

### Building Energy Ratings and Building Renovation Passports in EU renovation

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### Main EU challenge: Renovation of existing building stock





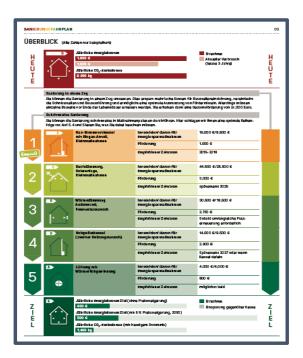
### Which renovation?



# HOLISTIC DEEP RENOVATION

## STAGED DEEP RENOVATION





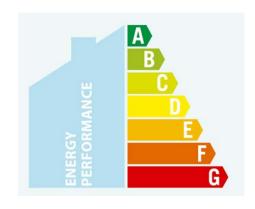
# Energy Performance Certificate in EU legislation



#### □ EPBD I (2002/91/EC)

- Integrated EPC methodology
- Mandatory energy performance certification system for new and existing buildings;
- Display of EPC for buildings occupied by public buildings (>1000 m2)







2000 2005 2010 2015 2018



#### □ EPBD (2010/31/EU)

- Independent quality control of EPC (Art.18)
- Penalties for non-compliance (Art . 27)
- Display of the energy label in the advertisements
- Display of the EPC on the frequently visited public buildings (>500m2; >250 m2)
- Mandatory requirement to hand out the copy of the EPC at the sale and rent transactions
- Improvement in EPC recommendations (cost effective and cost optimal measures)
- Verification of expert competence in the accreditation procedure

**9 January 2013; deadline** for implementation of EPBD

EPBD (2018/844)

### How to ensure quality of EPC?



- Requirements for the certifier (Art 17, EPBD)
- Accreditation process and register of certifiers (Art 17, EPBD)
- Minimum education and training requirements
- Continuous professional development (CPD)

QUALIFICATIONS
& ACCREDITATION
OF CERTIFIERS

**METHODOLOGY** 

- EPC calculation method (Art 3, EPBD)
- Choice of the calculation software;
- Collection of input data.

 Independent control of EPCs (Art 18, EPBD)

- Penalties for noncompliance
   (Art 27, EPBD)
- Independent control of certifiers

QUALITY
CONTROL
& PENALTY
SYSTEM

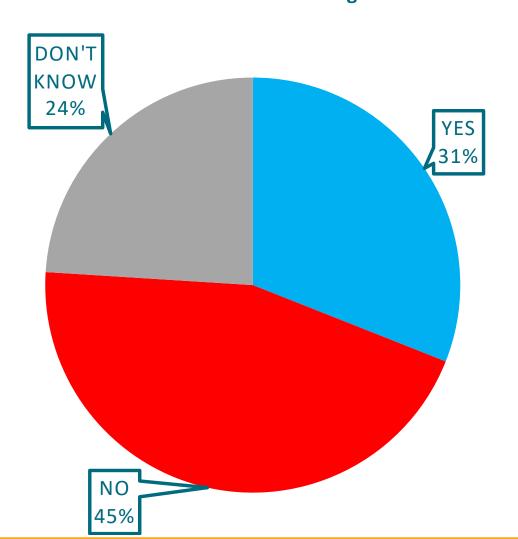
UNDERSTANDING
THE BENEFITS
OF THE EPC
SCHEME



### EPC are not driving renovation



Do you think there is a link between EPC's and the improvement of the EE of buildings?









Informs potential buyers/ tenants



### BUILDING RENOVATION ROADMAP

Personalised guidance for (all) owners



### What is a Building Renovation Passport?



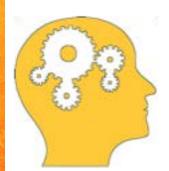
#### **DATA GATHERING**

#### **ON-SITE AND OFF-SITE**

- General Information & Administration
- Building construction information
- Building energy performance (such as EPC information)
- Building operation & use
- Smart information

#### **PROCESSING**





#### **BUILDING RENOVATION PASSPORT**

#### RENOVATION ROADMAP

- Renovation steps in a sensible order
- Comprehensive audit
- Long-term perspective
- Tailored to individual context



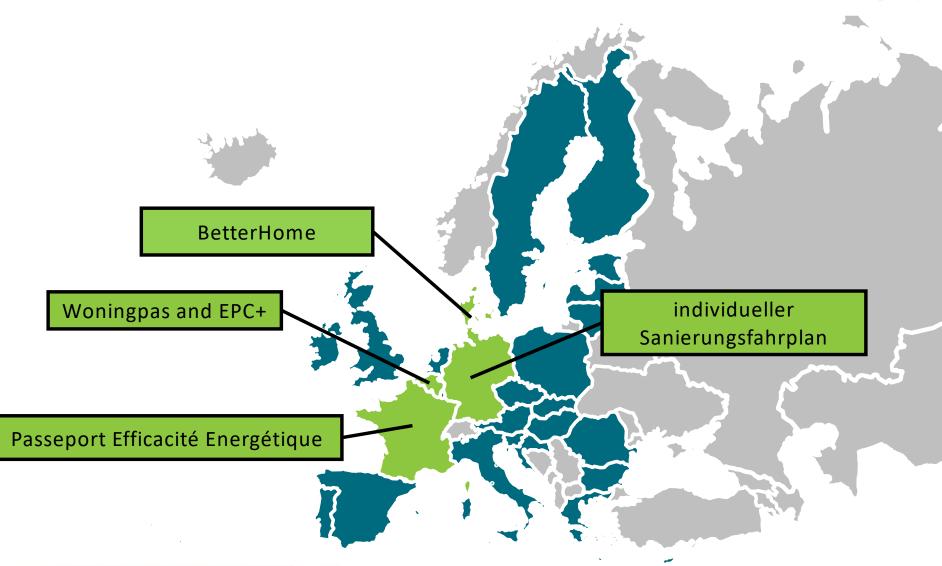


#### **BUILDING LOGBOOK**

- Inventory of building-related information
- Manage and monitor real-time energy consumption
- Functionalities to users
- Linking building owners (users) and third parties

### **Case studies**





### Common features



INDIVIDUELLER SANIERUNGS -FAHRPLAN

2013-2015

2017

SANIERUNGS -FAHRPLAN (BW)

2011

LAUNCH IN

2015

BETTERHOME

2013

LAUNCH IN 2014

WONINGPAS AND EPC+

WORKING GROUPS ON "WONINGPAS & EPC+ STARTED IN 2016

LAUNCH IN 2018 (LIGHT VERSION WONINGPAS) & 2019 (EPC+) PASSEPORT EFFICACITE ENERGETIQUE

CONCEPT
PUBLISHED BY THE
SHIFT PROJECT IN

2014

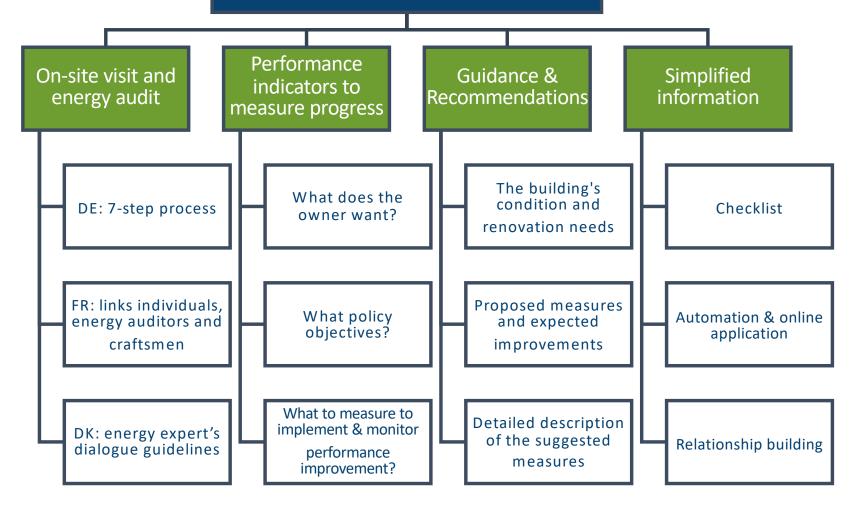
CURRENTLY (2018) TESTING PHASE II OUT OF III

- Voluntary tool: complementary to EPC (EC feasibility study by 2020)
- Ambition: long term renovation targets (deep renovation or long term efficiency levels)
- Customer-oriented: owners are at the center of the process (customized measures)
- Valorize comfort (qualitative indication to facilitate understanding and valorize non-energy benefits)



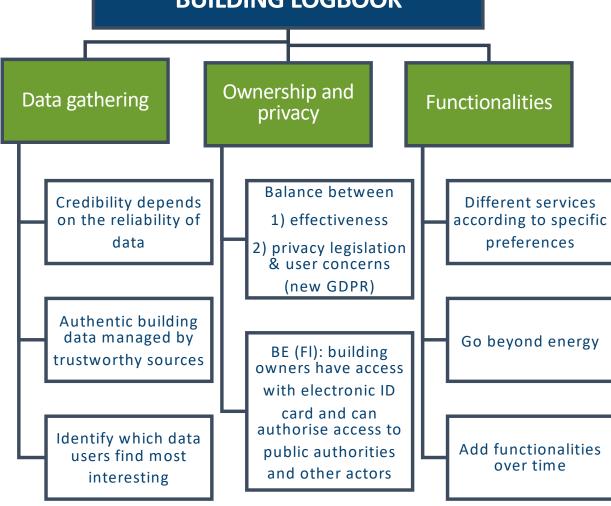
### KEY ELEMENTS OF THE RENOVATION ROADMAP







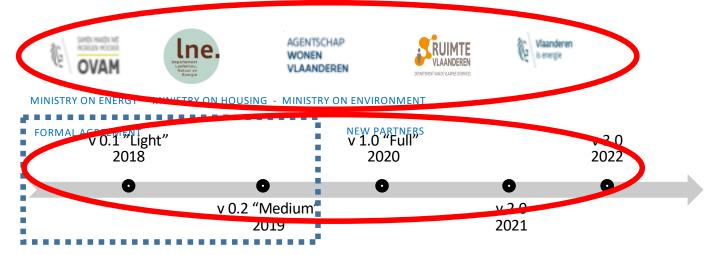
#### **KEY ELEMENTS OF THE BUILDING LOGBOOK**





### Flanders: modular roadmap





#### v 0.1 Light:

- Integration of certificates Retrieving certificates
- Inform the citizin and feedback

#### v 1.0 Full:

- Renovation advice & update
- Tailored grants and loans

#### v 3.0:

- Integration smart meters, smart
- buildings Automatic Advice

#### v 0.2 Medium:

- Messages on duties
- Autorization
- Dwelling quality: check-tool
- Upload supporting documents

#### v 2.0:

- All parties connected Reporting to policy





# Thank you...

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