The Bristol Approach

Project : Damp Homes

Damp homes are a major problem in Bristol - and many areas across the UK - affecting people's health and wellbeing. The DampBusters pilot project gathered damp homes data to see if sensor technology could make a difference to the issue.

What was the issue?

Over a three month period in 2015 Knowle West Media Centre undertook a city-wide 'network analysis' (include the network analysis diagram of places we visited) supported by artists who initiated conversations in 'hotspots' where people regularly gather, such as hairdressers and chip shops to discover the issues that people most cared about.

We discovered that over 30% of homes in Bristol were affected with the problem of damp and mould, which was impacting on people's mental and physical health. Individuals told us they felt that local authorities and landlords often ignored the problem, leaving them without solutions.

Community activist groups such as Acorn highlighted the need for more efficient ways to demonstrate the scale of the problem and discover if there were similarities between properties owned by the same landlords. Such evidence could help them challenge negligent landlords and, in the longer term, lead to policy change.

The World Health Organisation recognises that exposure to damp pollutants lead to the increased prevalence of respiratory symptoms, allergies and asthma, as well as disturbance of the immune system. Preventing (or minimising) persistent dampness and microbial growth on interior surfaces and building structures is the most important way to avoid harmful effects on health.

Who got involved?

University researchers, businesses, hackers, open data specialists, artists, architects, investors,

charities, housing associations, and city council representatives for housing, environmental health, building control etc.

People wanted to join the project either due to their involvement with the subject matter -ie.: damp homes or their interest in creating change through co-design and using technology.

A mix of personal invites, wide media communications, visits to specific groups and an artist commission to spend time 'professionally hang-out' listening to people on the streets was necessary to connect these people and form a shared goal.

How did they 'sense' the problem?

People came together for both regular self-organised meetings and a range of practical workshops facilitated by artists and creative technologists, including 'hack days' and making sessions.

people could ring a 'jargon bell' if anyone used terms that weren't familiar or were overly technical. The sessions didn't begin with technology either, but instead with a playful exploration of our own human senses.

What was created?

Through co-design workshops the group designed a 'damp busting' system including: a mix of sensing technology, community know-how and existing 'open-source'* resources. Everyone acknowledged that community training, human-data collection and face to face work had to go hand in hand with any digital sensing.

"The Bristol Approach is interesting because it is not just a matter of getting the technology right - it's taking a much more holistic approach to gathering data and using it."
- workshop participant

Prototype sensor - Photographer: Ibolya Feher

A prototype frog-cased sensor (because frogs don't mind the damp!) was created by the group and the KWMC Factory to gather temperature and humidity data in homes affected by damp. The sensor sat on a paper lily pad which acted as a 'data diary' for people to record their own human-data notes: e.g - did lots of washing.

A reporting map was created so people could record the damp and mould in their home. It was built using open source software and tested by residents, community groups and damp experts.

By testing these prototypes with people in their homes we were able to write a detailed spec to be developed further.

"*For these things to catch on there needs to be an emotional engagement with the technology and what it can do and how it engages with one's community.*

There's not going to be an engagement with a black box in the corner. There needs to be an aesthetic and a feel and a relationship with these things."
- Caleb Parkin, Lead Artist, The Bristol Approach

What was the result?

As the pilot project of The Bristol Approach, DampBusters generated a lot of valuable learning.

Through the project:

» A team of volunteers were trained in diagnosing different types of damp so they could support others to use the damp diagnosis platform and sensors.
» A schools training package was delivered so students aged 8 and 9 could learn more about data and the impact it has on our everyday lives, from collection to analysis and visualisation.

People who were part of the project:

» Learnt new skills and developed greater understanding of data, damp and sensing technology
» Felt more included in solution making
» Local coders explored whether it was possible to combine existing data sets such as health data with damp report data and sensor data.
» Further investment was made at a city level in technical developments to make citizen sensing infrastructure more accessible
» Ground-work was laid for future partnerships and collaborations, between citizens, charities, universities, community organisations etc.

Learning and reflections

Process:

Focus on people rather than tech: demystifying terms like 'data' during workshops and delaying the introduction of technology creates an environment of transparency and inclusivity where everyone is valued for their knowledge and expertise – whether tech or 'non-tech'.
Design requires time and iteration: it's important to test a basic working prototype of a whole system, rather than perfect each piece in isolation.

Engagement:

Involve people with a range of skills: not everyone will want to be physically involved in the designing and making process, but the work still needs to be open, accessible and transparent.
Establish local partnerships and communication channels: it's essential to work with local partners who have existing relationships with residents.

Technical:

There are many existing sensor kits out there, it is best to use a mix of existing things than create something from scratch. Don't be worried about having everything complete before testing it out. You will need someone who is technically minded and even ideally has some understanding of coding / data and sensor hardware on your team - hack communities, university researchers are often good partners.

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Credits

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