

EPBD19a feasibility study on building renovation passport

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Part 01

Review on building renovation passport schemes and related initiatives

Part 02

Analysis of the relevance, feasibility and possible scope of measures at EU level for building renovation passports

Part 03

Selection of policy options for building renovation passports and analysis of related potential impacts



The European Commission and the consortium carrying out this study were committed to actively engage stakeholders in the study, collect their input and viewpoints, and consider their feedback in relation to study results.

We reviewed 16 relevant cases

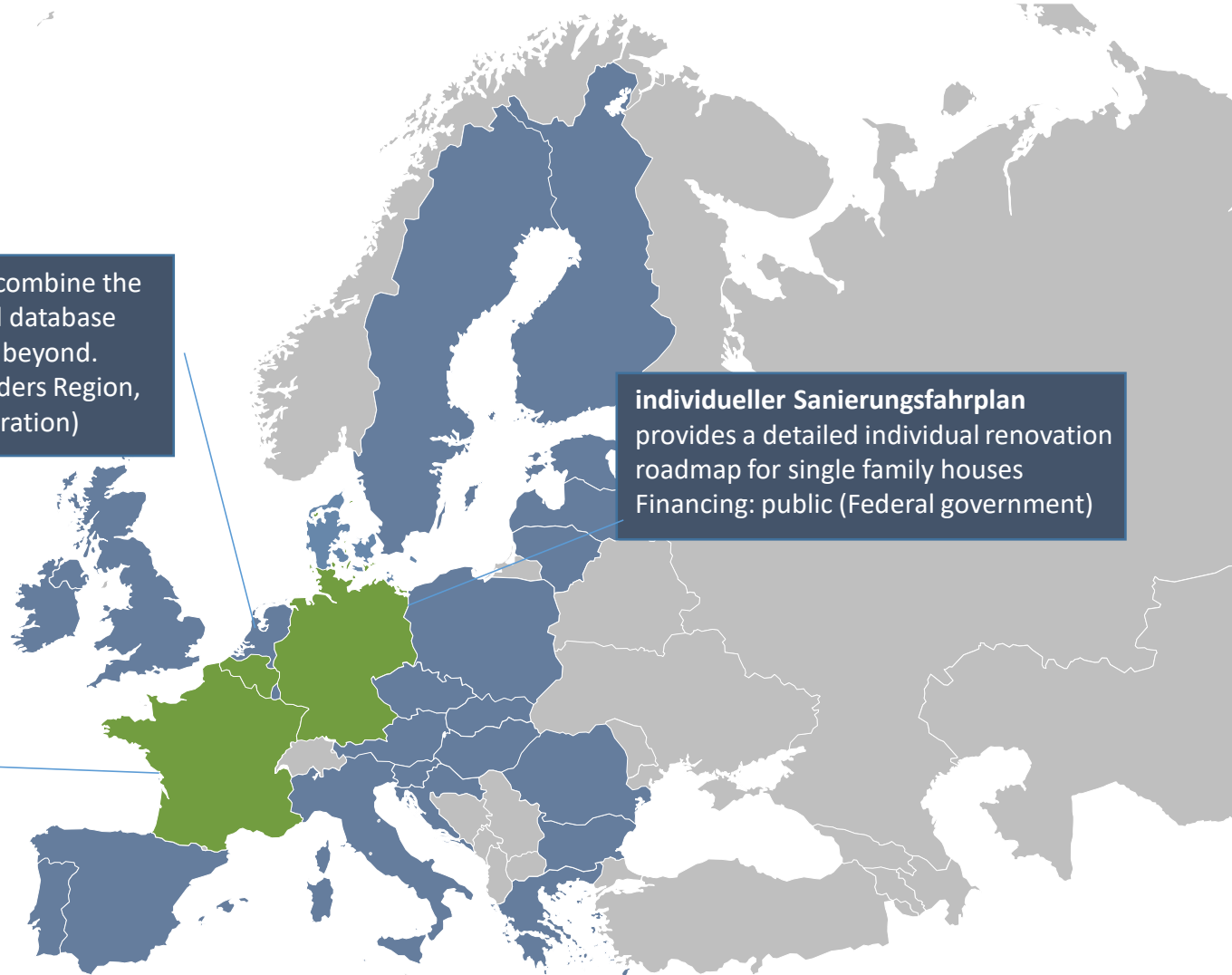
Woningpas and EPC+ combine the BRP with an integrated database with building data and beyond.
Financing: public (Flanders Region, inter-ministerial cooperation)

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

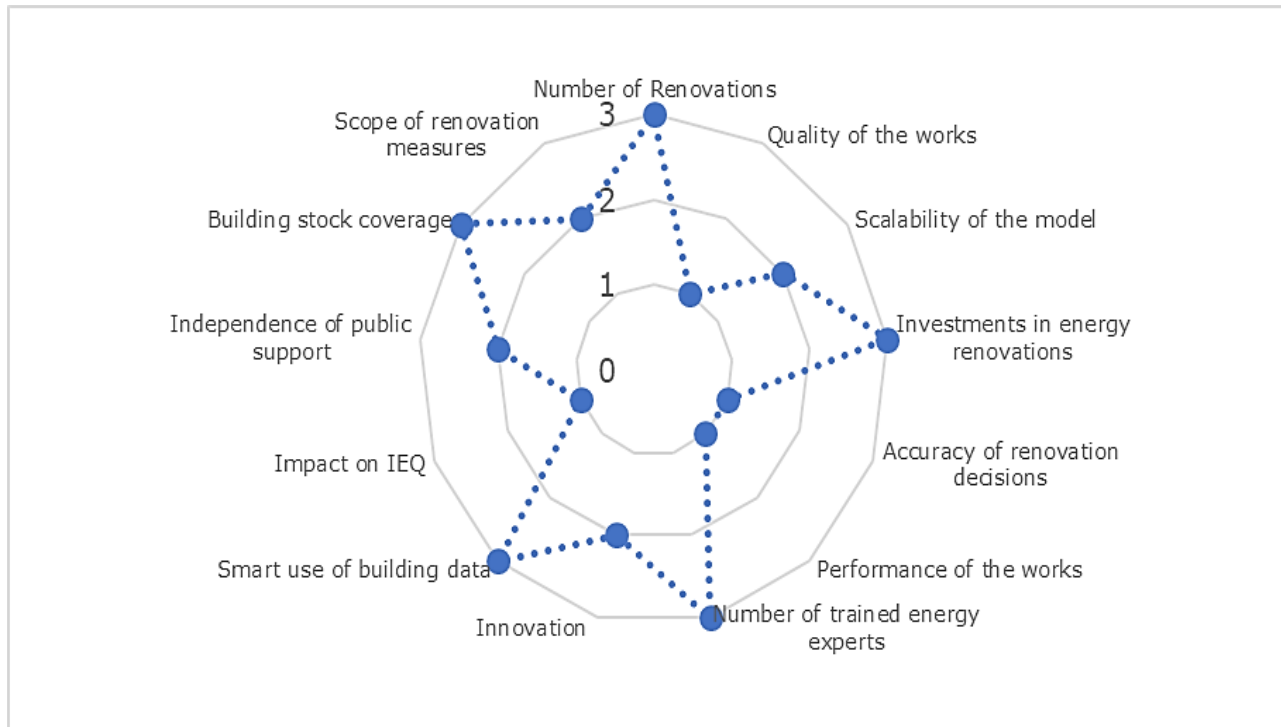
- Passeport Efficacité Energétique
- Passeport Énergie Habitat
- Picardie Pass Rénovation

Financing: Both private and public



We derived relevant information

Danish EPC framework



Key findings

- 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
- **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%)
- 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
- **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.
- **6% said they would have renovated if the EPC report included more detailed information**
- The most commonly implemented measures from the recommendations related to windows (42%), roof (39%), heating system (28%), doors (21%) and external wall (19%)

We proposed a definition of building renovation passport

Building renovation passport in the EPBD

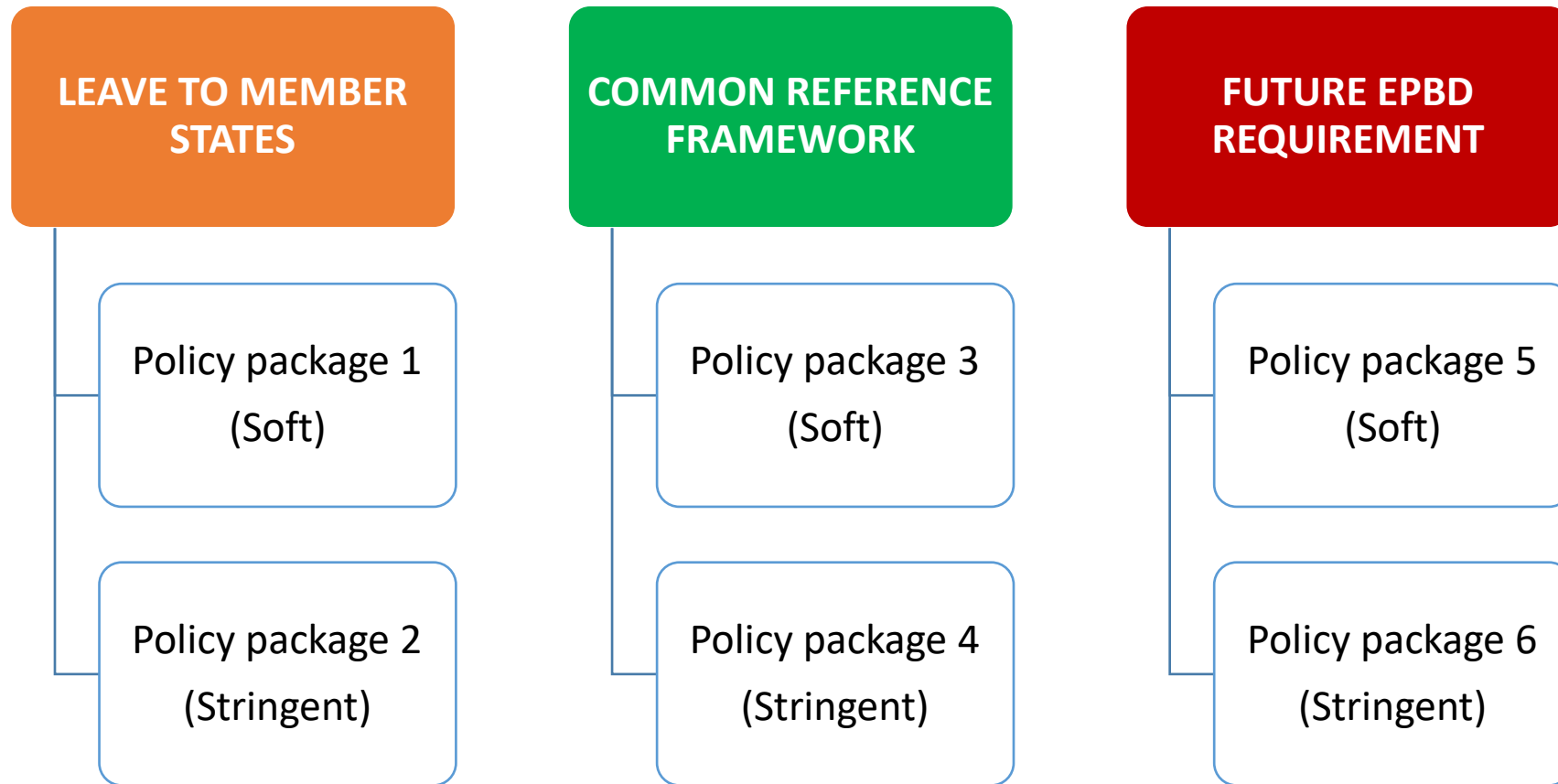
Article 19a of the EPBD declares that the European Commission shall, before 2020, 'conclude a feasibility study, clarifying the possibilities and timeline to introduce [...] an optional building renovation passport that is complementary to the energy performance certificates, in order to provide a long-term, tailored renovation roadmap for a specific building, following a calculation based on available data and/or an on-site audit by an energy expert. The instrument identifies and outlines deep renovation scenario(s), including steps to implement energy saving measures that could improve the building's energy performance to a significantly higher level over a defined period of time⁹. The instrument can be complementary to energy performance certificates and/or combined with digital logbooks

Article 2a(1)(c) of the EPBD aims to stimulate cost-effective renovation by providing support targeted to buildings in need of renovation under a scheme for buildings

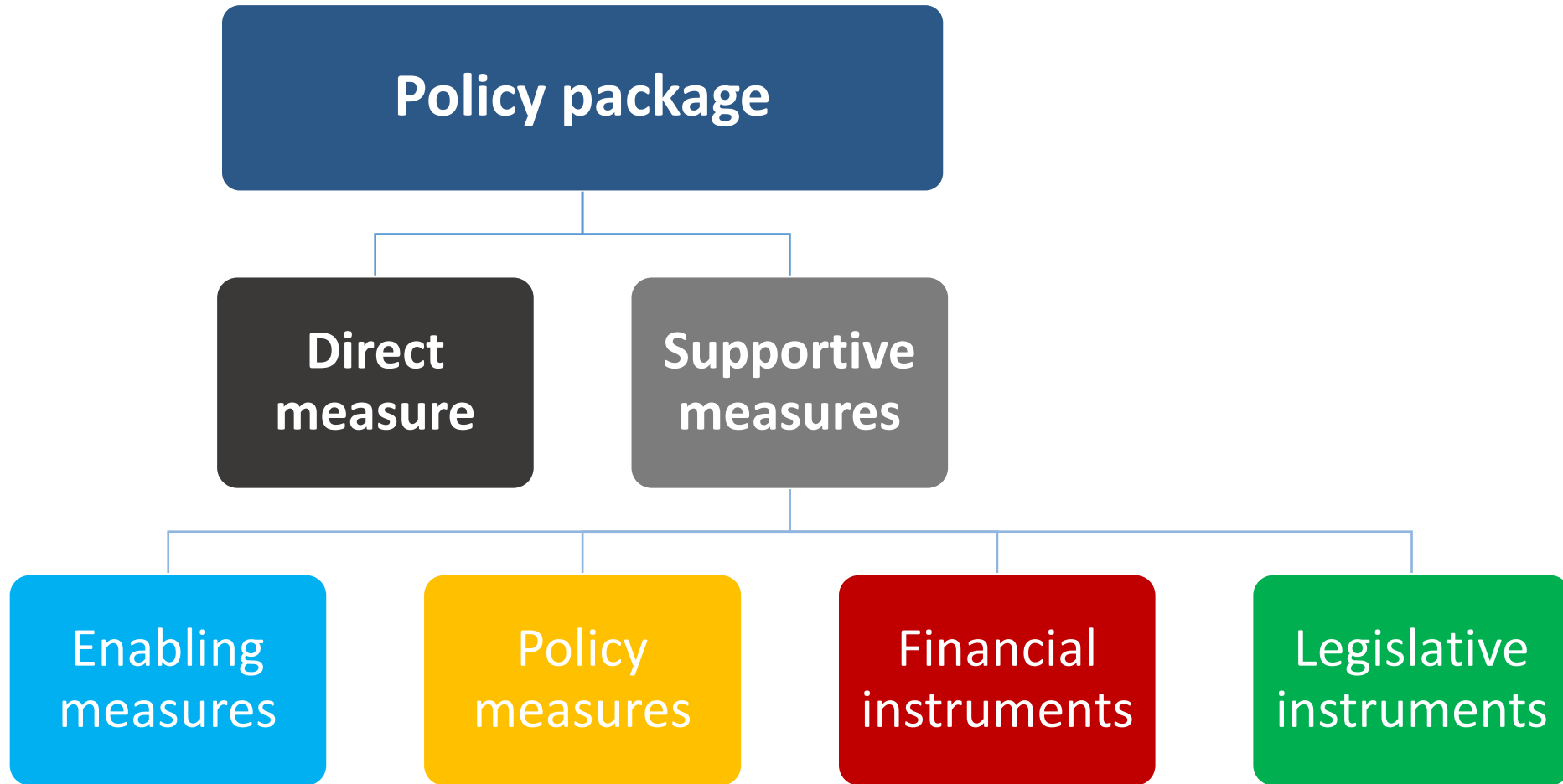
Proposed definition of *building renovation passport*

A building renovation passport provides a long-term, tailored renovation roadmap for a specific building, following a calculation based on available data and/or an on-site audit by an energy expert. The instrument identifies and outlines deep renovation scenario(s), including steps to implement energy saving measures that could improve the building's energy performance to a significantly higher level over a defined period of time⁹. The instrument can be complementary to energy performance certificates and/or combined with digital logbooks

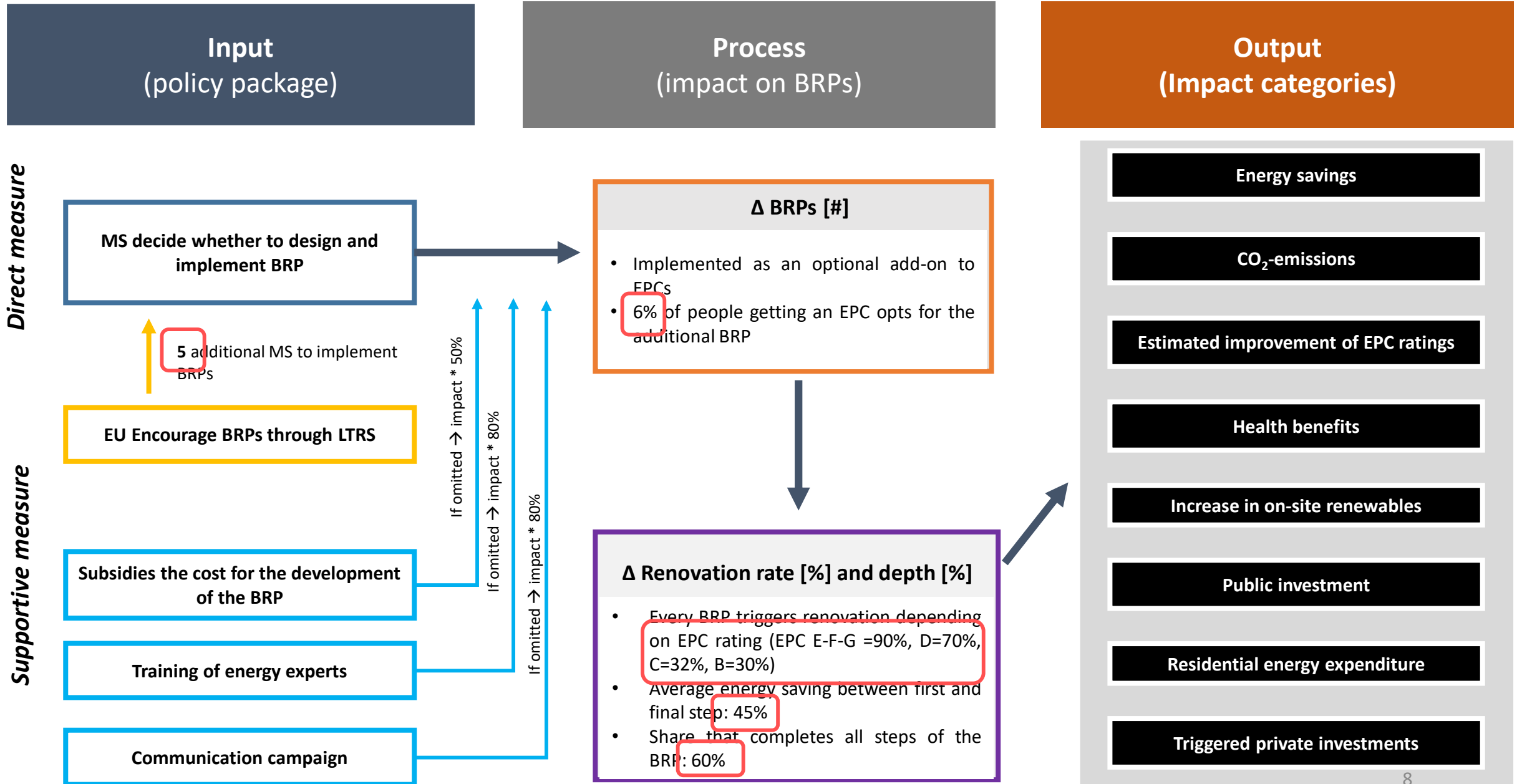
3 main policy options for the EU to consider



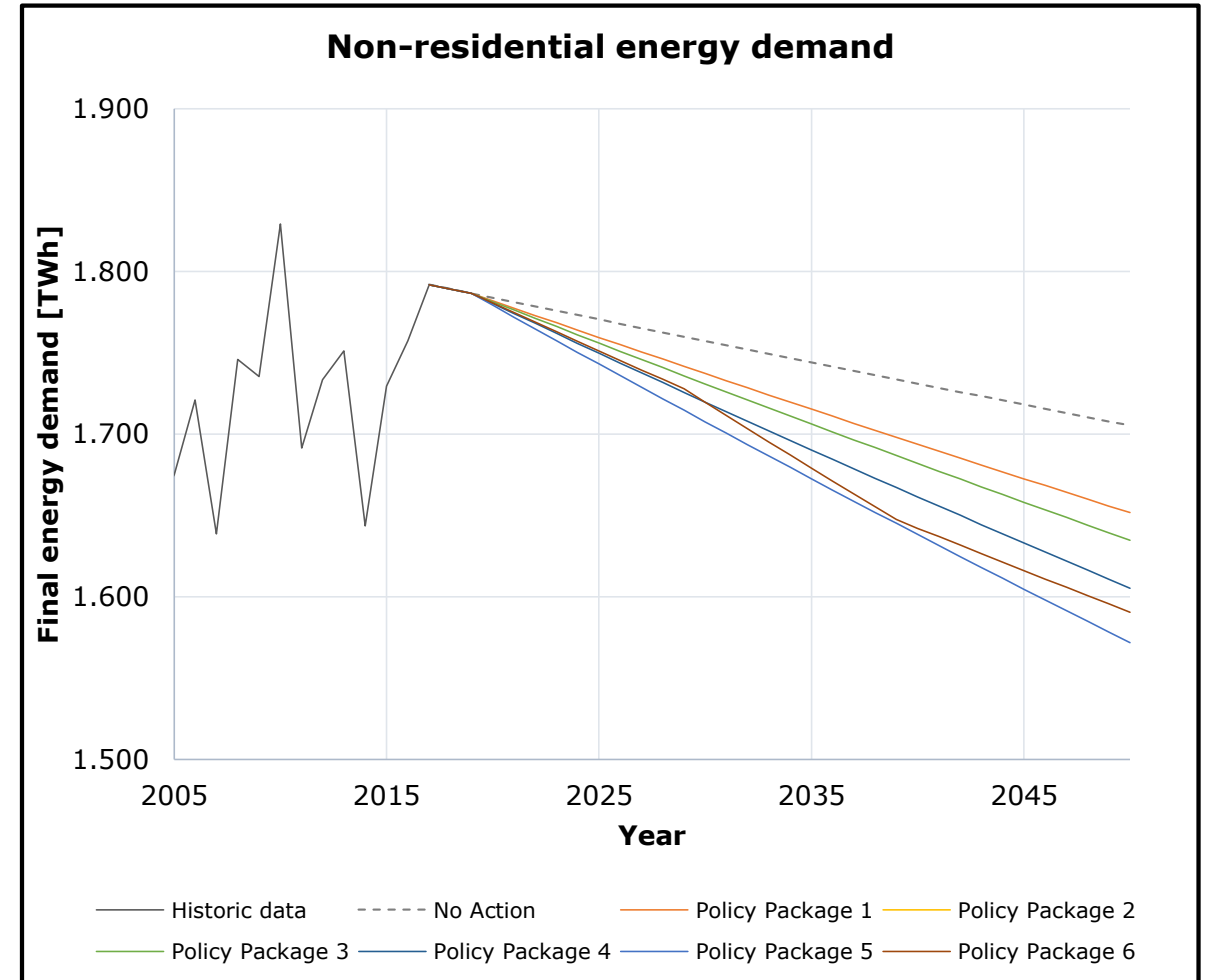
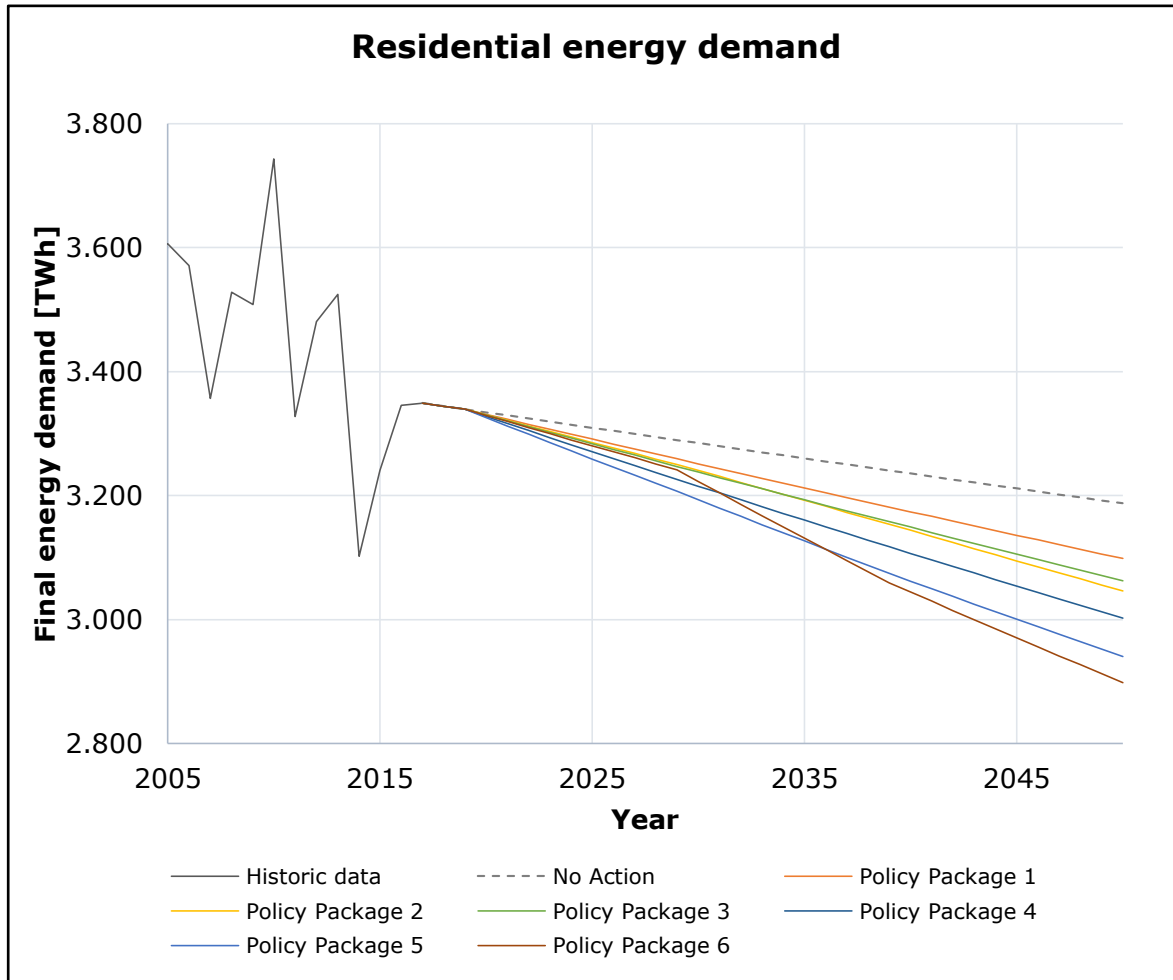
Types of measures



Policy package 1

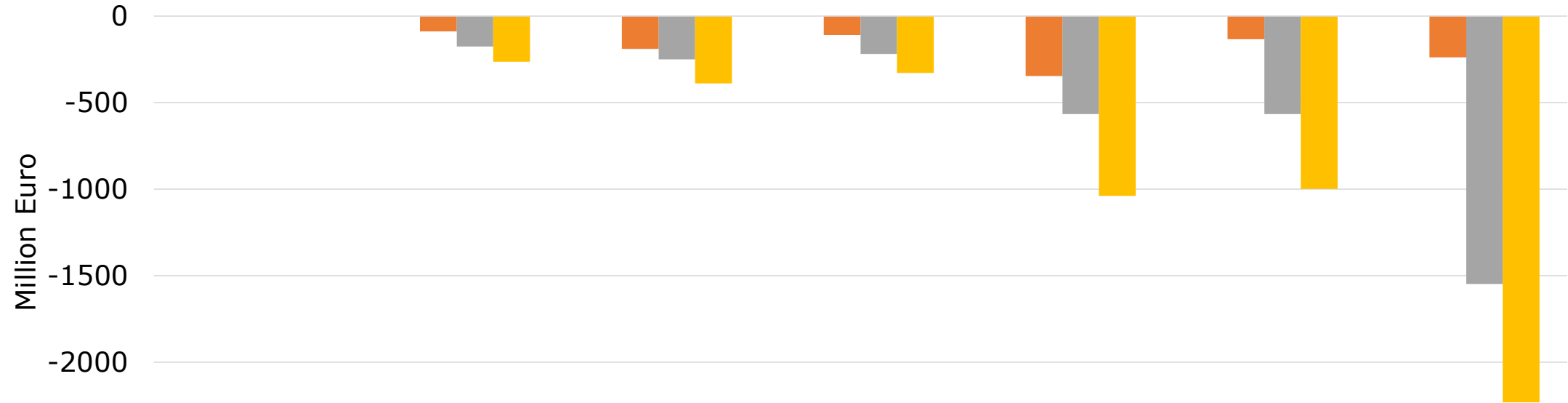


Energy demand



Health benefits

Absenteeism cost savings



	No action	PP1	PP2	PP3	PP4	PP5	PP6
■ 2020	0	0	0	0	0	0	0
■ 2030	0	(88,24)	(189,83)	(109,62)	(347,43)	(134,42)	(239,37)
■ 2040	0	(176,49)	(250,56)	(219,03)	(567,30)	(567,30)	(1.548,26)
■ 2050	0	(264,73)	(388,86)	(328,44)	(1.038,79)	(1.000,18)	(2.233,15)

Yearly savings per year in the different decades

Conclusion

- The review shows that BRPs are effective in alleviating two of the main barriers; low awareness of the benefits of energy renovation and insufficient knowledge of what measures to implement and in which order.
- The potential impact of BRPs on renovation activity is largely threefold;
 - It can trigger building owners with no previous intention to renovate to invest in energy efficiency measures
 - It enhances the quality, performance and overall depth of the renovation measures
 - It triggers people that have planned to renovate to do so earlier.

Conclusion

- All policy packages are expected to trigger energy and CO₂-emission savings.
- Impact of selected policy package varies depending on indicator, i.e. energy demand in residential sector is estimated to be between 3-10% lower by 2050, similar number for CO₂ emissions.
- Impact of the BRPs will be limited unless coupled with financial, communication and training measures. BRPs without accompanying measures won't have a considerable effect.
- To increase the attractiveness and effectiveness of BRPs, indoor environmental quality should be integrated.