

# Review of existing Building Renovation Passport schemes and initiatives

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# Building Renovation Passport in the EPBD

(9) The following Article is inserted:

*Article 19a*

## **Feasibility study**

The Commission shall, before 2020, conclude a feasibility study, clarifying the possibilities and timeline to introduce the inspection of stand-alone ventilation systems and an optional building renovation passport that is complementary to the energy performance certificates, in order to provide a long-term, step-by-step renovation roadmap for a specific building based on quality criteria, following an energy audit, and outlining relevant measures and renovations that could improve the energy performance.’.

# Process of selecting relevant initiatives

## Step 1) Criteria

**Intended outcomes**

- Improve renovation guidance
- Achieve a cost-effective decarbonisation of building stock
- Direct financial support and private investments to deep renovations
- Increase awareness among building owners
- Support training of experts
- Stimulate local job creation
- Aggregate demand to provide sufficient scale
- Reduce energy poverty and improve health
- Contribute to energy independence
- Support the shift to a circular building sector

**Indicators**

- Number of renovations
- Achieved energy savings
- Investments in energy renovations
- Accuracy of renovation decision
- Quality of the works
- Performance of the works
- Scope of renovation measures
- Number of trained auditors and energy experts
- Innovation
- Smart use of building data
- Scalability of solution
- Effect on indoor environmental quality
- Building stock coverage
- Level of support by public authorities

**Types of cases considered**

- Renovation roadmaps
- Digital logbooks
- One-stop shops
- Online renovation advice tools
- Energy audit frameworks
- EPC and other certification schemes



## Step 2) Quick-scan of cases

Case	Country	Number of Renovations	Quality of the works	Scalability of solution	Investments in energy renovations	Accuracy of renovation decision	Performance of the works	Use of trained auditors and energy experts	Renovation	Smart use of building data	Effect on EPC	Level of support by public authorities	Building stock coverage	Scope of renovation measures	Score	
Individueller Sanierungsfahrplan für Wohngebäude (ISF)	DE	3	2	2	2	3	3	3	3	2	2	2	2	2	3	31
Sanierungsfahrplan BW	DE	2	2	2	2	3	3	3	2	2	2	2	2	2	3	36
Woningpas & EPC+	BE	2	2	1	1	3	3	3	2	3	1	2	2	2	3	35
Plenty projects - Home Energy Masterplan	UK	3	2	2	1	3	1	3	1	1	1	3	2	3	3	33
Det digitale energimærke	DK	3	1	2	2	3	1	1	2	3	2	3	3	2	2	33
BetterHome	DK	2	2	2	2	2	1	3	2	3	2	3	3	2	2	32
Certificação Energética dos Edifícios	PT	3	1	2	2	2	1	1	2	3	2	2	2	2	3	32
Picardie Pass Renovation	FR	2	2	2	3	2	3	3	2	1	1	2	2	2	2	32
Passeport Efficacité Energétique	FR	1	2	3	1	3	3	1	1	3	1	2	2	2	2	31
Energieberatung	DE	3	2	1	2	2	1	3	1	1	2	2	3	2	2	31
Oktave	FR	1	3	2	3	3	3	2	1	1	1	1	2	2	2	31
Le Passeport Energie Habitat (ALEC43)	FR	2	2	2	2	3	1	2	1	2	1	2	2	2	2	30
Superhomes	IE	1	2	2	2	3	3	1	2	1	2	2	2	2	2	30
Rénoclimat	CAN	3	1	3	2	3	1	2	1	0	1	2	2	2	2	30
Effilogis - Bourgogne-France-Comté	FR	2	2	1	2	3	3	2	1	2	1	2	2	2	2	30
DCRAM	FR	1	2	1	2	3	3	2	3	1	2	2	2	2	2	30
Ma Rénov	FR	2	2	2	3	1	2	1	2	2	1	2	2	2	2	30
Effizienzhaus-online (Bosch)	DE	3	2	2	2	1	1	1	1	3	0	2	2	2	2	25
ERRoad	EU	0	1	3	1	3	3	2	2	3	2	0	2	3	2	25
HomeEnergy	NL	2	2	2	1	2	1	2	2	1	1	2	2	2	2	25
Home Energy Score	US	3	1	2	2	1	1	3	1	1	1	2	2	2	2	22
Building Energy Asset Score	US	3	1	2	1	1	1	3	1	2	1	2	2	2	2	22
EPBM Sanierungspassport	DE	3	2	2	2	1	1	0	1	3	0	2	2	2	2	22
Heizspiegel (CO2online)	DE	3	1	2	1	2	1	0	1	3	1	2	2	3	2	21
Building Energy Rating Certificate	IE	3	1	1	1	1	1	2	1	2	2	2	3	2	2	21
Efficiency Capital	CAN	1	1	1	3	2	2	1	1	0	1	2	2	1	2	20
ALDREN	EU	0	1	3	1	3	3	2	2	3	0	1	3	1	3	20
Heat Index	US	3	1	3	1	1	3	2	1	3	1	2	1	2	1	20
Superhomes Manager	DE	0	0	3	2	0	0	1	0	0	0	0	3	0	2	18
Fama Progetto Energia	IT	0	1	2	2	1	2	0	2	0	1	1	2	2	2	18
Shunter's care-free energy renovation package	EU	0	2	2	1	2	1	0	1	0	0	1	1	2	2	18
Greenland	EU	1	1	3	1	1	1	1	1	0	0	0	3	1	1	16
Irish "Building Renovation Passport"	IE	0	0	2	1	1	1	1	1	2	1	0	3	1	1	16
Dutch "Woningpas"	NL	0	1	1	1	1	1	1	1	1	1	1	1	1	1	14



## Step 3) Selection of "deep dives"

Nr	Case	Country	Type
1	BetterHome	DK	One-stop-shop
2	Certificação Energética dos Edifícios	PT	Energy performance certificate
3	Det digitale energimærke	DK	Energy performance certificate
4	Energieberatung	DE	Energy audit framework
5	EPC+ & Woningpas	BE	Building renovation passport
6	HeizCheck	DE	Online advice tool
7	Home Energy Masterplan	UK	Building renovation passport
8	Individueller Sanierungsfahrplan für Wohngebäude	DE	Building renovation passport
9	Ma Rénov	FR	One-stop-shop
10	Oktave	FR	One-stop-shop
11	Passeport Efficacité Energétique	FR	Building renovation passport
12	Passeport Energie Habitat	FR	Building renovation passport
13	Picardie Pass Renovation	FR	One-stop-shop
14	Rénoclimat	CAN	One-stop-shop
15	Sanierungsfahrplan BW	DE	Building renovation passport
16	Superhomes	IE	One-stop-shop

# Selected “deep dives”

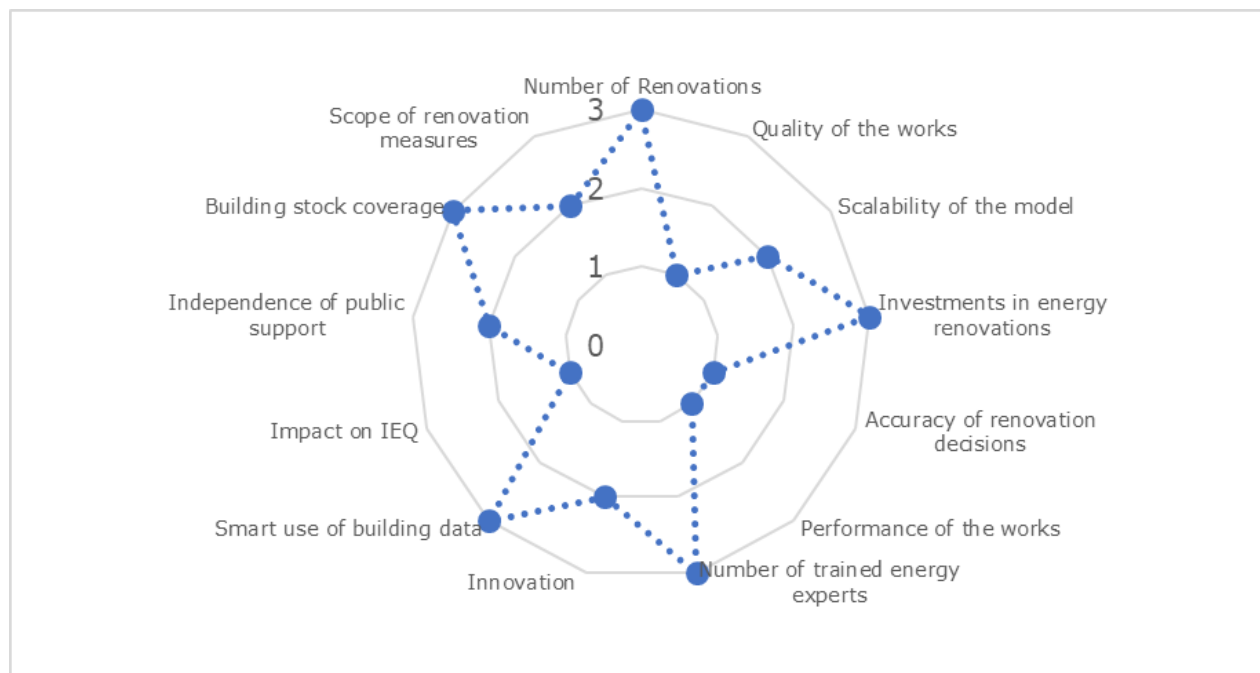
## Meta-data of the deep dives

What?	Data
Number of deep dives	16
Geographical spread	8 countries (7 European countries + Canada)
Types of cases	6 one-stop-shops 6 building renovation passports 2 energy performance certification schemes 1 energy audit framework 1 online application
Level of governance	8 regional, 4 national and 4 privately governed schemes

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16	Superhomes	IE	One-stop-shop

# Information derived from these “deep dives”

## Danish EPC framework



### Key results

- A survey of 1006 Danes who bought a property in 2015, shows that 65% stated that they read the whole report that comes with the EPC [8]
- 45% of owners are living in a building with a lower EPC rating (E-F-G) have implemented at least one of the EPC-listed energy-saving measures (for people living in D=35%, C=16%, B=15%, and A=7%) [8]
- When asked about the importance of the EPC when they bought their building, 22% described the EPC as very important, while 36% saw it as somewhat important [8]
- Most building owners were satisfied with an EPC rating C (37%), followed by D (22%). Only 7% desired an EPC rating A to be satisfied [8]
- 38% of the building owners implemented measures because it was “financially attractive”, while 28% did so in conjunction with other renovation work. Only 5% did so to reduce their climate and environmental impact [8]
- 46% of the building owners knew that it is possible to view their own or other EPCs online; while 46% out of these had used this function [8]
- 6% said they would have renovated if the EPC report included more detailed information and additional suggestions for renovation measure [8]
- The most commonly implemented measures from the recommendations related to windows (42%), roof (39%), heating system (28%), doors (21%) and external wall (19%) [8]

# Most developed Building Renovation Passports

**Woningpas and EPC+** combine the BRP with an integrated database with building data and beyond.  
Financing: public (Flanders Region, inter-ministerial cooperation)

**individueller Sanierungsfahrplan** provides a detailed individual renovation roadmap for single family houses  
Financing: public (Federal government)

**Several (regional) examples of models,** promoting and offering BRPs to owners, auditors and craftsmen

- Passeport Efficacité Énergétique
- Passeport Énergie Habitat
- Picardie Pass Rénovation

Financing: Both private and public

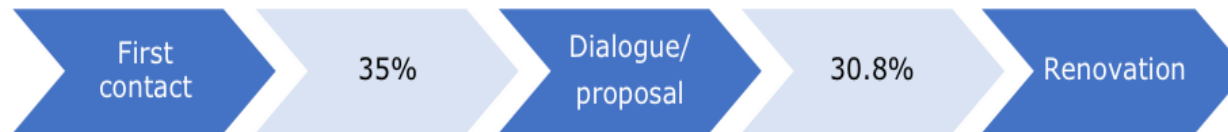
# Main findings (i)

- Renovation advice is more effective when it is integrated with, and reinforced by, other elements (e.g. simple access/use, financial support, communication)
- BRPs are effective in alleviating two of the main barriers to renovation;
  - low **awareness of the benefits** of energy renovation and;
  - insufficient **knowledge of what measures to implement** and in which order
- Tailored renovation advice, together with other support measures, has an impact on;
  - the **decision to renovate**,
  - the **number of measures to implement** and their **performance level**,
  - as well as on **what kind of measures** that are being implemented

# Main findings (ii)

- Conversion rate (average numbers from 4 deep dives):

- 35% of the homeowners informed about the scheme chose to get an on-site energy check, while;
- 31% of the homeowners that received the energy check (and subsequent renovation advice) decided to invest in an energy renovation;
- consequently, **10.8%** of the building owners that receives the first contact will go on and finally invest in an energy renovation



- The existing schemes and initiatives do not target any hard-to-reach groups (not interested, low-income etc.)
- Indoor environmental quality and the environmental aspects of renovations are not included in the analysed cases





# Thank you...

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