



Belfast Health and Social Care Trust (BHSCT) was founded in 2007 after the merging of six Trusts.

With an annual budget of approximately £1bn (spending about £3m each day) and a staff of 20,000, it is one of the largest NHS Trusts in the United Kingdom. An organisation of this size and constitution has a large carbon footprint ensuing an effect on climate change. The annual budget in for energy and water is approximately £15m. The Trust has a corporate social responsibility to address its environmental impact and reduce emissions.

Problem

The Trust could see that utility consumptions were difficult to manage and; in the new carbon world, they would need to gain control on consumption and associated carbon emissions.

In 2010 Damian Horisk (Divisional Estates Manager at Belfast HSC Trust) looked at various management options and approached Energy Metering Technology Ltd after hearing about our on-going city-wide AMR project for Leicester City Council.

Solution

EMT suggested an AMR pilot scheme using DATABIRD AMR hardware and DYNAMATplus data analysis software, this was carried out monitoring the Trusts fiscal meters at Mater Hospital. BHSCT were delighted with the results and together with EMT devised a roll out plan. The project was divided into two phases, the first phase was to monitor all of the fiscal meters bringing utility across the estate premises and the second phase to install and monitor sub utility meters.



Royal Victoria Hospital, Belfast

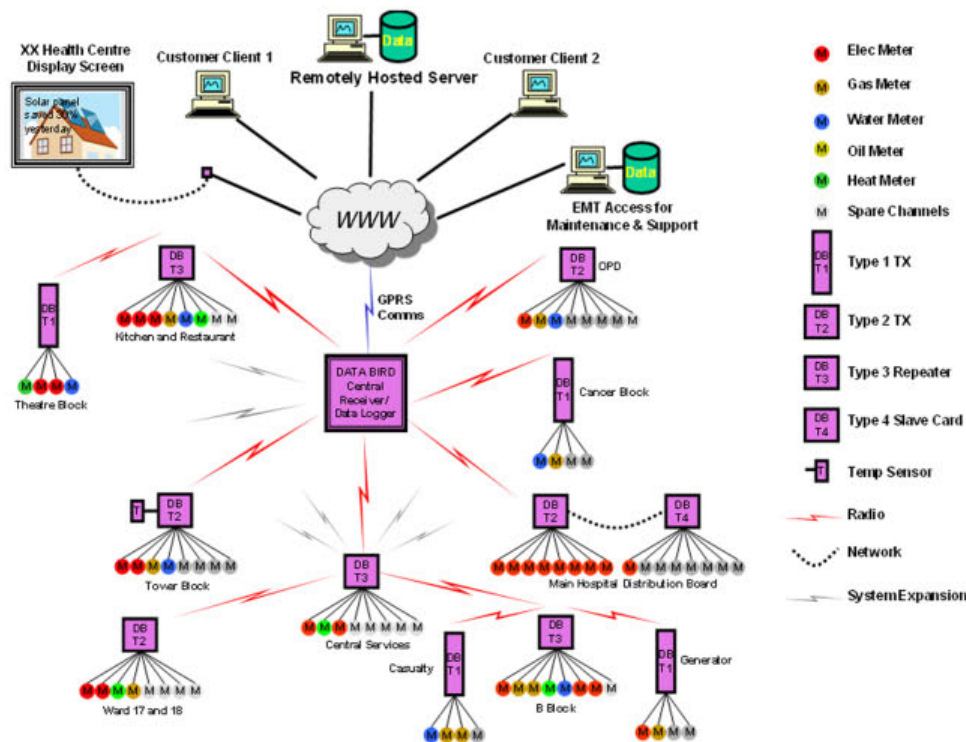
Data is now being collected from approximately 100 buildings ranging from six main hospitals to small health centres. Data is collected from all fiscal utility meters every 30 minutes using DATABIRD automatic meter reading technology. Sub-meters in each of the major Health Care premises are also monitored to pinpoint wastage.

The BHSCT DATABIRD infrastructure comprises 5 low power radio cells each cell with a DATABIRD central receiver/ data logger node point installed in a strategic, relatively high location within the cell; typically on top of a high building of a large hospital.

All of the meters are linked to the DATABIRD infrastructure, allowing the Trust to look closely at water and energy wastage across its sites and to understand individual rates of consumption.

EMT also designed an Energy Display Screen for the trust to assist with the cultural change to 'think before turning on' promoted to BHSCT stake holders. This culture change is hoped to have immediate effects within the Trust and also have a knock on effect by instigating the thought process externally.

The Trust's installation of a utilities auditing system is the foundation on which energy conservation and cultural change can be based. The system is the first complete automatic intelligent energy and water meter reading system (AMR) on this scale in Northern Ireland (*Malone, E. Belfast Telegraph, 2010*).



A Typical DATABIRD System Layout

Results

With a complex infrastructure to manage, consumption data and analysis is vital when making budget decisions particularly given the constraints that the Health Trusts are operating under. With the availability of 30-minute consumption data, the Trust is starting to effectively manage consumption and fully utilise the DATABIRD system.

This allows the Trust to firstly get a handle on wastage and carbon emissions and also to understand consumptions of their sites better leading to wiser capital upgrades to ageing services infrastructure.

The system has already proven effective, an example of one great achievement was helping to assess burst pipes during the winter's 'big freeze'. With 30 minute meter readings, the information from DATA BIRD was fed into the DYNAMAT meter data analysis software program, which was able to identify where water supplies to the health care premises were failing and where burst pipes had occurred.

Now and in the Future

BHSCT have been so delighted with the results of this project that the entire Northern Ireland Health Service has followed suit, EMT have now trained a local NI company as agents 'Atlas EMT' are now installing EMT's DATABIRD System throughout the Western and Northern Health Care Trusts.