

# **ENERGY RENOVATIONS OF EU MULTIFAMILY BUILDINGS:**

**Do current policies target the real problems?**

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## WHY ENERGY RENOVATION?

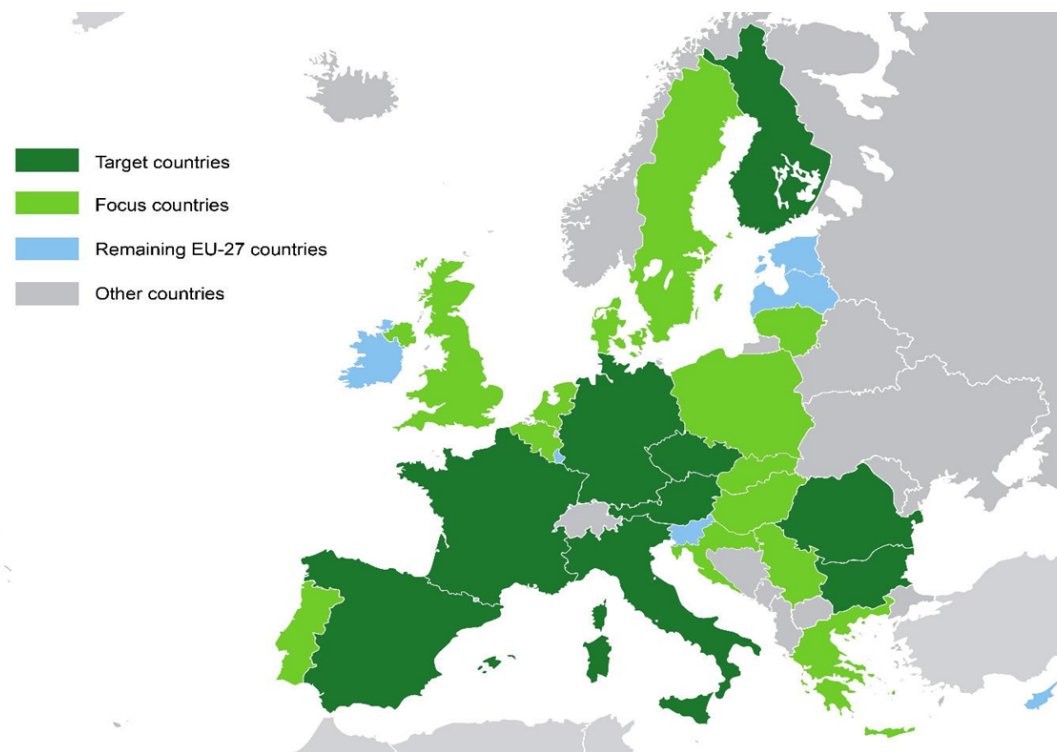
- EU's 20-20-20 targets
- Large cost-effective opportunity to reduce CO2 emissions
- Help Europeans keep warm/cool
  - at reasonable cost
  - with low CO2 emissions
  - for the next 50 years



## ENTRANZE

Policies to **EN**force the **TR**ansition to **N**early **Z**ero **E**nergy buildings in the EU-27

- Objective: to actively support policy making
  - by providing the required data, analysis and guidelines
  - to achieve a fast and strong penetration of nZEB and RES-H/C
  - within the existing national building stocks
- 11 partners from 9 countries
- Duration 4/2012 – 9/2014



# WHY OWNER-OCCUPIED MULTIFAMILY BUILDINGS?

- Dominant form of ownership in eastern and southern Europe and several other countries
- Large potential throughout Europe to reach energy efficiency improvements
- Reaching a time when retrofit is needed
- Its specific problems not visible in policy discourse

	Owner-occupied of multi-family , %	Type of ownership	Required majority for renovations, %
Austria	23	unitary system	>50% of shares, but minority rules
Bulgaria	90	condominium ownership/ unregulated	>67% (of area)
Czech Republic	79	condominium ownership	>75% of votes
Germany	24	condominium ownership	>75% of shares
Finland	50	housing company, residents own shares (like unitary system)	>50% of shares
France	26	condominium ownership	>50% of shares
Italy	65	condominium ownership	>50% of shares (for energy investments)
Romania	96	condominium ownership?	>67%
Spain	86	condominium ownership	>50% of shares

# RESEARCH METHODS

- Starting point to barriers and decision criteria from literature
  - little information on the relevance of each factor for individual building owner types
- Partners evaluation of *critical* and *contributory* barriers to investment
- Interviews with 3-4 experts in each target country
  - what weight do different decision criteria have

Austria	Owner-occupied single- and two-family homes	Owner-occupied multi-family buildings	Rental multi-family buildings
Criteria			
Financial			
Initial cost			
Expected energy savings			
Payback time			
Return on investment			
Ease of renovation			
Quality service available			
Quick installation			
Turnkey solutions available			
Lifetime and risk considerations			
Timing vis-a-vis previous renovations			
Ease of maintenance			
Widely used solution			
Other benefits			
Improved comfort			
Improved value of property			
Social approval/status			
Environmental/societal motives/pressures			
Environmental considerations			
Expected future regulation			
Recommendation by experts			

# DECISION MAKING ON ENERGY INVESTMENTS

- Evidence that cost effectiveness rarely determines investments
  - Not separate from other decisions concerning the building and users
  - Embedded in
    - existing structures of decision making
    - information use
    - institutional and social norms
  - Relevant who is the decision maker
- = Part of the overall (financial, legal and infrastructural) context of the building owners and users
- Condominiums: majority rules influencing decision making & different requirements for getting a loan from a bank

# SIMILARITIES & DIFFERENCES/EU-27

Renovation fund!

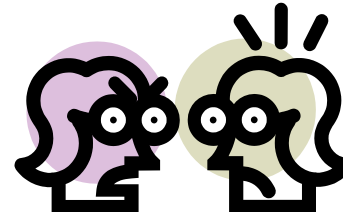
Degree of organization

Required majorities for  
major renovation  
decisions (50-75%)

- Owner-occupants decide
- Major renovation requires common decision (residents' assembly, community of property owners)
- Elected representatives (board, chairman) and employed specialists (house manager, administrator)
- Lay people make decisions with large consequences!

Possibility to take out a common loan!

# BARRIERS IN MULTIFAMILY HOMES



- Similarities
  - Renovation is a major disruption, not a regular event
  - Major initial costs, cannot often be done sensibly in pieces
  - Information needs exceed residents' processing capacity
  - Finance is not straightforward
  - Collective decision problems: non-attendance, diverse interests and situations, division of benefits ... "history" of interaction
- Differences
  - Easier where a common loan is possible (unitary system) and where renovation fund/plan exists
  - Easier where benefits are obvious (condition is so poor that things can only get better)
  - Costs of renovation may be difficult to (re)cover since location defines value of property
  - Renovation is particularly difficult when a large number of owners are absentees (e.g. rent their flat)



## COUNTRY STUDIES: AUSTRIA, FINLAND AND ROMANIA

- Residents concerned about disruption, risks and delays in the renovation (esp. FI & AT)
- Different ownership models: unitary system vrs. Condominium ownership
- Problems caused by the structure of ownership (esp. RO)
  - Heterogeneity of owners
  - No possibility to get a common loan (possible in FI & AT)
  - Some residents are insolvent/incapable of absorbing costs
- Problems in awareness & finding a common interest
- Different rules of majority decision in different countries

## POLICY MEASURES

- Buildings Directive (EPBD), Renewable Directive (RED), Energy Efficiency Directive (EED), Ecodesign Directive, Energy Labelling Directive
- National policies promote renovations mainly via
  - financial incentives
  - technical information about the benefits of renovation
  - efforts to improve the qualifications of the building sector
- Mandatory renovation funds (but they usually do not refer to energy efficiency improvements)

## DO EXISTING POLICIES TARGET THE REAL PROBLEMS?

- Now, national policies promote renovations via
  - financial incentives, technical information, efforts to improve qualification of the workforce
- For condominiums, main problems relate to the organization of **owners' decision making** and (organizing)/**financing of investment**
  - Good examples – standard solutions – diversity of buildings
  - Need to review national legislation concerning decision making in condominiums? (=target group specific instruments)
  - Critical need to engage financial services sector!!



# THANK YOU!

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## FOR THE DISCUSSION:

- **How** could the problems faced by condominiums be made **more visible**?
- How to find a medium for the problem solving? **Whose responsibility**?
- Where to direct future research?
- What kind of future research would help best to find solutions to the problems?