

BARRIERS AND POTENTIALS FOR RENOVATION SEEN FROM THE CUSTOMER SIDE AND HOW THESE CAN BE ADDRESSED BY ONE-STOP SHOPS

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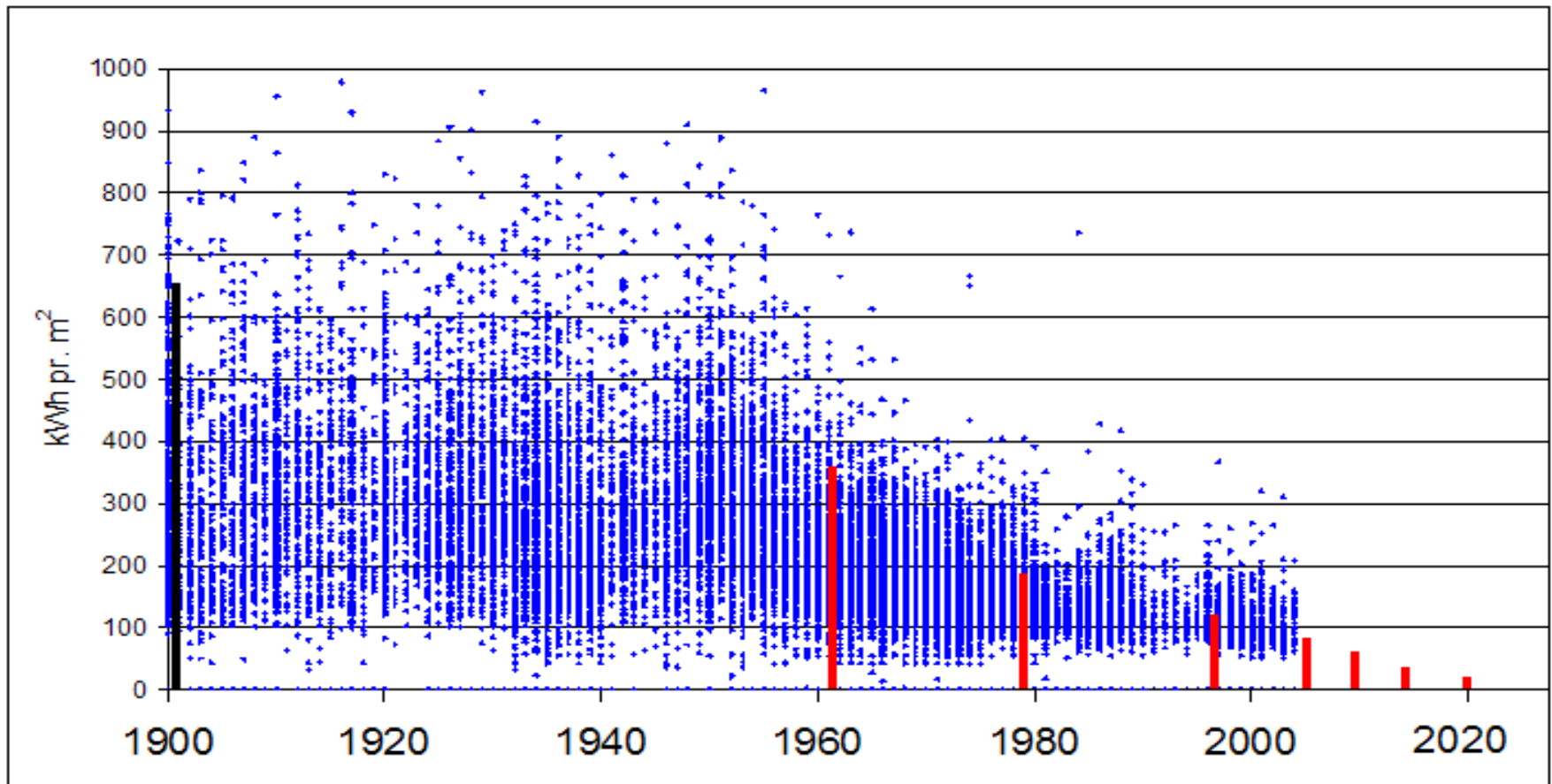
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Renovation Potential -Danish Example



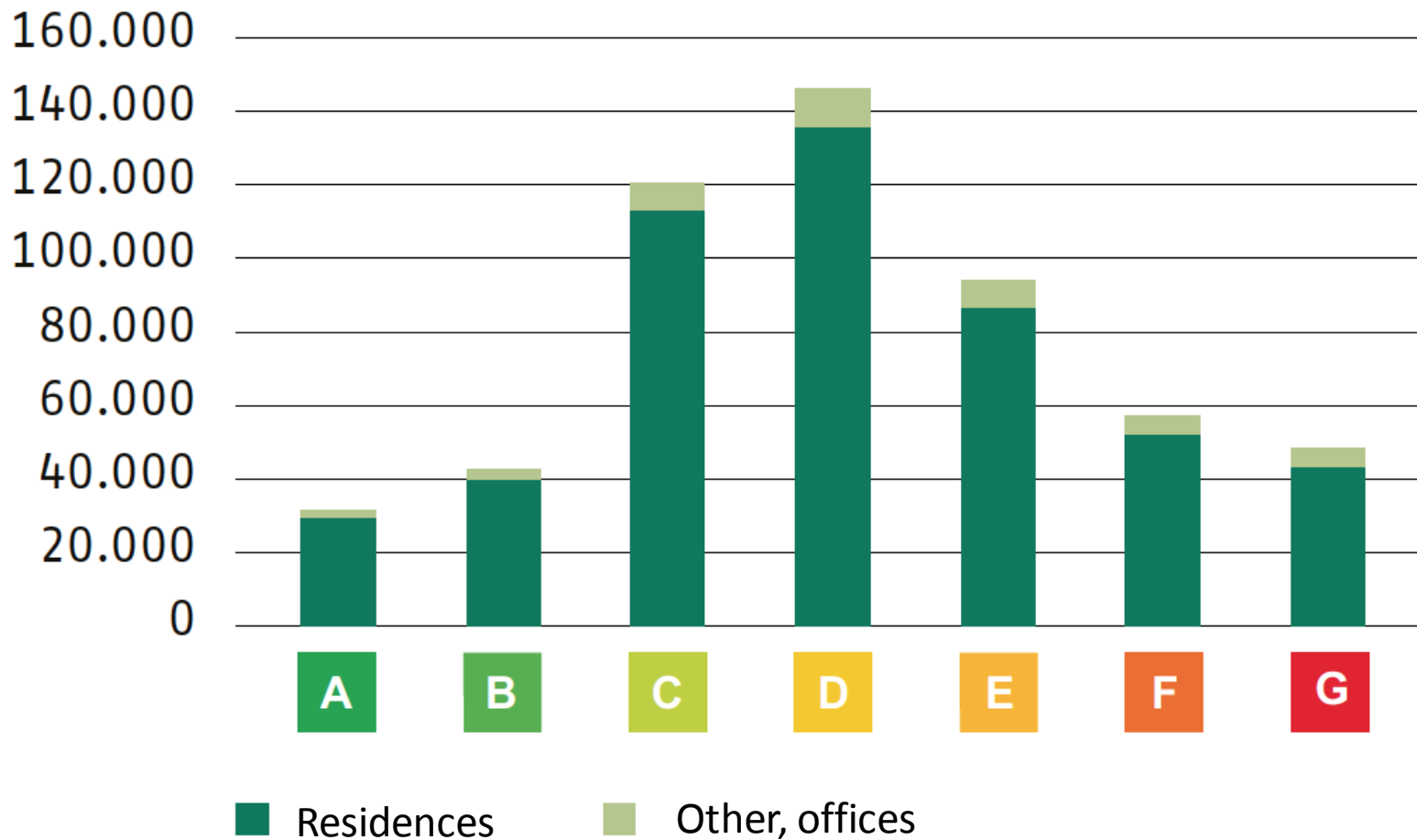
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Energy Use in Danish Single Family Houses – by year of construction

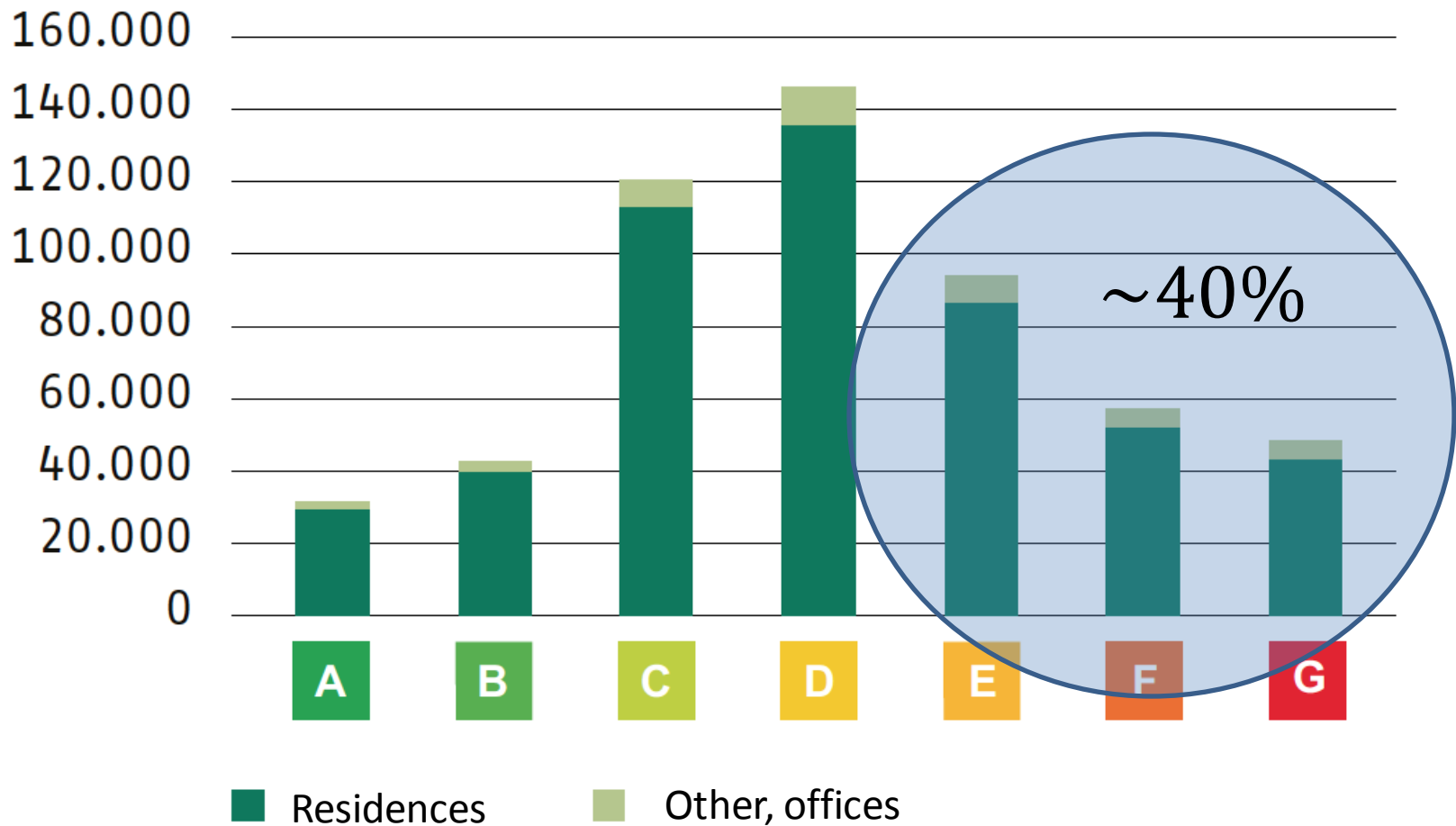


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DISTRIBUTION OF ENERGY CERTIFICATES - 2016



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Renovation Barriers -Danish Example



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IDENTIFIED BARRIERS FOR THE BUILDING OWNER

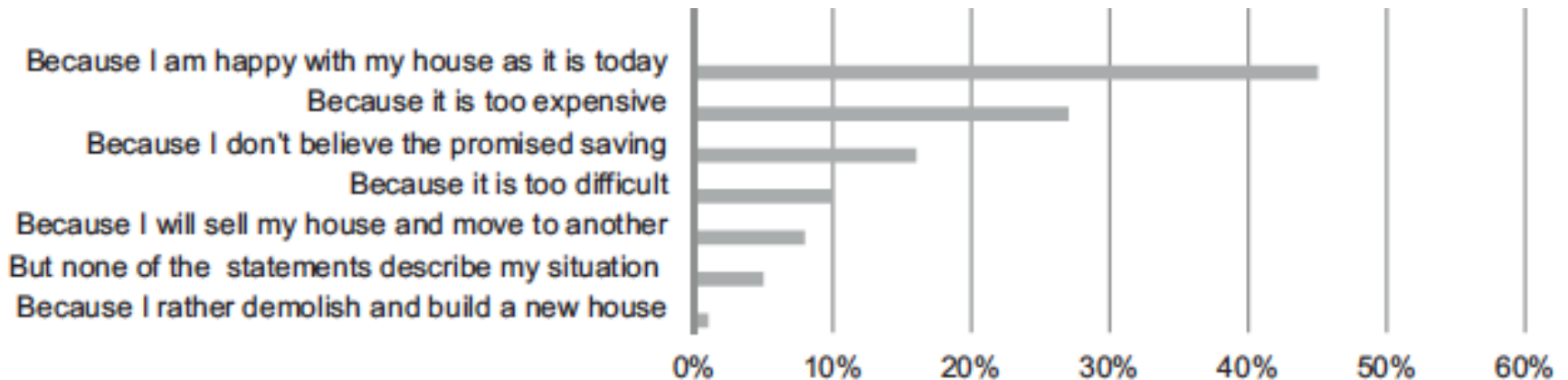


- Lack of knowledge and interest in energy use, potential energy savings, non-energy benefits, economic advantages.
- “Energy” renovation is not “prestigious”
- Mistrust in new products
- Highly aesthetic examples and proven savings are missing
- District heating price structure decreases potential energy cost savings.
- “Energy” renovation is costly and not cost effective.
- Unrealistic pay back times for typical renovation solutions
- Too much work to carry out and to control the proces.

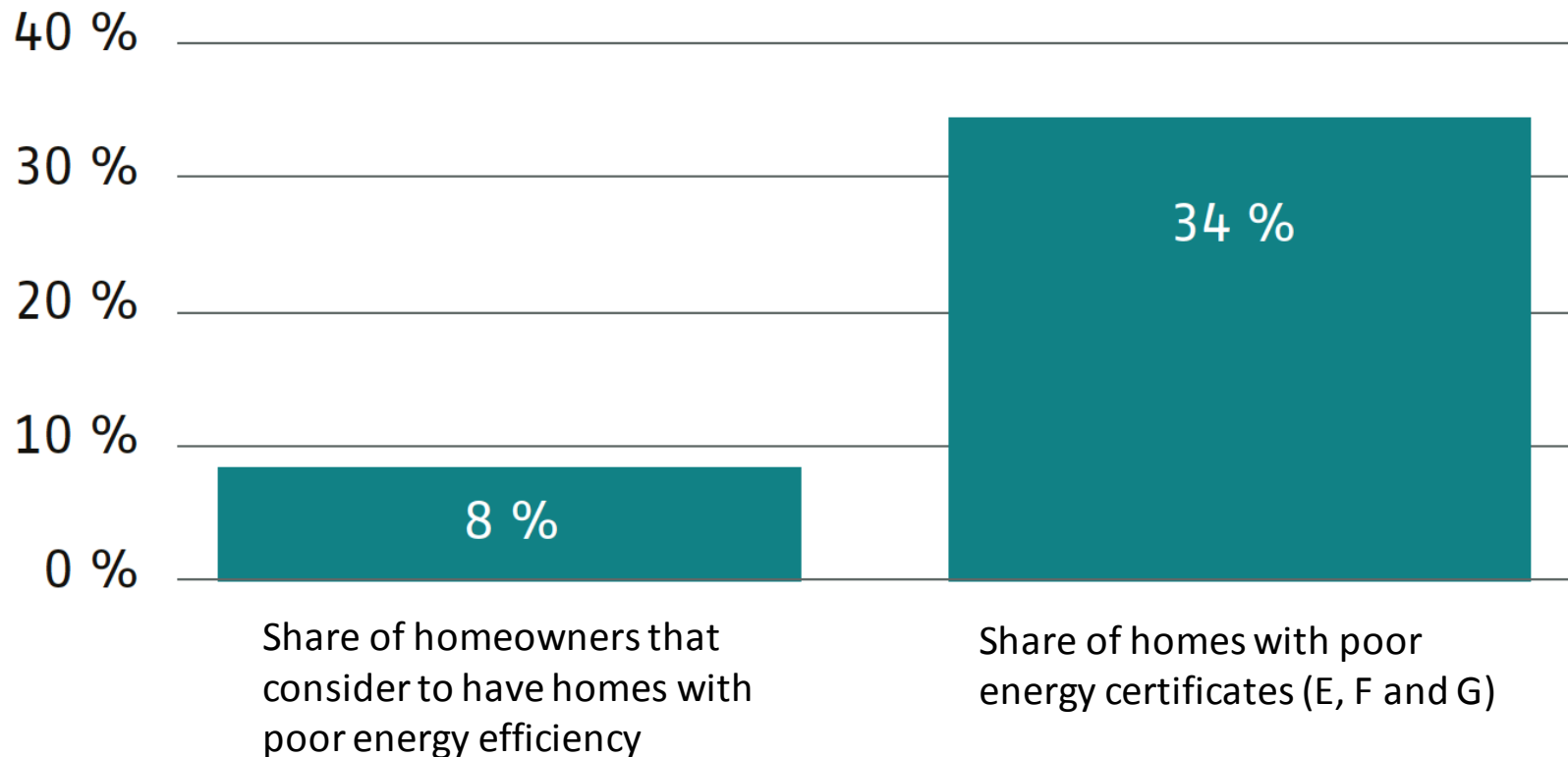


REASONS FOR NOT COMPLETING HOME RENOVATION?

- WHICH STATEMENT(S) DESCRIBE YOUR CURRENT SITUATION BEST?

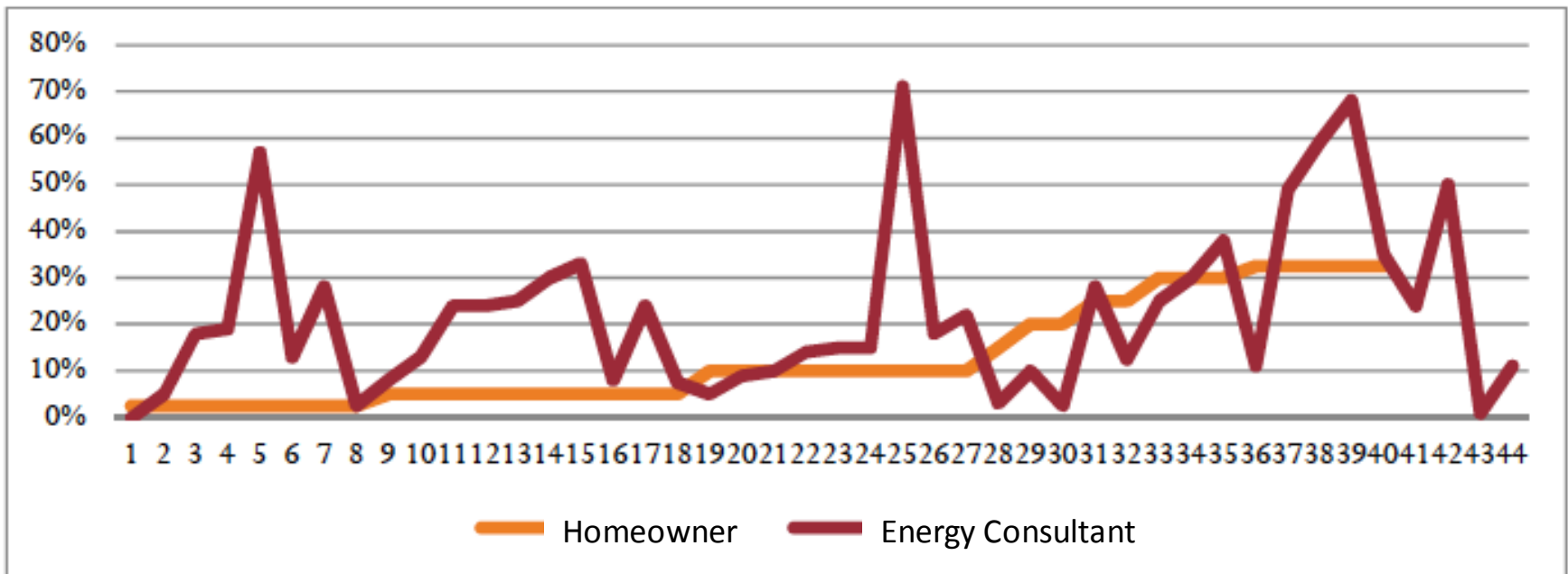


HOMEOWNERS THAT CONSIDER TO HAVE A HOME WITH POOR ENERGY-EFFICIENCY

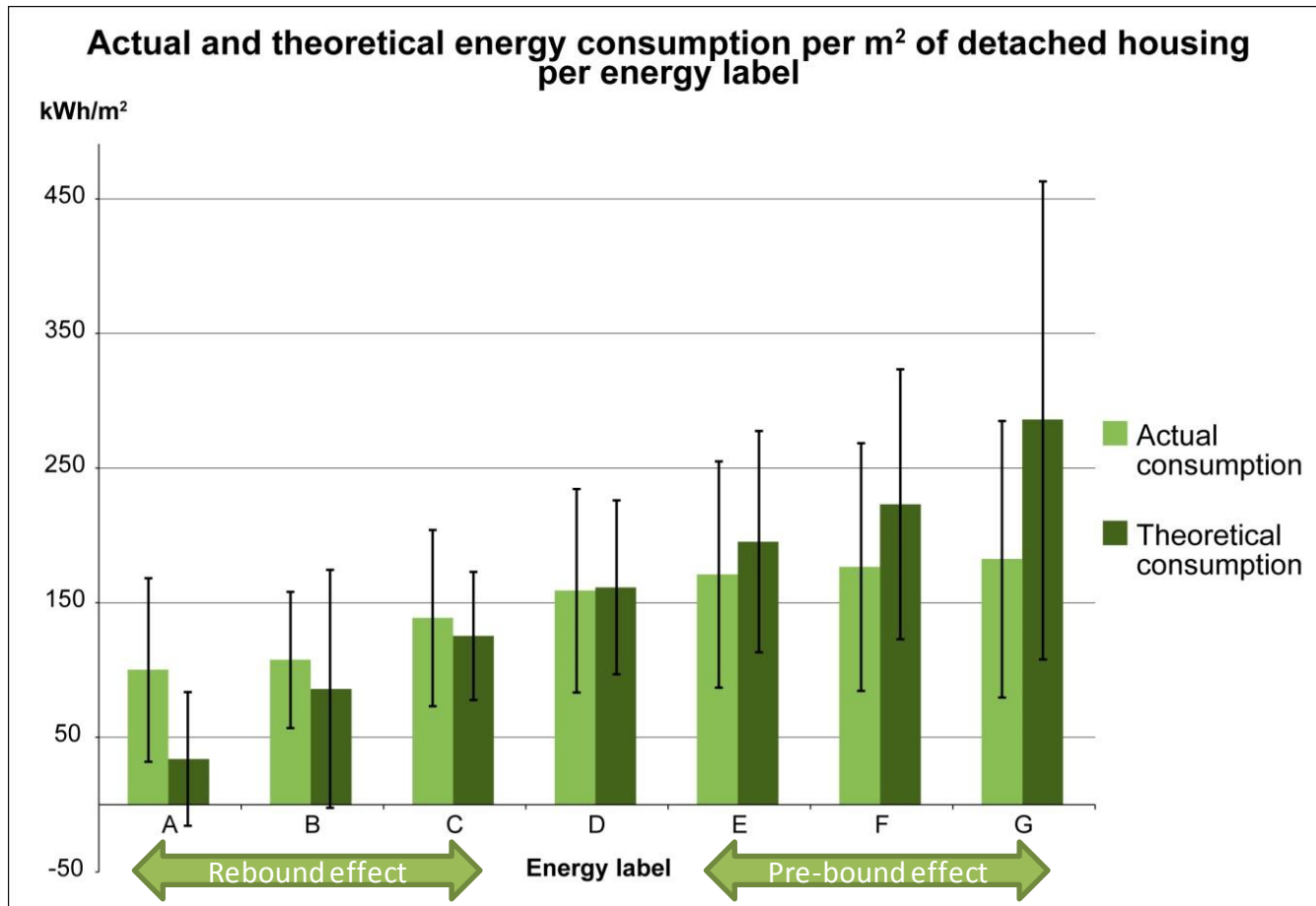


HOMEOWNERS OWN ESTIMATION OF POTENTIAL ENERGY SAVINGS

- ENERGY SAVING POTENTIAL ESTIMATED BY HOMEOWNERS AND ENERGY CONSULTANTS



EFFICIENT HOMES VERSUS EFFICIENT PRACTICES....



Based on 230.200 detached Danish houses with an energy label. (Gram-Hansen and Hansen, 2016)



Motivation of Homeowners



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WHAT CAN MOTIVATE PRIVATE HOME OWNERS?



KNOWLEDGE:

- Better information on non-energy benefits of renovation
- Increase awareness and focus on energy saving potential in all renovation activities.
- Make energy use visible and compare it with similar families
- Provide realistic expectations on energy saving potential
- Easy access to independent experts

ECONOMY:

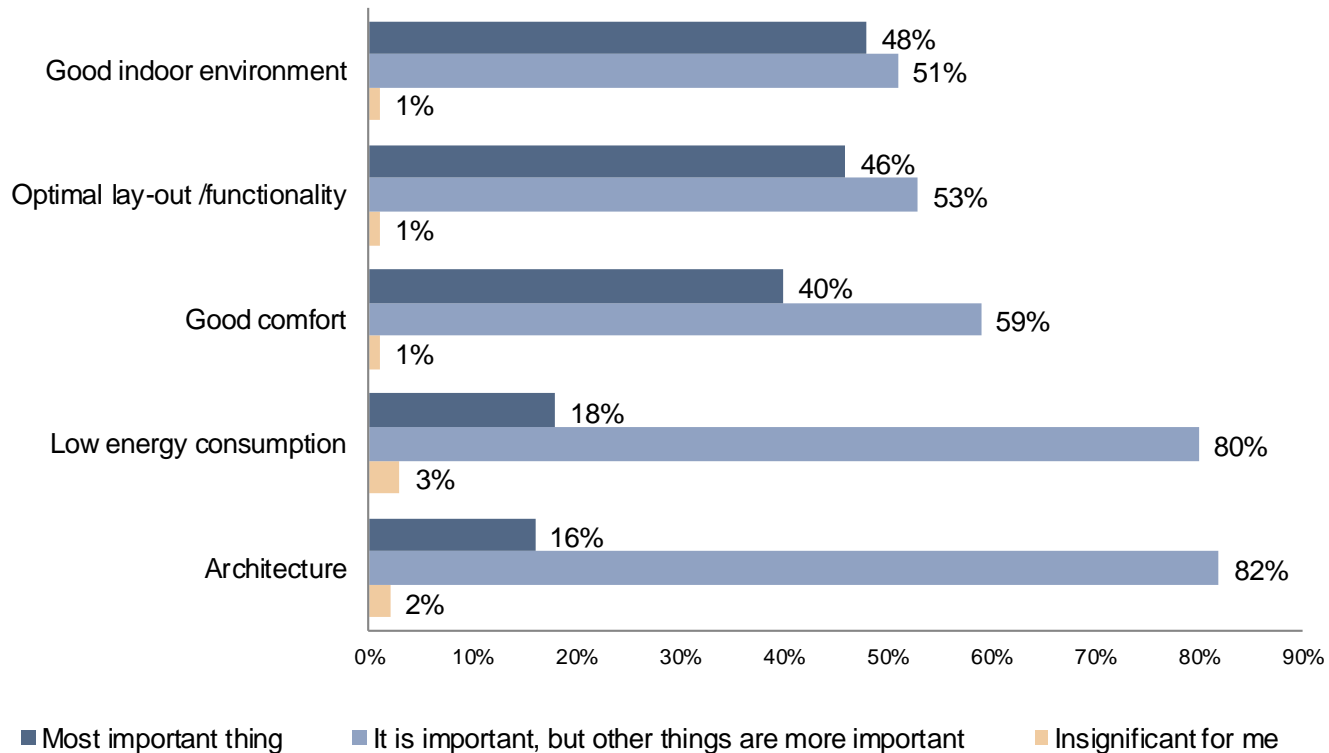
- Economic support and incentives
- Energy cost should encourage savings



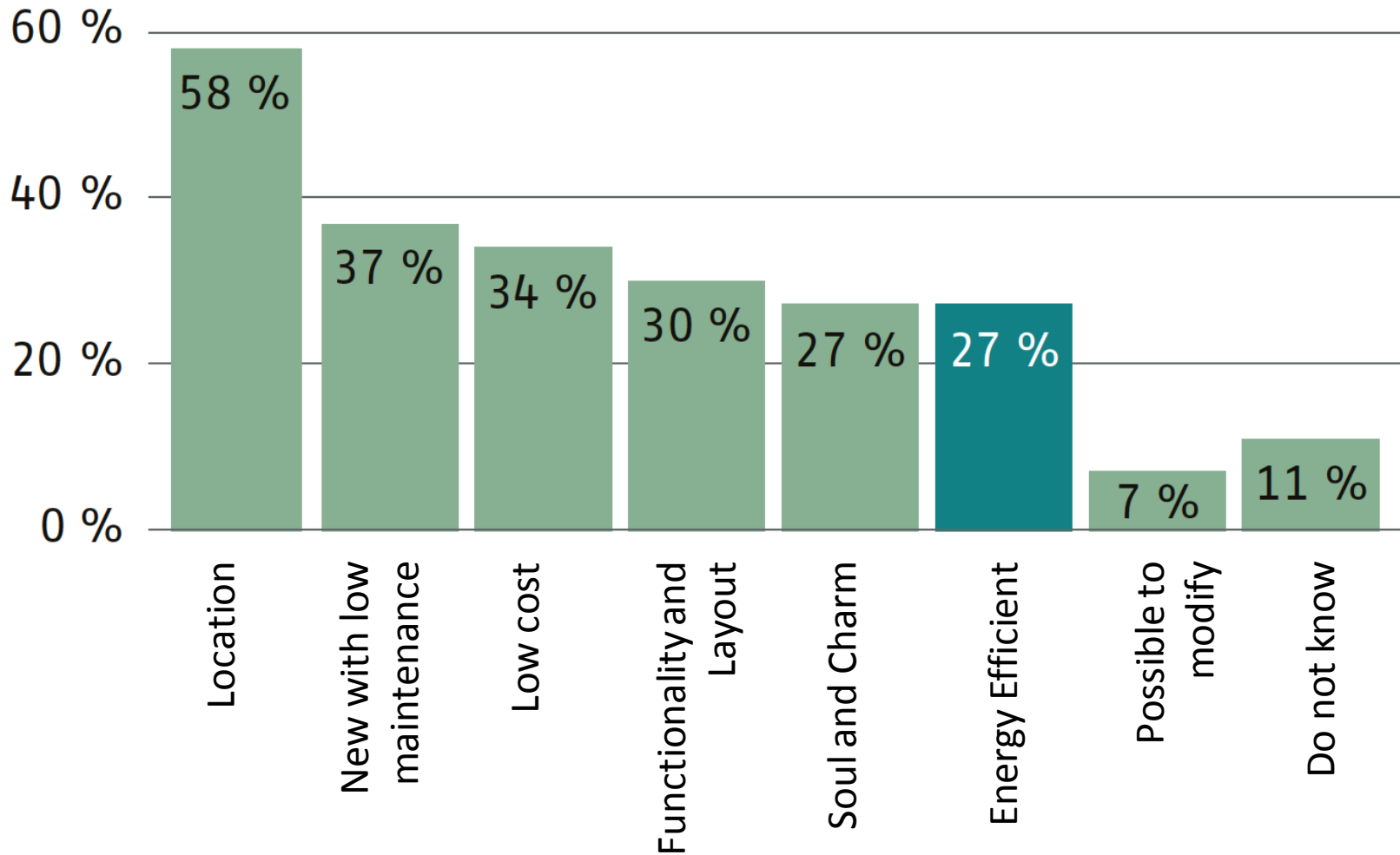
WHAT IS IMPORTANT FOR THE AVERAGE HOMEOWNER



How important are these five house related parameters to you?



WHAT IS IMPORTANT FOR A NEW HOMEOWNER

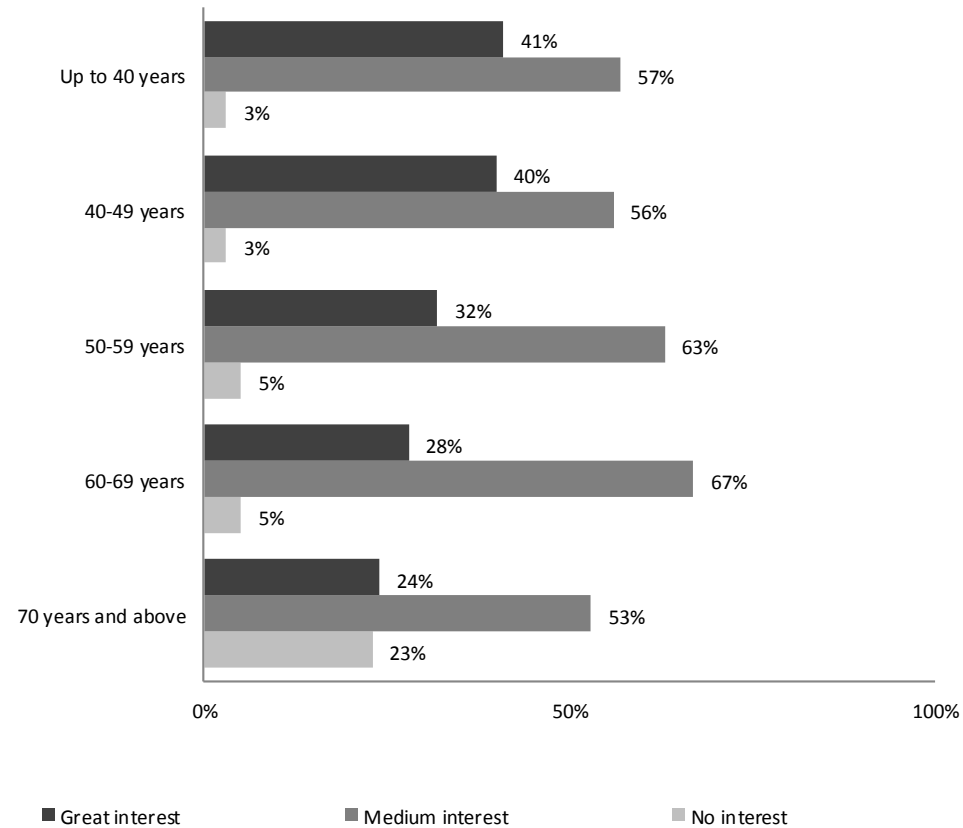


Recommendations for One-Stop Shops

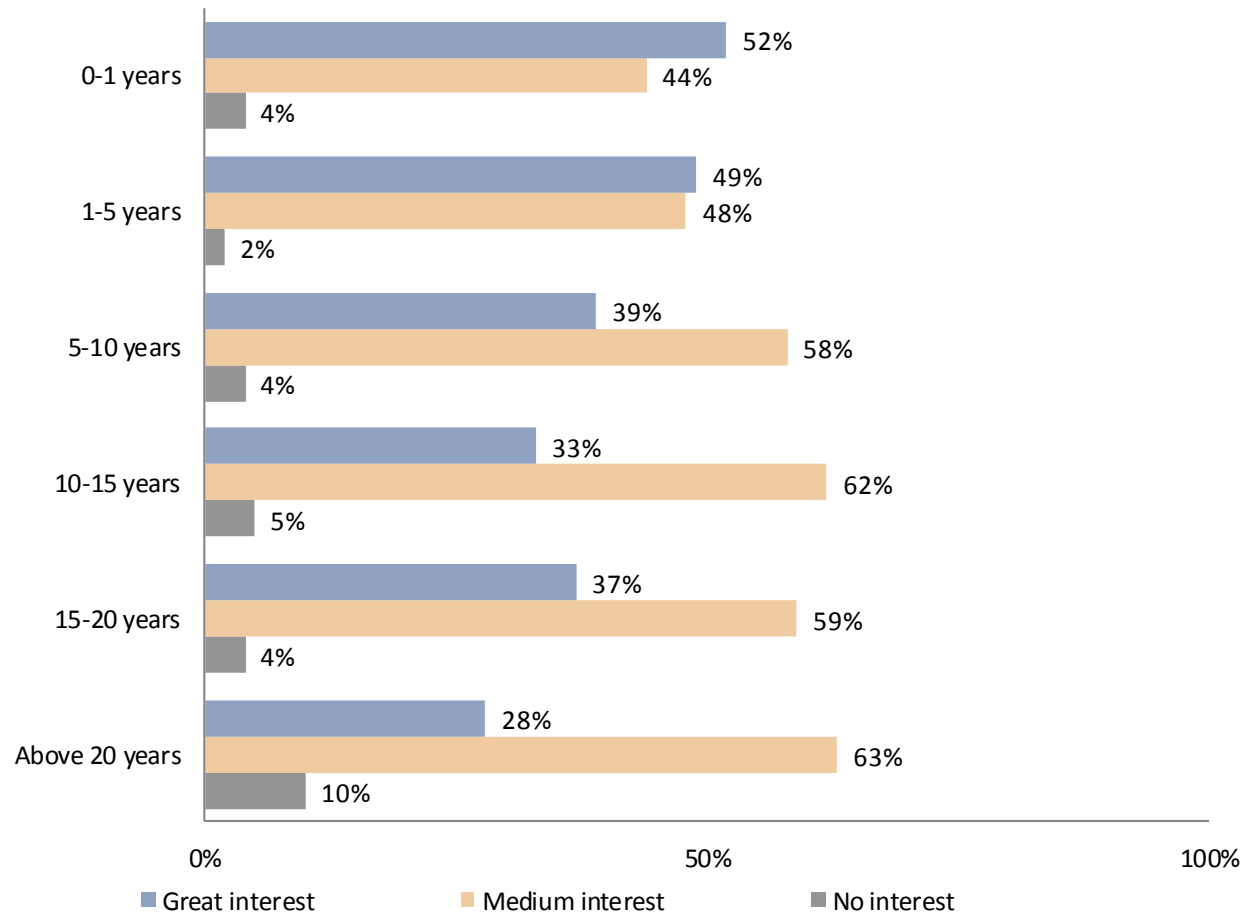


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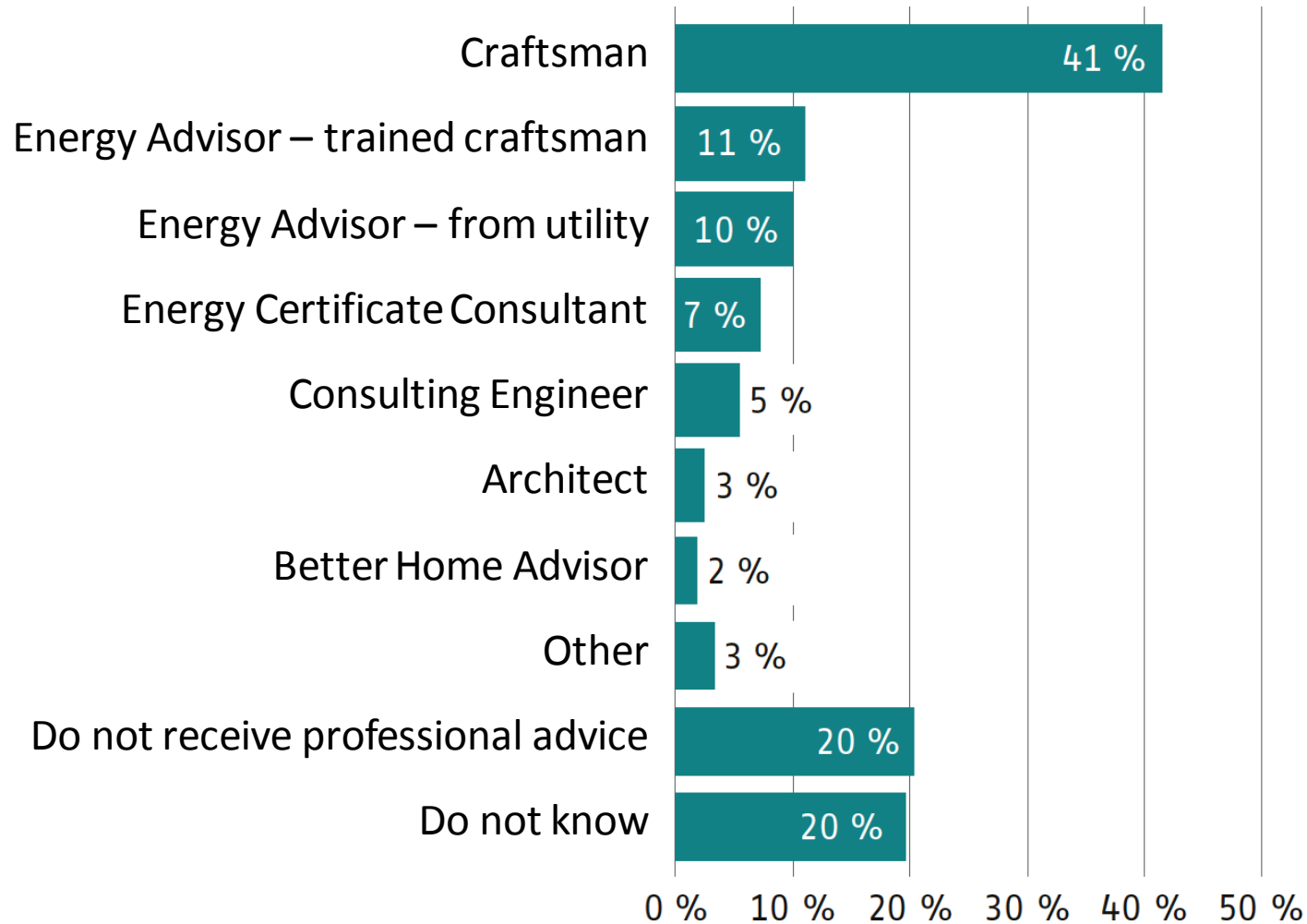
WHO HAS INTEREST IN RENOVATION?



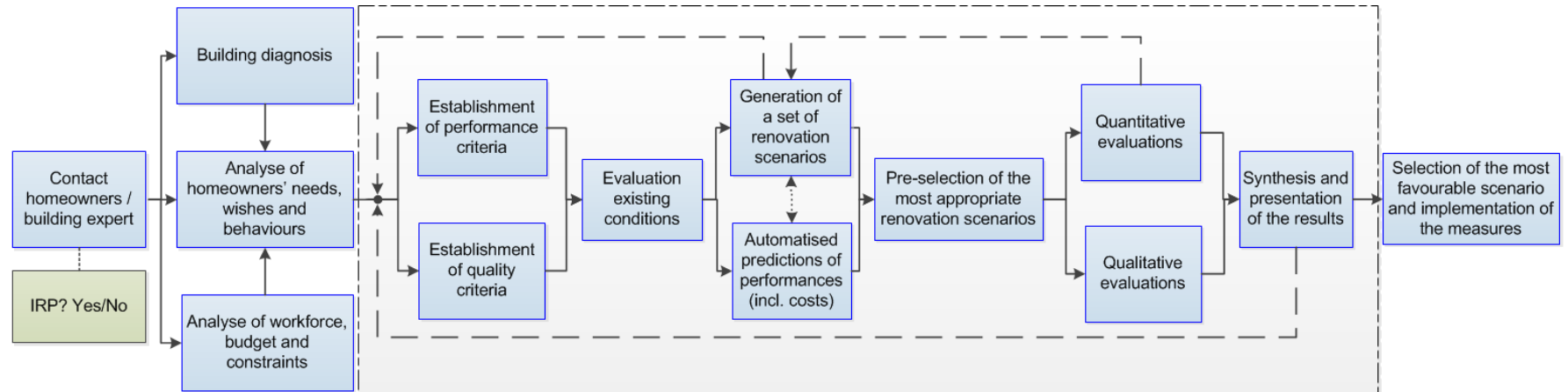
HOW STRONG IS YOUR INTEREST IN SAVING ENERGY BY RENOVATION?



FROM WHO DO YOU RECEIVE GUIDANCE?



THE INTEGRATED RENOVATION PROCESS - ITERATIVE OPTIMISATION



Building expert		Building expert				Building expert	
Homeowners			Homeowners		Homeowners		Homeowners
Problem + general objectives	Analysis + diagnosis	Identification and selection of criteria	Evaluation existing conditions	Generation and pre-selection of scenarios	Evaluation pre-selected scenarios	Synthesis and present. of results	Selection + implementation
		Iterative optimisation process					

**USER & BUILDING
PROFILING**

EVALUATIONS

DECISION



THE INTEGRATED RENOVATION PROCESS - INTERVIEWS AND CORRESPONDING RESULTS

- HOMEOWNERS:
 - More informed, more interested
 - Felt in control
 - Understood and sensed the multiple benefits resulting from a sustainable renovation (adapted language), and gave them a lot of importance
 - Selected the most favourable renovation (also in regard to energy saving potential)
 - Valued non-energy benefits, actual energy savings less important
- BUILDING EXPERT:
 - First applications of the IRP was **successful** and **promising**
 - First applications of the IRP was **time consuming**
 - First applications of the IRP have made the building **owners** feel **very satisfied**
 - Some **tools** are **missing** and need to be developed to automate the process and make it cost effective



RECOMMENDATIONS FOR ONE-STOP SHOPS

- TARGET THE RIGHT CUSTOMER AT THE RIGHT TIME
 - Focus on the windows of opportunity
- HAVE A HOLISTIC FOCUS IN THE GUIDANCE OF HOMEOWNERS
 - Comfort and functionality are more important than energy efficiency
 - Assistance in the realization and financing can be important, especially for young owners
- HAVE THE RIGHT RENOVATION ADVISORS THAT ARE ABLE TO IDENTIFY CUSTOMER WISHES AND REALISTIC ABOUT BENEFITS
 - Knows and can explain all the benefits of renovation
 - Energy savings are (only) a co-benefit





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Thank you



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INCREASED SALES PRICE COMPARED TO A REFERENCE ENERGY CERTIFICATE OF G

