

*TITLE:*

## **New system saves time and money at City College Plymouth**

*DATE:*

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*SUMMARY*

City College Plymouth made significant savings on its energy and water bills by installing software which constantly monitors its meters and sends text messages when any exceed the expected level.

The facilities team believes understanding and being able to properly manage the systems which run heating, ventilation and air conditioning – control systems – can realise more savings that targeting users with energy-saving campaigns.

*INSTITUTION PROFILE*

850 staff  
Offers further & higher education courses  
6 sites plus boat houses

*EAUC COMMENT*

This case study provides an excellent example of how employing modern technology and having the right service providers can help an organisation significantly reduce both energy and water consumption as well as saving money.

## **PROJECT PARTNERS**

TAC UK

## **THE PROBLEM**

City College Plymouth has a large proportion of buildings dating from the 1970s. These aren't very energy-efficient and, as the college's energy bill costs nearly £350,000 each year, and water an additional £46,000, reducing energy and water use is a high priority for the facilities team.

Along with focusing on reducing energy usage, the team had always carefully monitored its systems which control heating, ventilation and air conditioning, recognising that poor management could result in much higher energy and water usage. The software system the college uses is an aging, Satchwell 2800+, but is still effective.

A college-wide restructuring of staff led the facilities team to investigate the options for monitoring bills and energy reporting, which had previously been done by a consultant. With no spare staff time to do the monitoring and reporting in house, the team had to come up with an alternative solution.

## **THE APPROACH**

Alternative consultant services were investigated but were all more expensive than the original service. Finally, on the basis of price and good previous experience the facilities team appointed the manufacturer of the college's main heating control system, TAC, to provide the monitoring service. The company then introduced an additional software system called Satchwell Utilities Monitoring (SUM).

All college utilities meters now have a text messaging link to a central monitoring station. Real time data can then be accessed daily if necessary via the company's website, and the system sends an alarm to the facilities team if consumption has gone over the predicted usage.

A member of the facilities team has responsibility for using the system and investigating any alarms to ensure that energy and water usage is minimised and any leaks or excessive use are identified early. This takes very little time because the system does the monitoring automatically.

The City College Plymouth team estimates SUM saves more than user-focused energy saving initiatives such as 'turn off' campaigns, which they suggest should be pursued only after central control systems are effective.

## OUR GOALS

- To be a national lead on sustainable procurement in order to share their experience with others – the team has already been invited to present to other organisations on the work we carried out.
- To reduce the negative impact procurement can have on the environment by switching to more environmentally friendly products, e.g. recycled paper; use of networked photocopiers instead of printers; Fairtrade tea and coffee over non-Fairtrade.
- To make financial savings based on better and more ethical procurement.

## OBSTACLES AND SOLUTIONS

### Obstacle

- Lack of staff time and pressure from the college to cut costs, including the use of consultants
- Funding the capital costs of the system

### Solution

- Focused use of TAC for bill monitoring, energy reporting and real-time consumption monitoring
- Grants are available through the Learning and Skills Council's Salix fund. The payback period is so short that a good case for the investment could be made to any management teams

## PERFORMANCE AND RESULTS

SUM cost £10,000 to install and has an annual charge of £1,885. It paid for itself within one year based on the energy and water savings made.

The team believes the system is still saving the college money through the quick identification of problems. Actual savings are difficult to quantify, but, for example, an undetected water leak could cost more than £500 every month. The SUM system means that the team at City College Plymouth would be quickly alerted to the problem and be able to fix it.

The system takes little more than a couple of hours each week to manage, leaving staff free to concentrate on other projects.

## LESSONS LEARNT

- Monitor utilities usage closely and regularly using remote computer based means. In particular install smart meters that can quickly identify excessive consumption so corrective action can occur quickly.
- Invest to save – although £10,000 was the whole of Plymouth's energy-saving budget for one year, it was quickly paid back in savings on bills.
- Target users with energy-saving initiatives only when you have a proper understanding of your control systems and have maximised their energy-saving effectiveness.

## FURTHER INFORMATION

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City College, Plymouth – [www.cityplym.ac.uk](http://www.cityplym.ac.uk)

Satchwell – [www.tac.com](http://www.tac.com)

LSC's Salix funding – [www.salixfinance.co.uk](http://www.salixfinance.co.uk)



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