

Customer motivations: water saving & smart meters

Improving current service offerings and informing long term planning

Proposal for customer research

14th January 2021



Research context and project objectives

Overall, this project will provide an in-depth understanding on two separate but linked issues: what customers want in terms of water efficiency services and smart metering. Specifically, the project will feed into both longer and shorter term plans with the following overarching objectives:



Supporting WRMP and longer term strategy

- Significant longer term water resource challenges face Wessex Water (and all water companies)
- Research has already shown that customers expect demand options to be deployed (saving water) before investing in new sources (reservoirs etc.)

This project will identify fundamental consumer barriers to water saving – and identify ways to overcome these. As well as explore the motivations and customer benefits for water efficiency.



Inform potential smart meter roll out from 2025

- There is a strong expectation that smart metering will form part of the 2025-30 plans
- Again, indications are that customers expect this but there are known misconceptions and barriers for some customers – and Wessex Water wants to ensure smart meters lead to behaviour change.

This project will inform smart meter implementation: approaches to engaging customers; features that could drive behaviour change; and communication needs



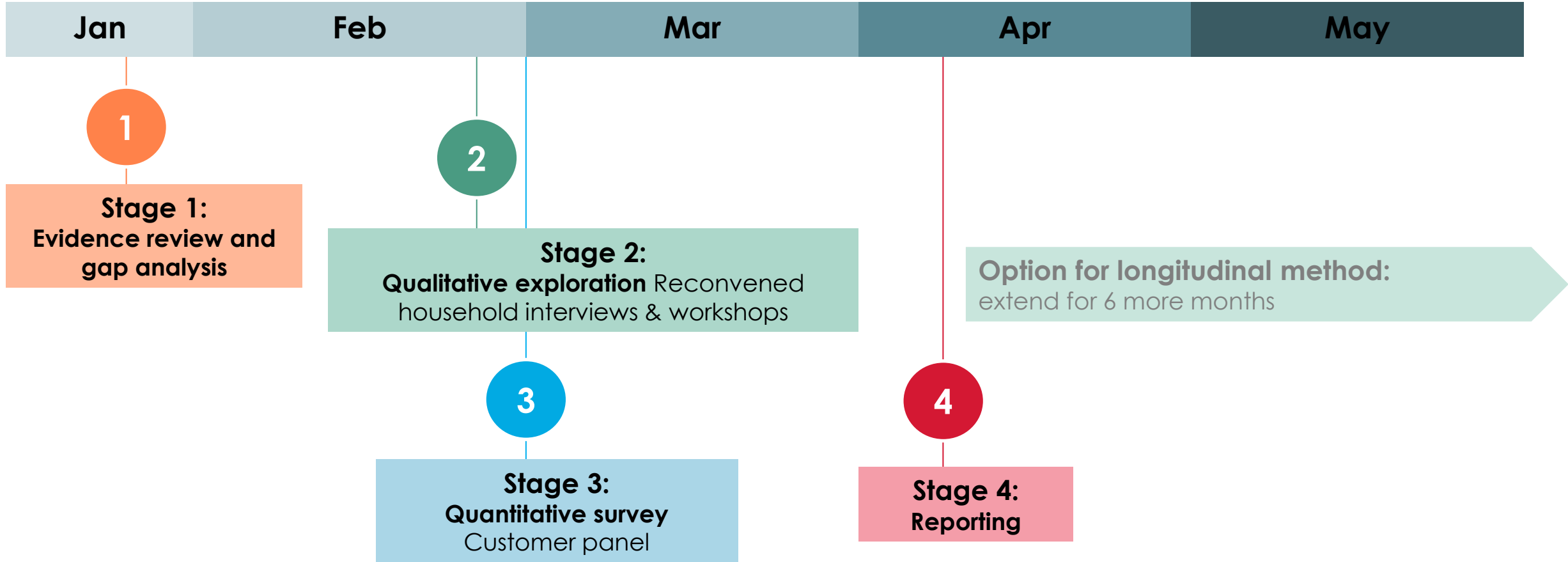
Refine current & future water efficiency programmes

- Wessex Water already provides various services to support water efficiency e.g. Home Check and Get Water Fit
- Some services are already being refined with new targeting approaches – but what do customers want...and what will help reduce usage?

This project will explore how these services are performing with customers – and where new or improved services could be developed

Wessex Water, as with many others in the industry, have conducted research into aspects of both water efficiency and smart metering. This project will build on current knowledge by initially analysing what we know, identifying gaps and focusing on where to gather new evidence.

We propose an approach that seeks to address the objectives using both primary and secondary data sources. Each stage is described in detail on the following pages. Between each stage we anticipate an interim meeting with the commissioning team to steer the content and design of the next stage.



Jan

Feb

Mar

Apr

May

1

Stage 1: Evidence review and gap analysis

There is a great deal of existing research and insight relating to water use behaviour, including research conducted for Wessex Water and from wider industry projects. This initial stage will be to conduct a systematic review of some 25 sources against an agreed coding framework – and from this to establish where there are gaps in knowledge.

Our approach to literature reviews

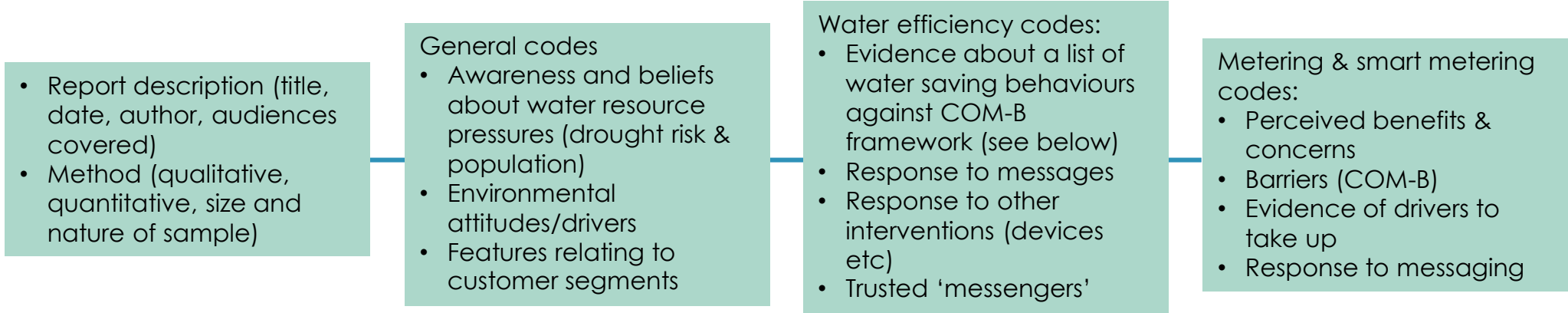
Blue Marble has conducted numerous literature reviews and data synthesis studies and we have developed a systematic approach to collating and presenting the evidence. We take a structured method, recording and coding all the data sources. This means our evidence and analysis process is transparent and traceable – and we provide an **evidence register** as one of the project deliverables. The steps are as follows:

- 1. Identify the source material:** many of the reports intended for this project are readily available, and any additional industry reports and conference papers can be quickly found on water company/industry body websites. We have anticipated (and costed for) a review 25 reports.
- 2. Develop the codeframe:** all reports will be reviewed against a pre-determined codeframe, that is refined at the initial stage of the review. The codeframe will be a central part of the evidence register (an Excel spreadsheet used to input relevant insights from across the body of reports). Specifically, we will use the COM-B model of behaviour change* as one element of the codeframe.
- 3. Populate the evidence register:** Once the codeframe is finalised, the literature review can be completed rapidly and the evidence register fully populated
- 4. Thematic and gap analysis:** the output will be a summary report identifying what we know and where there are gaps – and providing a clear set of areas to cover in the following stages of the project.

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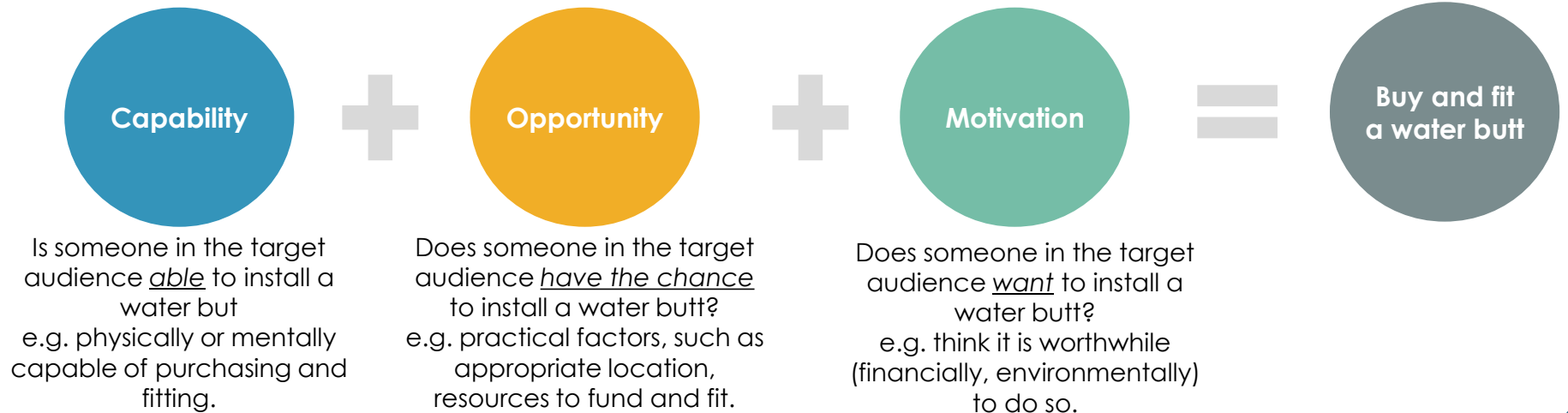
**Stage 1:
Evidence review
and gap analysis**

The evidence register will record each report:



We will use the COM-B model of behaviour change to understand the barriers to each of the behaviours of interest – identifying important capability, opportunity and motivation hurdles.

The COM-B model is based on the theory that, for an individual to carry out any behaviour (in this example, using a water butt), they must have **capability**, **opportunity** and **motivation**. We will use this model as an analytical tool across all the behaviours of interest in this research.



Based on Michie et al, 2011.

Sources identified for the literature review

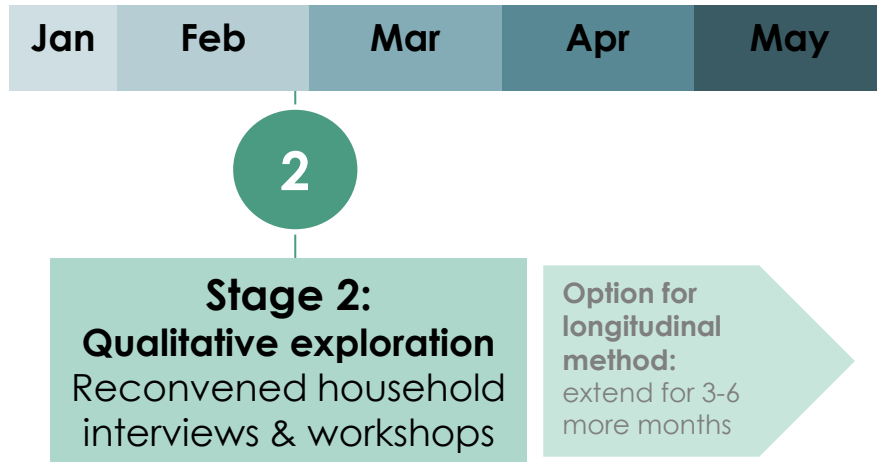
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Stage 1: Evidence review and gap analysis

The following reports/sections of reports have been identified. There is scope within the budget to add 5 or 6 additional reports (that could be identified by either BM or Wessex Water) as the project gets underway.

Green highlights where BM have the reports. Blue highlights where we will need Wessex Water to give BM access to reports.

	Sources	Topics	Number of reports
Wessex Water data	YPP Reports	2019: Smart Homes 2021: Smart metering journey 2016: Metering uptake Brief review of 2017/18/20	3 (plus 3 brief scans)
	Wessex Image Tracker	2021: review of any relevant questions plus brief scan of previous years from 2016 (incorporating the segmentation)	2-3
	WCWRG	WRMP engagement (qualitative and quantitative)	2
	SDS Engagement	2021 Report (Accent) PR19 SDS Final Report (BM)	2
	Have Your Say online community	Various	3?
	Tariff Trial	2009-11 – to recap on segmentation	1
	Internal data	Home Check water efficiency retrofit and advice visits Satisfaction (22k visits)	1
	Collaboration	Garden Water Use	1
External publications	Conference presentations	• Other Water Companies – e.g. Thames, Southern, Anglian, Northumbrian, Bristol – likely to be in the form of conference presentations	4-5?
	Service/device providers	E.g. Advizzo, Waterfall, LoFlo/Groundbreaker	2-3
	Stakeholders and research agencies	• CCW (BM) – “Sink Sense” 2021 • Frontier and Artesia Nov 2021 report on smart metering • Waterwise Nov 2021 report on smart metering • Blue Marble – attitudes to climate change report	4
Other	?	• ?	?



The role of this element of the project is:

- To explore specific gaps arising from the literature review (tbd)
- To build on the COM-B analysis and understand barriers to the different ways people could be saving water
- To find out how people respond to the experience of using less water – as this will inform the following:
 - To evaluate the range of water saving tools and services currently offered to consumers
 - To explore how smart meter data could help households to save water

Overview of approach

- Our proposal is to conduct qualitative research with a **sample of 20 households** reflecting the full range of life stage and occupancy.
- We propose a longitudinal approach, understanding perspective on water saving initially, then setting households up for a **4 week experiment** to actively save water. The timeframe will enable respondents to experience barriers and motivations to save water – and inform a smart meter trial/roll out.
- Integral to the research design is that a meter reading can be taken at key points.
- We have also included **co-design workshops** to follow the fieldwork, providing a more creative forum to interact with members of the Wessex team to explore new ideas for engaging customers in water saving.
- A month is a short timeframe in terms of behaviour change and we believe this approach would lend itself to a longer term study to explore different interventions and understand how to maintain behaviour change. This is added as a separate cost option.

Stage 2: in-depth exploration

2

Stage 2: Qualitative exploration

We set out the key parts of the process below. We will provide Wessex Water with address details for each participating household the week before interviewing starts. This will allow time for meter readings to be taken at the outset and again 1 month later.

'Before' meter read

Interview 1 – 45 minutes

- Household context (identifying segment characteristics)
- Starting perspective on water saving and understanding barriers to change
- Households tasked to reduce water usage over the coming month

NB: Any/all members of the household invited to participate in interview – but focus will be on the lead respondent

Interim tasks – 20 minutes per week

- Specific interventions including applying for Get Water Fit free items and employing 'top tips'
- Weekly online diary to complete water saving activities; perceived impact; levels of effort/sacrifice; household dynamics (for multiple occupancy households)
- Responses to include video blogs

'After' meter read

Interview 2 – 60 minutes

- Reflective conversation about experiences and response (if available) to new meter reading
- Experience of interventions/devices trialled
- Deep dive on attitudes to smart meters and how they can enable water saving

Co-design workshops (x 2) – 90 minutes

Half of the households invited to participate in workshops with Wessex team with creative sessions to:

- Overcome common barriers and reframe messaging around motivations
- Positioning smart meters: messaging and features

Option to revisit households

It will be possible for Wessex Water to extend the research to observe some or all of these households over a further 4-6 months. The benefits of this would be to observe how some behaviours become embedded – and where maintaining water efficiency proves harder to achieve. Our experience of longitudinal research, and the trust that builds between researcher and respondent – is that it can reveal much more accurate insights about behaviours, and identify weak links in behaviour change strategies.

Stage 2 - Sample design

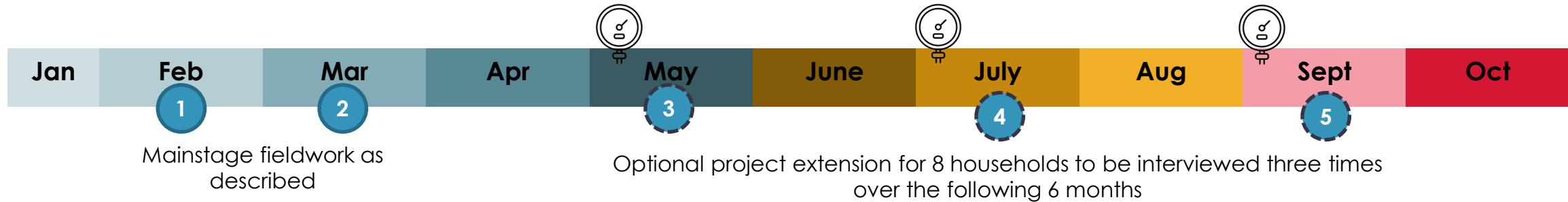
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Stage 2: Qualitative exploration

- We set out the proposed sample breakdown below with the primary sample criteria relating to household composition and life stage. We have specified that all households are metered to enable meter readings to be taken. However this is flexible and the literature review may show that there is an argument to include unmetered households for part of the sample to establish how 'unmeasured' views differ in relation to water efficiency and smart meters.
- Twenty households reflects a large sample for this type of in-depth longitudinal approach. It will provide diverse case studies illustrating the experiences of water saving over time, and reflects a different approach from previous research undertaken to exploring water saving
- We will use the attitudinal segmentation as part of the recruitment criteria: this project provides a good opportunity to learn more about how segments respond differently to water efficiency generally and smart meters specifically
- Recruitment will be conducted by our partner agency, BEAM Fieldwork, who have recruited samples for previous Wessex Water customer samples. BEAM will free-find respondents via their network of regional recruiters and local FB groups.
- All GDPR processes will be followed, including permissions for using any video clips from tasks and interviews as well as gaining permission for Wessex Water to provide us with meter readings during the project.

Segment	Definition	Size
1. Responsible Citizens	<ul style="list-style-type: none"> • Conserve • Participate • Comfortable 	26%
2. My World and Cost Conscious	<ul style="list-style-type: none"> • Conserve • Participate • Less comfortable 	20%
3. Family Focus	<ul style="list-style-type: none"> • Don't conserve • Participate 	19%
4. Closed World View	<ul style="list-style-type: none"> • Conserve • Don't participate • Comfortable 	10%
5. Young Disconnected	<ul style="list-style-type: none"> • Don't conserve • Don't participate • Comfortable 	6%
6. Stretched & Struggling	<ul style="list-style-type: none"> • Don't participate • Less comfortable 	20%

No. of depths	Household Composition	Quotas across the sample reflecting factors that may affect behaviour
6	One-person household – (2 under 40, 2 x 40-65 and 2 x over 65)	<ul style="list-style-type: none"> • Spread of life stage and age • SEG (minimum 8 x ABC1; 8 x C2DE) • Even split of males and females • Metering: all metered (to be discussed) • Min 3 household to be BAME and/or conform to non-UK religious/cultural lifestyle • 12 home-owners and 8 renters • 4 households to include someone with long-term health/disability (vulnerable) • Spread of households in terms of Wessex Water's segmentation (minimum of 2 per segment)
6	Couples with no children – (2 under 40, 2 x 40-65 and 2 x over 65)	
6	Families: Couple or lone parent with dependent children (3 x younger and 3 x older family)	
2	Student / shared house	
20		



- We have included a cost option to continue the longitudinal study with 8 households
- We would recommend which households we retain for a further 6 months, conducting 3 in-depth interviews in 2 month intervals
- Households would be chosen to reflect a range of situations that will have been established in the main stage of research e.g. high water usage household with limited resources; disengaged households; households with inconsistent behaviours (or with occupants with different levels of engagement) etc.
- At each interview, households would be given additional water saving behaviours to trial over the following 2 months
- Ideally meter readings taken the week ahead of each scheduled interview
- Full reporting in October.

Jan Feb Mar Apr May

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Stage 3:
Quantitative survey
Customer panel

Note on the timing of the survey

We propose to design the customer panel survey to run concurrently with the qualitative research thereby keeping the overall project timeframe more contained.

This is entirely flexible, however, and it may be optimal to run the survey later in the process e.g. following the workshops where there may be new ideas to test. We will discuss the timing of this element in the kick off meeting.

We will include survey data using Wessex Water's customer panel 'Have Your Say'

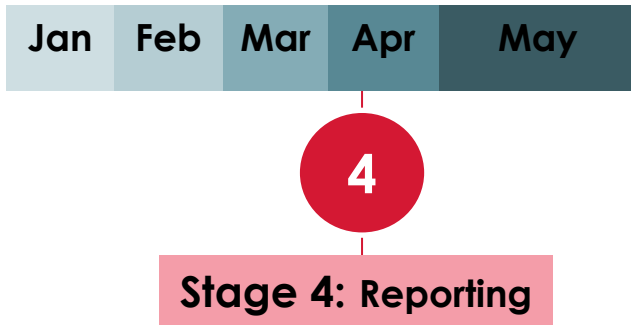
We anticipate the role of this element of the project is:

- To plug the gaps arising from the literature review (as appropriate)
- To test the prevalence of attitudes to water saving among the wider population
- To test specific issues such as the appeal of incentives/rewards for water use reduction
- To understand attitudes relating to smart meters
- To understand (self-reported) behaviours where there are gaps in existing survey data



Overview of approach

- Blue Marble will design a questionnaire with full sign off from the Wessex team
- We will also check the scripting and programming prior to launch
- Survey to be administered by Future Focus in the usual way
- We will then take the data file, run data tables with weighting, and analyse the data to incorporate into a combined report
- As we have done previously, we will reflect on the representation of the sample and ensure any considerations are addressed in the commentary.



Reporting

- This project is designed to be an iterative process with interim reporting to shape each subsequent element
- Interim reports will be short working documents designed to track project progress and enable clear decisions about the next stage
- The full combined report will be a full document presented for easy dissemination within Wessex Water and externally if needed
- We will incorporate short video clips of customers from the qualitative interviews/vlogs into the final report

Deliverables

AFTER Stage 1 [Synthesis]

- Short summary report on key findings
- Evidence Register (Excel format)
- Debrief meeting to discuss findings and implications for Stage 2 and 3 to core project team

AFTER STAGE 2 [Qualitative] – ahead of the workshops

- Interim debrief of findings from 20 households month-long project
- Summary of implications for workshop design (discussed at the debrief meeting)

AFTER WORKSHOPS and STAGE 3 (Quantitative survey)

- Combined report encompassing all stages and workshop outputs
- Video debrief of findings to core project team and internal stakeholders
- Method statement

THROUGHOUT THE STUDY

Weekly update calls

Our suggested timetable for this research is provided below, however, we can adapt this to meet any internal or external deadlines as necessary.

		January			February				March				April			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		17th	24th	31st	7th	14th	21st	28th	7th	14th	21st	28th	4th	11th	18th	25th
Stage 1: Evidence review and gap analysis	Agree proposal content															
	Evidence review				Interim meeting											
Stage 2: Qualitative exploration	Recruitment					Meter reads				Meter reads						
	Fieldwork (Including Interview 1, 4 week gap, Interview 2)										Interim meeting					
	Co-design workshops															
Stage 3: Quantitative survey	Questionnaire writing and scripting															
	Fieldwork															
Stage 4: Reporting	Combined analysis															
	Debrief meeting															
	Final report															



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