CASE STUDY

concept energy solutions

Aspect: Real-time Building Performance Monitoring

CUSTOMER

A group of four schools in the South West of England

BRIEF

Real-time building performance monitoring

OUTCOMES

Annual energy savings of 17%; a 6% reduction in average water consumption

We have developed Aspect to support our work in monitoring the performance of buildings, in real-time, to identify areas of excess consumption and to ensure that savings, once achieved, are maintained.

BACKGROUND

We have been working with a group of four schools in the South West, occupying a single campus but with very different requirements – two are secondary schools, one is a primary school and the fourth is for students with special needs and includes a hydrotherapy pool and other specialist facilities. Although there

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are shared incoming electricity, gas and water supplies, the schools have some sub metering which is used to apportion usage and costs – there is some sharing of services, in terms of heating, hot water and cooling.

THE CHALLENGE

We were challenged to find a way to identify with more accuracy the energy consumption of each school and then to monitor usage with a view to identifying savings opportunities.

ACTIONS

Having first validated the accuracy and suitability of individual sub meters, we installed Aspect monitoring and targeting software, connecting to all the sub meters and creating dashboards for individual users to view remotely, via their PCs. Knowing the schools well, we were able to create target profiles so that actual performance could be measured against what we know the buildings could achieve, in terms of energy reduction. We set up an alarm protocol, so that nominated individuals receive an email/text message as soon as usage falls outside target levels of usage.

BENEFITS

First, we were able finally to allocate accurately the energy usage per building, for reporting purposes. Secondly – and perhaps more importantly – we were able to identify

> **“With Aspect in place we can ensure that these savings are maintained over time.”**

a number of areas where energy usage was higher than expected and where savings were possible: pumps running continuously, boiler start-up times were excessively early, poor control of services after evening activities has ended, etc. With regard to water use, we identified a previously undetected leak that was resulting in a fairly small but continuous level of consumption soaking into the ground.

We were even able to recommend an easy-to-implement change to the cleaning regime, to avoid lighting being operated for extended periods unnecessarily.

Overall, annual energy savings of 17% have been secured and a 6% reduction in average water consumption – and with **Aspect** in place we can ensure that these savings are maintained over time.