



LOTI Case Study

Summary Details

Summary

Please summarise the innovation using the following format: These people... Used this innovation... In this process / scenario... So that...

Clarion Housing used IoT devices in Bromley to monitor the energy performance of the building, identify unintended consequences such as damp and mould, and capture baseline data before the solar installation.

Council / Housing Association

Clarion Housing.

Lead contact (to be referenced in the case study and for follow up by interested boroughs) & Email address

Please provide the lead for this project and also provide a contact email for follow up from interested parties who would like to replicate your results.

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The Outcomes

What outcome(s) did your solution set out to achieve, and what were the actual results? Please include engagement-specific metrics such as changes in resident satisfaction scores, participation rates, or reduction in related resident queries.

Set out to achieve: Capture baseline data before installation. Monitor the performance of the building. Monitor energy efficiency and identify unintended consequences like damp and mould. Spot residents in fuel poverty.

Actual results: The LCDM team monitors the devices. The LCDM team check for damp and mould issues and can intervene with their repair

team. They can also spot residents in fuel poverty and recommend they contact the Clarion Future charity for advice.

The LCDM receives monthly reports from IoT Solutions. If the LCDM team identifies a D&M issues they will refer it to the Repairs Team. The repairs team goes to site, and either resolves the issue (e.g. mould wash and new dMEV) or refers the property to a surveyor if they suspect fabric issues (e.g. failed cavity wall insulation). If the LCDM team suspect that the property is in fuel poverty they will contact the residents and advice to get in touch with Clarion Futures for money guidance.

Which of the following outcome categories were achieved?:

- ~~Cost cutting~~
- ~~Revenue generation~~
- Increased efficiency
- New service model
- Improved outcomes

Increased efficiency, New service model, Improved outcomes

Solution Details

This section provides details of what elements make up the solution.

Resident Engagement Approach

What was the initial strategy for engaging residents about the IoT sensor installation, and who was responsible for delivery (e.g. dedicated project team, housing officers, external partners)?

Initial strategy: An introductory letter was sent out for the sustainable home programme/Social Housing Decarbonisation Fund (SHDF), which informed residents of the property assessment and the plan to install IoT solution devices. The letter included a privacy notice.

Responsible for delivery: Two in-house resident engagement officers handle follow-up communications.

What methods were used to communicate the project and sensors to residents (e.g. digital notices, in-person meetings, postal information packs)?

Initial letters (postal information) were sent out. Follow-up information and discussion are provided via phone calls by the resident engagement officers for residents who raise concerns.

What specific resident concerns were raised regarding the sensors (e.g. privacy, surveillance, disruption to property), and how were those concerns addressed and mitigated?

Specific concerns raised: Privacy (not wanting to be monitored) and health and safety concerns.

How addressed/mitigated: For privacy, Clarion stated that they are processing the data under 'Clarion's Legitimate Interest' to manage the property, not to monitor the person. For health concerns, a leaflet or product data sheet, confirming it met all quality checks, was intended to be provided. However, the resident in this case was not convinced in one instance and did not accept the device.

How was resident consent for data collection obtained (i.e. Public Task, Legitimate Interest), and what was the measured participation or opt-in rate?

Data is processed under Legitimate Interest to improve homes and keep residents safe and comfortable. Public Task was also considered. The measured participation or opt-in rate was not provided.

How is data or insight from the sensors shared back with the residents to demonstrate value (e.g. proactive maintenance reports, resident-facing dashboards)?

Currently, only Clarion can see the data. However, the IoT supplier recently developed a user interface portal, which may soon allow residents to access their data (damp, mould, and temperature) and feel more in control.

What feedback mechanisms are in place for residents to report issues with the sensors or suggest improvements to the service model?

Residents can contact the two resident engagement officers via email or phone to report concerns or issues. These officers are in direct contact with the IoT supplier.

People and Resources

Please describe who was involved in the resident engagement process and how the interactions are different (e.g. new roles for housing officers, involvement of tenant groups).

Two dedicated in-house resident engagement officers were involved. Their introduction has made a big difference, as this work was previously handled by the surveying department which lacked the capacity for one-on-one communication. They now divide the follow-up process,

discussing the retrofit assessment and the IoT installation separately, as this is preferred by residents.

What is now different for the users (i.e. residents) as a result of the new solution being in place?

The LCDM team is able to proactively spot issues like damp and mould and intervene with repair teams. The system also allows the LCDM team to identify residents who may be in fuel poverty and recommend they contact the Clarion Future charity for advice.

Process

What processes had to change to embed the resident engagement strategy and ongoing communication alongside the solution?

The follow-up process with residents changed. The resident engagement officers now call residents separately to discuss the retrofit assessment and the IoT device installation, as residents prefer to discuss them individually.

What other processes were impacted (e.g. tenancy management, repairs booking)?

Repairs booking: The process of identifying and addressing damp and mould is impacted, as the LCDM team monitors the data and can intervene with their repair team.

Fuel poverty support: A process for spotting fuel poverty and referring residents to the Clarion Future charity was established.

Technology and Data

What technologies, if any, were involved in the solution?

What was the role of data in this solution? Please give details of any data required, any new data generated etc.

Technologies: IoT devices/sensors are being installed as part of a wider Sustainable Homes Programme, Clarion's WH SHF Wave 3 Funded programme. The programme involves the installation of renewables (Solar Programme) or fabric measures such as wall insulation, loft insulation and windows (Fabric Programme). As the programme follows PAS 2035 a ventilation strategy is always included, usually involving dMEV, trickle vents and door undercuts.

Role of data: Data is used to monitor energy efficiency, identify unintended consequences like damp and mould, spot fuel poverty, and capture baseline data before the energy efficiency measures go in.

*What other technology systems did this solution affect?
What were the specific implications for resident data protection and how did you ensure compliance with GDPR (e.g., anonymisation, data retention policies)?*

Other technology systems affected: The dashboard is shared with the internal LCDM team, providing them with instant alerts and problems.

Data protection/GDPR: A privacy notice was included in the initial letter. Data processing is covered by Legitimate Interest, based on the premise of managing the property, not monitoring the person. An initial omission of the data protection notice in some letters meant a retrospective action had to be taken to ensure compliance.

Resources required

This section outlines what it took to put this solution in place.

Money

How much did it cost to put the solution in place and where did the funding come from? Please consider the specific costs associated with resident engagement, communications, and Information Governance processes, in addition to procurement and staff time.

The specific cost figures were not available. Funding for the IoT devices themselves comes from the internal budget, as they are not eligible for grant funding. The communications plan was 'shoehorned' into the wider WH SHF Wave Three letter and did not have a separate budget.

Resources

Other than money, what resources were required to develop and implement this solution?

Dedicated in-house resident engagement officers. Involvement from the LCDM team and the Clarion Future charity. Technical information such as the product data sheet to address health concerns.

Time

How long did the solution take to implement? How long did it take to see measurable benefits?

Permissions and Governance

What permissions, if any, were needed and from whom? What governance was in place.

Sign-off from the Communications team is required before publication of

the case study. The internal Data Protection team was involved in deciding the legal basis for data collection (Legitimate Interest).

Replicating this solution

What advice would you give to another council or housing association wishing to implement this solution, specifically regarding successful resident engagement and communication strategies?

To replicate: Employ dedicated in-house resident engagement officers to handle one-on-one communication and granular detail, as this was a positive difference from previous efforts. Share the data dashboard with other internal teams, such as the LCDM team, to monitor the home holistically and facilitate intervention/support.

To do differently (advice): Ensure better information regarding data protection is provided from the outset to avoid having to correct it retrospectively. Provide more technical information about the devices, especially concerning health concerns. Include myth-busting information that the data is for managing the property, not spying on residents.

What templates or deliverables can you share?

The initial introductory letter for the project (version #5). The privacy notice. The product data sheet/leaflet used to address health concerns.

What was the business case?

The project is part of the Warm Homes SHF Wave 3 programme, driven by EPC data, to improve a home's EPC rating through interventions. The IoT devices support this by capturing baseline data and monitoring the building's performance.