



LOTI Case Study

Summary Details

Summary
<i>Please summarise the innovation using the following format: These people... Used this innovation... In this process / scenario... So that...</i>
Lambeth Council and University of Cambridge academics used monitoring devices (IoT sensors) in 100 homes that were either reported to have damp/mould or had a poor EPC rating as part of a large research project to formulate AI algorithms so that damp and mould, and other building defects, could be detected before they were visible or apparent in the dwelling.

Council / Housing Association
Lambeth

Lead contact (to be referenced in the case study and for follow up by interested boroughs) & Email address
<i>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.</i>
jcairns@lambeth.gov.uk

The Outcomes
<i>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.</i>
The solution set out to detect damp and mould and other building defects before they were visible. The actual results are that high quality data has been recording over one winter season so far and will be used to derive insights about the performance of the homes, particularly whether there is a risk of damp and mould. The residents are happy with the installation and there have been no complaints so far.

Which of the following outcome categories were achieved?:

- *Cost-cutting*
- *Revenue generation*
- *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: Targeted poor performing homes based on existing damp and mould issues or poor EPC ratings. Residents were invited by letter from Lambeth, which included a contact name for questions.

Responsible for Delivery: A colleague from resident engagement handled initial contact, with the internal Lambeth Market Research team carrying out door-to-door follow-up, arranging appointments by phone, and fitting the devices (two people per visit).

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

Methods included open community events/workshops organised by Repowering London, newsletters, postal letters with an FAQ sheet, and preparatory phone calls followed by in-person visits from the internal market research team.

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

The project's success is noted by the fact that no complaints have been received about the devices. The following measures were taken to address and mitigate potential concerns:

- **Trust and Privacy:** Open community events and workshops were used to build authenticity and address concerns about trust and privacy. Furthermore, maintaining control of the project internally within the council, rather than outsourcing to a third party, was a key strategy used

to build resident trust and ownership.¹ • Consent: Consent for data collection was obtained using a Memorandum of Understanding (MOU), which was explained to residents and signed in person when the devices were fitted. • Reassurance: Staff who fitted the devices were ensured to have the capacity to spend extended time with residents who required more reassurance or help.
<i>How was resident consent for data collection obtained (i.e. Public Task, Legitimate Interest), and what was the measured participation or opt-in rate?</i>
Consent was obtained using a Memorandum of Understanding (MOU), which was explained to residents and signed in person when the devices were fitted. The sign-up rate was very good.
<i>How is data or insight from the sensors shared back with the residents to demonstrate value (e.g. proactive maintenance reports, resident-facing dashboards)?</i>
This is still a work in progress. The project is developing a user-friendly version of the highly technical data, possibly using small report templates for each home.
<i>What feedback mechanisms are in place for residents to report issues with the sensors or suggest improvements to the service model?</i>
Residents can report issues or suggest improvements by contacting the project team via the email or phone number provided on the letters.

People and Resources
<i>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).</i>
Involved: Repowering London (community energy organisation), Lambeth's internal Market Research team, and colleagues from the sustainability and housing teams. Different Interactions: Keeping the delivery with internal Lambeth staff gave the council more ownership and increased resident trust. Fitting staff noted they needed capacity to spend extended time with residents who required more reassurance or help.
<i>What is now different for the users (i.e. residents) as a result of the new solution being in place?</i>
Nothing has changed significantly yet, as there is not enough data (only one season) to implement changes. The devices, which are simply plugged into sockets, are easy for residents to unplug.

Process

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

The resident engagement process was adapted by using the internal Market Research team to phone residents to arrange appointments before going out, and by ensuring two people were present at each visit for device fitting.

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

Estate management processes were impacted when they sent out communications to residents asking them to check if their unplugged devices were plugged back in.

Technology and Data

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)?

The data is gathered across multiple UK sites to formulate AI algorithms. The collected data is very high quality and reveals information about dwelling performance.

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 devices cost approximately £20,000, and the engagement budget was about £5,000 for the duration of the project.

Resources

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

Staff time from the sustainability, housing, and internal Market Research teams. Support from external partners including Repowering London and the University of Cambridge research team.

Time

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

benefits?

The project was extended from an initial one year to two years. The devices have been in place for approximately one full year/season, and there is not yet enough data to see measurable benefits or changes.

Permissions and Governance

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

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?

Advice focuses on engagement and device choice:

- Invest a lot of time in introducing the project.
- Use open community meetings to build authenticity and address concerns about trust and privacy.
- Maintain control by keeping the project internal to the council rather than handing it to a third party, which builds resident trust and ownership.
- Ensure the team fitting the devices has the capacity to spend extended time with residents who require more reassurance.
- Be cautious that cheaper devices (plugged into sockets) are easy to unplug, which can result in significant data loss.

What templates or deliverables can you share?

The project is currently developing templates for small, user-friendly reports to share data insights back with residents.

What was the business case?