

Costain, project brief

Using wellbeing impact in asset optioneering

Overview

This is a collaborative project, led by Costain and sponsored by the UK Water Partnership (UKWP) with a working group including DEFRA, the Environment Agency, Southern Water and Stirling University. The project aims to measure the wellbeing impact of improving water quality, through investing in combined Sewer Outfalls (CSO's) and monetise that impact, so that it can be included in optioneering business cases, and in capturing the benefits of investment.

The importance of the value of water in the UK, and its public profile, is continuing to increase as water supply and environmental challenges accelerate. To improve trust with the public, we need to take an increasingly long-term approach to infrastructure investment decisions that integrates wider sustainability considerations alongside economic and social outcomes. This will help to better reflect the views of citizens and communicate how the industry is providing clean, resilient, and sustainable water supplies for the future and begin to align the cost of water with its value to society.

Current business case methodologies across multiple sectors (including water) are based on an economic model with a "bolt-on" for carbon and social value measures. Social value tends to be biased towards extrinsic social value (for example providing volunteering opportunities or enhancing skills in local communities) with insufficient consideration given to the long-term intrinsic value of the asset to society (for example providing cleaner bathing water). Costain analysis of the policy environment confirms this gap.

The emerging six capitals model has shaped many waters companies' approach to public value and made a significant strategic contribution. The level of adoption of six capitals and similar varies, as does the maturity of the approach. Costain and many of the water companies are involved in the British Water sponsored, UK Water Forum working group, on multi-capitals, and Costain is ensuring that this proposal complements the activity of that working group.

Context and project background

Customers' Willingness to Pay (WTP) is the primary focus area within existing business case methodologies, however the relatively new (2021) Government guidance on the evaluation of wellbeing, including monetisation using the WELLBY factor, provides a new and more innovative lens to complement existing methodologies, assisting in the shift to a 'citizen' view on the value of water, and its contribution to public value through wellbeing. Using the WELLBY conversion factor for monetisation of the ONS 4 wellbeing survey, enables the monetisation of the impact for use in business cases.

The existing regulatory environment, including Ofwat, recognises the need for improvement, and requires companies to work together to respond to the challenge of creating an industry wide comparable process, that is robust, and sufficiently broad, and integrates environmental and social impacts into business case methodologies. This proposal responds directly to this regulatory requirement by utilising the members of the UK Water Partnership (UKWP) to work collaboratively on this proposal.

“How the public value the water environment, how they interact with it and how they perceive water at a local level is very important. We need to understand what has the greatest influence on changing behaviour and work like this helps gather insights into that.”

Damian Crilly, Environment Agency

This project aligns with the 2025 water innovation strategy with a particular contribution to principle 4, ‘Being led by environmental, social, and economic purpose’. Interestingly it does not match directly with any of the themes, (does that provide food for thought as societal wellbeing is not mentioned at all, how important is it?) but does contribute to a number including ‘Providing the services society needs, expects and values’, and ‘Taking a whole life approach to responsible consumption and production’. In terms of the outcome this project is directly aligned with ‘social and public value’.

As part of the project to date, Costain carried out research across the sector, with a survey. There were 70 respondents including water companies (23%) consultants (36%) contractors (17%) and regulators (7%). This survey provided the following insights that support the importance of this project in influencing the sector.

- 80% of participants either disagree or strongly disagree that the current regulatory environment enables meaningful customer/citizen perspectives to be included in asset decision making processes.
- 85% of participants either agree or strongly agree that current water business case methodologies are often insufficient to promote the best long-term value for society.
- 78% of participants do not believe that customer/citizen wellbeing is currently considered within water business case methodologies for asset decision making.
- 94% of participants do believe that customer/citizen wellbeing should be included within water business case methodologies for asset decision making.
- 80% report that wellbeing methodologies are not used very much or not at all.

Southern Water wanted to fill a gap in existing business case methodology and better understand and quantify the wellbeing benefits of cleaner rivers and seas for their customers. The Southern Water Customer Insights team worked with Costain to design a survey to assess

how customers perceive local water quality, and how this impacts their wellbeing. This survey incorporated the Personal Wellbeing Standard, ONS 4. Using the survey data from 1000 customers, 500 inland and 500 coastal, and the guidance outlined in HM Treasury’s Green Book supplementary guidance for wellbeing, Costain designed a methodology for estimating the wellbeing value of improved water quality in recreational blue spaces. Costain used the data to monetise the impact for business cases, using the WELLBY* figure, the duration of impact, the level of change experienced, and the estimated number of citizens/customers impacted by water quality in 2 locations using ORVal. In recognition that the methodology is at an early stage, a conservative approach was taken to assumptions and appropriate sensitivity analysis used to mitigate risk.

(*A WELLBY is defined as one-point change in life-satisfaction for one year. A movement of 1 point on a scale of 1 to 10 on average over a year is worth £13,000 (Low £10,000, High £16,000) in 2019 prices and value)

Current partners and their roles

Role	Current Partners	How they will be involved
Lead Partner	Costain	Leading the overall proposal, facilitating collaboration across the UKWP network and providing infrastructure delivery and social value expertise.
Academic partner	Stirling University	Provide academic rigour and challenge to the development of the methodology, participate in bids for research funding. Link to digital catchment.
Regulatory and Industry Bodies	Environment Agency and DEFRA	Provide regulatory insight to inform development of the methodology and enable effective influencing of the policy environment. Review how Best Value Plans for Water Resources can consider wider public value factors alongside economic cost.
Water Company	Southern Water	Share best practice in the use of wellbeing methodology and collaborate to develop a collective, consistent approach across the industry.
Industry	UKWP members	Links to current research in the social value domain. Consideration of wider links to digital twin development, multi-capital approach, supply chain infrastructure delivery and wider perspectives from sectors such as retail.

Benefits of participation for water companies

The aim of this methodology is to provide a route to a deeper understanding of local customers relationship with blue and green infrastructure at CSO locations. It identifies specifically how their wellbeing is impacted by the water quality, and can quantify, in financial terms, the wellbeing improvements that result from investment.

The output for water companies is that by monetising this wellbeing impact it can provide additional evidence of customer impact for business case optioneering, improving the rationale for investment in those locations which will generate the greatest customer wellbeing impact. It will also support technical solutions that have the greatest wellbeing impact for local people. For example, the whole life wellbeing impact of nature-based solutions (NBS) is undervalued in current methodology, whereas the WELLBY methodology will allow those benefits to be evaluated.

The project has begun the journey to a benefit framework for wellbeing by developing a water sector specific methodology, utilising the HM Treasury Wellbeing Guidance for appraisal, to explore and monetise the wellbeing impact of water, to complement and provide a different perspective to existing WTP methodologies. Water companies have the opportunity to raise the profile, standardisation and usage of this model, across the water industry to support better decision-making and establish a robust, fair and reasonable methodology that can be used in investment decision making, improve societal outcomes related to water assets, and better communicate the benefits with customers so enhancing the public value of water.

The project case studies to date have provided Southern Water with greater insight into the impact of cleaner water on customer's wellbeing and perceptions and the research has proven the hypothesis that, 'An improvement in water quality at bathing locations has a positive measurable impact on the wellbeing of citizens/ customers. The wellbeing impact valuation has filled a gap in existing methodology, which focuses on ecology and shellfish, and the quantitative estimates at the two case study locations, Brighton and Langstone Harbour, were found to be potentially significant in business case decision making.

"For the first time we have been able to quantify the wellbeing impacts of cleaner water, enabling us to better prioritise what is important to our customers."

Chris Braham, Head of Strategic Asset Management, Southern Water

Next steps

The specific need of the project is the opportunity to extend the methodology into further case studies, these are the key steps needed for water companies to get involved in the project.

- Identify a suitable individual who has responsibility for CSO investment and technical optioneering along with benefits realisation to review the proposed methodology. Costain would be delighted to present the methodology and existing case studies for consideration.
- Subject to the methodology being identified as value adding, and a priority for funding, identify a number of CSO geographical locations where the methodology could be developed and applied, this may be where NBS is under consideration, or where visitor numbers are particularly high or the wellbeing impact is seen as particularly significant, for example for new bathing water locations, and scope the required work with Costain.

- Cost the work, this will need to include work with the customer insights team and design optioneering team.
- Identify budgets and integration requirements and options for funding both internal (innovation funding, project costs) and external (alternative innovation funding, collaborative funding with other organisations).
- Go/No Go dependent on available funding, if go integrate into existing project cycle, if no go, consider next steps or terminate
- If Go, consider nominating a representative, to join the UKWP working group, meeting quarterly, and share the development of the methodology and contribute to the wider industry work including developing or supporting the development of suitable case studies

If you are interested in meeting the Costain project team to find out more, please let us know by filling out the survey (found in the newsletter) or reaching out to Thomas directly.