



Energy Efficient Mortgages Initiative

*Energy efficient Mortgages Action Plan (EeMAP)
&
Energy efficiency Data Protocol and Portal (EeDaPP)*



The **Energy Efficient Mortgages Initiative** is aimed at delivering a standardised European framework and data collection process for energy efficient mortgages, with favourable financing conditions for energy efficient buildings and energy saving renovations.

It consists of two parallel projects, the “Energy efficient Mortgages Action Plan” ([EeMAP](#)) and the “Energy efficiency Data Protocol and Portal” ([EeDaPP](#)), and is funded via the European Commission’s Horizon 2020 Programme.

www.energyefficientmortgages.eu

Banks can Play a Game Changing Role in Improving Energy Efficiency (EE)

In the EU 28 there are...



510 million
people

...of which

More than
350 million
live under
their own
roof



7498 MFIs
and
188,109
branches

Private financing



On average
each branch
serves
around 2,700
people



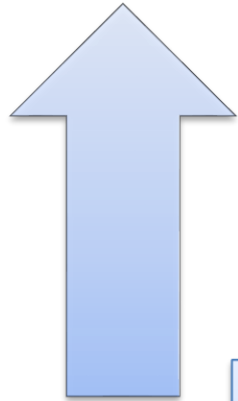
This initiative
has huge
potential!



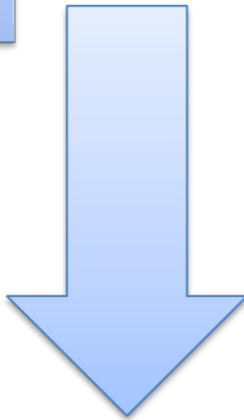
247 million
dwellings

more than
220 million
dwellings
were built
before 2001

Underlying risk parameters impacted by EE



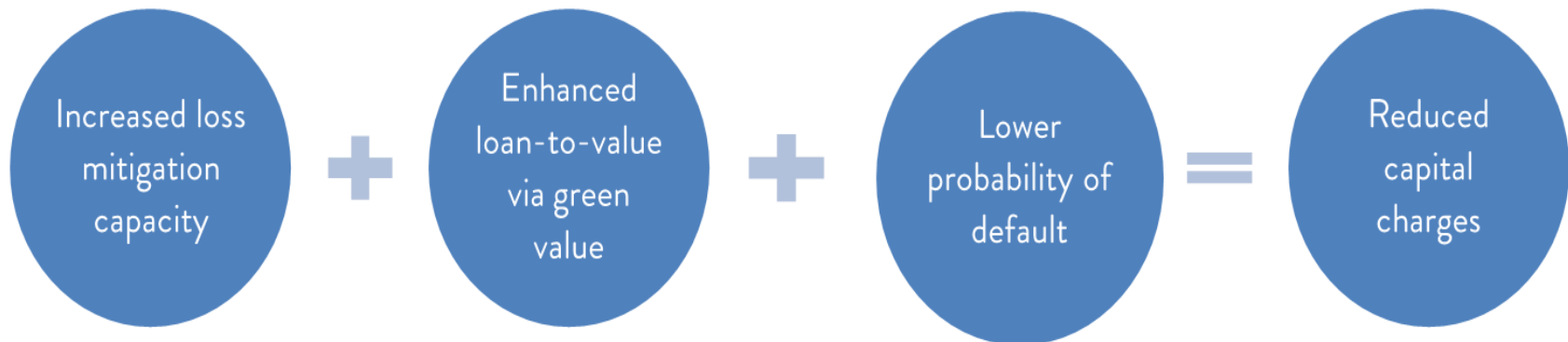
Retrofitting impacts positively on property value ensuring **wealth conservation & loss mitigation** by preventing “brown discount”



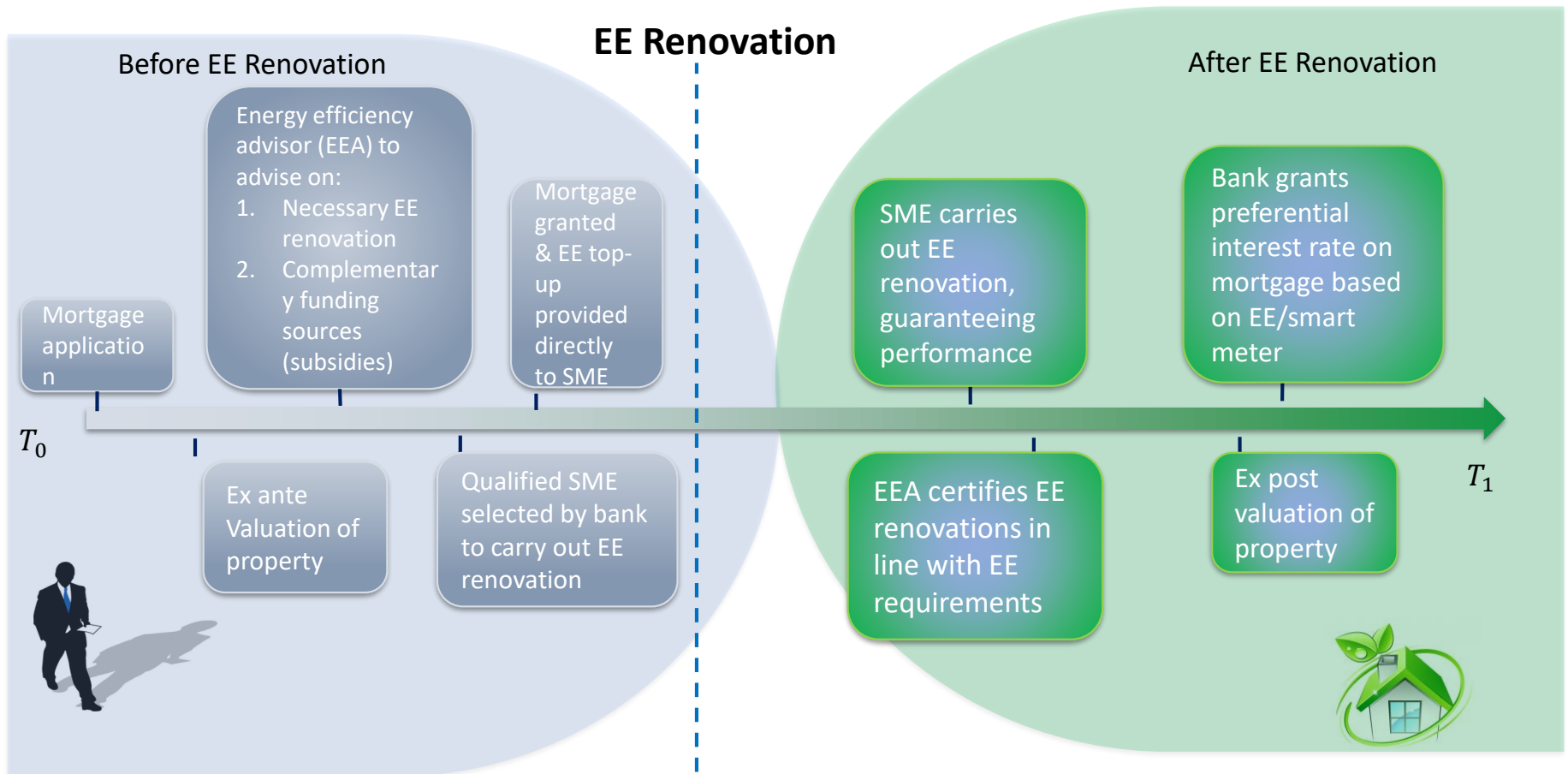
EE leads to a reduction in the impact of energy costs to income, reducing borrowers’ **probability of default**

The **ultimate objective** is a pan-European private bank financing mechanism, based on a standardised approach, to encourage energy efficient improvement by households of the EU's housing stock by way of financial incentives linked to the mortgage, and in this way support the EU in meeting its energy savings targets. Independent from, but complementary to, public funds or tax incentives.

Underlying business case:



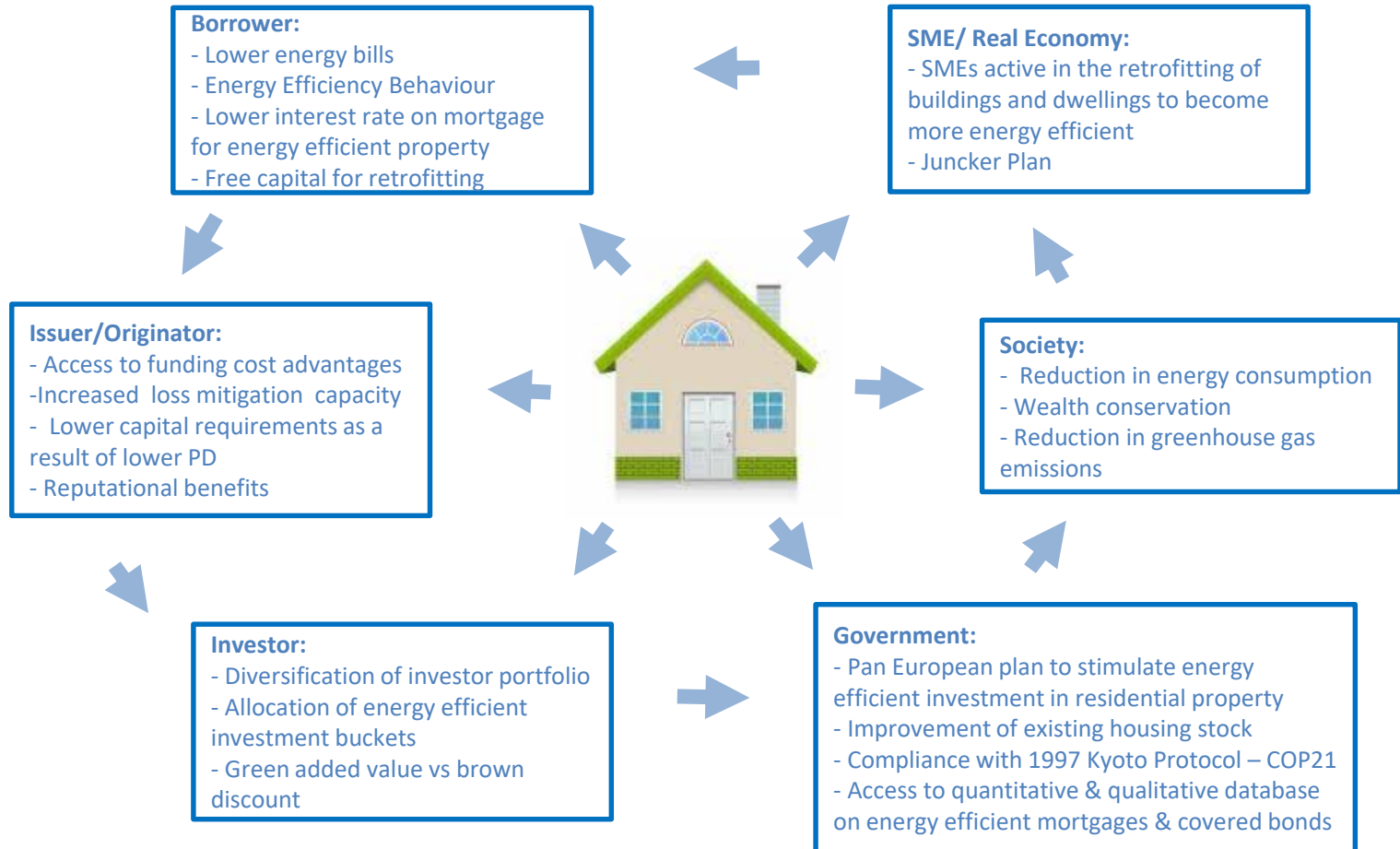
Bridging Renovation Gap - In Practice





Energy Efficient Mortgages Initiative

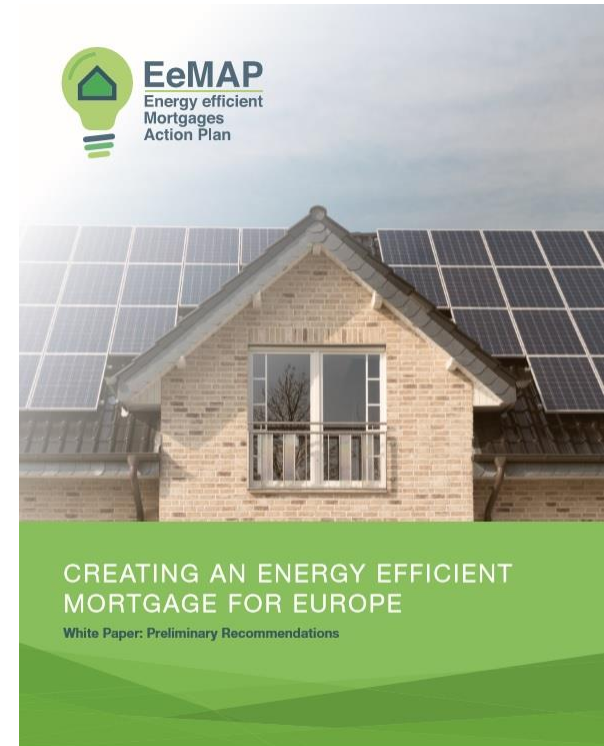
Incentive Chain



- **Overview** of current practices in relation to **finance, energy efficiency indicators, property valuation** and the impact of **energy efficiency on risk management**
- **Key recommendations** towards the creation of an Energy Efficient Mortgage product for Europe
 1. **A simple & standardised framework** for Energy Efficient Mortgage to help market entry allowing for national heterogeneity, with guidance on the underlying finance mechanism
 2. **A clear definition of an Energy Efficient Mortgage** to enable banks to differentiate between energy efficient and conventional mortgages in their risk management processes
 3. **Energy efficiency in property valuations.** To ensure that energy efficiency is appropriately taken account of in property valuations, banks should be guided on how and what to instruct property valuers in relation to energy performance of buildings
 4. **Simple and proportionate energy efficiency performance indicators,** with flexibility to take account of differences between current national approaches

The White Paper is available on the energy Efficient Mortgages website:

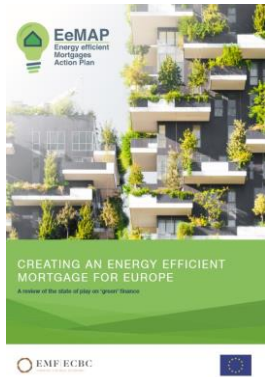
<http://eemap.energyefficientmortgages.eu/wp-content/uploads/2018/04/EeMAP-White-Paper.pdf>





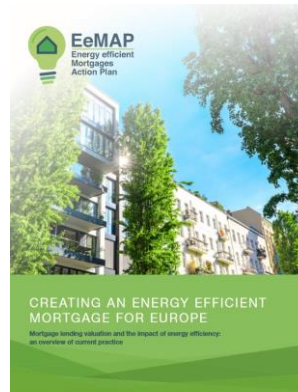
Market Best Practices: Five Technical Reports

The research findings are detailed in **five Technical Reports**



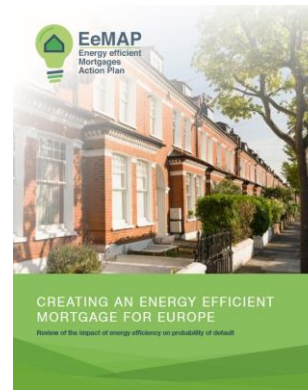
'Green' Finance

Building Performance Indicators

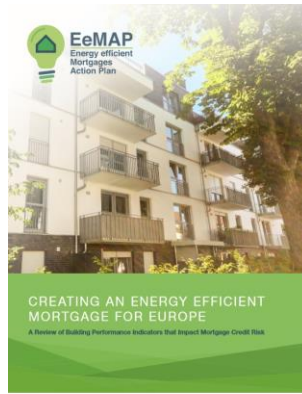


Mortgage lending valuation

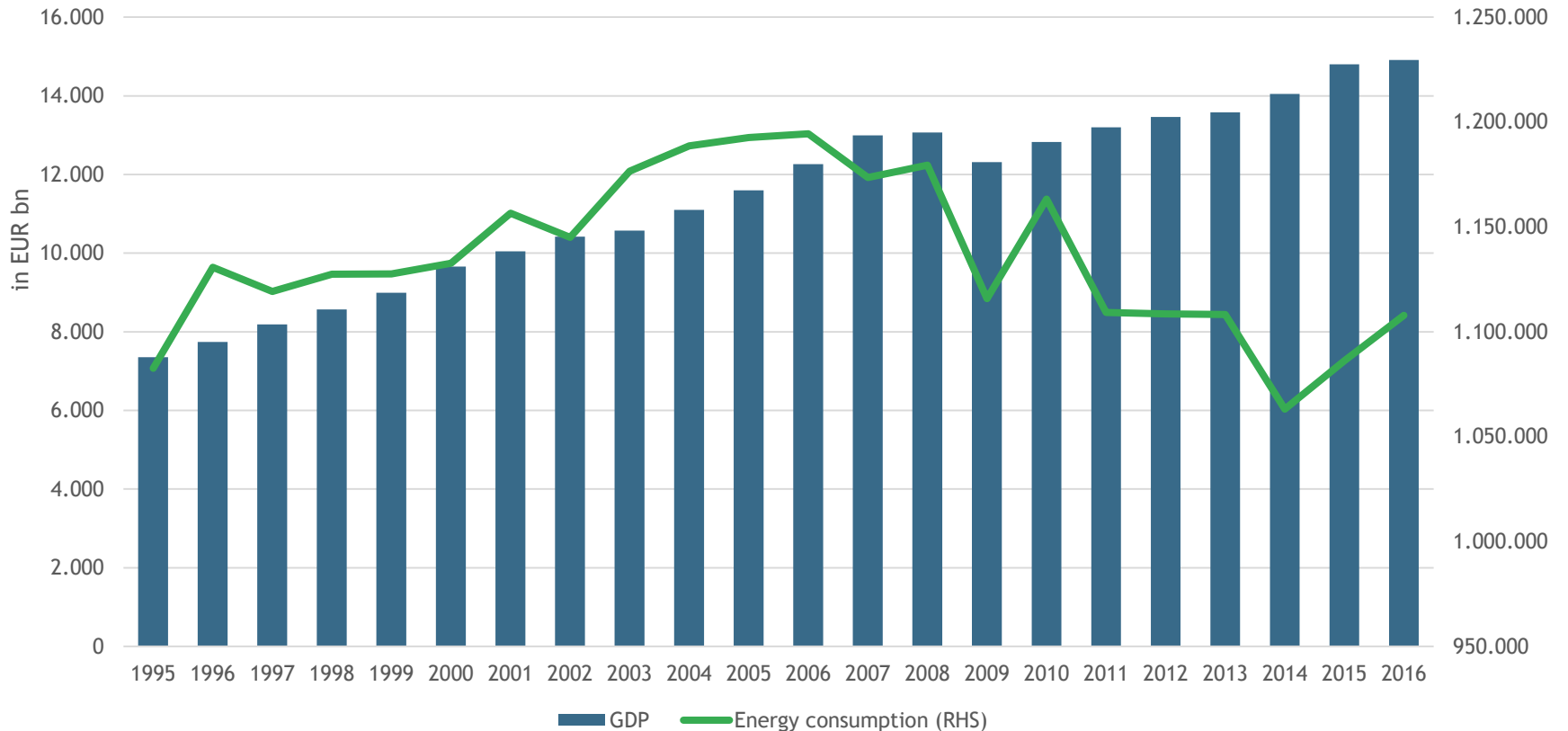
EE Impact on probability of default



Consumer Research Insights

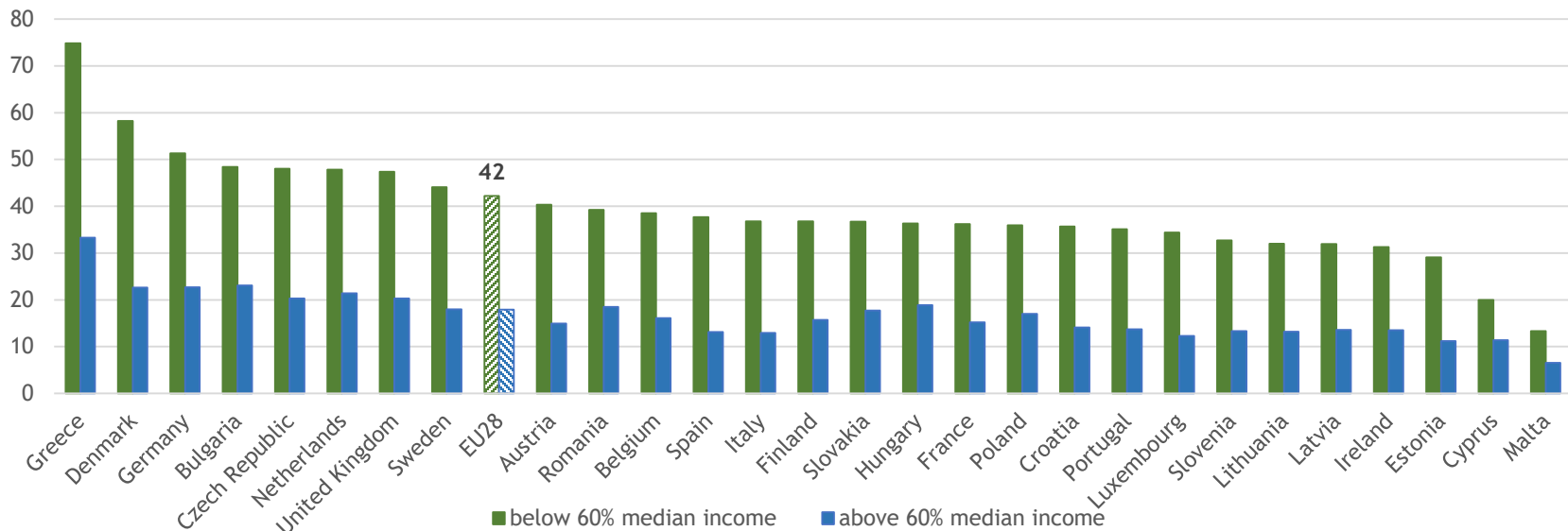


Energy consumption evolution in the EU (current composition)



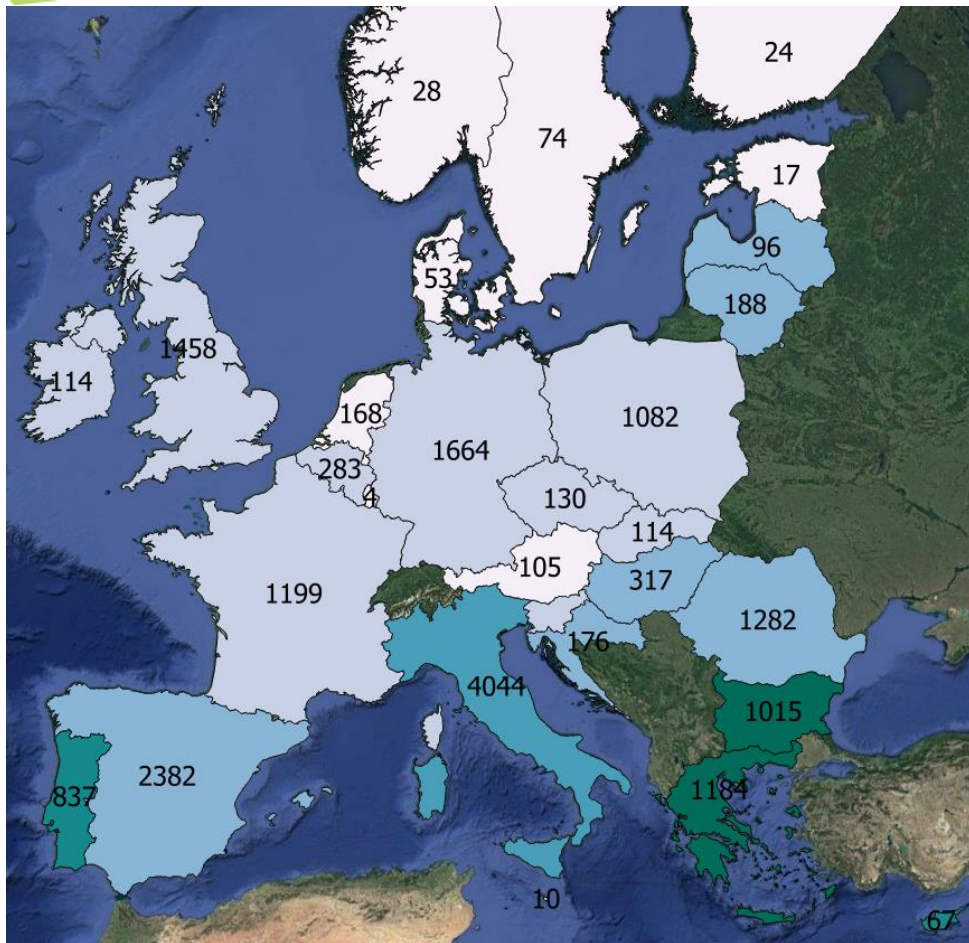
Source: Eurostat

Housing cost as % of disposable income



Source: Eurostat – 2017 EU-SILC survey

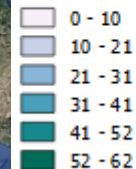
Around 42% of disposable income of poorer households (below 60% of median income) is spent on housing costs



- 21% of EU population that earn 60% or less than median income in their respective countries, over **18 million people**, live in a household which they cannot adequately heat
- This issue has different degrees of relevance according to country

Legend

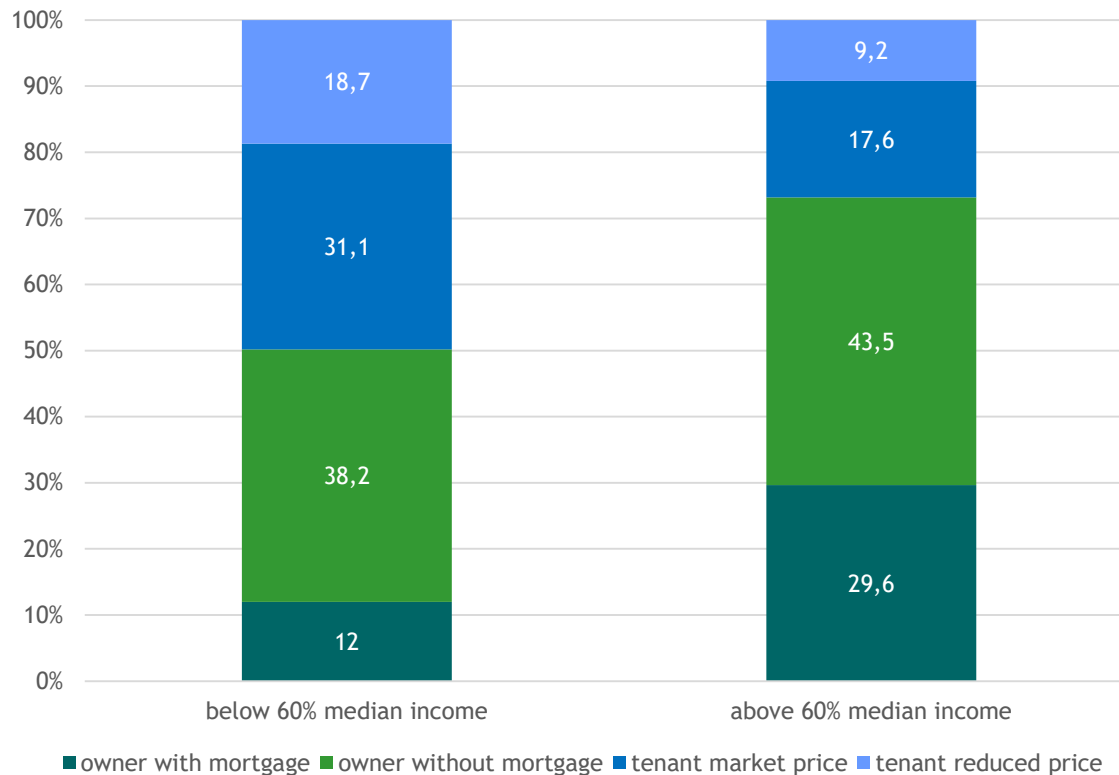
percentage of population below 60% median income unable to adequately heat their dwelling*



The label shows the number of citizens (in thousands) affected

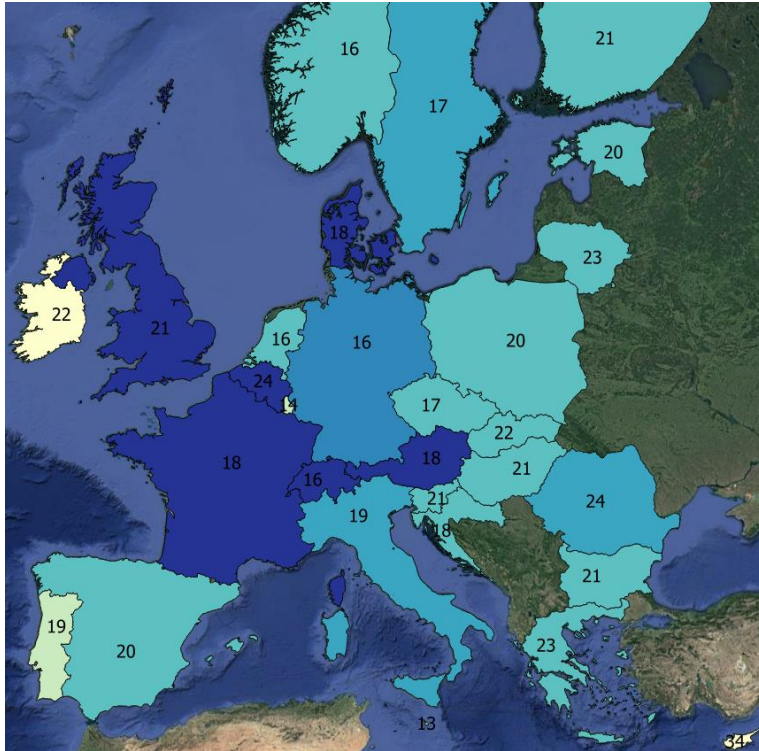
Source: Eurostat EU-SILC survey 2017
*according to the Survey definition

Breakdown of tenure status by income group



- In EU breakdown of how citizens live is reflected by their income group
- Poorer part of population in Europe (around 86 million people earn less than 60% of their respective Member States' median income) typically live as tenants
- These individuals are also more than two times less likely to have a mortgage than the rest of the population

Source: Eurostat – 2016 figures



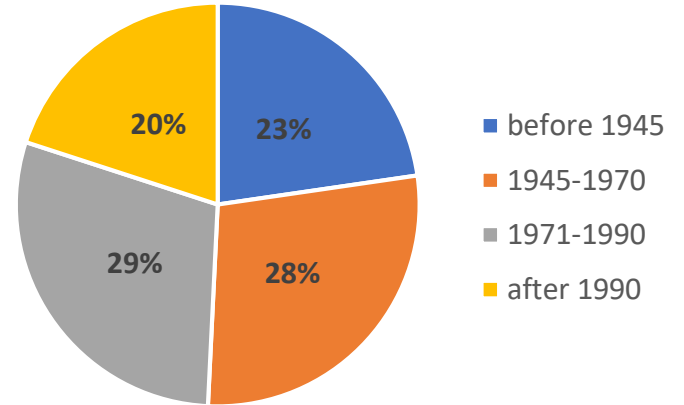
Legend

House age - most represented decade of construction

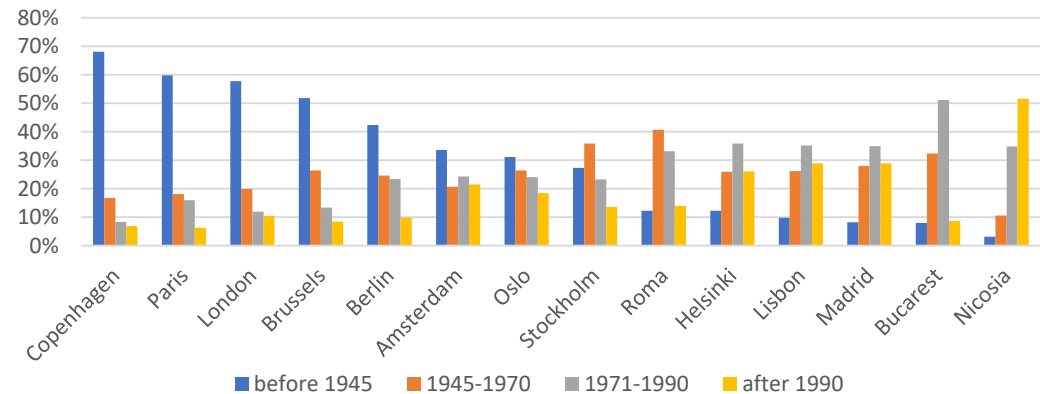
- before 1919
- 1919 - 1945
- 1946 - 1960
- 1961 - 1970
- 1971 - 1980
- 1981 - 1990
- 1991 - 2000
- after 2000

Label shows the percentage of dwellings built in the given period

EU housing stock age structure



Breakdown of age of housing stock according to selected capital cities



EPC Label	Energy Consumption (kWh/m ² /y)	Energy Costs* (€/year)	Energy Savings from class G (€/year)	Additional Market Value from Class G (€)
A	55	600 €	3.050 €	64.000 €
B	81	850 €	2.800 €	58.000 €
C	117	1.250 €	2.400 €	50.000 €
D	167	1.800 €	1.850 €	38.000 €
E	217	2.400 €	1.250 €	27.000 €
F	274	3.000 €	650 €	14.000 €
G	335	3.650 €	- €	- €

- Source – Copenhagen Economics (2016)
- average energy price of 0,10€ per kWh and considering a 100m² house



Pilot Scheme: To begin Solving the 'Chicken & Egg' Dilemma



Assets	Liabilities
EE mortgages • collateral	EE bonds • Covered Bonds • Securitisation



European Investment Fund (EIF)

Investor Demand
National Promoting Banks:
Green Purchase Programs

European Investment Bank (EIB)



Under the **Energy Efficient Mortgages Pilot scheme**, Pilot Scheme Banks have the opportunity to analyse the feasibility and voluntarily implement the [Energy Efficient Mortgage Product Framework](#) into existing product lines and processes.

On 14 June at the [Energy Efficient Mortgages event](#) in Windsor, Pilot Scheme Banks were invited to take part in **7 subgroups** to identify the opportunities and risks in various areas (i.e. *Origination/retail; risk management; marketing; funding & investor relations; partnerships; IT solutions & Data; development of technical expertise*), taking as the starting point the Energy Efficient Mortgage Product Framework, and highlighting potential operational solutions.

For further information:

- [Press release](#), 14 June 2018: "The light turns green: Energy Efficient Mortgages Pilot Scheme goes live!"
- Energy Efficient Mortgages Pilot Scheme [Roadmap](#) for Lending Institutions
- Energy Efficient Mortgages Pilot Scheme [Pioneers](#)

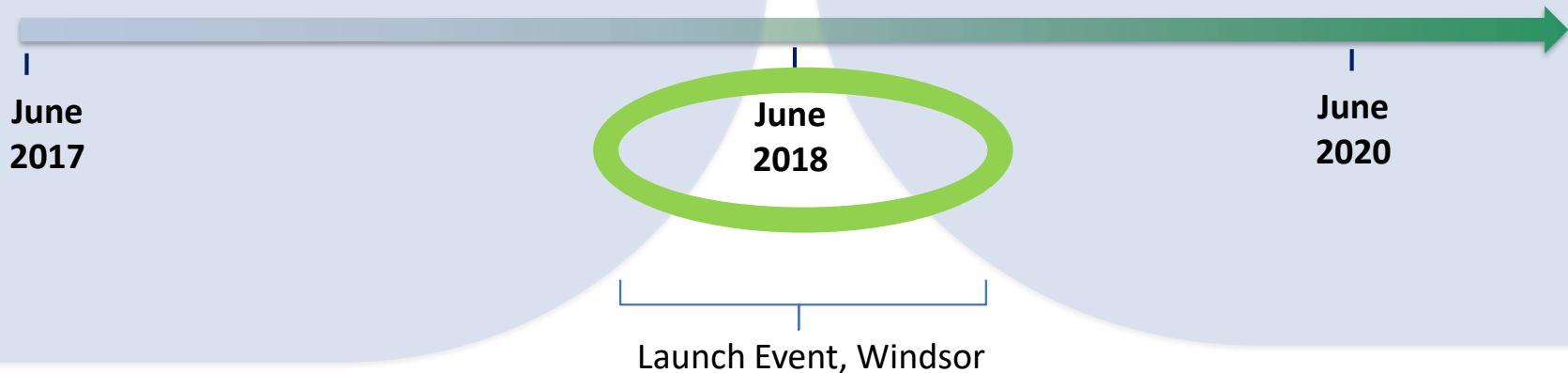
Pilot Scheme: Existing Data Analysis & Operational Test Phase

Phase 1: Framework Preparation & Analysis of Existing Data:

- Design of Product Framework and System Set-up
- Substantiation of Business Case
- Focus on Correlation between EE and LGD & PD

Phase 2: Operational Test Phase:

- Deployment of Product Framework and High-level Guidelines
- Assessment of framework Implementation
- Tag excising Mortgage Loans and begin Originating EE Mortgage Product
- Involvement of the Advisory Council
- Data collection





- ABN AMRO (NL)
- Argenta Bank (BE)
- AXA Bank (BE)
- Banca Monte dei Paschi di Siena, BMPS (IT)
- Banco BPM (IT)
- Belfius Bank & Verzekeringen (BE)
- Berlin Hyp AG (DE)
- BNL Gruppo BNP Paribas (IT)
- BNP Paribas Fortis (BE)
- BNP Paribas (UK)
- Groupe BPCE (FR)
- BPER Banca (IT)
- Caisse des Dépôts Group (FR)
- Caixa Geral de Depósitos, CGD (PT)
- Caja Rural de Navarra (ES)
- Cassa Centrale Banca (IT)



List of Pilot Scheme Banks Involved (ii):

- Colibri Hypotheken (NL)
- Compagnie de Financement Foncier (FR)
- Crédit Agricole (IT)
- Crelan (BE)
- Deutsche Hypothekenbank (DE)
- DNB Boligkreditt AS (NO)
- Ecology Building Society (UK)
- Friulovest Banca (IT)
- Garanti Bank (RO)
- ING Belgium (BE)
- KBC Bank (BE)
- Mortgage Society of Finland, Hypo (FI)
- Münchener Hypothekenbank eG (DE)
- Norddeutsche Landesbank, NORD/LB (DE)
- Nordea Bank (SE)



List of Pilot Scheme Banks Involved (iii):

- Nordea Eiendoms kreditt (NO)
- Nordea Kredit (DK)
- Nordea Mortgage Bank (FI)
- OP Mortgage Bank (FI)
- PKO Bank Polski (PL)
- PKO Bank Hipoteczny (PL)
- Rabobank (NL)
- Raiffeisen Bank (BO)
- Société Générale (FR)
- Société Générale CIB (IT)
- Triodos Bank (BE)
- Triodos Bank (ES)
- UniCredit (IT)
- Unión de Créditos Inmobiliarios, UCI (ES)
- Volksbank Alto Adige (IT)



Members of the Advisory Council:

- European Commission
- European Investment Bank (EIB)
- European Bank for Reconstruction and Development (EBRD)
- Scottish Government
- The World Bank
- UNEP Finance Initiative
- International Finance Corporation (IFC)
- Climate Bond Initiative
- Province of Trento - Agency for Water Resources and Energy (APRIE)
- Ministry of Finance of the Republic of Lithuania
- ACTIAM
- Japan Housing Finance Agency (JFH)

The main role of the Advisory Council is to help advise and support the deployment of the Pilot Scheme in the market and explore the possibility of a **‘regulatory sandbox’** for banks participating in the Pilot Scheme