Auto Water Quality Profiler – planning with knowledge in mind

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Project Overview

Executive Summary

A water authourity needed to understand the impact of recycled water on dam water quality. They needed data to inform a model of the dam. They engaged a University to develop the model and equipment vendors to install the tech. Later they changed the purpose to an efficiency driver for operational purposes but reliaiblity was an issue. Engagement and knowledge transfer could be improved with maintenance and planning stakeholders and feedback from operations was not fullly critqued.
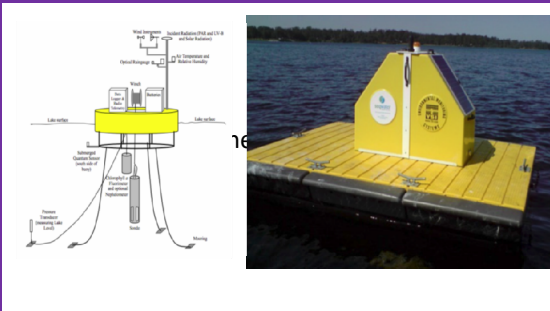
Trust - lacking
Energy - needs improvement
Step 4 - Critique

InnoPulse observations: Energy was lacking due to unreliability + insufficient information to stakeholders. When the project driver changed to efficiency, support also waned.

Step 1 - FORM

The problem was the drought and putting recycled water into a Dam. The need was to identify water quality concerns. The solution was to install an automated water quality profiler to provide on-line data for a model of the dam water quality.

Knowledge Goal - develop a water quality model, Knowledge Gap - developing the model and providing data for the model

Stakeholders - Operations, government, consumer, retailers; Collaborators - University researchers; Communication plan - present learnings, write academic papers

Budget was set to engage a Phd student to build the model and to install the profiler. The timeframe was 3 years.

Step 2 - CREATE

Collaboration activities - A university provided the PhD student and a researh organisation were also involved in examining different types of technology.

Different technologies and platforms were tested

The new knowledge was shared through presentations to operations

Energising Activities - Govt minister, CEO, Researchers were energised to resolve the knowledge gap for the recycled water effort.

Step 3 - ADOPT

Expectations- The water quality profiler would provide sufficient data to inform the water quality model. The model would demonstrate the impact the recycled water would have on the dam water quality. The profiler would be reliable and useful source of on-line data and drive operational efficiencies.

Roll-out plan - The profiler would be used in one dam first then could be installed in others. The usage would transition to operations and access to the data would be improved.

Roadblocks - Operations did not find it that useful as they found it to be unreliable, leading to lack of trust in the data and the predictive modelling.

Efficacy, reliability - the data was accurate but the technology was not reliable. A maintenance plan had not been implemented in a timely manner.

Step 4 - CRITIQUE

Feedback process, resources - feedback was provided from operations however, resources were not provided to act.

Benefits Realisation - the data was useful for the model development. The information about the data was not widely known and benefits were not able to be fully realised.

Learnings - Trust was lacking in the technology, the knowledge objects were not fit for purpose and had not involved sufficient stakeholders like planning / maintenance to fully realise benefits.

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