views on this point.

Business customers in England and Wales who are eligible to switch their retail provider are excluded from the qualitative part of SIM. For continued comparability across companies, we propose that, as with SIM, **C-MeX should only survey the satisfaction of residential customers in England and Wales**. Under C-MeX, we will continue to implement a reputational incentive for companies operating wholly or mainly in Wales to provide good-quality services to their non-residential customers who are not eligible to switch retailer²⁵.

We are not proposing to cover **retailer** satisfaction with wholesaler services through WaterworCX. The business retail market operates within a legal framework which regulates the behaviour of market participants, and the market is at an early stage of development so it is not yet clear what, if any, service incentive would best fit the needs of retailers. Given the limited number of retailers and the relationships between associated retailers and wholesalers, it seems unlikely that our approach for C-MeX or D-MeX would be appropriate for retailers at this point. **Market Operator Services Limited** (MOSL) monitors wholesaler performance²⁶ and there are procedures for retailers to raise disputes about wholesalers. We will be monitoring the development of the market and will work with MOSL, retailers and wholesalers to ensure that wholesalers are encouraged to deliver good-quality customer service to retailers.

²⁴ This [information notice](#) explains key changes between the previous and current SIM. The current SIM guidance in use today applies these changes.

²⁵ The non-residential SIM for Wales currently takes the form of a quantitative measure based on written complaints, escalations, and CCWater investigations. Companies wholly or mainly in Wales can also propose bespoke performance commitments with reputational and/or financial ODIs to complement the SIM where appropriate. We propose that this approach continues for PR19.

²⁶ Market Performance Ranking by Wholesaler, May 2017 shows the type of performance that is reported: <https://www.mosl.co.uk/market-performance/details/22/market-performance-ranking-by-wholesaler-may-2017>

The November outcomes consultation asked whether the future customer incentive should play a part in addressing the issue of **vulnerability**. As mentioned in the main PR19 methodology consultation document, taking into account consultation responses and further analysis we have carried out, we do not propose to address vulnerability through C-MeX. Instead, we propose to include it as an explicit part of PR19 by requiring companies to develop bespoke performance commitments in this area, and to report against common measures of vulnerability. We will also apply qualitative vulnerability tests as part of the initial assessment of business plans.

C-MeX – practical application

Communications channels to capture the voice of the customer

As noted in the November outcomes consultation, UK adults communicate differently than in the past. In 2016, access to the internet using a mobile phone and fixed broadband continued to rise²⁷. While customers aged 65+ had significantly lower take-up of broadband and mobile services (and higher take-up of landline phone services than the population overall), personal smartphone use amongst those aged 75+ increased from 9% to 17%. The November consultation responses revealed wide support for a multi-channel approach to the new measure, which we have considered in three ways:

- 1 The channels **we use** to survey customers to collect data for the incentive;
- 2 The channels **companies offer** to customers to communicate with them; and
- 3 The channels that **customers use, that our surveys capture**.

The first point is covered in the main PR19 methodology consultation document and Table 4.2, below. We are proposing that the customer experience survey is carried out by telephone and that the customer service (contact) survey is carried out online. We do however note that because our proposed customer service survey is a brief survey, it could equally be carried out via text message, and we invite views on this point. Research carried out for our [customer data focus report](#) found that the majority of companies collect landline and mobile telephone contact details for their customers and many also collect their customer's email addresses. We therefore do

²⁷ 68% of households had internet access via a mobile phone; 81% of households had access via fixed broadband. Source: Access and Inclusion in 2016, Outcomes for consumers in vulnerable circumstances, Ofcom, March 2017:
https://www.ofcom.org.uk/__data/assets/pdf_file/0030/98508/access-inclusion-report-2016.pdf

not anticipate that obtaining relevant contact information for our proposed channels will be unduly burdensome.

Regarding the second point, as discussed below, we propose to stipulate in the new guidance for C-MeX and in CCWater’s complaints handling guidance²⁸, that companies should offer at least four channels, including two online channels, for customers to contact them. To promote innovation, we do not intend to specify which channels, but options include: phone, email, website forms, webchat, social media (Twitter and Facebook) and letter. We also propose to adjust a company’s C-MeX score downwards if it does not actively offer at least four channels, including two online channels, for customer contact.

In relation to the third point, the updated customer service survey will capture the satisfaction of customers who contact their water company through all channels that a company offers. Option 3 includes NPS, which is often sent by text message and which reflects customers’ communication habits. We are aware that some, but not all, water companies use NPS. If this option was adopted, we propose collecting data directly from companies which would require companies to carry out these surveys in a consistent manner. We would welcome information from companies on their current use of NPS.

We invite views on the communication channels covered by C-MeX: specifically the channels we use to survey customer sentiment and how to implement the score adjustment for non-adherence to the guidance on customer contact channels.

Methodology for C-MeX

Table 4.2, below, summarises the key elements of the satisfaction survey methodology for C-MeX, which is further discussed below.

Table 4.2 - Summary of methodology for C-MeX satisfaction surveys

	Customer service / contact survey	Customer experience / non-contact survey
Description and purpose	Survey of customers who have contacted their company. To maintain an incentive for companies to improve handling and resolution of customer contacts and complaints.	Survey of customers who have not contacted their company. To incentivise companies to improve overall service satisfaction for all their customers, not just those

²⁸ CCWater’s guidance for handling complaints is set out in Appendix 1 of SIM guidance for collating information: http://www.ofwat.gov.uk/wp-content/uploads/2015/11/gud_pro201503sim.pdf

	Customer service / contact survey	Customer experience / non-contact survey
		who have directly contacted their company.
Survey scale	1-5: very satisfied to very dissatisfied	1-5: very satisfied to very dissatisfied
Sample size and split	200 customers per company, who have contacted their company with a complaint or contact. Based on customer contacts via all the communications channels that a company offers. Sample split as follows:- For water-only companies – 50:50 retail: wholesale water. For water and sewerage companies – 50:25:25 retail: wholesale water: wholesale waste. 'Retail' includes contacts about all customer -facing activities including billing. ²⁹	200 registered bill payers (or account holders) per company. No split between customers of retail and wholesale services.
Survey frequency	Survey carried out 4 times per year.	Survey carried out 4 times per year, at different times to the contact survey to obtain a more continuous measure over the year.
Survey channel	Online (although it would also be possible to carry out this survey via text message).	Telephone.
Time between customer contact and data submission	Past 7 days.	N/A
Depth of measurement / questions asked	Up to 5 questions in the survey, including: "How satisfied are you with the handling of this matter?"; "How satisfied are you with the resolution of this matter?"; "Based on this interaction, would you recommend your water company?" The average of satisfaction with contact handling and resolution would	Multiple questions in the survey, but only one question would be used for the financial incentive score, for example: "Overall, how satisfied are you with the service provided by your water company?"

²⁹ The sample for the qualitative component of SIM, as set out in the [SIM guidance](#) is based only on 'billing' contacts. We propose expanding this in C-MeX so that 'retail' contacts include contacts and complaints about all customer-facing activities, for example billing, account-handling (payments, debt management, meter reading), customer queries and advice.

	Customer service / contact survey	Customer experience / non-contact survey
	be used for the financial incentive score.	

The SIM measures satisfaction on a **rating scale** of 1-5, where 1 is very satisfied and 5 is very dissatisfied. Economic Insight stated that a case could be made for extending the scale to include a sixth category of ‘completely satisfied’ to identify outstanding service quality and address SIM score convergence concerns. Some of our stakeholders expressed similar views. However, we are proposing to address convergence through cross-sector benchmarking. In addition, the original pilot of the SIM used a scale of 1-10 which was not found to provide further benefits compared with a 1-5 scale as a 1-5 scale was more digestible, and when averaged out produced the same results as a 1-10 scale. We therefore propose continuing with a scale of 1-5 for both surveys.

We propose measuring customers’ satisfaction with **contact handling and resolution through an online survey**, using a few short questions. As recognised above, the contact survey could also be carried out via text message, and we invite views on this. Online channels can suffer from low response rates, a problem which is likely to be exacerbated in situations where customers have not directly contacted their water company. Hence, our proposal is to survey those who have recently contacted their company via online channels, and to survey those who have not (ie for the experience survey) by telephone. We note that CCWater’s [Water Matters](#) report uses a telephone survey of residential water customers, and includes both those who have contacted their company and those who have not.

In terms of the **depth of measurement**, SIM scores are based on a single question, although the telephone survey asks several questions. The purpose of the surveying exercise for C-MeX, is primarily to generate data for an incentive mechanism. It is not meant to serve as a comprehensive diagnostic tool. It also should not be used as a substitute for companies carrying out their own customer engagement to understand their customers’ preferences, which underlie their satisfaction. However, we would like to continue to use the exercise to generate insight about the overall experience in case it highlights specific performance issues. Hence, we propose to ask up to five questions in the contact survey and more in the experience survey, (although fewer than in the current SIM survey).

The SIM incentivises companies to improve both their **retail and wholesale operations** service by splitting the qualitative SIM survey sample evenly between

billing and operations contacts³⁰. This acknowledges the importance of good customer service across both parts of the business. Also, because some customers are served by different companies for their water and wastewater services, this split enables the customer's assessment to be attributed to the correct business. We intend to maintain this delineation for the contact survey.

For the experience (non-contact) survey, we propose to base this on a random sample of all bill payers. These customers will likely give their views on the overall service, and it might be harder to differentiate between their views on the retail service and the wholesale service, and between their views on the water and on the wastewater service. We recognise that this poses methodological challenges for customers who are served by different companies for their water and wastewater services respectively (some billed by one company, some by both). We welcome views on how we can address this within the process, for example through upfront sampling or identification in the survey, through the questions asked, or through the allocation of C-MeX scores.

Our proposal involves two separate surveys. We are aware from consultation responses, that some companies already conduct their own satisfaction surveys using a multi-channel approach. These companies could submit data for C-MeX scores from their own satisfaction surveys to avoid duplication. However, in order to maintain the integrity of the process, and to ensure it is fair and consistent across companies, we propose that each survey will be **conducted for us by an independent third party**. The results of the two surveys will be combined with equal weightings, into a single C-MeX score, annually. Greater quarterly sample sizes across the two surveys combined, should make them more robust. The greater robustness should also mean we can apply annual incentives.

We also recognise that we could use one survey, and ask customers if they have had contact with the company. However, it is likely that this process will capture few contacts in the random sample. As we want to maintain the incentive on contact handling and resolution, our preferred option is to continue to request from water companies data on the customers who have contacted them directly (as with SIM).

³⁰ Operations contacts are separated into water and wastewater contacts for Water and Sewerage Companies (WaSCs), and water operations contacts for Water Only Companies (WOCs). For WOCs the sample is weighted 50:50 billing: water operational contacts; for WaSCs the sample is weighted 50:25:25 billing: water operational: wastewater operational.

Proposed Definitions

The [SIM guidance](#) contains a number of definitions for companies collecting data for the calculation of the annual SIM score. These include “Customers”, “Households”, “Developer Services”, “phone complaints”, “written complaints” (which is based on CCWater’s guidance), “wanted / unwanted phone contacts” and “all contacts.”

For all of our options for C-MeX and D-MeX, we propose **maintaining the definitions** of “**Customers**”, “**Households**” and “**Developer Services**”. Wanted/unwanted phone contacts do not feature in our options; hence, we are not discussing them here.

We propose adopting some **additional definitions**, including some mentioned in the November outcomes consultation. These proposed definitions, along with a short explanation are listed below:

Service users: all end-users of a water or wastewater company’s services.

While all are served by the wholesale or operations side of the business, not all come into contact with the retail side of the business.

Bill payers: The registered bill payers or account holders. There will typically be one per household and they form a subset of all service users.

Bill payers are served by the retail side of the business. As direct contacts relate disproportionately to billing queries, bill payers tend to be more exposed to the company’s customer service. Bill payers also tend to be the people who self-serve through online account management.

Contacts: bill payers who have had direct, active contact or interaction with the company.

Those who have actively and directly contacted the company with a billing query, issue or complaint would fall into this category. While it is possible for non-bill payers to contact the company, contacts will be a subset of service users and will most likely be a subset of bill payers.

Non-contacts: bill payers who have not had a direct, active contact or interaction with their water or wastewater company.

This group could include bill payers who have been contacted by their water company, but who have not contacted their company themselves. We propose that those who have completed a self-service transaction are included in this group. This definition is new for C-MeX as the SIM does not cover non-contacts.

We are proposing to **modify the definition** of ‘complaint’ by removing the “phone” and “written” categorisations and adopting the following definition:

Complaint: An expression of dissatisfaction made by a customer to a water-only company or a water and sewerage company, related to either:

- i. the company’s provision of services to that customer; or
- ii. the complaint-handling process itself; **and**

where a response or resolution is explicitly or implicitly expected.

We invite views and supporting evidence on our proposed definitions and methodology for C-MeX, specifically on the areas highlighted in Table 4.2. We invite information from companies on the extent of customer contact data that they hold customers to inform the decision on the survey channels that should be used for C-MeX, and the extent to which online account management is offered / used.

Quantitative element of C-MeX: complaints and unwanted contacts

25% of a company’s SIM score is based on the volume of written complaints and unwanted phone contacts made by household customers. We see a number of **difficulties** with this.

The primary difficulty is that some company activities (such as, water efficiency schemes or pursuing bad debt) can generate complaints or unwanted contacts. The adverse impact on a company’s SIM score can discourage companies from proactively engaging with customers. The quantitative SIM component also provides an incentive for companies to make it hard for customers to contact them.

The complaints element of the quantitative part of SIM uses CCWater’s complaints handling guidance, which is set out in Appendix 1 of the [SIM guidance](#), whereby a “complaint” is defined as a written complaint. An unwanted phone contact, as set out in the SIM guidance, is a customer phone contact to the company that is ‘unwanted’ from the customer’s point of view and includes repeat or follow-up calls made by the customer. Although these sets of guidance contain definitions and explanations of

what constitutes a complaint and an unwanted contact, the interpretation of the guidance can still vary between companies.

Data from the Institute of Customer Service suggests that 26% of customers will use social media to complain³¹. Therefore, measuring and financially incentivising direct complaints to companies is increasingly less relevant in a social media era. We have found 81% of water companies on Twitter and 52% on Facebook. In addition, among the 62% of the respondents to the SIM survey (in Quarter 4, 2016-17) who use social media and/or the internet, 17% said they would use social media to complain about a matter. Similarly, 19% would use it to ask a question or query. Despite this, the quantitative element of SIM does not include contacts and complaints made via social media.

In addition, the SIM score is calculated by applying various weightings to contacts depending on whether the contact was written or by telephone. We understand from some responses to the November consultation, that these weightings³² tend to distort the handling of issues depending on the channel by which the customer contacts the company, rather than by the customers' needs and priorities.

We want to stretch companies to really improve their performance. Great customer service is about much more than reducing complaints, and customers should be able to interact with companies in a way that best suits them, not the company. Therefore, we propose to remove the 25% quantitative element from the financial incentive and replace it with the following **protections for contact handling**:

- working with stakeholders to improve the SIM implementation guidance for the customer service element of C-MeX, including in the following ways:
 - **redefining 'complaint'** (as described in the definitions section above by removing the word 'written') and **including complaints made via social media**, where they are attributable to the customer;
 - stipulating that **companies must offer at least four communication channels** to receive customer contacts and complaints, including at least two online channels; and

³¹ Severn Trent response to November Outcomes consultation, SIM Appendix:

<http://www.ofwat.gov.uk/wp-content/uploads/2016/11/Severn-Trent-SIM-Appendix.pdf>

³² Quantitative element is the volume of complaints (currently defined as "written" complaints) and contacts that are unwanted by the customer. The contact weightings applied are: unwanted phone contacts = 1, written complaints (including emails) = 5, escalated written complaints = 100, CCWater-investigated complaints = 1,000.

- working with CCWater to ensure the sector **applies the updated guidance consistently**;
- applying **reputational incentives on complaints** by publishing CCWater’s complaints data alongside C-MeX scores annually, based on updated guidance and on a relative basis (complaints per 10,000 connections) by company;
- supporting the **existing reputational incentives**, whereby CCWater requires water companies who display poor complaints performance to submit interim reports; and
- taking into account complaints, and how companies respond to and learn from them, **via the initial assessment of business plans**.

We invite views and evidence on our preferred option to remove complaints from the financial incentive of C-MeX.

Cross-sector comparisons and implementation in C-MeX

The ranking element of SIM is simple and powerful as it encourages competition between the companies. However, SIM only compares companies within the water sector. The convergence in scores, also means there is limited ability for the top performers to learn from one another. The SIM penalty collar of 12% of residential retail revenue, and the reward cap of 6% of residential retail revenue, has been more effective in promoting catch-up, than in shifting the frontier.

At PR19 we want to incentivise companies to learn from the sectors that lead on customer service, and to drive a frontier shift in customers’ experience of the sector. We consider that increasing the potential for higher rewards and benchmarking against good performance across all sectors on UKCSI, will achieve this.

The November outcomes consultation responses showed general agreement with comparisons beyond water. However, some respondents cautioned against using UKCSI due to their concerns around aspects of its methodology. Others thought that comparisons could only be drawn for customer service activities.

UKCSI measures customer satisfaction on a range of measures, including staff professionalism, complaint handling, trust and reputation³³. Some consultation respondents were concerned about using UKCSI as a benchmark because customers self-select companies to rate. This means that no firm is guaranteed to

³³ UKCSI is based on an online survey of over 10,000 individual consumers who self-select five companies with which they have had an interaction over the last three months and rate their experience over 30 metrics, including staff professionalism, complaint handling, trust and reputation.

receive sufficient numbers of responses (a minimum of 35 responses is required) to feature in it.

However, UKCSI is well established and used by Ofgem in its Broad Measure of Customer Satisfaction (BMCS) incentive package for the RIIO-ED1 electricity distribution price control³⁴. There is also a good correlation between Ofwat SIM scores and UKCSI, suggesting that it would be a suitable source for informing our incentive mechanism.

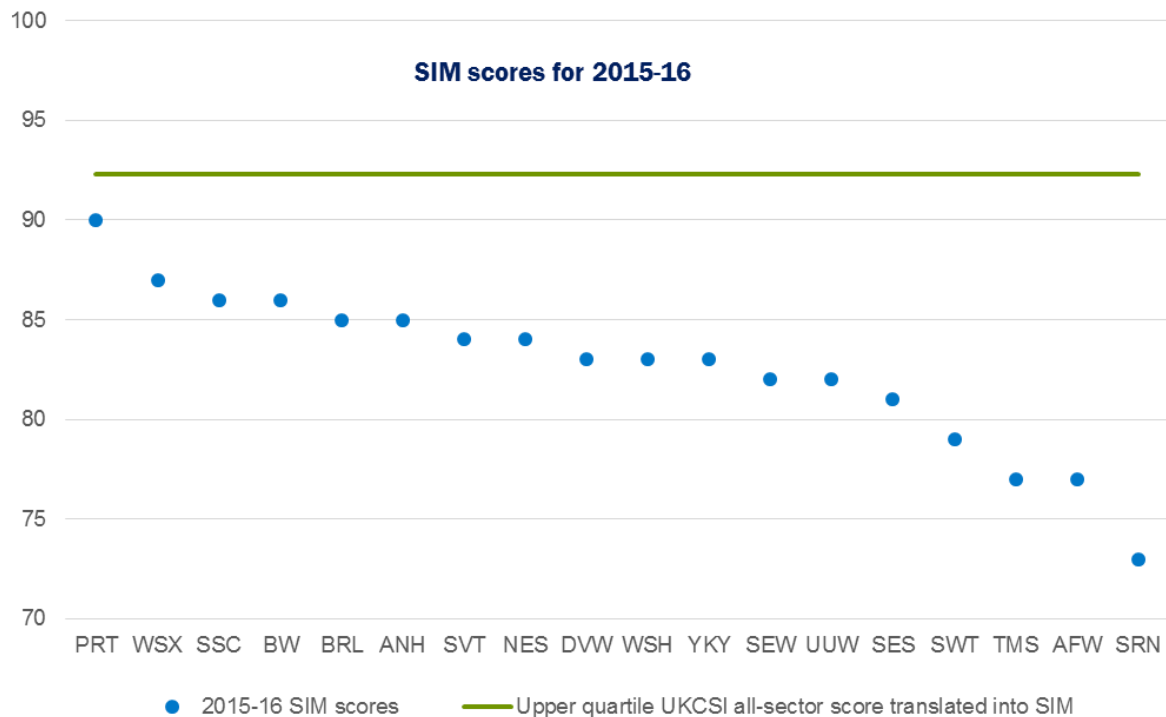
Our preferred option for how to implement the financial incentive is as follows:

- We **rank** companies based on their C-MeX scores each year;
- Each year, the **top three performers** would receive a reward of up to 1.2% of residential retail revenues (using 1.2% annually holds the incentive at the same level as the current SIM of 6% of residential retail revenues over 5 years);
- Higher rewards of up to 2.4% of residential retail revenues will only be available if a company is within the **top three performers and performs at or above the cross-sector threshold**. We propose that this could be the all-sector upper quartile on the UKCSI, converted into its C-MeX equivalent³⁵. Figure 4.3 below illustrates how this might work by translating the UKCSI all-sector upper quartile value for January 2017 into the latest SIM scores. This would ensure higher rewards are only available for very good performance, relative to customers' experience of organisations across the whole economy. We would decide during PR19 whether the latest UKCSI all-sector upper quartile value looked sufficiently stretching for use as the threshold relative to the pilot C-MeX scores;
- The **poorest performers** would receive a penalty of up to 2.4% of residential retail revenues annually, depending on their performance; and
- C-MeX scores would be **published annually** on the new WaterworCX part of the Ofwat website, which might also link to Discover Water.

³⁴ Ofgem's BMCS includes a customer satisfaction survey (CSS). [Ofgem's consultation](#) mentions using UKCSI to inform Ofgem's approach for deciding an incentive target (see page 5, under question 3). Ofgem's subsequent decision is [here](#).

³⁵ We would propose to use the simple upper quartile of all the organisations covered by UKCSI rather than an upper quartile based on the number of samples for each organisation.

Figure 4.3 SIM scores for 2015-16 and the upper quartile UKCSI all-sector score translated into SIM



We recognise that there are alternative ways to implement the cross-sector benchmark. We invite views on alternative approaches as well as our preferred approach.

Applying incentives in-period versus end-of-period

We propose that the **C-MeX financial incentives are applied in-period** (reconciled for each year individually rather than at the following price review) to strengthen the incentive for companies to improve the overall experience of their customers more quickly. To ensure the annual results are robust, we are increasing the overall sample sizes for the C-MeX surveys to 400, by including the experience survey (detailed above). The annual financial incentives are capped at 2.4% of residential retail revenues for rewards and penalties (12% of residential retail revenues divided by five years).

4.2 The Developer Services Experience Incentive (D-MeX)

The November consultation covered the importance of providing excellent customer service to the wider set of a wholesaler’s customers, including developer services

customers³⁶. For the reasons set out in the main PR19 methodology consultation document, we are establishing a new developer services measure of experience (D-MeX) at PR19. This would exist in addition to the quantitative performance measurement system, currently coordinated by Water UK³⁷.

Our stakeholder engagement has revealed an appetite for an incentive to further improve services to developer services customers, although it has also revealed several features of this customer group that we need to take account of:

- there are many types of developer services customers with different needs (such as small and large developers, self-lay organisations (SLOs), new appointments and variations (NAVs), contractors, consultants, individual residential customers, one-off developers, landowners and public sector organisations). Some stakeholders argue that any system to measure the qualitative performance of services provided to new connection customers, would have to be split into these customer groups for sampling and benchmarking purposes;
- a new connection can sometimes take a long time to complete (for example for a large new development), and there can be multiple contacts between the customer and the water company's developer services team during that period. For projects that span a long period, project managers may change. Some developers also employ a consultant to assist with securing a new connection, so the relevant contact may be a third party rather than the developer itself;
- most new connections business is made up of smaller customers (<10 units) who present a lower financial value / high transaction volume. By contrast, large developers typically present a higher financial value / low transaction volume, as customers. The smaller customers have a higher cost to serve as they are least familiar with the new connections process and are often more sensitive to risks arising from poor customer service that affect their costs or delivery timescales; and
- we are aware that some companies have conducted their own in-house satisfaction research after evaluating key points in the new connection process, but they have found the response rate to be very low. They have also found that larger developers tend not to respond to SMS surveys.

³⁶ Developer services customers consist of developers, SLOs and NAVs. 'Developer services' customers can also be referred to as new connections customers.

³⁷ The latest Water UK Developer Services service results can be found here: <https://developerservices.water.org.uk/latest-reports>

The four options we considered for D-MeX

We have considered four options for D-MeX, as described below. All these options combine financial and reputational incentives.

D-MeX Option 1: Dedicated developer services customer survey

Option 1 has the following features:

- setting up a **D-MeX Task and Finish Group** of developer services customers and water companies to examine the customer journey and further explore how best to develop and implement a **six-monthly satisfaction survey that could be compared across companies**. We will focus on discussions with developer services customers and their representatives, to identify their main areas of concern. We will also work with relevant industry stakeholders (for example Water UK's Infrastructure Policy Group);
- **company performance would be ranked annually** on D-MeX based on an average of the two six-monthly surveys;
- there would be **financial rewards and penalties** for the best and worst performers in D-MeX. These financial incentives could be up to 5% of annual developer services revenue. We would like these **rewards and penalties to be applied annually** to bring the rewards and penalties closer in time to the performance that generated them.
- we would explore with the Task and Finish Group **whether the existing Water UK quantitative measures should be incorporated into D-MeX** in any way; and
- we would **pilot D-MeX**, as set out in the timetable in Table 4.4, below.

D-MeX Option 2: Relying on C-MeX to cover developer services customers

Option 2 includes developer services customers in both the contact and experience surveys for C-MeX. The rationale for this proposal is that the prospect of having a developer services customer included in the random selection for either of the C-MeX surveys would incentivise companies to improve their service performance for developer services customers. Companies would be ranked and financially incentivised annually based on their C-MeX scores.

D-MeX Option 3: Financially incentivising existing quantitative metrics

Option 3 expands and links financial incentives to the Water UK quarterly performance measures. This option would involve us consulting developer services customers about what further metrics they would like water companies to be measured against. It would then use systems that are currently in place to collect and report on performance. Quarterly results would continue to be published on Water UK’s website. Annual performance would be published on Ofwat’s website. We would apply financial incentives annually.

D-MeX Option 4: Bespoke performance commitments

Option 4 would require all companies to propose bespoke performance commitments, accompanied by financial incentives, to improve the service experience for developer services customers. Some water companies currently have such performance commitments, but they are non-financial.

Our assessment of the potential options for D-MeX

Table 4.4 summarises our options assessment, as set out in the description of the options above.

Table 4.4 - Assessment of D-MeX Options

	Option 1 Preferred option Dedicated developer services customer survey	Option 2 Relying on C-MeX to cover developer services customers	Option 3 Financially incentivising existing quantitative metrics	Option 4 Bespoke performance commitments
Achieving our objectives	Furthers the consumer objective by creating a new, dedicated, common incentive for developer services customers, which promotes comparative competition	Furthers the consumer objective by including developer services customers in C-MeX and promotes comparative competition among companies through financial and reputational incentives, but not	Furthers the consumer objective by financially incentivising performance on certain metrics and promotes comparative competition among companies, but not as effectively	Furthers the consumer objective, but not as effectively as other options as it does not promote comparative competition among companies, so it does not harness comparative reputational incentives that

	Option 1 Preferred option Dedicated developer services customer survey	Option 2 Relying on C-MeX to cover developer services customers	Option 3 Financially incentivising existing quantitative metrics	Option 4 Bespoke performance commitments
	among companies through financial and reputational incentives. ✓ ✓	as effectively as in a dedicated incentive. May also reduce the effectiveness of C-MeX in improving residential service performance as it would be less comparable with UKCSI. ✓	as a dedicated incentive based on qualitative data. ✓	would drive benefits. ✓
How our objectives are achieved	Pro-market insofar as the ranking aspect encourages competition between companies. Applies better regulation principles as well targeted. Focusses on customer outcomes (satisfaction) rather than outputs. ✓ ✓	Pro-market insofar as ranking aspect encourages competition between companies. Not as well targeted on developer services customers as option 1. ✓	Pro-market insofar as ranking aspect encourages competition between companies. Applies better regulation principles as well targeted. Focusses more on quantitative outputs than customer outcomes. ✓	Applies better regulation principles. In particular allowing companies flexibility in how to design their own commitments and encouraging ownership of their performance and its measurement. ✓
Practicality	Most resource intensive of all the options as it involves creating a new survey and surveying methodology. Sample sizes may be small, even for a six-monthly survey,	Unlikely to generate a representative sample for developer services customers. ✓	Least costly option as data gathering and reporting systems already exist. ✓ ✓	There are resources implications for companies to develop bespoke commitments and for developers to interact with different company approaches. ✗

	Option 1 Preferred option Dedicated developer services customer survey	Option 2 Relying on C-MeX to cover developer services customers	Option 3 Financially incentivising existing quantitative metrics	Option 4 Bespoke performance commitments
	but not as small as option 2. ✓			

Relative to the status quo, all the D-MeX options incentivise companies to deliver performance improvements for developer services customers.

Option 1 is our preferred option because it is a common incentive mechanism for comparing water company performance, which is based on qualitative feedback to best capture the developer customer experience. It ranks companies based on the satisfaction of new connections customers.

Applying the same survey under option 2 to groups of customers who have different needs, services and expectations would not highlight service performance for developer services customers as clearly as a dedicated survey under option 1.

Under option 3, while performance against the quantitative metrics currently reported by Water UK is important, performance on the measures is already high in some areas. Also, the lack of qualitative metrics means that the customer's experience is not fully being captured.

Option 4 would avoid the need for us to devise a methodology to ensure a consistent approach across all companies for ranking purposes. However, it limits the ability to compare companies and the related reputational incentives which could drive benefits effects, and which have been effective with SIM. It would also be the least practical for developer services customers as they would have to interact with up to 17 different company approaches.

D-MeX practical application

We have identified two approaches to generating data for D-MeX option 1; both involve us appointing an independent research company to conduct satisfaction surveys amongst a sample of relevant customers, as follows.

- In our preferred approach, the sample would be based on company data of **contacts made by developer services customers** in the previous months. This data would be provided by water companies to the research company. After cleansing the sample, a sizeable proportion (for example, 25% of those contacts) would be selected at random for each company, and surveyed via telephone. These surveys would take place once every six months. Customers would be asked about both their satisfaction in relation to the matter about which they contacted the company, as well as their overall experience with the water company.
- This approach of using past contacts is similar to the current SIM, and one with which water companies are familiar. It provides sufficient incentives to improve performance, but avoids the need to create representative samples in different developer services customer segments. It is difficult to predict what a representative sample size would be. We can work further on this through the D-MeX Task and Finish group and the piloting process.
- An alternative implementation method is for water companies to ask each of their developer services customers to appoint a single individual point of contact for the purpose of responding to satisfaction surveys. We would then ask water companies for the contact details of these individuals, and conduct a satisfaction survey once every six months. This approach would be comprehensive as the sample would effectively be the whole developer services customer population, but it is likely to be more resource intensive than our preferred approach. We also recognise that there can be multiple contacts between the customer and the water company's developer services team, so it might be difficult for a single individual to answer confidently about the developer services customer's satisfaction with the services received.

We invite views and evidence on our proposed approach to implementing D-MeX. We particularly welcome information around how companies segment their developer services customers, and how companies receive, log and manage their contacts from developer services customers.

4.3 Implementation Timelines for C-MeX and D-MeX

We plan to conduct pilots for both C-MeX and D-MeX according to the timetable set out in Table 4.5, below.

Table 4.5 - C-MeX and D-MeX high-level timelines

Stage	C-MeX timing	D-MeX timing
Consult on concept and timelines	July – August 2017	July – August 2017
Convene a Task and Finish Group to discuss details of the methodology: how to implement the measure and compare company performance in a fair and consistent way	August 2017 – October 2017	August 2017 – May 2018
Design pilot	December 2017 – February 2018	May 2018 – October 2018
Conduct pilot / test proof of concept	12 months: April 2018 – April 2019	6 months: December 2018 – April 2019.
Work through changes, draft guidance, pilot revised approach	April 2019 – March 2020	April 2019 – March 2020
Publish final guidance ³⁸	March 2020	March 2020

We invite views, supported by evidence on the implementation timelines for C-MeX and D-MeX.

³⁸ The SIM guidance for PR14 was published in March 2015.