

PRESS RELEASE 13/07/2016

Warmth on prescription delivered by robots on behalf of Islington Council

Robots have been deployed to insulate homes in Islington, 'on prescription'.

Why would NHS be interested in insulating old homes? Its research shows that well-insulated, warm homes improve health and wellbeing. This includes improved respiratory health as well as improved mental health (given the link between excess cold and poor levels of mental wellbeing).

When in 2014 a partnership between the CCG, the local council and a consortium of local housing associations invested £200,000 in retrofitting the homes of 1,000 fuel-poor Oldham residents¹ the benefits accrued as a result of the work – including fewer visits to A&E and GPs' surgeries, for example – were worth around £300,000. As Dr Wilkinson who administered the program pointed out, if every one of Oldham's 20,000 residents living in fuel poverty was helped out of it, it could save the NHS around £6.1 million a year.²

The serious health impacts of cold homes led Islington Council in London to trial a 'Warmth on Prescription' programme aimed at improving the homes of those with serious health conditions. The Council owns thousands of socially rented homes which are inhabited by some of the most vulnerable members of our society. Many of these homes are older, period properties which are energy inefficient, resulting in their inhabitants struggling to stay warm in winter.

Why Robots? As the available insulation measures are expensive, prohibitively disruptive and often inapplicable to properties located in conservation areas little can be done. Traditional measures such as new boilers or loft insulation have been applied where possible, but alone do not bring a property up to modern standards, so many of the homes were still cold and draughty in winter.

Then Islington Council discovered Q-Bot, a UK start-up that developed robots to insulate floors. The device crawls under suspended timber floors and insulates them from below, making the home not just warmer but much less draughty. After running initial trials at 6 properties Islington Council performed energy assessment (EPC) of the test houses to check the improvements. It turned out that insulation floors with robots was the most cost effective energy improvement available (at £970 per each EPC point gained compared to £2,015 when externally insulating the wall and £11,810 when replacing the windows) with the biggest impact on CO₂ reduction for the cost (with over 6.2kg of CO₂ saved for each £1 spent over the lifetime of the measure, 4 times higher return than from installing a new condensing boiler).

What did the residents say?

Before Q-Bot Installation

"Flat has problems with draughts, dust and air quality."
"I would like less air movement."
"I wish it was warmer."

After Q-Bot Installation

"Can keep warm for much longer."
"Noticeably less draughts and dust."

¹ http://www.oldham.gov.uk/homepage/639/warm_homes_oldham

² http://www.sustainablehomes.co.uk/hs-fs/hub/63188/file-2512332556-pdf/docs/Dr_Ian_Wilkinson,_Oldham_CCG.pdf?t=1449681126795

“Work was done to plan; installers were respectful.”

Following the test results as well as the tenant feedback Islington Council is working with DECC to expand the programme in 2016.

John Kolm-Murray, affordable energy manager at Islington Council, said: *“Using Q-Bot allowed us to bring our older homes to a higher standard with less disruption to our tenants than other insulation measures, and at a reasonable cost. Our assessment of the trials has been positive and we are looking at ways we can roll this out across more of our homes.”*

Mathew Holloway, CEO of Q-Bot: *“We are very excited with the new ‘warmth on prescription’ initiative; this model allows all parties to benefit equally from retrofit works and has demonstrable effects on the local Health Service. It makes residents better off, is sustainable for the Council, beneficial for the NHS, and is sustainable for our business allowing us to plan ahead and grow with confidence.”*

For more information on the trial, costs and energy savings please request a full case study.

Contact Details:

Q-Bot – info@q-bot.co / +44 (0)208 877 2709

W: www.q-bot.co

SprayBot:

Q-Bot has developed an innovative system for reducing heat loss through suspended timber floors using a robotic device to apply insulation, called SprayBot. The robot can access the building through an external opening, performs a visual analysis, and builds up a 3D map of the space; it then applies the insulation, before finally inspecting the job done, thus facilitating quality control and validating energy savings. As the robot can fold and deploy through small openings, access can be made through an air vent in the outside wall, or through a small opening in the floor from within the property. This minimises disruption to residents and results in a typical install time of 1-2 days.

Spray applying insulation to suspended timber floors can reduce heat loss through the floor by up to 85%, reduce temperature stratification within the room, and reduce the draughts in the property by up to 40%. This creates a warmer, comfortable home, and reduces energy bills. In older, solid wall properties the service is often the most cost effective way of improving the EPC rating.

In a highly competitive insulation market, robots empower installers, making their work more efficient and safer while insuring the work is carried out at a lower cost, with minimum disruption, and within a very short timeframe. In older, poorly insulated buildings with timber floors, heating bills can be significantly reduced. Thermal comfort for occupants is also greatly enhanced, due to reduced cold draughts and temperature differences.

About Q-Bot:

Q-Bot was founded in 2012 with the objective of using robotics and advanced manufacturing techniques to revolutionise the building and construction industry. The company is funded through a combination of government grants, private investment and sales revenue. The company has been supported by Climate-KIC, InnovateUK, The Department for Energy and Climate Change, The Royal Commission for the Exhibition of 1851 and is currently funded by the European Union's Horizon 2020 program. In 2014 Q-Bot received its first private investment from EcoMachines and in 2016 completed a second round with ClearlySo, Curious White, Wroxall and Minerva Investors Group of Business Angels. The company has offices in London and Paris with a multidisciplinary design and engineering team.

About ClearlySo:

ClearlySo is Europe's leading impact investment bank, working exclusively with businesses and funds delivering positive social, ethical and/or environmental impact along with financial return. It supports capital raising activity through financial advisory work.

Originally founded in 2008, ClearlySo has helped more than 100 clients raise more than £100 million in impact investment from its extensive network of high-net-worth individual and institutional investors.

ClearlySo is headquartered in London.

About EcoMachines Ventures

EcoMachines Ventures is a London-based VC fund that makes seed and follow-on investments in innovative Pan-European B2B hardware companies. We foster the development of world-class technology in the Energy, Transport, Circular Economy, Smart City and Industrial High-tech sectors. Working as a strategic partner alongside successful entrepreneurs and corporate partners, we help promising companies for the next stage of their growth. Learn more at www.ecomachinesventures.com.