# switchee



# Switchee Customer Project Overviews

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# Switchee Deployments: Large Scale

#### Project Summary: 15,000 Units

## Flagship Group

Knowing that we see a net return of £2 for every £1 we invest in Switchee, and also put another £2 into our residents' pockets, confirms the value proposition.

Matt Brazier Director of IT

#### **About The Client:**

Flagship Group are the largest provider of homes for people in need across the East of England. They maintain a large portfolio of homes and support the communities they're part of. They own and manage over 28,000 homes, with a turnover of £160m in 2018.

#### The Challenge:

With over 28,000 properties across the east of England, maintaining Flagship's property portfolio is a huge task, especially whilst minimising the impact on the resident. Flagship's main two challenges are successfully communicating with residents and becoming proactive instead of reactive with their maintenance schedule. Flagship wants to improve the efficiency of their communication and also struggle to ensure residents report property faults in a timely manner - causing repairs and maintenance requests to significantly increase in cost.

#### Our Solution:

Over the past 5 years, Switchee has worked closely with Flagship Group to develop a real-time, remote analytics solution to improve asset management and communication with residents. A steering committee made up of Switchee and Flagship team members worked collaboratively over an intensive 10-month period to prove various feature benefits for the organisation. Six initiatives were chosen with the aim of proving three main business benefits. Proactive property maintenance through live environmental data analytics and testing, improved communications between household and landlords and resident benefits associated with fuel savings and having simple heating controls. Each of these were implemented, tested and showed a monetary return on investment.

#### The Results:

Through this pilot, Flagship have proven net annual savings of £2.5m, a reduced total resident fuel bill of £1.8m and a reduction of the Fuel Poverty Gap by 61%. These results led to an evidence-based business case for the roll-out of 15,000 Switchee devices to all gas and air source heat pump properties. Over a 5 year period there is an expected return on investment of 93%. The expected lifespan of a Switchee device is 10 years and over this period the ROI is expected to be 145%. The investment in the 15,000 properties will be cash-positive in 2.4 years. With these results, Flagship are moving to a full rollout of their stock.

15K £7.3M £1.8M

Switchee Units Being Installed

Saved in the next 10 years

Resident Fuel Bill Savings Per Year

#### Project Summary: 5,000 Units

# **Dudley Council**

Engaging with our tenants is very important to us and the Switchee messaging service gives us a new, exciting way of offering information and support to help residents to afford to heat their homes.

Helen Langley,
Senior Support Officer

#### **About The Client:**

Dudley Metropolitan Borough Council are a local authority housing provider based in the West Midlands. Their housing stock of approximately 22,000 units is made up mostly of terrace and semi-detached urban properties, with some tower blocks. Their strategy is to provide the highest quality housing for the residents of Dudley, whilst improving the efficiency of expended resources.

#### The Challenge:

Dudley have the unique challenge of attempting to roll out a widespread scheme of connected energy efficiency solutions with a constrained budget and a long list of required features. They needed an OJEU compliant route to a volume rollout. They also needed a technology that could provide the benefits of reducing fuel poverty and increasing energy efficiency but without a huge investment per property.

#### **Our Solution:**

After conducting a small scale pilot, a project of 5,000 units tendered over 5 years was agreed. By utilising the existing heating replacement vehicle to deliver the additional energy efficiency and fuel poverty measures, they reduced installation overhead. Primarily, Dudley wanted a system to monitor time to heat and potential property overheating that wasn't reliant on a residents Wi-Fi for connectivity. Dudley also recognised that to have a greater impact in reducing fuel bills, it is more effective to provide energy efficiency advice in conjunction with installing energy saving measures. Switchee provided them with a live alerts system both for a time to heat metric and an overheating metric as well as a digital communication channel.

#### The Results:

In total, 5000 Switchee units are to be installed through the 5-year heating specification contract. Switchee's heating optimisation and remote overheating and time-to-heat statistics have been used to reduce the overall energy expenditure amongst Dudley's most vulnerable residents. Switchee's communication technology has been successfully deployed in numerous ways - with one project having 107 out of 413 tenants digitally requesting support (96% of tenants responded to the Switchee message). Utilising Dudley's internal expertise on fuel poverty, all 107 tenants were given energy savings tips with each resident receiving personalised support. Overall, it has helped Dudley to pursue their carbon reduction targets whilst improving their overall quality of service.

5K
Switchee Units Being Installed

96%

Response Rate to Energy Efficiency Messaging 939

Tonnes of CO2 Saved Per Year

# Switchee Deployments: Medium Scale

#### Project Summary: 400 Units

# Vale of Aylesbury

We're looking to add Switchee's to all of our 7,500 properties in the next few years... We are installing them in all void properties and when we replace kitchens and bathrooms.

Andrew Rysdale
Assistant Director of Property

#### **About The Client:**

Vale of Aylesbury Housing Trust are a 'not-for-profit' Registered Social Landlord (RSL) providing affordable housing for over 23,000 people in Buckinghamshire and the surrounding areas. They are a leading local social housing provider, responsible for over 7,600 homes, 16 Independent Living schemes and 159 shared ownership properties.

#### The Challenge:

The main challenge that Vale of Aylesbury were attempting to face was counteracting instances of mould and disrepair. With so many properties and limited surveyor resources, their team were struggling to get enough surveyor visits to diagnose and remedy mould issues. As a result, there was increasing concern about the problems this would cause both for residents and on their rates of disrepair. They needed an always-on device that would allow their surveyors to remotely diagnose issues, visit to confirm the diagnosis and verify that the solution had worked.

#### Our Solution:

The solution was to install a trial of around 400 units to understand the effect it would have on mould surveying and disrepair claims. A steering group was formed with representatives from a variety of different departments within the organisation. This helped ensure that Switchee was best placed to help a number of different departments - allowing a more broad use of its feature sets. Switchee was used for digital messaging, appointment scheduling and boiler tests, as well as its original purpose of helping to target mouldy properties and reduce instances of disrepair.

#### The Results:

Through the initial trial, Switchee was successful in remotely identifying damp and mould issues. Properties at a medium or high risk of mould were grouped together and then sent mould surveys through Switchee. Feedback from those surveys then allowed the housing team to intervene. Mould issues were then proactively resolved by the housing team - in one case fitting a new envirovent system and using our data validated its performance (a 12% decrease in absolute humidity). A recent mould survey was sent to their entire portfolio - with 20 properties reporting issues. Using Switchee's appointment scheduling, 15 visits were conducted with a 100% access rate. One property had significant mould issues, another had a bed placed in front of a critical radiator and multiple properties had either broken or disabled ventilation fans. Catching these issues early has saved thousands in remedial works and reduced the risk of new disrepair cases in those properties.

400

Switchee Units Installed

100%

Access Rate to Properties

**15** 

Properties proactively found with issues.

#### Project Summary: 364 Units

### **Gentoo Group**

We have seen the benefits in the landlord dashboard data, which has helped us to identify customers who require support in changing the way they use their new heating system.

Kirsty Tweddell

Asset Sustainability Manager

#### **About The Client:**

Gentoo are a housing association that manages over 28,000 properties in and around the Sunderland area. They are focused on delivering an outstanding service to their customers and as a responsible business they pride themselves on inspiring people to make a difference. Their stock consists of mostly general needs properties with some mixed stock and sheltered accommodation.

#### The Challenge:

With such a large portfolio, and without any consistent building construction, Gentoo have found themselves having to develop energy efficiency strategies for each type of construction. One such strategy involves removing gas from their tower blocks. They are attempting to do this to reduce the fuel costs that are incurred for their elderly and fuel poor residents, but also as part of a wider energy efficiency scheme across their entire portfolio. As an innovative housing provider, Gentoo saw that the combination of Switchee's smart thermostat and ground source heat pumps could provide the right outcome for their residents whilst costing significantly less than any other route.

#### Our Solution:

With the deployment of Switchee, Gentoo aimed to reduce the rates of fuel poverty for residents living in any of the tower blocks. Switchee also provided them with a tool to remotely assist elderly and vulnerable residents with their heating. Switchee was used to give residents precise control over their heating whilst giving Gentoo a communication channel that is non-intrusive but extremely visible. Gentoo used Switchee's messaging system to communicate with residents about the new ground source heat systems through meetings and information drops.

#### The Results:

The trial saw 364 Switchee smart thermostats installed in flats throughout their tower blocks. Switchee units were required for every unit in order to control their new ground source heat pumps, and they acted as a much-simplified user interface for an otherwise complicated but effective system. Resident comfort with the innovative new ground source heat pumps has been incredibly high due to Switchee's interface. Gentoo have also benefited enormously from the ongoing usage of Switchee's messaging system giving much-needed feedback for further rollouts. They've been receiving 90% response rates to surveys sent through Switchee.

364

£323K

90%

Switchee Units Installed

Saved in the next 10 years with Switchee

Survey Response Rates

#### Project Summary: 220 Units

# **Peabody Group**

The Switchee trial enabled Peabody to identify and target properties requiring maintenance, leading to 40 interventions and saving Peabody thousands in long-term remedial costs.

Nic Wedlake **Group Sustainability Manager** 

#### **About The Client:**

The Peabody Trust was founded in 1862 as the Peabody Donation Fund. It is one of London's oldest and largest housing associations with around 55,000 properties across London and the South East. Following the merger with Family Mosaic in June 2017, the Peabody Group now houses over 111,000 residents. They pride themselves on helping make people's lives better.

#### The Challenge:

In 2014, Trust Thamesmead and Tilfen Land were taken over by the Peabody Group. Since taking over management of the Thamesmead estate, Peabody has been continuously fighting to maintain Thamesmead's properties - specifically spending well over a million pounds repairing and compensating residents for issues resulting from damp and mould. This state of affairs was unsustainable so they embarked on a project to improve the building performance - both in terms of reduced maintenance as well as increased tenant approval.

#### **Our Solution:**

Peabody deployed a coordinated strategy to combat the incidence of CD&M in the Thamesmead estate looking to tackle the root causes of the problem, identify a property issue and put measures in place to solve them. Switchee units were installed across a number of different homes throughout Thamesmead to help identify properties at risk of CD&M as well as evaluate the effectiveness of other third-party retrofit interventions. Switchee data was used to test a variety of solutions - allowing multiple retrofit interventions to be installed simultaneously to test real-world effectiveness.

#### The Results:

Switchee have helped ensure that Peabody's residents are living in the best conditions possible as well as ensuring that the maintenance staff are significantly better supported. Fuel Poverty and CO2 emissions were both significantly reduced through the installation of Switchee. An NEA report concluded that on average, residents saved 15% per household on their heating bills after the installation. Damp and mould occurrences have all but vanished from the properties where Switchee was installed alongside other retrofit measures. The pilot was a huge success at proving the value in real-time data and alerts, as well as the efficiency of Switchee's mould risk metric.

220

£219K 26.4

Switchee Units Installed

Saved in long-term remedial costs

Tonnes of CO<sub>2</sub> Saved Per Year

# Switchee Deployments: Small Scale

#### Project Summary: 48 Units

# **Together Housing Group**

We can see the potential Switchee has in helping us combat disrepair whilst improving the day-to-day lives of our residents

Patrick Berry *Managing Director of Together Energy Services* 

#### **About The Client:**

Together Housing Group are one of the largest housing associations in the North of England, managing over 36,000 homes across both the Yorkshire and Lancashire areas. Together Housing run with the primary focus of improving the lives of their residents and local communities.

#### The Challenge:

With so many properties, Together Housing have correctly assessed that one of the biggest improvements they can make to improve the lives of their residents is to improve the energy efficiency of their homes. They have, therefore, been looking to install a significant number of new and innovative energy saving measures to address this. They have also been investigating how to better gather and utilise data in order to improve their repairs and maintenance performance across their entire stock.

#### **Our Solution:**

Switchee worked with Together Housing to put together an appropriate size trial to provide evidence of Switchee's energy saving capability as well as it's proactive maintenance possibilities. A trial was put together of 52 units to be installed in a variety of housing types to simulate a full rollout. This trial gave the repairs and maintenance department at Together Housing access to the Switchee dashboard in order to look extensively at the data that Switchee was generating and transmitting. This would allow them to understand the extent of the preventative maintenance they could conduct with a full rollout of units.

#### The Results:

Switchee data was used in order to understand the property condition and current energy efficiency in every unit. This allowed Together Housing to assess the 4 other innovative energy saving technologies that were being installed alongside Switchee giving them the evidence they needed to install successful technology across additional properties. The NEA analysis conducted on the project showed that there were average savings of £77.64 over 12 months after the installation of Switchee - with some residents saving well in excess of £100. The trial also provided Together Housing with the insight necessary to determine how their properties were performing in the real world. Following the success of this trial, Together Housing Group have been seeking additional funding to install a further 400 units.

48

Switchee Units Installed

£78

Average Resident Savings
Per Year

76%

Of Residents Had Reduced Bills

#### Project Summary: 25 Units

## **Nottingham City Homes**

We've also shown, with real data, that the main issue with CDM in one property was under-heating. ...We have improved the living conditions for the resident and most probably reduced our maintenance costs associated with CDM.

Emma Riccardo

Project Liaison Officer

#### **About The Client:**

Nottingham City Homes is an ambitious ALMO based in Nottingham City. They are an arms length management organisation (ALMO) created in 2005 by Nottingham City Council to manage its homes. They manage a portfolio of 15,800 houses, 10,000 flats and 2,200 bungalows, as well as more than 1,000 leasehold properties.

#### The Challenge:

With such a large stock size, they are faced with the goliath task of maintaining a large number of properties that have many different property archetypes and age profiles. This ranges from large concrete blocks constructed in the 1970s to off-site new build constructions. With such a variety of different stock profiles, they wanted to face the problem of condensation and mould head on and establish a robust system by which they could upgrade their stock without wasting resources.

#### **Our Solution:**

In 2019 Nottingham City Homes' began a programme of installing various building upgrades. As part of this process, Nottingham City Homes chose Switchee to provide energy efficiency improvements for residents and housing management improvements for their team. The goal was to test that their diverse property portfolio could all have the Switchees installed, and a connection could be made to our analytics platform from even their most challenging of properties. As part of this programme, both teams have worked hard to ensure that both they and their residents get the most benefit out of the upgrades.

#### The Results:

With the deployment of Switchee, Nottingham City Homes are starting to see the benefits associated with real-time data alerts and in-depth condensation and mould statistics. All of the units were installed in different types of buildings in terms of construction to simulate a full stock rollout across their diverse property portfolio. Every Switchee was able to consistently make connection with our analytics platform, and Nottingham City Homes were able to begin viewing and acting on the data. With Switchee's retrofit monitoring capabilities, they were able to quickly and efficiently identify the root causes of each individual property's problem and directly target resources towards sorting it. In one example, ventilation was quickly identified as the main factor in a number of property's mould problems.

25

Switchee Units Installed

£780

Saved Yearly by one Resident 4.54

Tonnes of CO2 Saved Per Year

#### Project Summary: 5 Units

## **Cromwood Housing Group**

The use of smart technology has allowed Cromwood to provide excellent living conditions for our residents using remote diagnostic tools as well as remote heating control of our housing stock

Mendy Stern

Operations Director

#### **About The Client:**

Cromwood Housing is a private for-profit social housing provider founded in 2002. They manage a large portfolio of landlords' properties in London and Greater Manchester that have been placed with local authorities to provide social housing solutions for temporary accommodation..

#### The Challenge:

Cromwood's primary tenancy type is short-term emergency tenancies – which means that they have tenants who are unfamiliar with the use and functionality of their property. Tenants don't know how to utilise their properties heating appropriately, instead they are heating their properties to excessively high levels, and then controlling the internal temperature by opening and closing the properties windows. Cromwood have attempted to deploy traditional methods of tenant liaison and direct communication in order to combat this issue, but those have failed to resolve it.

#### **Our Solution:**

The project Switchee and Cromwood decided upon aimed to be give Cromwood the ability to understand and remotely set profiles for their entire portfolio of relatively geographically disparate properties. This would help ensure that their residents were comfortable in their properties, whilst not overheating it unnecessarily. After units were installed, Switchee was able to provide Cromwood with access to the data needed to remotely understand a property's heating and cooling curve in order to set individual properties optimal heating settings. This reduced their reliance on in-person liaison and surveyor visits in order to evaluate heating performance.

#### The Results:

Utilising Switchee's remote heating data, Switchee was able to give Cromwood the tools they needed to be able to implement appropriate heating profiles remotely. This has been a significant improvement for Cromwood who have been struggling with overheating issues since their inception in 2002. On average, Switchee has improved the heating inside of Cromwood's properties by 9 degrees. This is approximately a £675 saving per year per property. They are also now able to respond to immediate requirements in setting heating profiles for residents without the need for someone on-site.

5

£675

9°

Switchee Units Installed

Saved Yearly on Heating Bills

Reduction Per Property

# GLARION HOUSING 50-Hages Clients

Futures Housing Group
G15 Members

1 Taria

Properties In Management



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