

How South West Water uses CACI's Ocean data to achieve their ambition of eradicating water poverty





Background

For over 30 years, South West Water (SWW) has been supplying reliable and high-quality drinking and wastewater services to customers throughout South West England. When the business was tasked with developing an affordability model for their customers, they set themselves a target of getting customers out of water poverty and onto the right support tariffs where necessary. While their own data and customer insight could act as a starting point, SWW recognised the impact that pairing this with CACI's Ocean data would have on achieving their desired outcome.

Challenge

Higher financial strain due to the cost-of-living crisis, coupled with the industry-wide ambition of eradicating water poverty by 2025, made it imperative for customers who require and are eligible for support to be proactively identified and lifted out of water poverty through SWW's holistic affordability toolkit.



Solution

John Huxtable, Customer and Recovery Data and Insight Manager at SWW, shared that he had been tasked with the challenge of developing and utilising a bespoke affordability model, built using CACI's rich income data, to understand equivalised income in comparison to household water bills now and in the future. **Gina Bryden**, Principal Consultant at CACI, elaborated on the steps that CACI took to help SWW achieve this:



Water poverty is a critical issue that we're working with much of the water sector to address. To enable companies to target their affordability toolkit and even auto enroll customers onto support tariffs, it is imperative that they can confidently identify those customers most likely in need and eligible for our support.

Understanding the SWW brief, challenge and previous models used by the industry, a bespoke and granular dataset was created to supply a unique and current perspective into equivalised income at a 6/7-digit postcode level, in conjunction with the wider validating characteristics of these customers, the complete SWW household customer and the property base.



South West Water built a model which combines this data with their own billing data at a customer level, enabling them to calculate the percentage of equivalised income from their customers' current spend on their water bill at a property level. They can further combine this with OBR forecasts of income, housing costs and bill profiles to 2030 to model water poverty and wider outcomes into the future.



The model and overlaying dashboard that South West Water built in Power BI to present this information has been specially designed to deliver impactful insights in two parts:

Part 1

The dashboard showcases the number of customers in the region that are likely to be in water poverty, the cost to bring them out of water poverty, the average cost based on occupancy should a customer have a meter installed, and the potential bill value should any customer be able to realise a 5% water efficiency saving. From this, the model can determine which customers after all targeted interventions would most likely be eligible for support through a social tariff.

CACI calculated and supplied equalised income data based on three ratios as there is no common method used and this is subject to change. The model incorporates all versions of this, showing variance at an overarching and detailed level.





Part 2

The dashboard separately segments customers to provide additional context that contributes to the creation of actionable insights. This allows SWW to not only look at locality, but also characteristics including age, occupancy, home ownership and incomes. It also enables the business to clearly show the changing characteristics of water poverty and other customer indicators and measures over time.

SWW are also using this data to target their community outreach to ensure they are on the ground and targeting their campaigns and engagement efforts in those areas, with information summarised and presented geographically at an MSOA level upwards.

According to John, there have been a few key Ocean variables that have been particularly powerful within the model, such as household occupancy to help the business gauge the number of occupiers in both metered and unmetered properties, household variables highlighting owned or rented properties, and variables pertaining to lifestyle traits. Household variables have been especially beneficial for SWW when appending OBR forecasts of incomes and housing costs to effectively model water poverty and other indicators into the future, as well as forbolstering the design and costing of their strategy detailed within their 2025-2030 Business Plan.



We find it extremely easy to use the data supplied by CACI and match it up with the customers that we have on our customer base to then drive what we want from it.

This visualization point of view encourages the wider business to engage with this model as well.



John Huxtable, Customer and Recovery Data and Insight Manager at SWW

Results

From July 2022 to September 2023, over 15,000 customers were auto-enrolled onto support tariffs and brought out of water poverty. The affordability model enabled SWW to directly engage with these customers, build their trust and encourage further contact and conversation, particularly where customers may be entitled to or require additional support or services.

SWW are targeting their Lowest Bill Guarantee, no risk metering to unmeasured customers who the model identifies as likely being brought out of water poverty through metering alone. The model also enhances their ability to target water efficiency engagement and intervention where a 5% consumption reduction could lift or prevent a customer being in water poverty.

The model has also been used to develop, profile and cost their 2025-2030 Business Plan submission to customers in respect of affordability and has been extended to Bristol Water who sit within the Pennon Group, the owner of SWW.



SWW shared their bespoke method with industry stakeholders during the Consumer Council for Water's Affordability Seminar held in September 2023, where the model received positive feedback.

waterShare+ Data Led Innovation

- We set our teams a challenge to develop an extensive and innovative suite of data which would allow us to identify to a high level of probability at a customer level, those in most need of our support.
- To do this we have partnered with CACI with the shared challenge to build an accurate, granular and up to date view of income, housing cost and equivalisation utilising multiple scales.
- Working collaboratively we have been able to develop a street level view of most recent and scaled bespoke equivalised income data at six and seven digit post code level (c12 properties) – the narrowest view that can be achieved – which can be updated annually.
- We have coupled this with actual annualised bill data at a property level and further validated through the use of ONS and socio demographic information as well as DWP information.
- To bring all of the data together we have developed a bespoke model which allows us to refresh quarterly and produces visual outputs of customers and their characteristics.
- This has allowed us to identify, to a high level of probability, individual customers who are in WP and their characteristics.
- This method also allows us to identify changes of use and circumstances, identify customers who may have recently fallen into WP and those who may no longer need our support – also allowing us to target renewal and test the model through customer engagement.
- The model has also been developed to calculate where a customer, based on occupancy would benefit from a meter and whether metering would bring the customer out of Water Poverty.
- The model also includes water efficiency scenario modelling which tells us where a potential 5% annualised efficiency could bring or prevent a customer falling into Water Poverty. This allows us to target water audits and free water saving devices.
- The model and OBR forecasts of incomes and housing costs are used to forecast Water Poverty and other outcomes into the future. This allows us to inform the design of our strategy and has been used in conjunction with other data in the production of our Business Plan for 2030.
- This model and its inputs have been further assured independently by ICS consulting.

CACI

Office for National Statistics

Office for Budget Responsibility

ICS

South West Water

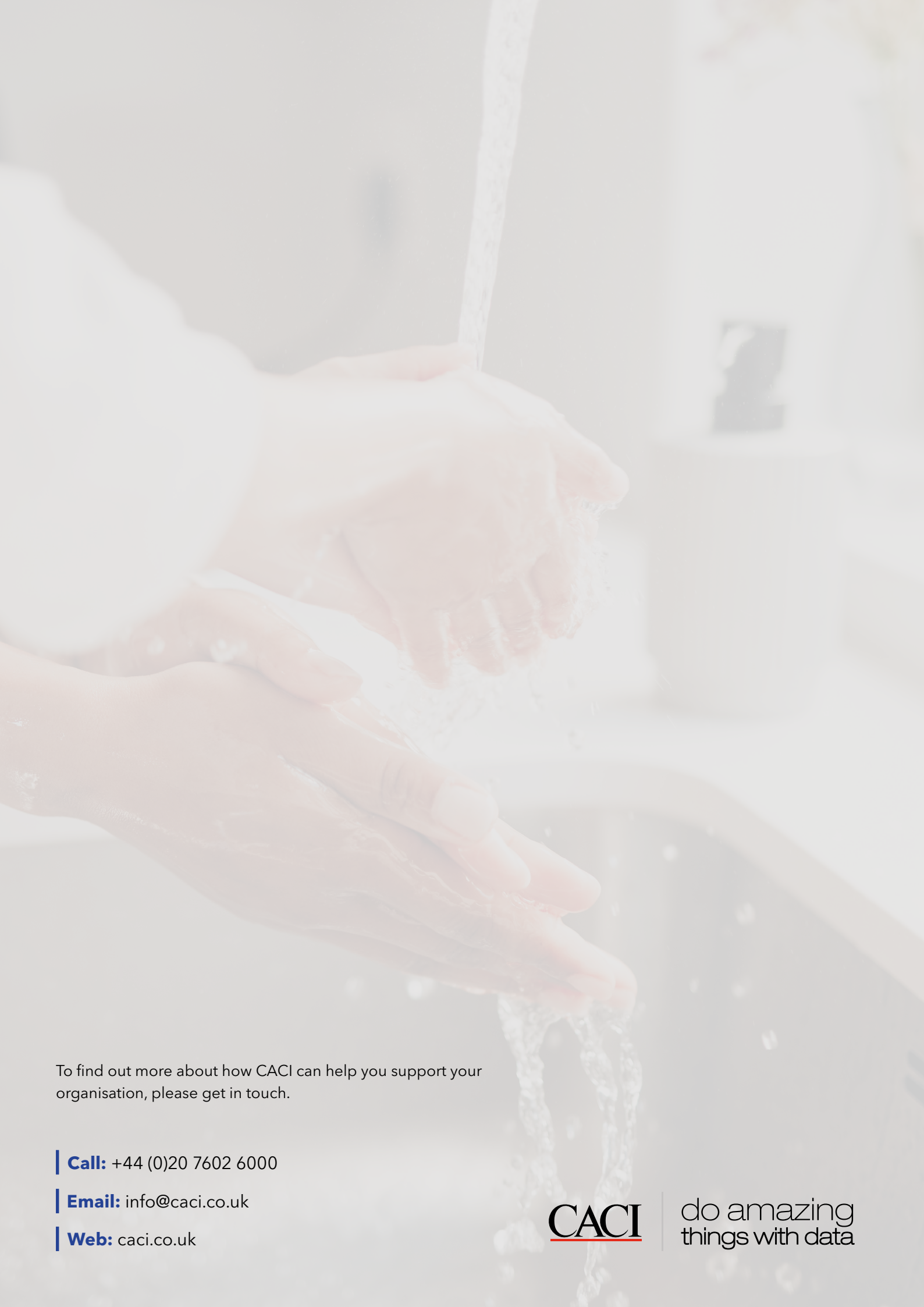


The use of the full range of our affordability toolkit remains critical to our ambition, we are now able to a high degree of confidence identify and, subject to further validation, engage with and auto-enrol customers onto our tariffs and bring them out of water poverty.

These customers are often the struggling silent and hardest to reach who – without the data provided by CACI and the wider inputs into the model – we would not have had the capability to lift out of water poverty or achieve our commitment of eradicating water poverty which we are on track to achieve and is at the heart of our approach.

John Huxtable, Customer and Recovery Data and Insight Manager at SWW





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