

Energy-Efficient Refurbishment: motives and barriers for private home-owners

Energy Efficiency and Renewables in Buildings –
Challenges, Parameters and Successes
from a British and German Perspective

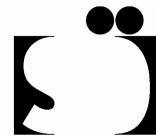
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Projektpartner:



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Förderung:



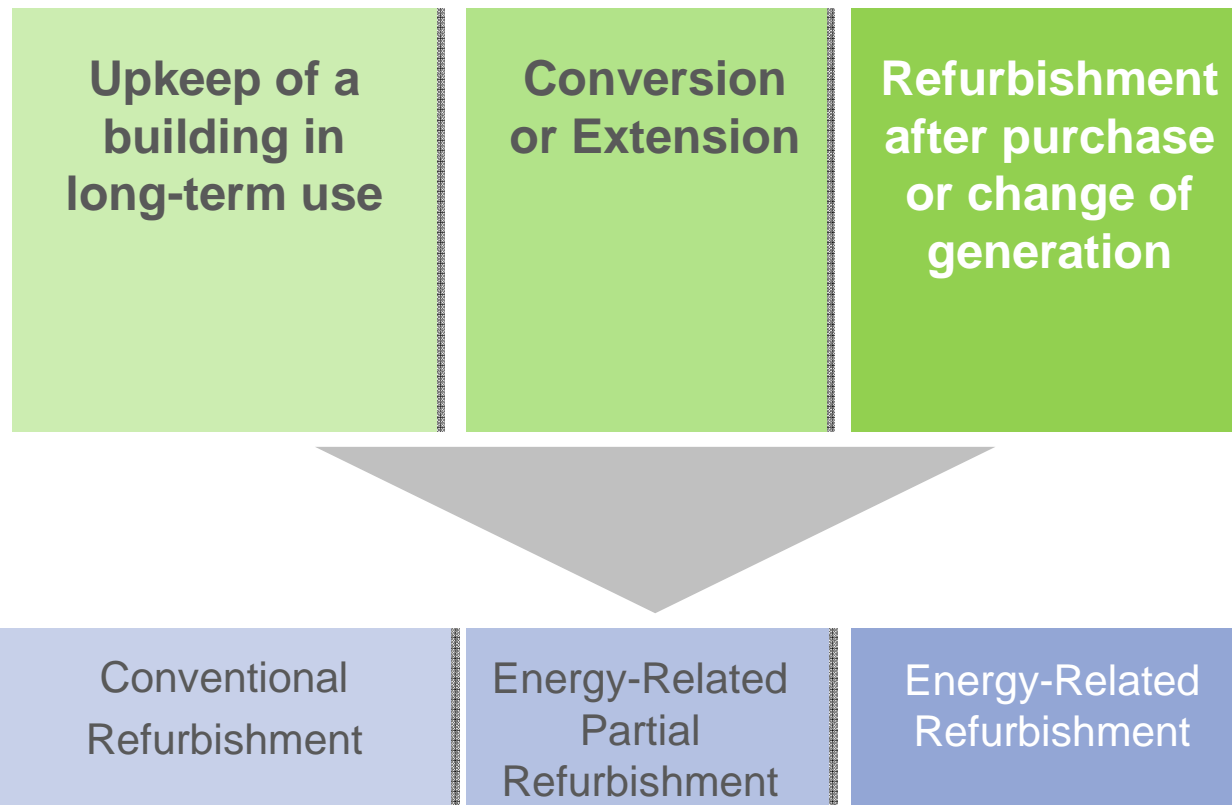
Background to the problem

- Energy consumption for heating fell by 2.4% from 1995 to 2006
 - Marked improvement in energy efficiency
 - Improved buildings and heating systems
 - Change in user behaviour (lowering of room temperature)
 - Dramatic rise in residential energy costs
 - € 1,556 per household/year (2007)
 - Major savings potential of the 14.5 million single and double occupancy houses
 - Energy-related modernisation can reduce energy requirements by up to 80%
 - Low rate of refurbishment
 - Only about 1-2% undergo energy-related refurbishment each year
 - Inadequate refurbishment efficiency
 - Only a third of the savings potential is realised during refurbishment
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Empirical Design

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- Empirical survey on refurbishment decisions of private home-owners
 - Stage I
 - 44 qualitative interviews
 - Keeping up and refurbishment measures within the last three years
 - Energy efficient refurbishers
 - conventional refurbishers
 - Field work: summer 2008
 - Phase II:
 - standardised survey
 - 1.000 home-owners
 - Field work: beginning 2009

Starting Points and Refurbishment Methods



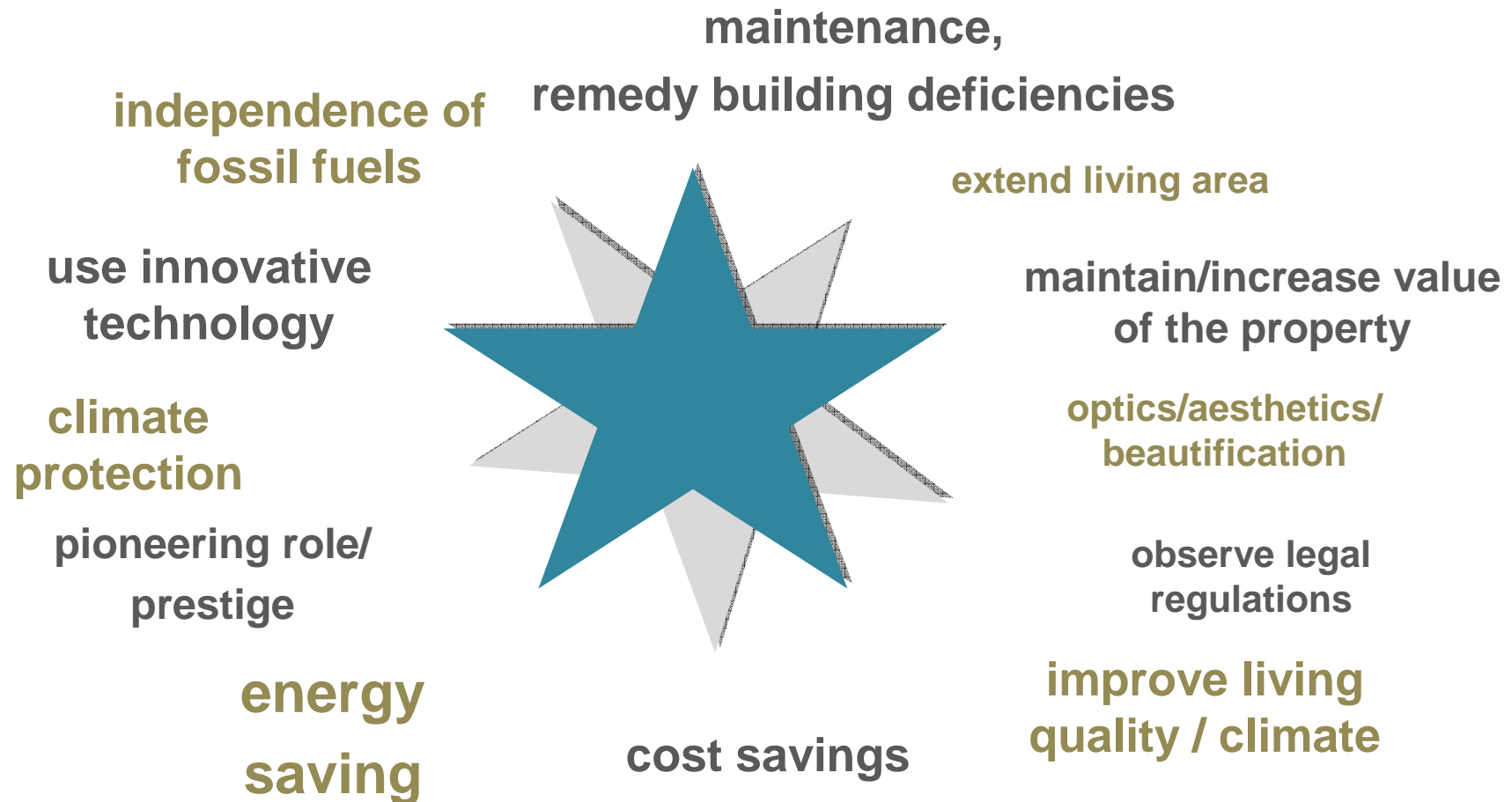
Starting Point and Stage of Life

- Private home-owners are relatively old
 - Ratio of home-owners in Germany: 43 %
 - Highest ratio in the 60+ age group (55%)
- Different age structure of modernisers
 - Biggest group is the over 60-year-olds
 - Also above average: 50-60-year-olds and 30-40-year-olds (Technomar 2005)
- Narrow time window for economical energy-related refurbishment
 - dependent on age of building (maintenance cycle)
 - ... and biographical situation/future perspective of home-owners

Starting Point and Stage of Life

- Upkeep of a property in long-term use
 - Maintenance
 - Frequently individual measures
 - Limited budget
 - Probably higher age groups
- Energy-related refurbishment in the case of conversion/extension and transfer of ownership
 - Readiness to take more extensive measures
 - Probably younger age groups
- Transfer of ownership as time window
- Uncertain biographical situation prevents extensive refurbishment
- Own input important for low-income households in particular

Motives and Motivational Alliances: Energy-Related Refurbishment



Motives and Motivational Alliances: Energy-Related Refurbishment

- Different motivation for conventional and (partial) energy-efficient modernisers
- Conventional modernisers:
 - Main motivation: functionality, optics and strong cost element
 - Energy-efficiency not on maintenance agenda
 - Not aware of the problem (“already do a lot”)
- Considerable potential for energy-related refurbishment
 - Wide-spread desire to consume less energy
 - Numerous motives
 - Climate protection, environment and sustainability only effective with the already “convinced”
 - Frequently: energy efficiency as additional benefit, pragmatic compromise or concession to limited financial resources
 - Positive aspect: trend towards energy efficiency and climate protection

Barriers and Obstacles



Modernisation decision

- Energy-related refurbishment decision as a complex interplay of economic, social, psychological and technical factors
- Subjective preferences
 - Weighing up costs and benefits on the basis of emotional desires and objective criteria
 - Improvement in use value is central
 - Main concern: liquidity and short-term costs
 - Life cycle costs rarely taken into consideration
- Often inadequate knowledge of financial support options
 - ➔ Highly subjective viewpoint in judging financial scope and latitude
 - ➔ Attitude and lifestyle play a major role

Conclusions

- Distinguishing between different approaches
 - Address different forms of refurbishment (“top refurbishment” v. “general refurbishment”)
- Offers of information and advice aimed at target groups
 - Independent and professional advice for energy-related refurbishment
 - Energy advice as part of overall refurbishment advice
- Reconsider role of financial support
 - “Incentive” for energy advice and higher energy-efficiency standards
 - Support programmes to take account of own input
 - Innovative financing models for older home-owners
- Establishment of quality standards for energy-related refurbishment
 - Building regional competence networks