



RISE

Retrofit information,
support & expertise

Quality through connected data

Supply chain advice pack

August 2026

Funded by:



Department for
Energy Security
& Net Zero

www.riseretrofit.org.uk



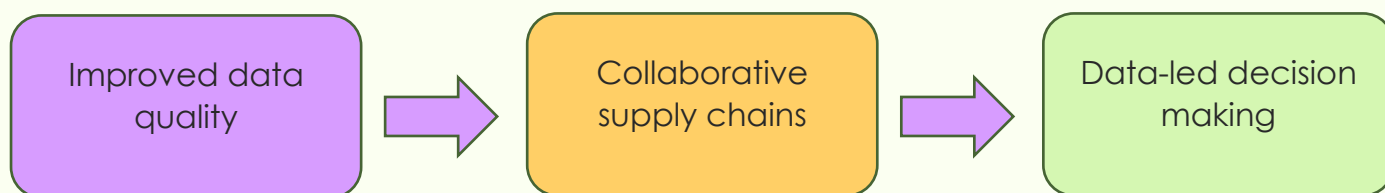
Introduction

The success of a retrofit project depends on more than the quality of the measures installed. High-quality retrofit delivery relies on having accurate, consistent and accessible information throughout the entire retrofit lifecycle. From strategic planning and assessment through to design, installation, monitoring and future maintenance, connected data enables better decisions, supports compliance, reduces risk and improves outcomes for residents.

As retrofit programmes scale up across the UK, organisations are increasingly recognising that disconnected spreadsheets, emails and paper records can create inefficiencies, duplication and quality risks. Connected data systems allow information to flow seamlessly between stakeholders, helping everyone involved work from the same evidence base.

This advice pack explores how connected data can strengthen quality management, improve collaboration across the supply chain, support compliance requirements and create reliable audit trails throughout retrofit delivery.

Readers that would like this document in a more accessible format should contact rise@turntown.co.uk.



Why connected data matters

Connected data refers to information that is captured, managed and shared in a structured way across multiple stages of a retrofit project. Rather than being held in isolated systems, connected data creates a continuous record that supports decision-making throughout the lifecycle of a home.

Retrofit projects generate significant amounts of information, including:

- Property surveys
- Occupancy assessments
- EPC information
- Stock condition data
- Retrofit designs
- Product specifications
- Installation evidence
- Ventilation calculations
- Test certificates

- Photographs
- Resident communications
- Monitoring and evaluation data

When this information is connected and accessible, organisations can make informed decisions, avoid duplication and maintain confidence in project quality. PAS 2035 reflects this whole-house approach, requiring relevant information to be gathered, reviewed and handed over between project stages.¹

Connected data supports quality by helping organisations:

1. Understand the property, its condition and resident needs.
2. Select suitable retrofit measures.
3. Reduce design and installation errors.
4. Identify risks earlier.
5. Improve coordination between stakeholders.
6. Demonstrate compliance with scheme requirements.
7. Maintain robust project records.
8. Monitor actual performance after installation.
9. Learn lessons for future projects.
10. Improve resident outcomes.

Connected data throughout the retrofit lifecycle

Quality retrofit delivery requires information to flow through every project stage.

Strategic targeting and planning

Before projects begin, clients and housing organisations often hold significant quantities of data that can support programme planning.

Examples include:

- Asset management records
- Stock condition surveys
- Repairs and maintenance histories
- EPC data
- Fuel poverty indicators
- Resident vulnerability information
- Previous improvement works
- Damp and mould records

¹ [pas_2035_2023.pdf](#)

Combining these datasets helps organisations identify suitable properties, understand risks and prioritise interventions more effectively.

For example, EPC ratings may suggest that two homes have similar performance. However, when repairs records, mould complaints and occupancy data are reviewed alongside EPC information, significant differences in need and risk may become apparent.

Useful **examples of data-driven housing planning** can be found through Energy Systems Catapult's open data resources.²

1. Retrofit assessment

Assessment forms the foundation of every PAS 2035 retrofit project.

During this stage, information is gathered regarding:

- Property construction
- Occupancy patterns
- Ventilation provision
- Moisture risks
- Building defects
- Existing heating systems
- Energy performance
- Heritage constraints
- Resident needs

The quality of all subsequent decisions depends upon the accuracy of information collected at this stage.

Poor-quality assessment data can result in:

1. Inappropriate measure selection
2. Increased project risks
3. Unforeseen defects
4. Additional costs
5. Delays to delivery

By contrast, high-quality assessment data supports robust and evidence-based retrofit design.

2. Design and improvement planning

Retrofit designers rely heavily on assessment information to develop appropriate solutions.

Key design-stage data includes:

- Improvement Options Evaluations
- Medium-Term Improvement Plans
- Ventilation strategies
- Airtightness strategies

² [Open Data for Net Zero | Energy Systems Catapult](#)

- Product specifications
- Thermal calculations
- Sequencing considerations
- Risk assessments

Where information is missing or inaccurate, the risk of design assumptions increases.

Connected data enables designers to access assessment findings directly, reducing misunderstandings and ensuring design decisions reflect actual building conditions rather than assumptions.

3. Installation and quality assurance (QA)

The installation phase generates substantial amounts of evidence and project information.

This commonly includes:

1. Installation photographs
2. Product records
3. Material specifications
4. Site inspection results
5. Variations and change requests
6. Non-conformance reports
7. Quality assurance records
8. Commissioning certificates

When managed effectively, this information provides clear evidence that work has been completed in accordance with design requirements.³

A connected approach ensures installation teams, retrofit coordinators and clients can access information in real time, reducing disputes and improving quality assurance processes.

4. Handover, monitoring and evaluation

Data management does not stop when installation work is complete.

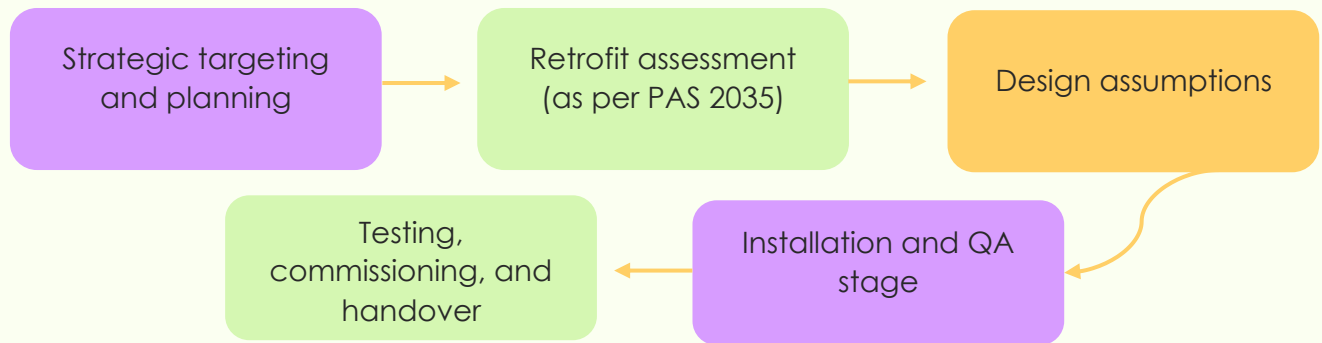
Post-installation information can include:

- Energy consumption data
- Smart meter information
- Temperature monitoring
- Humidity monitoring
- Indoor air quality data
- Resident feedback
- Defects and complaints
- Maintenance records

This information helps organisations understand whether intended outcomes have been achieved.

³ [Retrofit Portal • TrustMark](#)

Monitoring and evaluation is increasingly recognised as a critical component of retrofit quality assurance because it enables organisations to compare design intent with real-world performance.⁴



Why data sharing across the supply chain is essential

Retrofit delivery involves a wide range of stakeholders:

Stakeholder	Key responsibilities	Typical data inputs
Retrofit Assessor	Assess property condition and risks.	Survey data, occupancy information, photographs, ventilation assessments..
Retrofit Designer	Develop retrofit solutions.	Design calculations, specifications, improvement plans.
Installer	Deliver retrofit measures.	Installation records, product information, quality evidence.
Retrofit Coordinator	Oversee PAS 2035 compliance.	Risk assessments, approvals, compliance documentation.
Client / Landlord	Asset ownership and programme oversight.	Asset data, stock condition records, strategic objectives.
Resident Liaison Team	Resident engagement and support.	Feedback, access arrangements, customer communications.
Asset Management Team	Long-term asset planning.	Maintenance records, future investment plans, defects data.

⁴ [Monitoring-and-Evaluation.pdf](#)



Every stakeholder contributes information and relies on information produced by others.

Where data is fragmented or inaccessible, *risks increase significantly*.

Common consequences of poor data sharing

1. Assessments not reflected in designs.
2. Designers working from outdated information.
3. Installation errors.
4. Delays to projects.
5. Increased rework.
6. Duplicate surveys.
7. Inconsistent resident communications.
8. Missing compliance evidence.
9. Reduced confidence in project outcomes.

These issues often result in additional cost whilst undermining overall project quality.

How the supply chain can access and use connected data

The value of connected data depends on ensuring the right information is available to the right people at the right time. While approaches **vary between programmes and organisations**, retrofit projects are increasingly using digital platforms that enable authorised stakeholders to access relevant project information through a single shared environment.

Examples of how supply chain partners may access connected data include:

- Client and landlord asset management systems.
- Retrofit programme management platforms.
- Contractor portals.
- Common Data Environments (CDEs).
- PAS 2035 compliance management systems.
- Digital property records and retrofit passports.
- Shared document management systems.
- Mobile inspection and quality assurance applications.

Access permissions should be proportionate to roles and responsibilities, ensuring stakeholders can **view and contribute information** relevant to their part of the retrofit process whilst maintaining appropriate data protection and security controls.

How connected data benefits retrofit delivery

Access to connected data enables supply chain partners to make better-informed decisions throughout the retrofit lifecycle.

Example 1: Avoiding abortive visits

An installer reviews survey information, photographs and access requirements before attending site. Potential issues such as **restricted loft access, resident availability or existing defects** are identified in advance, reducing wasted visits and programme delays.

Example 2: Improving installation quality

A ventilation installer can access the retrofit design, ventilation calculations and commissioning requirements directly through a shared platform. This helps **ensure installation matches the design intent** and reduces the risk of performance gaps.

Example 3: Faster issue resolution

Where defects or unexpected conditions are identified on site, photographs and observations can be uploaded immediately and reviewed by designers, coordinators and clients. This allows **decisions to be made more quickly** and reduces delays waiting for information to be passed between stakeholders.

Moving beyond EPC data

EPCs remain an important tool within retrofit planning.

However, EPCs represent modelled performance rather than actual building performance.

Real-world outcomes can differ considerably due to:

- Occupant behaviour
- Installation quality
- Ventilation effectiveness
- Moisture conditions
- Heating controls
- Maintenance practices
- Building defects

As retrofit programmes mature, organisations are increasingly supplementing EPC data with operational performance information.⁵

Useful sources of real-world performance data

- Smart meter data
- Energy billing information
- Temperature monitoring

⁵ [Green Homes Grant \(GHG\) SMETER project evaluation - GOV.UK](#)

- Humidity monitoring
- Indoor air quality data
- Stock condition surveys
- Damp and mould records
- Repairs data
- Resident satisfaction surveys
- Defect reporting systems

Combining these datasets provides a richer understanding of actual building performance and allows organisations to make better-informed retrofit decisions.

Improving resident outcomes through data

Connected data ultimately exists to improve outcomes for residents.

Using high-quality information throughout the retrofit process can help organisations:

- Target homes most in need.
- Identify fuel poverty risks.
- Improve thermal comfort.
- Reduce overheating risks.
- Address damp and mould issues.
- Minimise disruption during works.
- Improve handover information.
- Monitor whether benefits are being achieved.

Questions organisations should ask after installation include:

- Is the resident finding the home warmer?
- Have energy bills reduced?
- Do residents understand how to operate new systems?
- Has indoor air quality improved?
- Are there any signs of damp or condensation?
- Are there emerging maintenance issues?

Monitoring these outcomes creates opportunities for continuous learning and service improvement.

Digital platforms and connected retrofit data

Digital platforms are becoming increasingly important in retrofit delivery.

They can provide a single source of truth for project information, helping organisations avoid fragmented records across multiple systems.

Benefits of Digital Platforms

1. Improved collaboration
2. Reduced duplication
3. Greater transparency
4. Better version control

5. Easier reporting
6. Stronger compliance management
7. Enhanced auditability

Many organisations are now integrating retrofit information with:

- Asset management systems
- Customer databases
- Repairs systems
- Contractor portals
- Monitoring platforms
- Compliance systems

This integration provides a more holistic view of properties and improves decision-making across retrofit programmes.

Retrofit passports and digital property records

Despite being in its infancy as an idea, retrofit passports are also becoming increasingly put forward to tackle challenges with data in retrofit.

A retrofit passport is a long-term digital record that captures important property information, including:

- Building characteristics
- Assessment findings
- Retrofit measures installed
- Product information
- Warranties
- Maintenance requirements
- Future improvement opportunities
- Performance information

By maintaining a consistent property record, organisations could avoid repeating surveys, plan future improvements more efficiently and preserve knowledge about completed works.

Summary

Connected data is a critical enabler of high-quality retrofit delivery. By ensuring information flows effectively between assessment, design, installation, monitoring and maintenance activities, organisations can improve decision-making, strengthen compliance, reduce risk and deliver better outcomes for residents.

As digital retrofit delivery continues to evolve, those organisations that invest in effective data management, collaboration and performance monitoring will be best placed to deliver successful, customer-focused retrofit programmes at scale.

Resources



Podcast: All RISE podcasts are available [here](#).

Podcast: “navigating retrofit with data with Knauf” available [here](#).



Masterclass: All RISE masterclasses are available [here](#).

Masterclass: “Data: getting it right” available [here](#).



Advice pack: All RISE advice packs available [here](#).

Toolkit: “Property and Household Data Sources” available ([here](#)).



This pack aims to share insights, good practices, and lessons learned from the sector. It is intended for informational purposes only and does not constitute as recommendations or endorsements of specific suppliers, products, or services or as legal advice. Please always check the latest regulations.



www.riseretrofit.org.uk



RISE – Retrofit information, support & expertise