EU and Cities Policies for ambitious energy efficiency renovation of existing buildings

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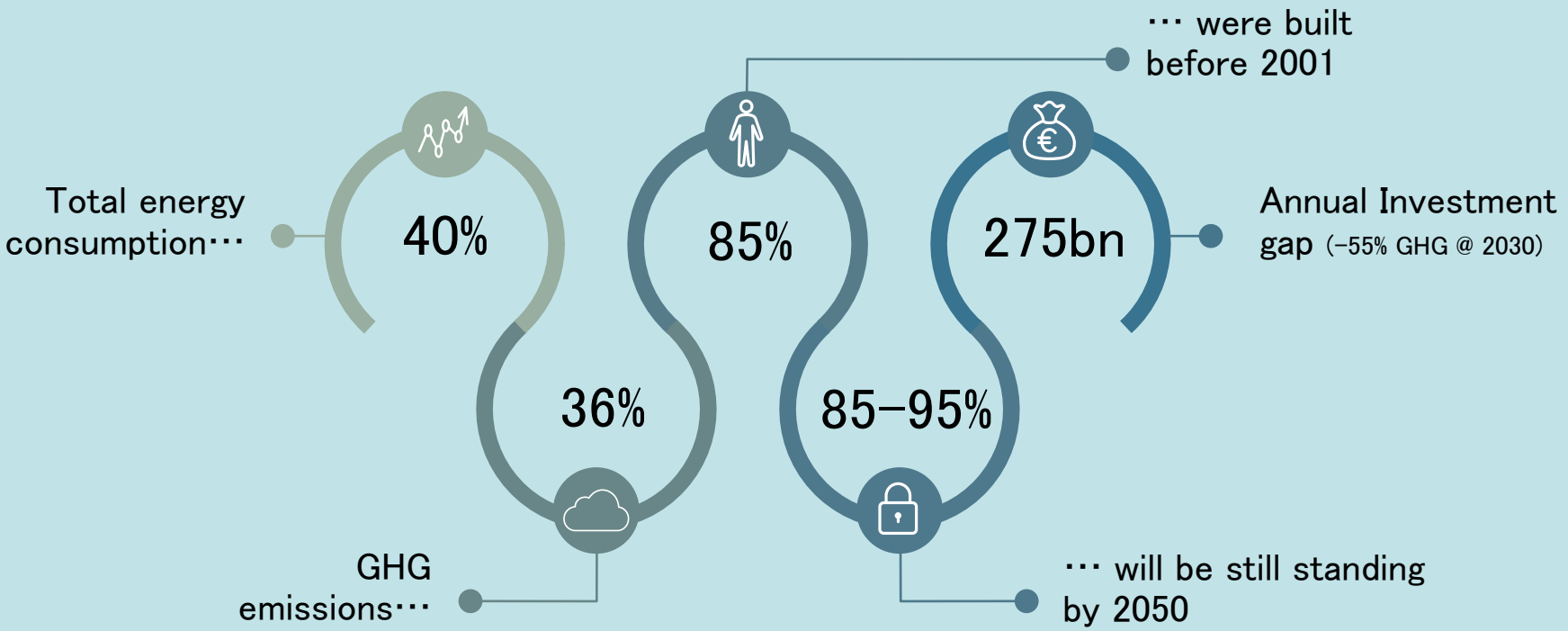
European Commission

Introduction to Buildings in the EU

Why renovation: buildings in numbers



- Under the Green Deal, the EC has launched the **Building Renovation Wave.**
- The Key issue is removal of barriers and financing.

The current renovation rate (~1% per year) will need at least to double to reach the EU's energy efficiency, renewables and climate objectives

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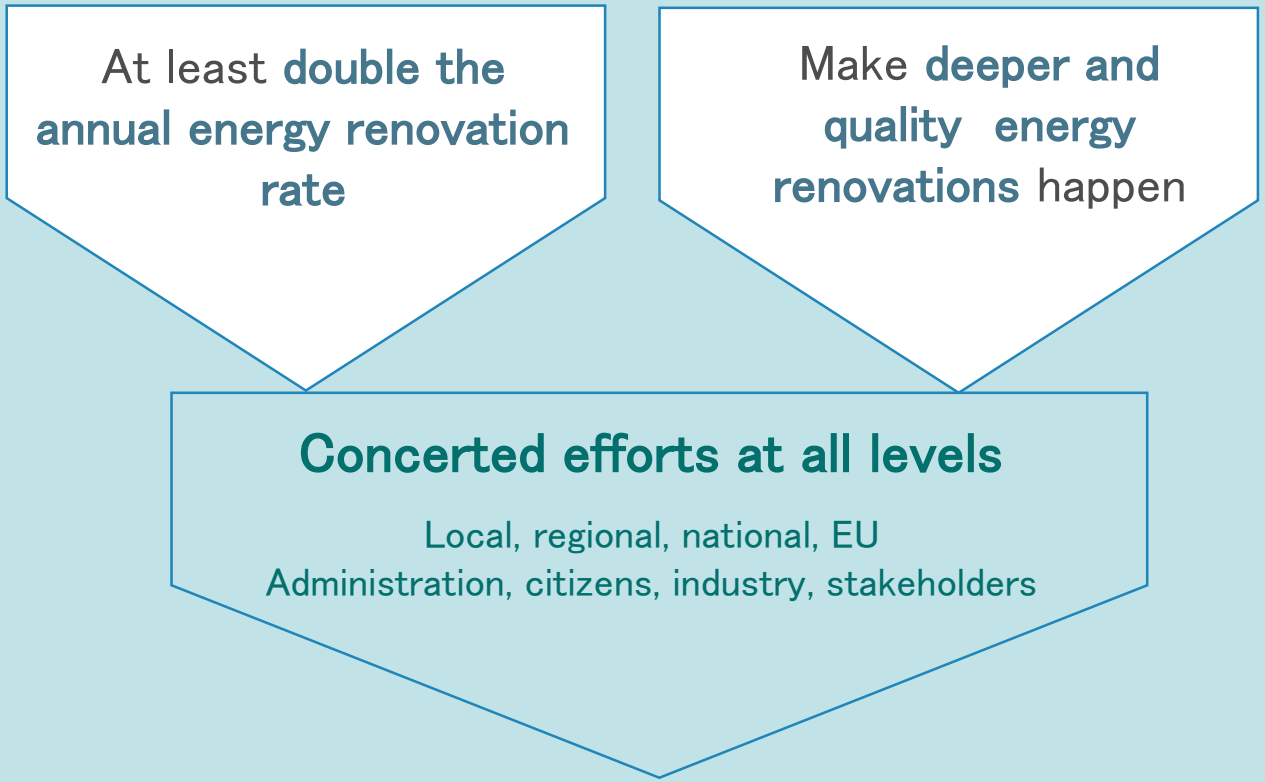
The Renovation Wave
a center piece of both the Green Deal and the Recovery Plan for Europe



Priority Areas:

- Tackling energy poverty and worst-performing buildings
- Public buildings and social infrastructure
- Decarbonising heating and cooling

The new European Bauhaus a platform to combine sustainability with art and design for the buildings of the future

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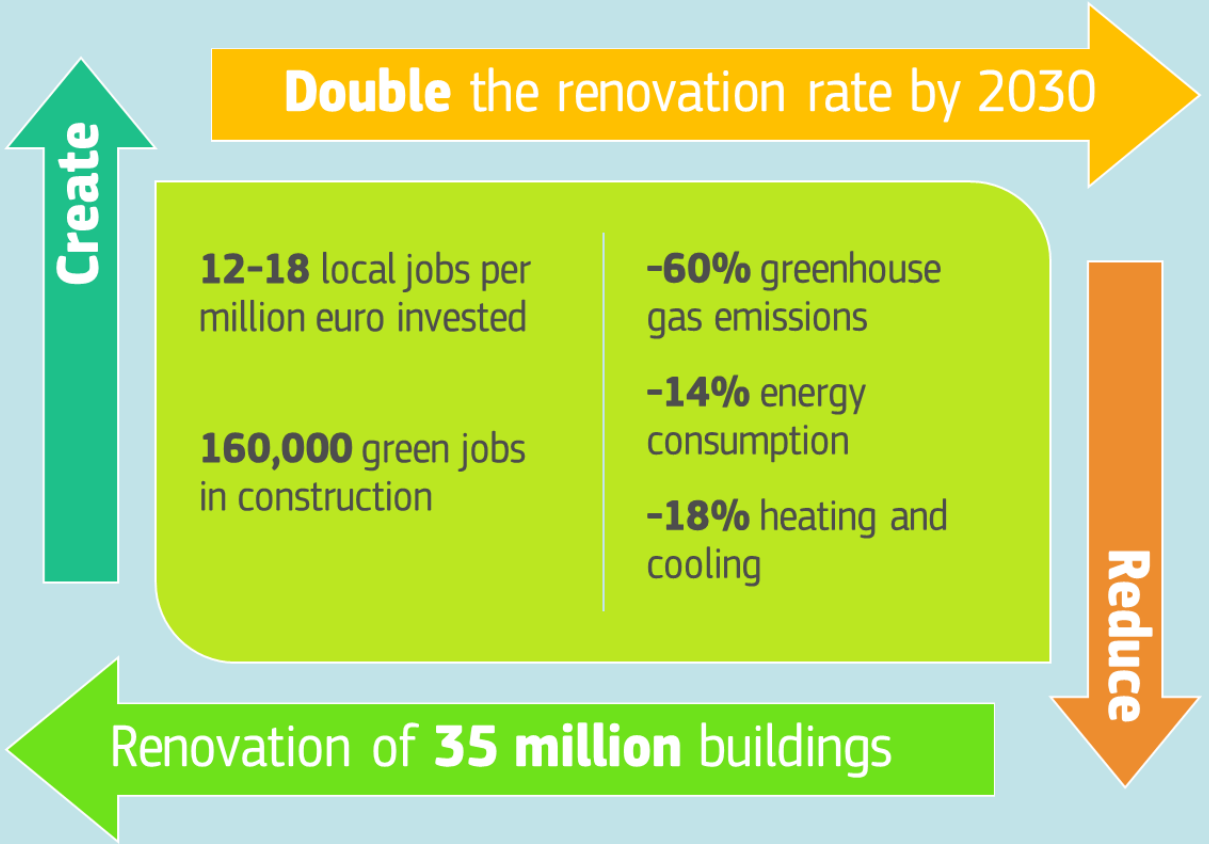
The Renovation Wave delivering multiple benefits



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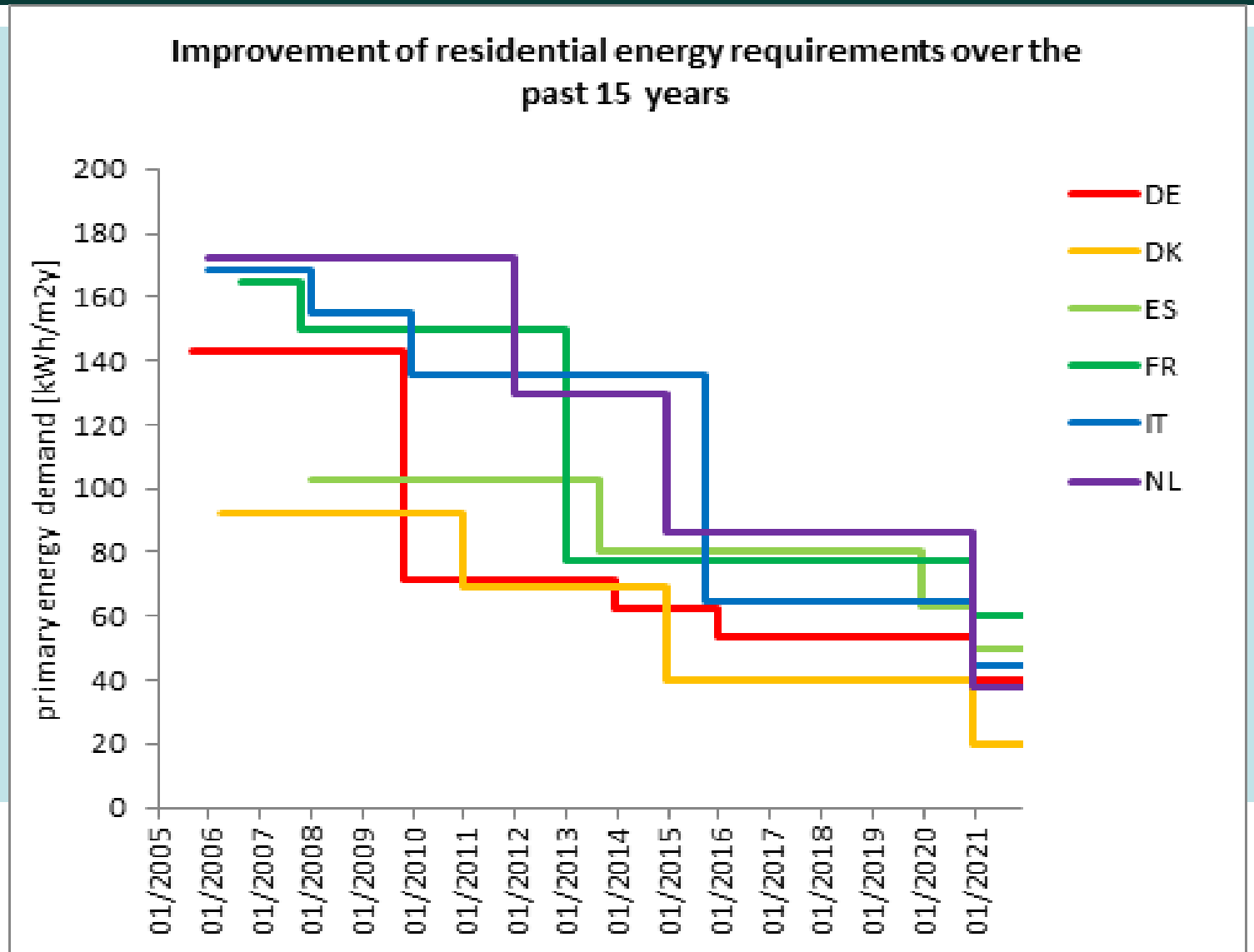
Main EU policies for Energy Efficiency

- **Energy Performance of Buildings Directive** (started in 2002, last amended in 2018)
  - Building standards for new and existing buildings at cost-optimal level; NZEBs; Energy performance certificates; National Long Terms Renovation Strategies;
- **Energy Efficiency Directive** (started in 2012, last amended in 2018)
  - MSs' Targets, Central Gov. Building Renovation, Audits, Metering, EnPC
- **Ecodesign Directive** (started in 2005, last amended in 2009)
  - Mandatory efficiency requirement for technical systems and appliances

Impact of the EPBD



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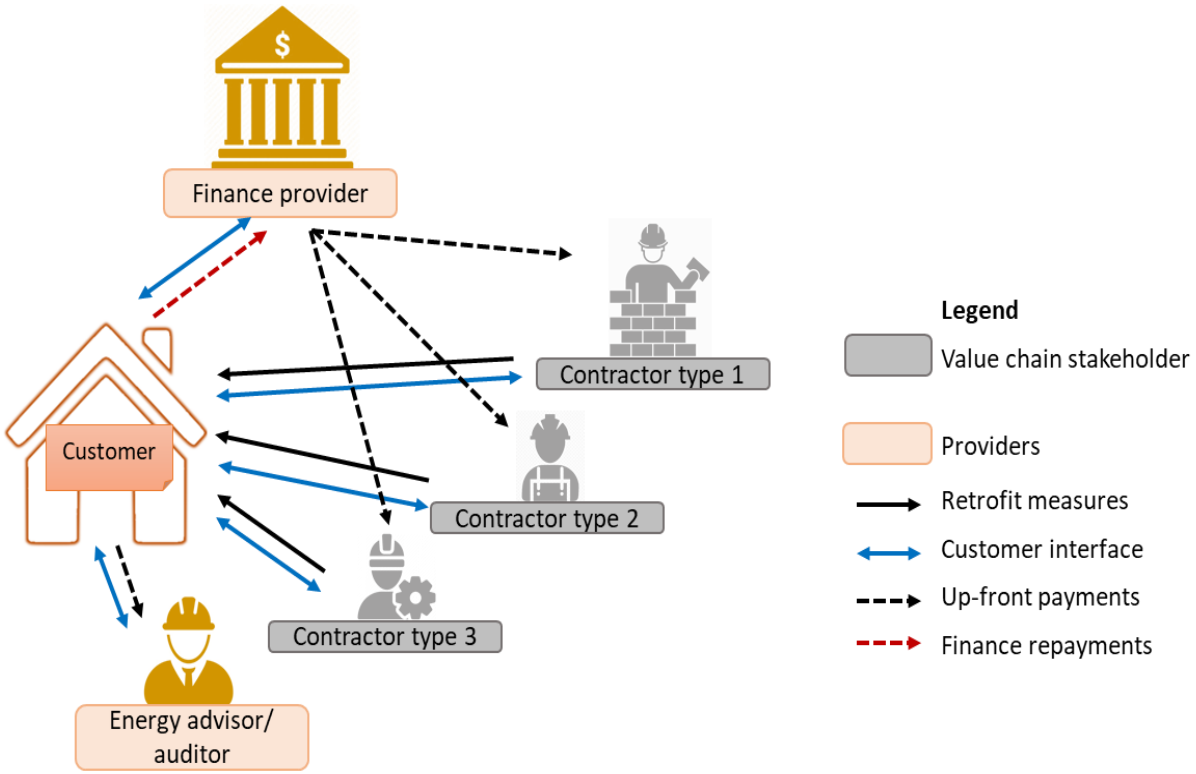
Policies For Building Renovation

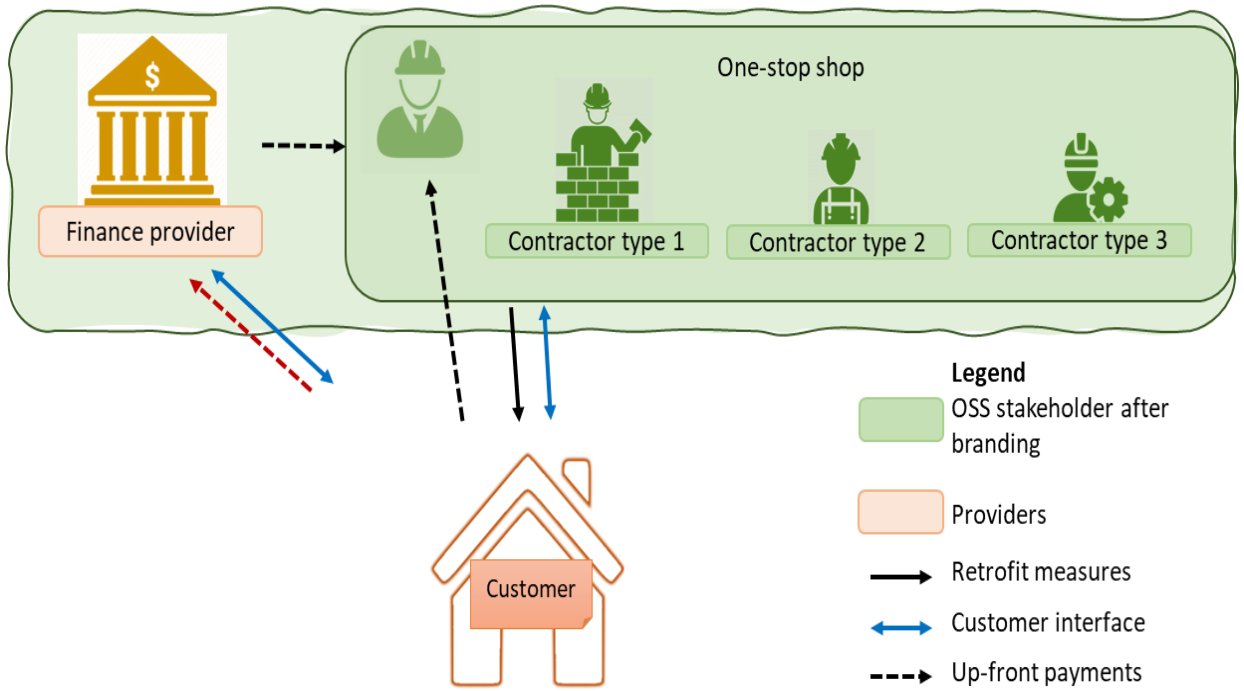
- Some policy instruments may be better suited than other for the **building renovation**, but there is no single policy that alone will be enough. Examples are:
  - **Energy Company Obligations** (Art. 7 EED);
  - Targeted subsidies for **energy poor households** for insulation, efficient boilers and appliances. Better use of public money for investing in EE than subsidizing energy.
  - **Tax deduction** schemes and **zero interest loans**;
  - **Energy tax**, but could also be difficult to implement, as may have an heavy impact.
- Attention to distributional impact of current EE policies and the rebound effect after the EE measure has been implemented (EE measure increasing energy consumption).
- **Energy refurbishment of rented apartments** may lead to gentrification, if rent is substantially increased.

One Stop Shops – important local enabler

The atomized market model



The One-stop shop model



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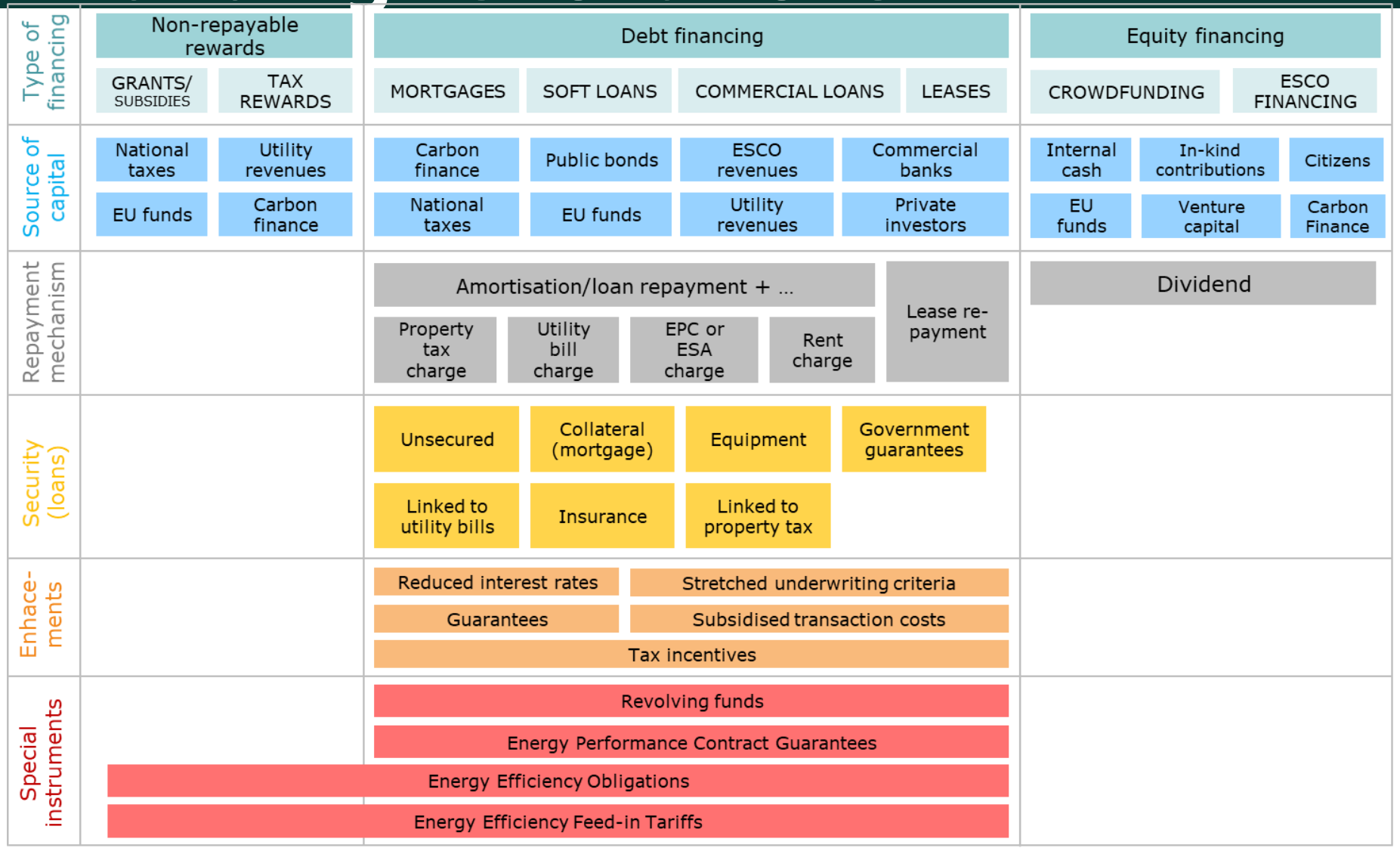
Financing plays a key role for enabling building renovations



Several financial tools are available in EU Member States

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Co-benefits of Energy Efficiency

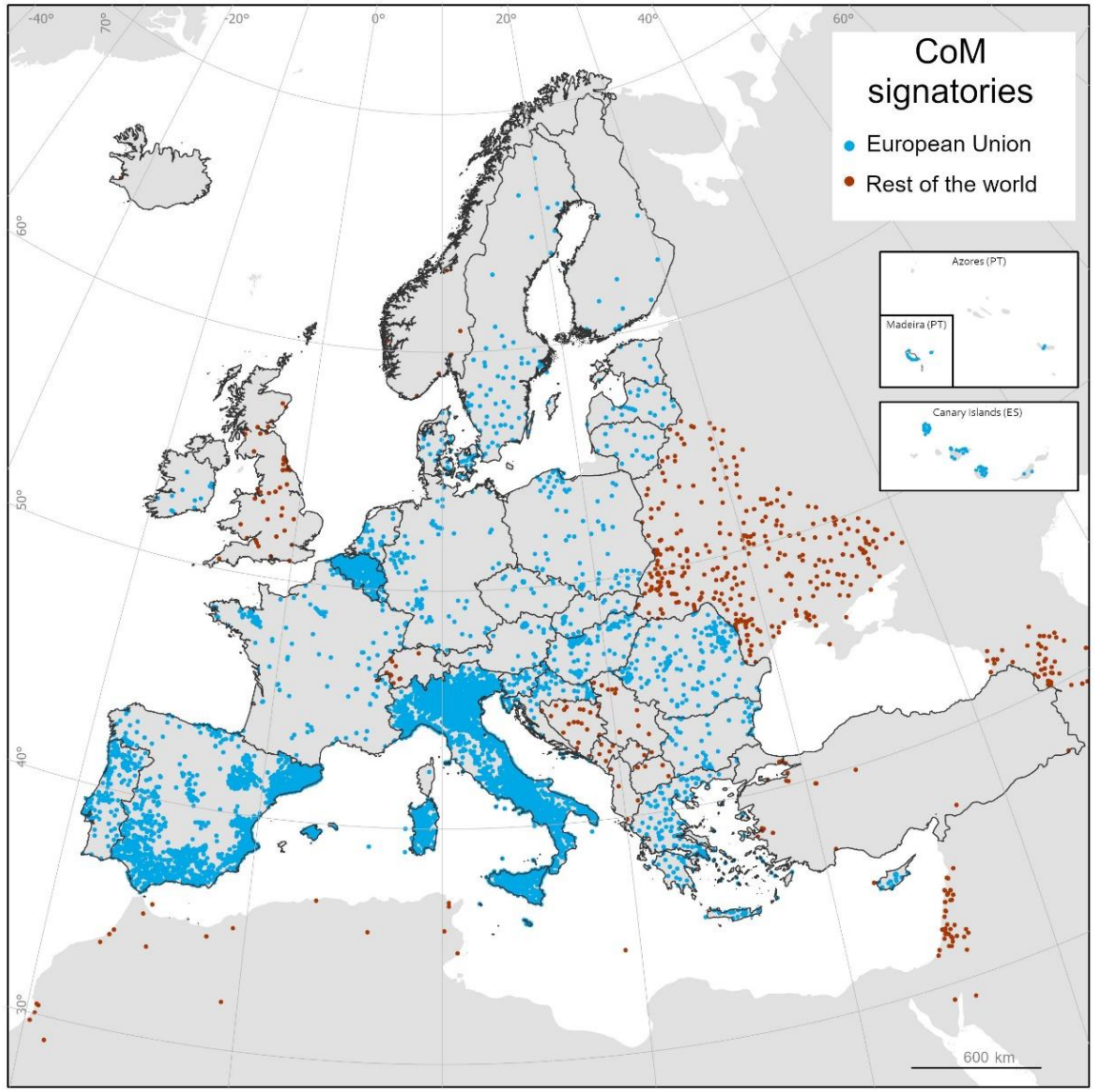
- Building renovations will increase the **value of the property** and will also improve the indoor climate and air quality (health benefits).

- Reduction of direct fossil fuels emissions in cities for heating demand will also improve **outdoor air quality** (big problem in some regions in Europe)

- Energy efficiency will reduce **energy poverty**, i.e. household not able to pay for the energy bill (even more important after the Covid-19 crisis). It is estimated that more than 50 million households in the European Union are experiencing energy poverty.

- Energy efficiency will results in **creation of local jobs** in particular related to the renovation of the buildings. (very important after the Covid-19 crisis).

EU Covenant of Mayors Cities



- **90%** of the GGoM signatories come from the EU-27
- In the EU **9,858** cities and local authorities have joined the GCoM, covering more than **217** million inhabitants
- **1 EU citizen out of 2** lives in a city or town committed to the CoM

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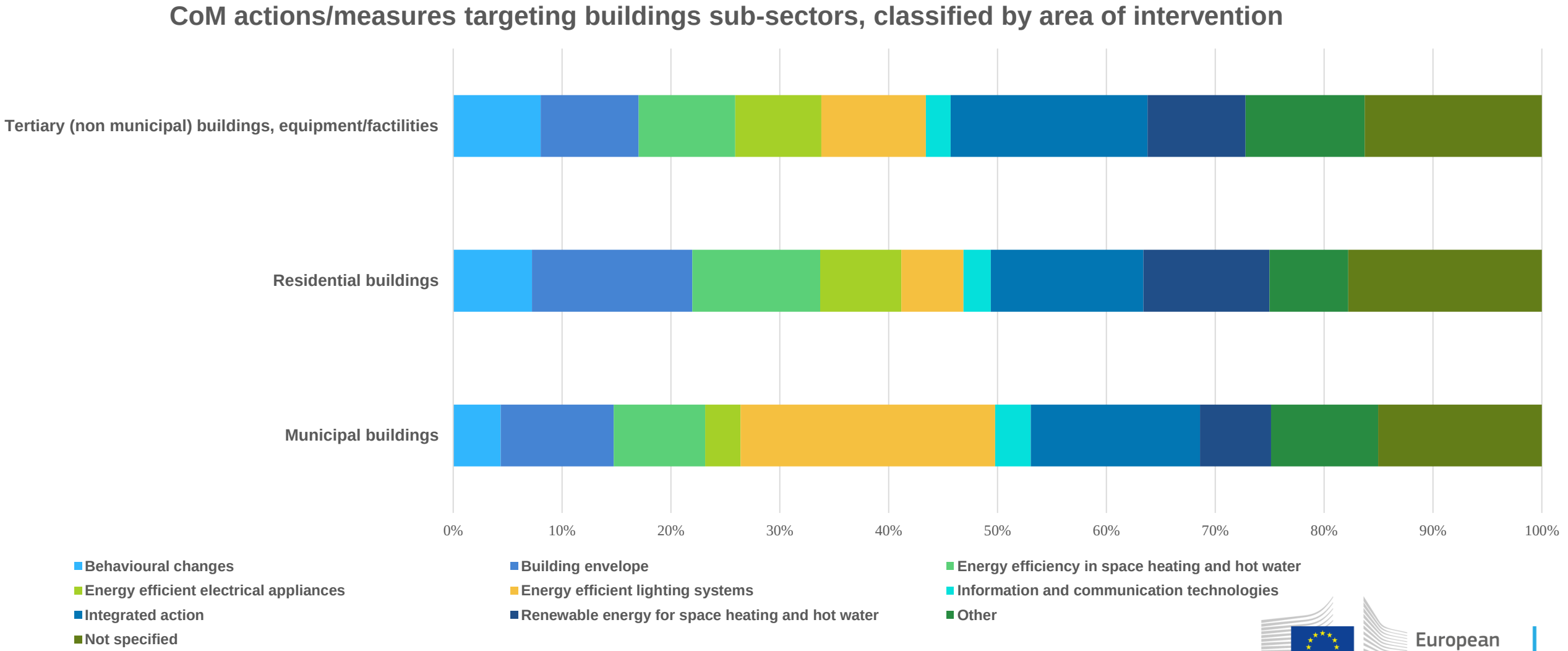
Local Action on Building Efficiency and Renewable Energies

- In EU CoM cities buildings account for **56% of GHG emissions.**
- The building energy sector is addressed by over 90000 actions and measures: the majority of them aim at **improving energy efficiency** of lighting systems, building envelopes, space heating and hot water systems, as well as of electric appliances.
- Many measures are also aiming at **promoting renewables** for space heating and hot water (notably through solar thermal collectors and biomass boilers).
- Many actions are classified as “integrated action”, i.e. they target in a holistic way the building system.
- A small share of actions concerns information and communication technologies (ICT), for example remote management systems and energy management software for municipal buildings and street lighting.

Building actions and measures by area of intervention



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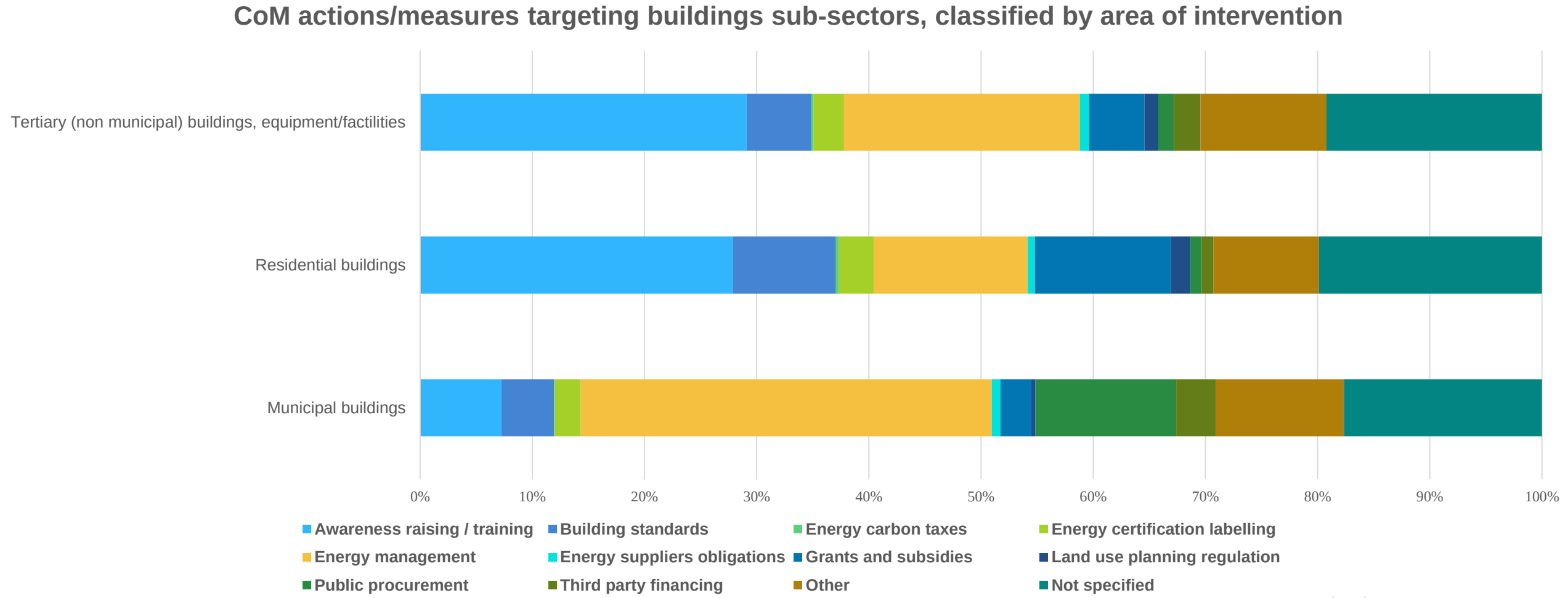
Building actions and measures by type of intervention



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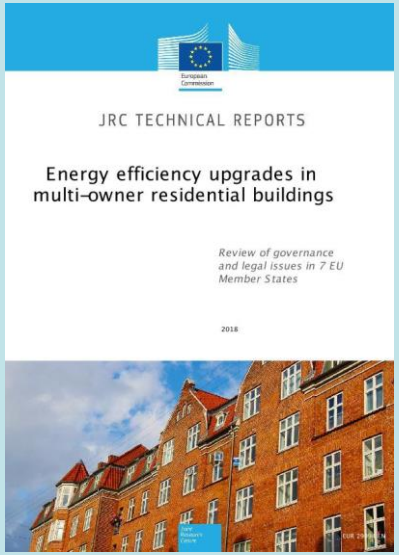
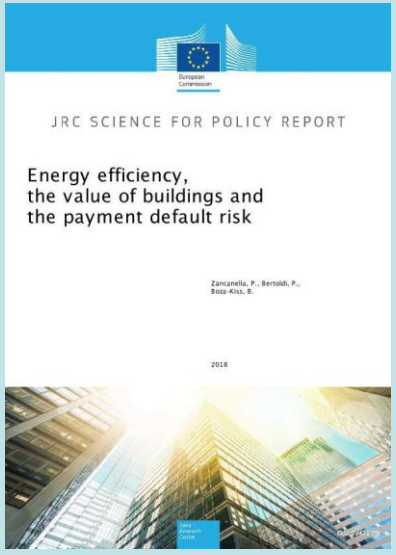
Recent Relevant JRC Studies





- The above JRC reports are available online
- Other JRC published reports:
  - Report on Multi-benefits Economic Calculation Method;
  - Technical Assistance Tools for Financing Energy Efficiency;
  - Use of EPC by Financial Organisations;

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Conclusions

- Energy Efficiency is key for the de-carbonisation of the EU economy. In particular in the building sector.
- EU Member States Energy Efficiency measures and policies complement the EU ones and are reported in the National Energy and Climate Plans and National Long Term Renovation Strategies.
- Additional policies on buildings are implemented by cities for example in the frame of the Covenant of Mayors.
- There are many co-benefits due to Energy Efficiency in buildings at local level.

Thanks

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