

# DIGITAL BUILDING LOGBOOKS

## AN INTRODUCTION TO LOGBOOKS AND RETROFIT

This is an introductory document on digital building logbooks for the retrofit industry. It sets the scene for why the National Retrofit Hub is engaging in logbooks, and how we think that they could play an important role in scaling up good quality, locally delivered retrofit across the UK. Read on to find out about: work already done on digital building logbooks within the industry, how logbooks could be expanded to facilitate retrofit and their potential to overcome barriers to retrofit at scale.

**A Digital Building Logbook is a secure online tool, that brings together information on a building. Data is integrated, added and updated through a variety of sources. The logbook aims to make everything you might need to know about a building accessible in one place.**

### DOCUMENT CONTENTS

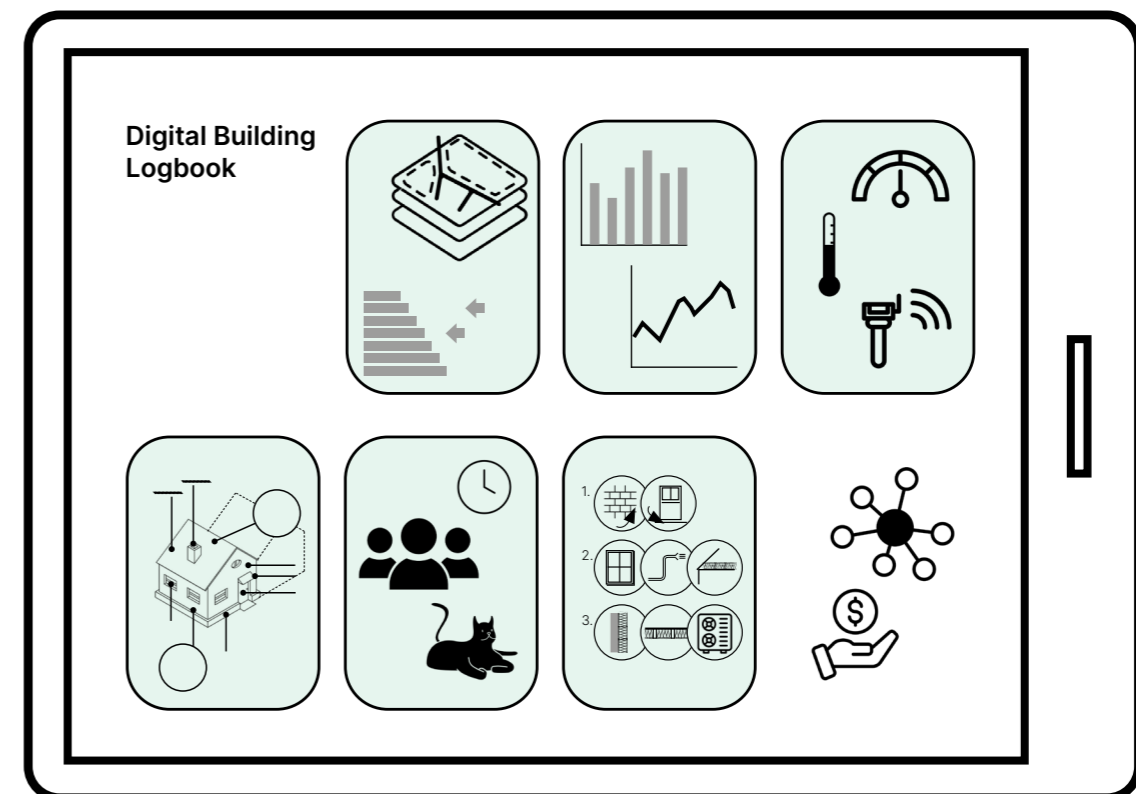
#### Data:

Informing Effective Retrofit Plans	2
Dynamic, Interoperable and Accessible	3

#### Digital Building Logbooks:

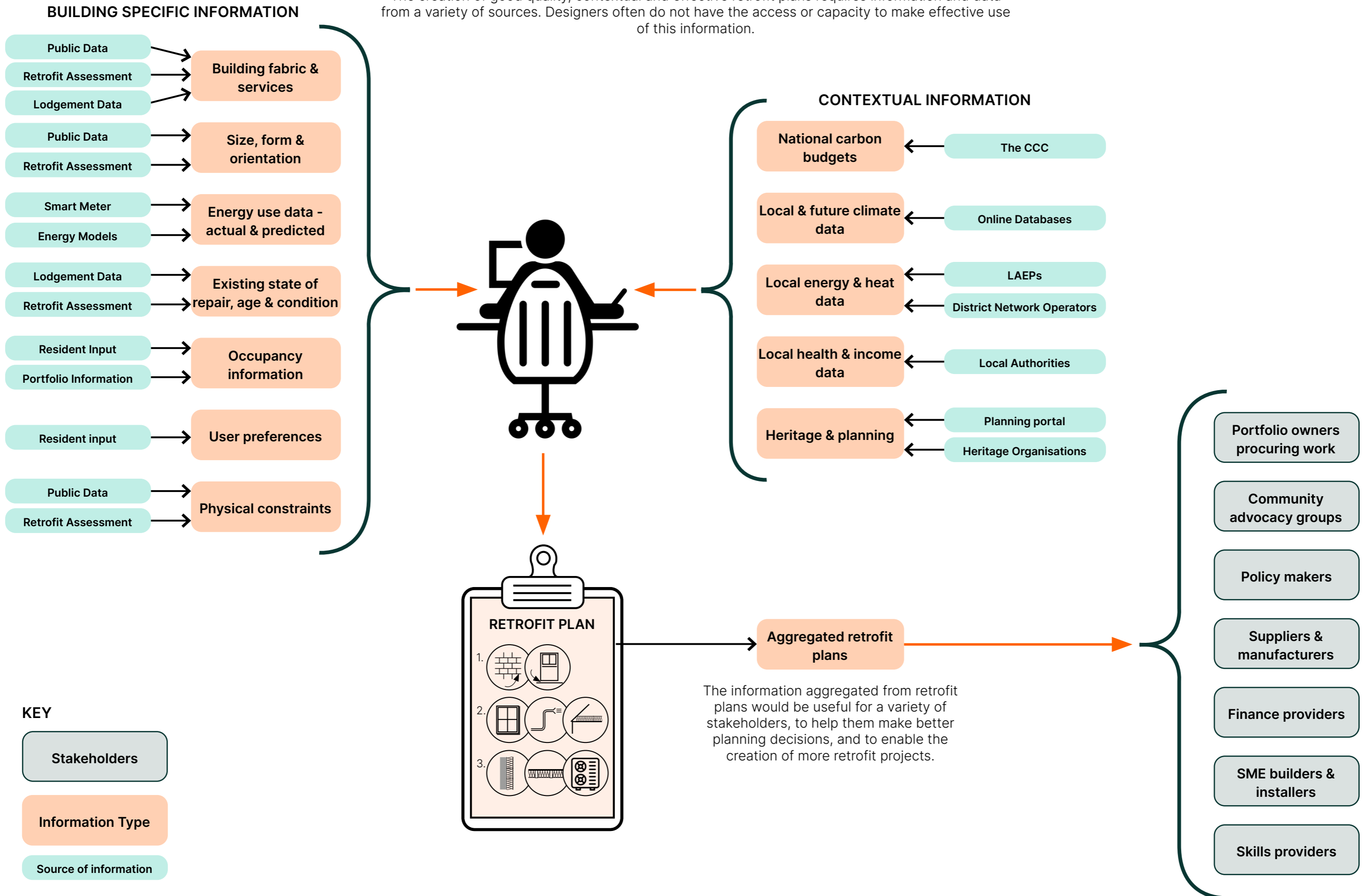
UK Industry Progress to Date	4
Potential Use in Retrofit	5
The Aspiration	6
Helping Overcome Barriers to Retrofit at Scale	7
Use in Other Sectors	8

Key Questions	9
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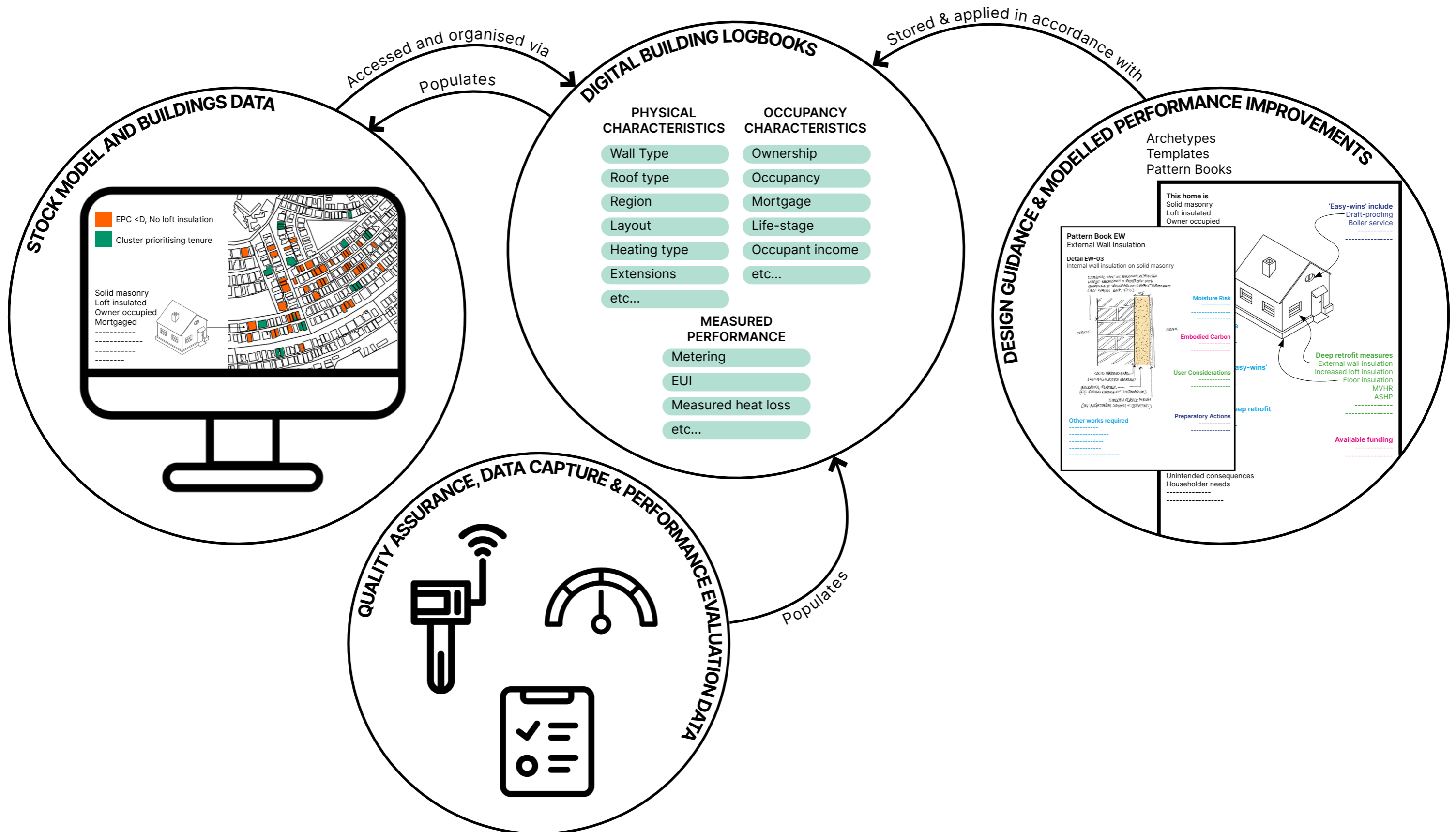
# DATA: INFORMING EFFECTIVE RETROFIT PLANS

The creation of good quality, contextual and effective retrofit plans requires information and data from a variety of sources. Designers often do not have the access or capacity to make effective use of this information.



## DATA: DYNAMIC, INTEROPERABLE AND ACCESSIBLE

Digital building logbooks have the potential to enable simplified and instant access to the up-to-date information and data produced and available for a building. These digital repositories could help store information produced as part of a retrofit assessment, including the retrofit plan, and through building performance evaluation and monitoring, so that it is easily available later and for others. Digitally capturing this information could also allow for it to be aggregated, to better inform retrofit stakeholders and decision-makers operating at a strategic level. A standardised framework for data capture does not exist yet, but would not only make information transferable and interoperable, but help structure and inform retrofit guidance such as pattern books.



# DIGITAL BUILDING LOGBOOKS: UK INDUSTRY PROGRESS TO DATE

The following organisations are working on defining the scope, understanding the use cases, enabling the uptake and setting the standards for digital building logbooks:



## **Residential Logbook Association**

Trade body representing 6 logbook providers

Encouraged by DLUHC to develop a self-regulatory process to create a set of standards for the property logbook industry.

Led to the creation of the Digital Register for Logbooks to provide better verification around property transactions.

Currently working on widening the scope of data held to support retrofit projects.

Working with the legal industry and law commission to help digitise building information, and make property logbooks a legal asset.

Working with the DLUHC/Ministry of Housing to test logbooks with their First Homes (Help To Buy) Initiative.

Support for lettings and rentals.

Incorporating new-build digital handover packs.

Collaborating with mortgage and loan providers to better integrate information on available finance.

Currently working on widening the scope of data held to support retrofit projects



## **Home Buying & Selling Group**

Group of property, legal and finance professionals

Set-up in 2016 by DLUHC in partnership with the property industry to drive digitisation of property transactions.

Coordinate the Property Data Trust Framework.

Collaborated with the RLBA, RICS and others to create standards for the collection, storage, and transfer of data included in the property logbooks.



## **Green Finance Institute**

Forum for innovation in green finance

Published Building Renovation Passports: Creating the Pathway to Zero Carbon Homes, in collaboration with the RICS, the RLBA, and others. The document provides recommendations on:

- Data to be included
- Data collection, ownership and accessibility
- Roles and responsibilities
- Sector-by-sector benefits and opportunities



## **Climate X Change**

Scotland's centre for expertise connecting climate change research and policy

Reviewed barriers and opportunities to the implementation of property logbooks in Scotland.

Concluded: "There is significant hope (based on extensive stakeholder engagement, development and testing) that this enhanced building data availability (and its transparency for relevant stakeholders) will have a major impact on scaling up retrofit activity."



## **iBRoad**

EU Horizon Fund project

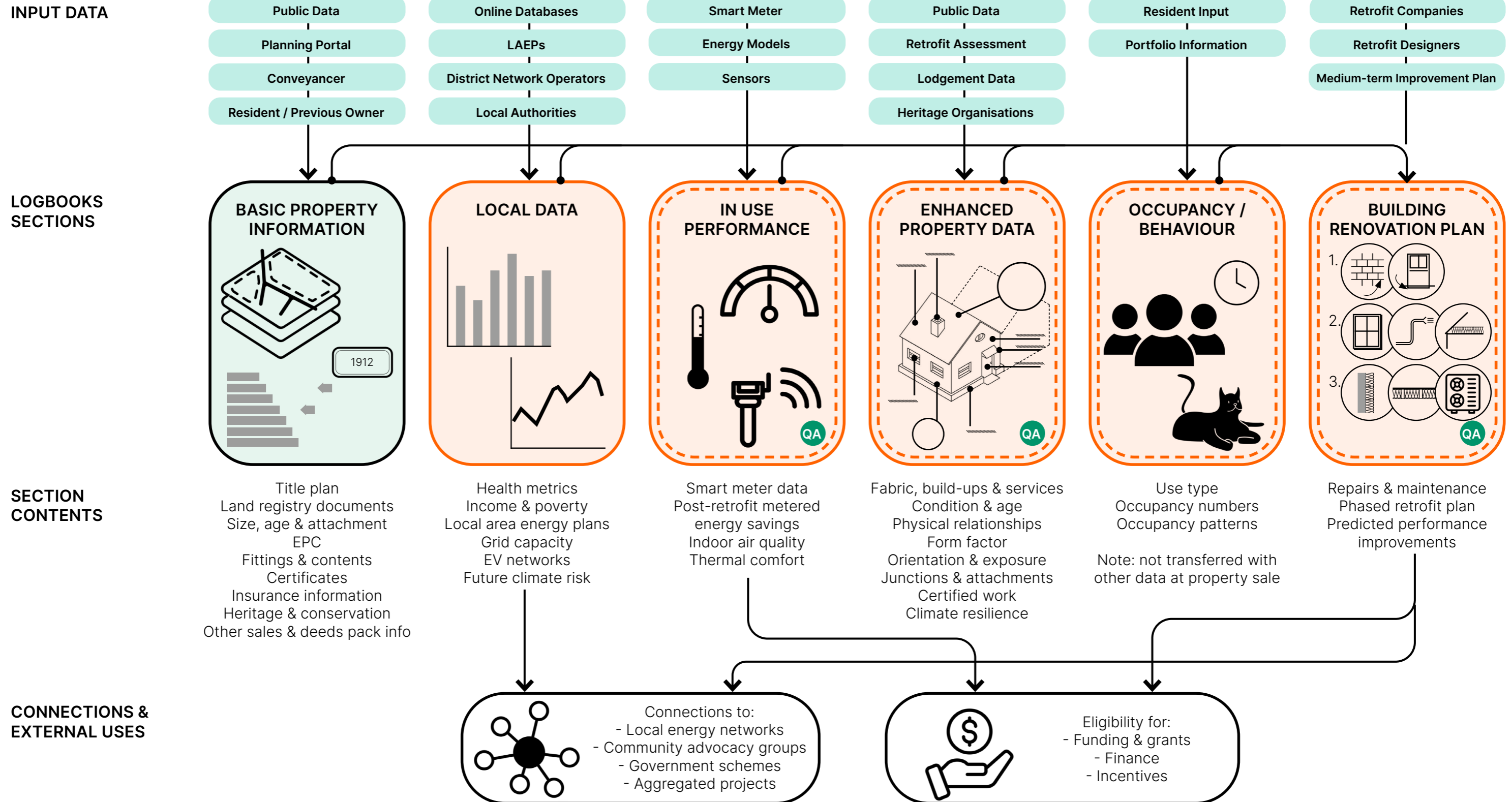
Designed, developed, and tested the creation of Individual Building Renovation Roadmaps for single-family houses.

Currently supporting national and regional authorities, agencies, and other organisations across the EU to adopt these roadmaps.

[FOR MORE INFORMATION, CLICK HERE TO READ THE RLBA DIGITAL BUILDING LOGBOOK PRIMER.](#)


# DIGITAL BUILDING LOGBOOKS: POTENTIAL USE IN RETROFIT


There is the potential to enhance, augment and develop logbook information to enable good quality retrofit at scale. Existing and new data inputs could be collected into new logbook sections as follows:





## KEY

Source of information

 The data schema for this section has been defined and agreed. Current logbooks provide this information.

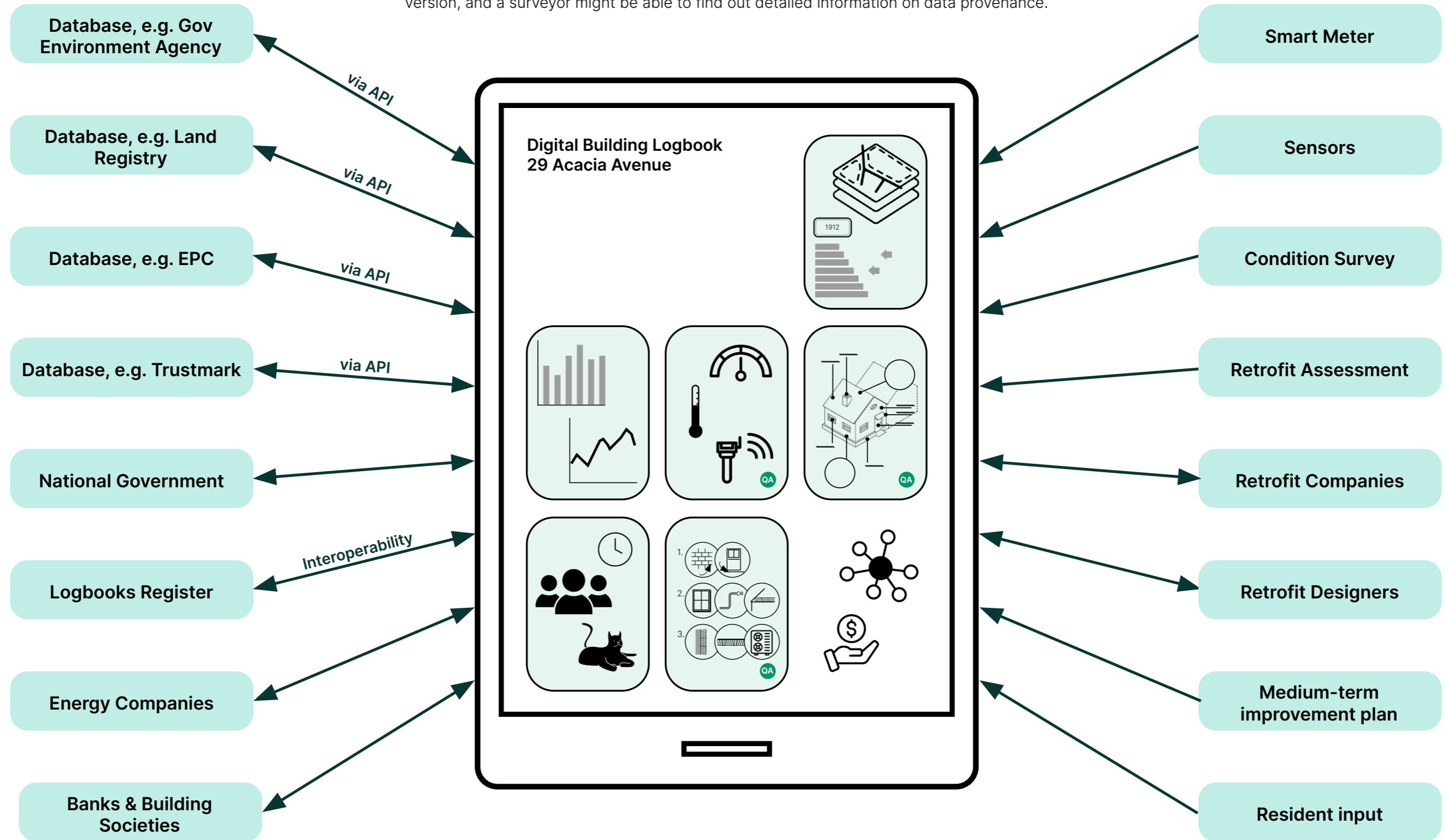
 The data schema for this section has not been defined or agreed. The NRH could play a convening role to produce a schema.

 These sections must be dynamic, able to be updated and adapted over time.

 Quality Assurance processes should be embedded within the data collection and use for this section.

## DIGITAL BUILDING LOGBOOKS: THE ASPIRATION

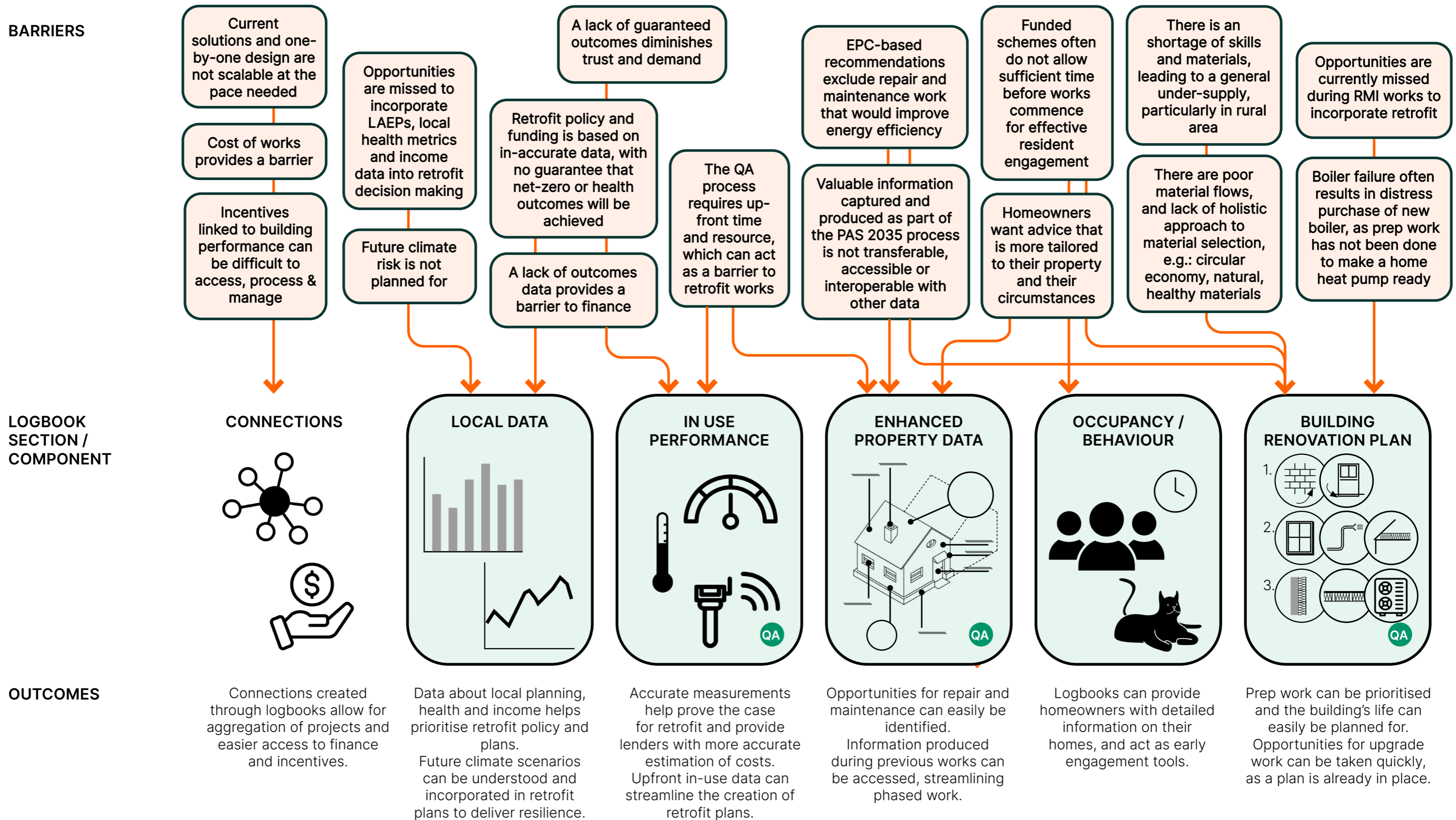
The logbook is a secure, online tool providing access to building information. The aspiration is for these to be connected to various data sources, organisations and stakeholders, drawing live information in, and providing information back out. The interface might look different depending on the user, for example, a homeowner might see a streamlined, more user friendly version, and a surveyor might be able to find out detailed information on data provenance.



[FOR MORE INFORMATION ON THE DATA SOURCES CURRENTLY AVAILABLE, CLICK HERE.](#)

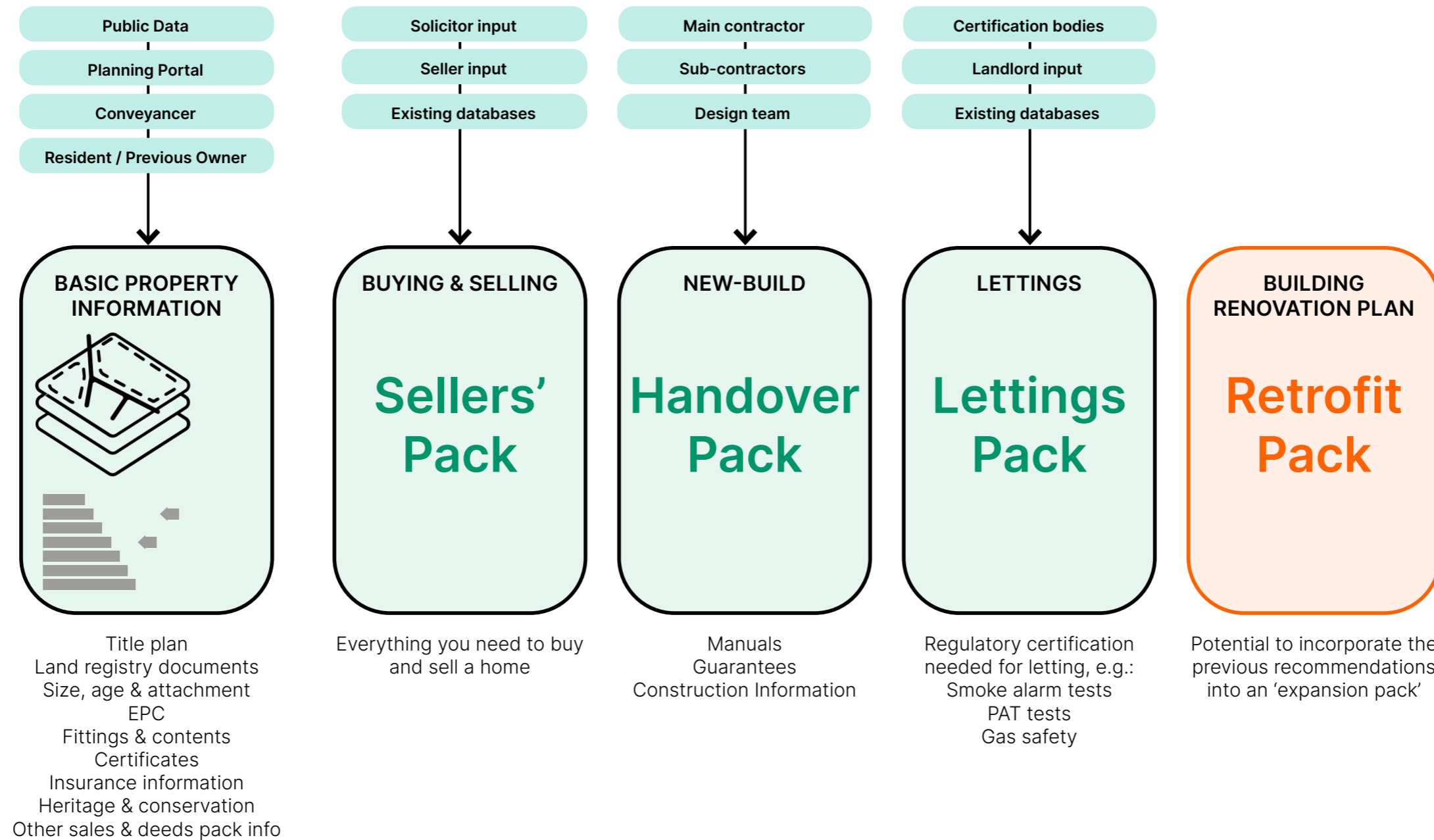
# DIGITAL BUILDING LOGBOOKS: HELPING OVERCOME BARRIERS TO RETROFIT AT SCALE

Digital building logbooks have the potential to help overcome barriers that have been identified by the National Retrofit Strategy and by the National Retrofit Hub's working groups.



## DIGITAL BUILDING LOGBOOKS: USE IN OTHER SECTORS

Other sectors are using 'expansion packs' to digital building logbooks to streamline transactions and provide a better service to customers. Examples include:



### KEY

Source of information



The data schema for this section has been defined and agreed. Current logbooks provide this information.



The data schema for this section has not been defined or agreed. The NRH could play a convening role to produce a schema.

## KEY QUESTIONS

The National Retrofit Hub held a round table with potential logbook stakeholders, including: surveyors, energy companies, financiers, councils, and building owners, and asked for their views on the following questions:

### What could drive the adoption of logbooks within the industry and for homeowners or residents?

Our panel suggested that to enable adoption logbooks should be:

- Easy to use and access
- Free or low-cost
- Interoperable
- Transferable
- Pre-populated
- Government endorsed
- Linked to advice and incentives
- Useful
- Compatible with retrofit data standards

The group also identified the need for:

- Sales routes
- Channel partners
- Better awareness
- Legislation
- Public access

### Who should pay for logbooks?

Options include:

- The conveyancer or retrofit agency, bundled with other services.
- The lender, as part of a mortgage deal, or through an incentive from an energy company.
- Property owners, for long-term data access to their property's maintenance plan

Trigger points in a building's life, such as a sale, letting, or refurbishment, would provide a good opportunity to deploy a logbook.

Government funding or incentives could have a big impact on uptake. Logbooks could be offered as part of a funding or voucher scheme, particularly where retrofit assessments are required to comply with PAS 2035.

### What would be needed so that organisations could offer or provide logbooks?

Our panel suggested that they would need:

- Partners to help them engage with logbooks
- Confidence in the security of data.
- Support with data management internally.
- Clarity on what data to ask for from consultants or contractors.
- For there to be a schema and agreed standards to ensure interoperability across platforms.
- A clear way of sharing logbooks.
- Clarity on data provenance, reliability and the liability associated with using data already contained in a logbook.
- Funding for staff time, ongoing support, concise training and resources.
- Agencies or aggregate organisation that could manage logbooks on behalf of local authorities.
- Agreements to use data linked to current funding streams, e.g.: ECO, SHDF, HUG.
- The ability to retain versioning of data, full update histories and hence improvements made.

### How can we ensure the contents of the log-book are accessible and easy to understand for residents?

Different user interfaces for different types of stakeholders are key. A homeowner or resident will need to see less, and simplified information.

Homeowners particularly require information that helps them make decisions.

Graphic displays and dashboards would also improve accessibility and engagement.

Easy search would improve accessibility.

A standardised data schema and format could improve access for people viewing multiple logbooks.

## KEY QUESTIONS

Our working group participants also asked us the following questions:

### What level of detail would be captured in log books? Would changing a light bulb be included?

This question should be asked when creating a data schema for each of the sections identified. Logbooks need enough data to be useful when making decisions, but not over-burden the user or surveyor. This will be a careful balance to strike.

### How can logbooks consider shared assets, like community energy schemes and heat networks?

These items will be important to incorporate within the data schemas for the local data and connections sections. Logbooks should enable engagement with and connection to shared assets by providing up-to-date information on what systems are locally available.

### How can embodied carbon and whole life carbon be incorporated?

Logbooks have the potential to include information on the materials needed as part of a retrofit plan, and the materials already within a building, via material passports. This should enable whole life carbon to be considered more holistically, and unlock supply chain certainty and the circular economy.

### Will the state of maintenance and repair be included in the logbook?

Yes, this is key to inform a retrofit plan.

### How joined up are developing ideas around logbooks with the golden thread and government policy?

Making strong and useful connection between building safety, the golden thread, and material passports should be considered when developing data schemas for each of the sections identified.

### Will logbooks be reliant on EPC data only?

No, logbooks will contain, and sit alongside EPCs, but provide much more information, drawn from various sources.

### How will user behaviour be integrated to logbook?

This could be from user input, surveys or performance data such as CO2 monitoring. Data protection, security and ownership will be key considerations when thinking about how to manage, store and provide access to this data.

### How can logbooks be used across tenures, by social landlords, private landlords, residents and homeowners?

This is key to enabling the local delivery of retrofit at scale. An agreed data schema, and interoperability could ensure that multiple logbooks are able to be aggregated and read together.

Further work is required to ensure this goal is met.

This document was created with contributions from:  
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and working group 1 participants.

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