



Helping the  
Northern Health and  
Social Care Trust cut  
costs and energy  
consumption





**The Northern Health and Social Care Trust (NHSCT) is the largest health trust in Northern Ireland, delivering health and social care services to a population of 470,000. NHSCT operates in 150 sites, all run by a building management system to control, heating, ventilation and air-conditioning (HVAC).**

In 2019, the NHSCT started work on upgrading the trust's building management system. The system is run through a network of more than 200 outstations. The goal was to improve efficiencies, both from a cost perspective and to reduce energy consumption.

We worked with Newtown Abbey-based ATC systems Ltd to design a modern upgrade to NHSCT's building management system. Using the Internet of Things (IoT), and with the help of ATC, we provided NHSCT with a way to monitor all outstations within the building management system remotely and identify problems as quickly as possible, often with just a few taps on a screen.





## The challenge

In 2019, 74% of the NHSCT building management system needed to be upgraded. In the planning stages, the NHSCT was keen to have the latest technology to cut the time spent on maintenance and reduce costs. The trust spends £6.5 million per year on heat, light and power, so efficiencies are always welcome.

The NHSCT saw the system upgrade as an opportunity to reduce their net energy consumption as called for by a new strategy, the “energy management strategy and action plan to 2030”, from the Northern Ireland executive. The NHSCT has a wider goal of lowering energy consumption by 30% across the trust by 2030, in line with government guidance. So it wanted to use the upgrade of their building management system to reduce its energy consumption by 10% as part of that aim.

It also needed a system that could manage today’s increased threat of cyber security attacks and needed to be in line with the best and latest IT standards.

Overall, the NHSCT knew it needed a more efficient, connected and innovative building management system but it needed us to help it develop the right one.

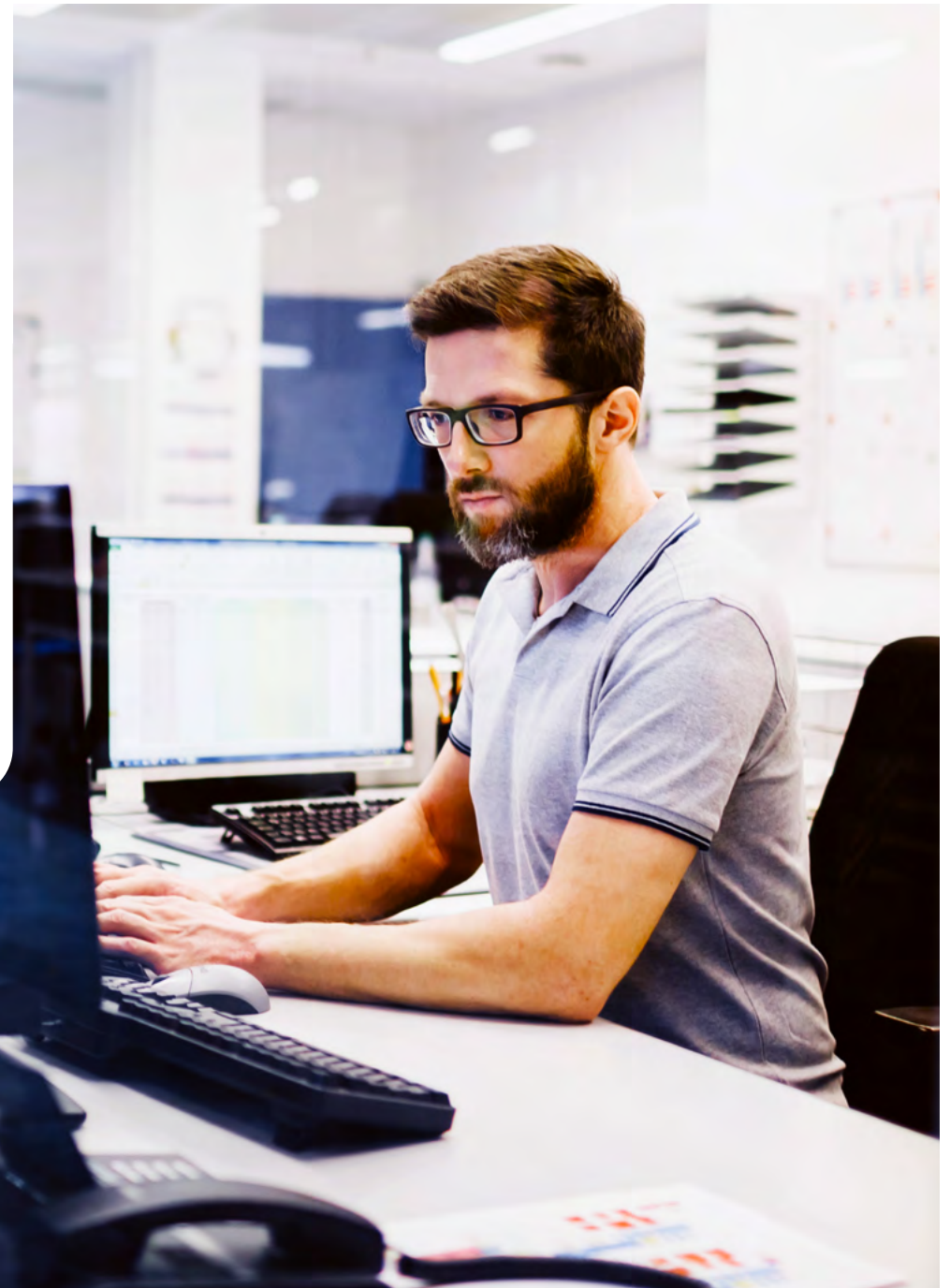


# The solution

The NHSCT turned to us to design a solution to upgrade its existing system. We worked with local management system specialist ATC Systems Ltd and presented a solution based on IQ®VISION – software that brings together controllers and smart devices into one central platform. The solution allows estate officer to monitor key factors such as heating, hot water and room temperatures, but also other pieces of data, such as room occupancy, so the trust can see how space is being used. The new system relies on a strong network and IoT, allowing different objects such as temperature sensors to collect and feedback data over the internet.

The solution was a complete overhaul to the trust's old system and required an upgrade of both software and hardware. James Carson, Energy and Environment Manager, NHSCT, said the new building management system gives him and his team the ability to monitor several controls through one central platform.

“This project to upgrade the trust's building management system has been a resounding success,” he said. “Previously, the trust used four different systems which have now been incorporated onto a single platform. We've replaced obsolete systems and hardware with trend IQ4E controllers and respective equipment and upgraded our software to IQ®VISION. We now have a building management system that's efficient, reliable and fit for purpose.”



# The results

The full upgrade of the trust's building management system is still being rolled out but James has already seen benefits.

“Before we had this new system, if a fault was reported, a member of staff would have had to visit the site and physically go to the plant room to diagnose and fix the issue. Now more than 20% of problems can be fixed remotely. We've seen massive savings in time and money.”

James said the trust is on track to see a cut of £225k in costs, which was the savings goal for the three phases of the project.

In addition to reducing costs, the new system is also compatible with the trust's latest IT cyber security guidelines. And it's helped build analytics, giving the trust data to help with planning and allocating resource.

“Not only is the building management system an integral part of ensuring thermal comfort across the trust's estate, but it plays a key role in preventing Legionella (a bacteria that causes pneumonia or flu like symptoms). We're able to have sight of water temperatures throughout the estate. The plan is to build on the success of the Building Energy Management System or BEMS



for short – upgrade and now look into building analytics, for example to improve space utilisation.”

While it's too soon to say how close the trust is to meeting its target of 10% reduced net energy consumption through the building management system, James is confident the new solution will help meet initial KPIs and further environmental targets, even 30 years in the future.

“We're expecting a lot of focus on carbon in the future, with the goal to get to net zero carbon by 2050. Ultimately now, we'll have a platform that's up to standard to help us meet even more goals.”





#### **Offices worldwide**

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