Homes fit for the Future
Accelerating Deep Retrofit for 2050

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25 September 2019
Housing accounts for over 70% of land use in most cities (UN-Habitat)

Housing is the 4th largest sector of GHG emissions in the UK, accounting for 14% of the overall emission (BEIS)

80% of the homes we will be using in 2050 already exist

Poor housing costs the NHS over £600 million each year (BRE)

18% of the UK population is aged 65 and over, of which 32% are living alone (ONS)
Our Role

• Convening stakeholders across the housing sector
• Breaking down silos across different segments
• Bridging the gaps between the demand and supply
• Accelerating the creation of a new market for innovation

Champion Innovation in Housing
Why are we coming together?

Workshop objectives

1. Create a joint government/industry blueprint for deep retrofit.

2. Attempting to define the “innovation needs” required to bridge the gap between our current ability to deliver deep retrofit, and what we need to do to meet the 2050 goals.

3. We want to capture a coherent story, understood by all the key stakeholders, to support our roadmap.

4. We want to create a coalition of people, and to take forward a national programme of Deep Retrofit.
Outcomes

1. The beginnings of a roadmap that shows the desired outcome, the needs of the users, the capabilities of the suppliers, and the new products and services needed to connect the two.

2. Programme of innovation activities identified that will unlock retrofit for our existing stock

3. People feel deep retrofit is moving in the right direction of becoming a solvable issue

4. Better understanding of their role (and that of their organisation) in this challenge and to consider what they might do to act
Agenda

09:30 – 10:00  Arrival
10:00 – 10:30  Welcome to Urban Innovation Centre & Deep retrofit workshop
10:30 – 10:45  Introductions
10:45 – 11:15  What we already know? (Discussion & Validation)
11:15 – 12:15  What needs to be true? (In order that we can scale Deep Retrofit)
12:15 – 12:30  Open Space Part #1: Setting the questions
12:30 – 13:15  Lunch (and voting)
15:30 – 16:00  Presentations & closing summary
16:00 – 18:00  Drinks & Canapes reception
Considerations

1. Let's not dwell on the past - how are we actually going to take this forward?

2. Let's focus on ways to drive down the cost of deep retrofit and build supply chain capability and capacity.

3. We're going to focus on social housing as the initial target.
Workshop ambitions

• A demand for knowledge, what is the sector is doing in this space today?

• What other organisations are working on, insights, knowledge share, lessons learnt and desire for collaboration.

• Identifying a collective approach to retrofit

• Understanding what actors are needed and by when?

• Joined up thinking and coming together!
Overview of the day

**Demand Side:** The Local Authorities & Housing Associations

**Supply Side:** Businesses / Industry
What we already know?

Many demonstration projects have proved that it is technically possible to retrofit existing homes to a very high standard, but is not happening at anything like the required speed to meet 2050 targets.
What we already know?

Collectively the industries main barriers to adoption are:

- Lack of demand from householders and landlords
- Lack of clear and consistent Government policy direction
- High costs of retrofit & insufficient capability & capacity in the supply chain
- Lack of financing
What needs to be true?
(in order that we can scale Deep Retrofit)

Demand Side:
The Local Authorities & Housing Associations

Supply Side:
Businesses / Industry
Demand

What does a customer need to adopt and scale deep retrofit?

I need accurate picture of starting point e.g. building passport with scenario of interventions and sequence and precision on impact on building energy.

I need contractors / trades having access to the best sustainable practice theory and skill training.

I need an independent trusted assistance service that is free to access.

I need cheaper retrofits. More attractive retrofits with much better performance. A more pronounced social approval for retrofits as a solution to climate and warmer homes.

I need this to be a requirement (e.g. regulation)

I need to bring costs down and find different way to value all savings.

I need to know why it is important to retrofit my house? Will this help my energy bill? How much? What is the payback period? Will this help my wellbeing? To what extent and under what practical and tangible way? Do I need to do it myself? Or can I outsource the whole thing? Will I receive incentives? How much?

I need to better understand the business case for investment and how I can integrate it in to asset management planning.

I need deep retrofit needs to be acknowledged as an urgent priority that has to be dealt with, not something that can be taken or left.

I need to properly understand my housing stock and its correct status. Then I can understand the best measures I could implement to improve its condition. If I don’t understand the problem, how am I supposed to find the solution.

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Demand Side:
The Local Authorities & Housing Associations
Supplier

What does a supplier need to deliver deep retrofit at scale?

I need an obligation and mechanism for building information to be made available and comprehended and passed on.

I need certainty that the work will keep flowing, that the demand is there for the long term and the investment I make in upskilling won’t be wasted. I need to not be undercut by cowboys doing bad retrofit.

I need to link energy efficiently of the home with the energy suppliers i.e. supply “energy services”.

I need to dissolve the design/construction split. Architects to work with contractors so they factor buildability in design and have better cost awareness.

I need access to consumers who want retrofit.

I need access to technologies.

I need standards / clarity / buyers and profit!

I need an independent party who will very verify what I am saying and doing.

I need a knowledge centre – collects data, defines what ‘good’ is and identified skills and training needs.

I need accredited high quality retrofit training that is embedded into building trades – a zero carbon hub for retrofit.

I need clear Government initiatives and incentives.

I need sharing of performance information and details of specification.

I need better information to underspin specification and speed up process.

I need an independent advisory body to provide impartial advice that is project specific and in line with nest practice thinking.
Bridging the gap between Supply & Demand

“What do we need to work on in order to bridge the gap between supply and demand, in order to stimulate and scale Deep Retrofit?”
Themes

What are the desired themes / areas which could help bridge the gap to deliver deep retrofit at scale?

I wish I could establish a framework for data about existing buildings to identify property specific, optimised solutions for consideration briefing.

I wish I could make housing providers understand the value of data and how to be more data driven.

I wish I could achieve a consistent, universal supplier knowledge base in relation to retrofit for delivery.

I wish I could mandate appropriate retrofit to a consistent standard across the entire housing stock, building in feedback loops and reflection to ensure retrofit is sensitive and efficient.

I wish I could generate value in energy efficient low-carbon homes therefore increase demand for them.

I wish I could significantly reduce the cost of deep retrofit otherwise it will cost around £1tirillion for whole UK at cost of £30k - £50k per home.

I wish I could achieve a building typology dependant retrofit templating software tool.

I wish I could streamline retrofit process from design to post installation monitoring.

I wish I could ditch EPCs and replace with building passports.

I wish I could build investor confidence in retrofit one stop shop for finance and knowledge for retrofit.

I wish I could create a compelling brochure for retrofit for social landlords.

I wish I could build on Energiesprong to establish a flexible technical solution platform that addresses many archetypes, gives desirable homes and unlock investment and motivation.

I wish I could create a cluster of 5,000 – 10,000 homes identified for a deep house retrofit.
Innovative Solutions

What are the key opportunities to help deliver deep retrofit at scale?

1. Investor confidence and finance

2. Process innovation to improve productivity

3. Deep understanding of existing stock

4. Integrated retrofit solutions
Innovative Solutions

What are the key opportunities to help deliver deep retrofit at scale?

“A coherent story “one voice” from the sector, identifying what is possible and what is needed for scaling deep retrofit can increase the likelihood of securing future Government funding for deep retrofit initiatives”

Mike Pitts, Innovate UK
Next Steps

- **Synthesis of Workshop & Interviews**: October 19
- **Roadmap development**: November 19
- **Publication for Industry and Government**: December 19
Would you like to contribute to our research?

Connected Places Catapult will be working with other partners and stakeholder groups to further explore the needs and opportunities with regards to bridging the gap between demand and supplier to scaling deep retrofit. To contribute your own thoughts and to find out what role you can play please email info-LDN@cp.catapult.org.uk.