The time has come to rationalise systems for Heating, Ventilation and Air Conditioning (HVAC) in non-residential buildings to stop energy wastage. The iSERVcmb project found that continuous monitoring and inspection are the answer.

Getting the whole picture of HVAC systems

Heating, ventilation and air-conditioning systems inside buildings are often inefficiently operated. Now that sustainability and energy costs have become central concerns, a system for the continuous monitoring, remote inspection and performance benchmarking of HVAC systems makes good environmental sense.

“Traditionally you had areas of expertise, an architect to design the building, a building services engineer to design the services, facilities managers to operate and maintain the building, and so on,” says Professor Ian Knight of Cardiff University. “This means that there is rarely someone who has an overall understanding of the building services.”
New procedures

Prof Knight is the project coordinator of iSERVcmb, a three-year EU-funded project involving nine countries that looked into the continuous monitoring and benchmarking of HVAC systems in non-residential buildings.

The first system on iSERVcmb’s database was McKenzie House at Cardiff University where, as a result of the iSERVcmb process, electrical energy consumption has gone down from 170 kWh/m² to 122 kWh/m², representing a yearly saving of 28%. As a result, Cardiff has extended the process to other buildings on its estate.

By the project’s end in 2014, iSERVcmb had monitored the energy use of over 2 000 HVAC systems in 16 Member States, and identified areas for reducing wastage, thus allowing users to adapt their systems. One result of the project has been the development of a new HVAC inspection procedure that is helping to inform European Standards and Directives.

More about the Intelligent Energy Europe programme [2]

More about the iSERVcmb project [3]

Picture: Cardiff University’s McKenzie House building has saved 28% of energy through the iSERV process at very little cost. © Professor Ian Knight

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