Halton Housing

WHO ARE HALTON HOUSING?

SECTION 1

Forward thinking Housing association with

7000+ HOMES
in the Northwest

SERVING 18000
customers with in-house DLO & customer welfare teams

Social RESPONSIBILITY
to customers

SUPPORT FOR VULNERABLE CUSTOMERS

66% OF CUSTOMERS using online services

Reduced impact of **Universal Credit**

WATERFRONT POINT
new ways of working

Full cloud migration

FLEXIBILITY

Smoother transition to Covid-19 remote working

LEADERSHIP MATTERS

INNOVATION
Purpose Driven Innovation Projects developed

USING SMART TECHNOLOGY

SECTION 2

WHY WE WANT TO BECOME PRE-EMPTIVE?

DEVELOP NEW SERVICES, REDUCE COST TO SERVE

COMPELLING IMPERATIVES FOR CHANGE

Net Zero Carbon / Retrofit

No new gas boilers after **2025**

Disrepair/ Habitations Act

🔥 FIRE COMPLIANCE LEGISLATION

SMETER Project with BEIS, Loughborough, UCL, Leeds Beckett University

Budget | Electricity now
Today
£0.11 p/h
menu | tariff

Most advanced thermal study in **EUROPE**

CALCULATE THE HTC OF A HOME WHILE LIVED IN

IDENTIFY AND QUANTIFY RETROFIT PROJECTS

USING SMART METER AND IOT DATA

SEEDS 2020 CATEGORY WINNERS

Use of sensors to monitor homes for environmental conditions

💡 SMART LIGHTING

Use of smart sensors emergency lighting

SUPER-FAST BROADBAND

Roll out of fibre networks

STRATEGIC MANAGEMENT OF ASSETS AND COMPLIANCE THROUGH THE APPLICATION OF BIM AND DIGITAL TWINS: A PLATFORM FOR INNOVATION IN BUILDING MANAGEMENT

CREATING A DIGITAL TWIN OF A 1960'S HIGH RISE TO DEMONSTRATE FIRE SAFETY COMPLIANCE.

THE FUTURE

SECTION 3

Lessons learnt from previous projects

DRIVEN US FURTHER, QUICKER

HORIZON SCANNING

New partnerships with academia add real world value

DATA
FULLY DATA DRIVEN ORGANISATION

DATA DEMOCRATISATION

DATA LITERACY

Drone / Photogrammetry Program

Quicker detection and resolution of issues at height (roofs, facades)

DETAILED VISUAL INFORMATION ABOUT STOCK

USING AI TO DETECT PROBLEMS FROM HIGH RESOLUTION RGB/THERMAL IMAGES

Using AI to detect precise measurements

Using 360 walkthroughs to remotely inspect job progress

BIM (Building information modelling)

DEVELOP BIM STRATEGY FOR END-TO-END VISUAL ASSET MANAGEMENT

Utilise digital twins for insight and modelling

INTRODUCTION OF ENTERPRISE ARCHITECTURE

Incremental adoption of the TOGAF standard

CUSTOMER EXPERIENCE

Insight roles

Digital engagement strategies

INNOVATION PROJECTS HERE

Halton Housing

SEEDS

PROJECT OVERVIEW

We were awarded first place in the 'Smart and Sustainable Digital Innovation' category for our paper 'Strategic Management of Assets and Compliance through the application of BIM and Digital Twins: A platform for innovation in building management' at Leeds Sustainability Institute's International SEEDS (Sustainable Ecological Engineering Design for Society) Conference 2020. The paper, written by Halton Housing's Innovation Team, in partnership with Leeds Beckett University and Site Desk Limited, explores the idea of developing a proof of concept (PoC) building information modelling (BIM) system bringing together offline assets, adding rich mapping and data layers to older buildings which lack drawings and documentation.

WHY DID WE GET INVOLVED?

The annual SEEDS conference brings together experts from around the world focusing on sustainability agenda and the positive and detrimental changes that are taking place. Through review, research and proven practice, the aim of the SEEDS Conference is to foster ideas on how to reduce negative impacts on the environment while providing for the health and wellbeing of society.

The project will help demonstrate the next stage of innovation at Halton Housing by building a proof of concept BIM system. With the addition of live IoT data and Smart Compliance, it will bring together offline assets, adding rich mapping and data layers to older buildings which lack drawings and documentation.

BENEFITS & OUTCOMES

The creation of a centralised easy to navigate system, bringing together information about assets such as fire doors, sprinkler systems, dry risers and showing their exact location in the building, including links to maintenance cycles, certification and documentation will act as a foundation for future innovations in the built environment with the integration of live IoT data. The system will also help with our compliance for new fire legislation and can be expanded to include full building and asset lifecycle.

PARTNERS

Sitedesk Limited and Leeds Beckett University.

INNOVATION
Improving people's lives

SMETER

PROJECT OVERVIEW

The Smart Meter Enabled Thermal Efficiency Ratings (SMETER) programme was established to develop, test, and demonstrate technologies that measure the thermal performance of homes using smart meters and other environmental data.

Working on behalf of the Department for Business, Energy and Industrial Strategy (BEIS), the programme played a key role in improving the reliability and accuracy of Energy Performance Certificates (EPCs). EPCs are currently based on the Standard Assessment Procedure (SAP). Calculating a homes' energy efficiency using SAP can be inaccurate ratings due to assumptions made during a visual survey. By 2030, all social housing homes must have a minimum EPC rating of C (the current guideline is E). As part of the programme, Halton Housing provided 30 homes and enlisted the help of 30 customer volunteers to create an industry-leading data set that is among the largest in the world.

WHY DID WE GET INVOLVED?

As well as being fully funded and enhancing our reputation within the sector the project has given access to data that has not been available before. The data can inform us on how to make better decisions and introduces IoT capabilities to the business. The final solution will better inform housing providers like Halton Housing when making choices on how its homes are improved and upgraded to meet the minimum energy efficiency rating of C by 2030, showing which ones are poor performers and need addressing first. We will also be able to evidence improvements in our carbon footprint.

WHO WAS INVOLVED?

Working on behalf of the Department for Business, Energy and Industrial Strategy (BEIS), the Smart Meter Enabled Thermal Efficiency Ratings (SMETER) programme was delivered by Halton Housing in conjunction with leading universities Loughborough University, Leeds Beckett University, and University College London.

BENEFITS & OUTCOMES

The programme helped to inform our choices on how we improve and upgrade our homes, showing us which ones are poor performers and need addressing first. It allowed us to evidence improvements in our carbon footprint, help advise customers on the average cost to heat their home and allowed us to suggest lifestyle changes to help them save money and reduce their impact on the environment. Thanks to the findings and data from the programme, BEIS is now looking at a solution that can be certified and used across the UK to help contribute towards the UK meeting its 2030 Fuel Poverty target and 2050 Net Zero target.

Sitedesk

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United Kingdom