

CASE STUDY:

Determine Cost Efficiencies in Non-Infrastructure Capital Maintenance Projects

UK Water Utility

Overview

The water utility wanted to have its control & cost issues associated with AMP5 capital programme delivery investigated by Enzen. This was on the backdrop of key challenges faced, including lack of comparative efficiency metrics at unit cost level with respect to other organisations, the need to determine internal contract efficiency levels and unit cost gap assessment with a comparable organisation in order to benchmark and adopt measures to mitigate the gap.

Highlights

It was recognised from the outset that assessing efficiency in the maintenance of non-infrastructure assets (generally above-ground assets such as treatment plants and pumping stations) was likely to be more complex than for infrastructure (below-ground assets), due to the wider range of maintenance activities

We also expected to encounter difficulties in obtaining suitable data, following our experience in the infrastructure area

Cost Efficiencies in Non-Infrastructure Capital Maintenance Projects

Enzen was engaged by the water utility to determine cost efficiency in Non Infrastructure Capital Maintenance projects that were executed in year1 of the current AMP5 period. Enzen had successfully completed a thorough analysis of the Infrastructure Capital Maintenance projects earlier.

It was recognised from the outset that assessing efficiency in the maintenance of non-infrastructure assets (generally above-ground assets such as treatment plants and pumping stations) was likely to be more complex than for infrastructure (below-ground assets), due to the wider range of maintenance activities. We also expected to encounter difficulties in obtaining suitable data, following our experience with the infrastructure analysis earlier.

As a result of positive support from key individuals in Asset Management and Capital Delivery teams, we obtained useful data from which we were able to draw firm conclusions.

Enzen's Approach to this initiative

Expenditure on non-infrastructure capital maintenance in AMP5 (2010 – 2014) is forecast to £400M. The objective was to relate this content to the relevant stylised projects in Ofwat's Cost Base and use the Cost Base results as a point of reference, against which we could assess efficiency levels.

We identified from Year 1 schemes as many matches to the PR09 Cost Base as possible. 5 matches were found from 32 stylised projects. Actual & assessed cost data from 57 waste water pumping station projects were obtained from capital delivery to identify Cost Base matches.

Available service briefs and quotation sheets were used to assess the scope of work and to identify agreed costs. Contract price lists were analysed for associated direct and indirect project rates. Outturn costs in finance and the associated cost booking processes for the 57 waste water pumping station projects were studied and compared with the agreed costs.

Key findings

Relative Efficiency

- COPI adjusted rates were higher than the Cost Base median rates for the 3 pump replacement costs analysed
- COPI adjusted rates were lower than the Cost Base median rates for the 2 MCC replacement costs analysed
- The results above were mixed, but relative efficiency for M&E replacement compared with the PR09 Cost Base had not improved
- Also, there were too few actual schemes in Year 1 that matched the Cost Base stylised projects to draw firm conclusions about the relative efficiency of the MSF M&E contract rates as a whole
- The composite lump sum nature of the MSF rates made relative efficiency analysis very difficult. More granularity of data and greater coverage would have greatly assisted benchmarking

Key Benefits

- Identification of critical data and control points in the end to end process that are lacking, which result in the inability to deliver cost efficient outcomes as committed to the regulator
- Joint working agreement between Asset Management, Capital Delivery, Commercial and Finance Teams
- Acknowledgement that there is a need to better integrate process, data and their related hand-offs to better control volume and cost outcomes

Key findings

Cost Control & Governance

- There is evidence that inadequate scoping of the capital projects did lead to increased costs through less use of composite lump sum rates and more use of plant/labour/materials rates
- More process rigor is required to control the cost updates of the management accounts, updated business plans and final outturn costs
- Cost efficiency determination based on actual costs is difficult since systems do not have the controls to indicate full financial closure

Way forward

Key recommendations and way forward decisions included:

- Need for greater collaboration & transparency between Asset Management, Commercial, Capital delivery & Finance teams to bring in enhanced planning, execution & financial controls
- Review comprehensiveness and granularity of critical data & associated price elements in the contract
- Evaluate comprehensiveness of critical data from a PR14 standpoint that needs to be captured at the right level of granularity across the end-to-end process
- Deploy an effective control environment on a tactical basis that captures critical price & cost data, mitigates current gaps and factually informs and influences future process
- Drive unit cost control and efficiency metrics by planned estimates (volume & cost) versus actuals (volume & cost)
- Form a Joint Steering Group involving Asset Management, Capital Delivery, Commercial and Finance representatives in the below areas:
 - Design specification & controls – adopt design standards as mandated for AMP6
 - Contract reviews – define criteria and parameters to support the extraction of granular level costs as required for the PR14 submission
 - Project reviews – enable the capture of accurate project data
 - Cost data analysis – ensure accuracy of costs to be used in PR14

The above recommendations continue to be progressed via logical delivery an implementation steps, leveraging on innovative commercial pain-gain business models.

