

GREEN Home

Energy Efficiency for Homeowner Associations

HOW TO ACCELERATE THE ENERGY
EFFICIENCY INVESTMENTS IN THE
MULTIFAMILY HOUSING SECTOR

Kristina Eisfeld , VDIV Deutschland
Project Coordinator
16.03.2023



The German-Polish Duet

Agenda



- 1 Introduction
- 2 Setting the Scene – Context and Status Quo
- 3 Financing EE Investments in HOA
- 4 Structure of a HOA loan
- 5 Best Practice Examples for Subsidies
- 6 What Criteria are Needed to Make EE Investment More Feasible for HOA



GREEN Home

A short introduction



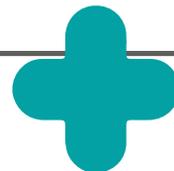
Our Vision: Deep Renovation for HOA Works Simply!



10/21



09/24



This project has received funding from the European Union's Horizon2020 research an innovation programme under grant agreement No 101033878

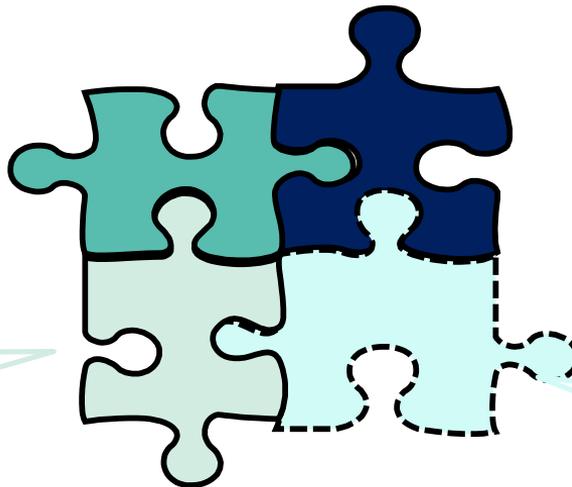
Our Expertise and Motivation

VDIV:

- Support of property managers as key actors and multipliers in the implementation of deep renovations in HOA
- Establishment of a stakeholder dialog

IWO:

- Support for refurbishment of HOAs in Eastern Europe
- Dialogue with international, national, and EU projects on good practices



DENEFF:

Support the supply side in adapting their business models according to the needs of HOAs

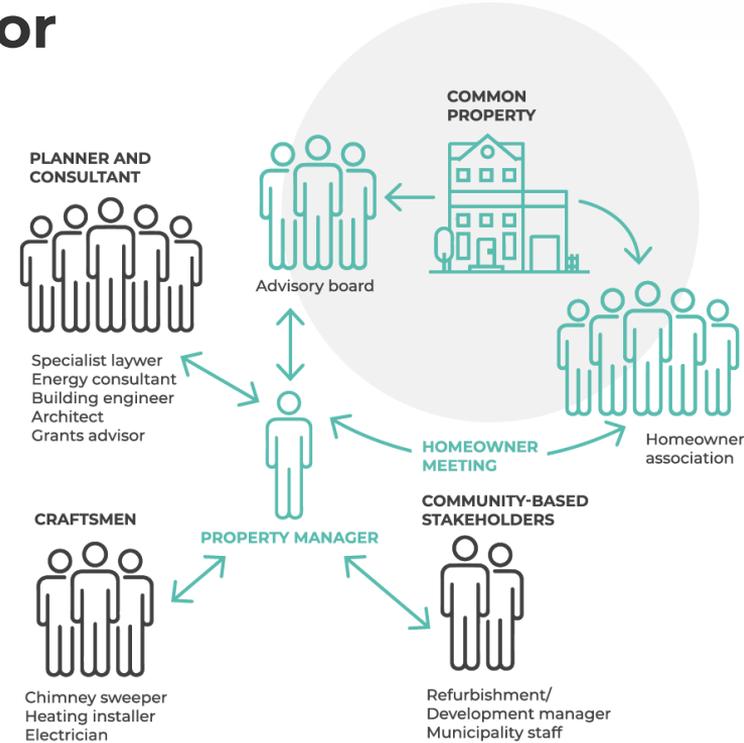
FFF:

- Large international network & expertise in designing financial instruments



New Tasks and Obligations: Property Managers Become Key Players for the Energy Transition in the Building Sector

- The project aims to support homeowner associations (HOAs) and their management companies nationwide
- Core obligation to maintain the value of the building becomes more complex due to climate risks and political requirements
- Owners have high demands on their management and right to certified manager (December 2023)
- 20h training in a 3-year period



Our challenge

How can we provide homeowner associations with **financing tools** and other **practical instruments** to help them protect the value of their property, become carbon neutral, and adopt, and implement comprehensive energy efficiency measures?



Advisory board which provides support



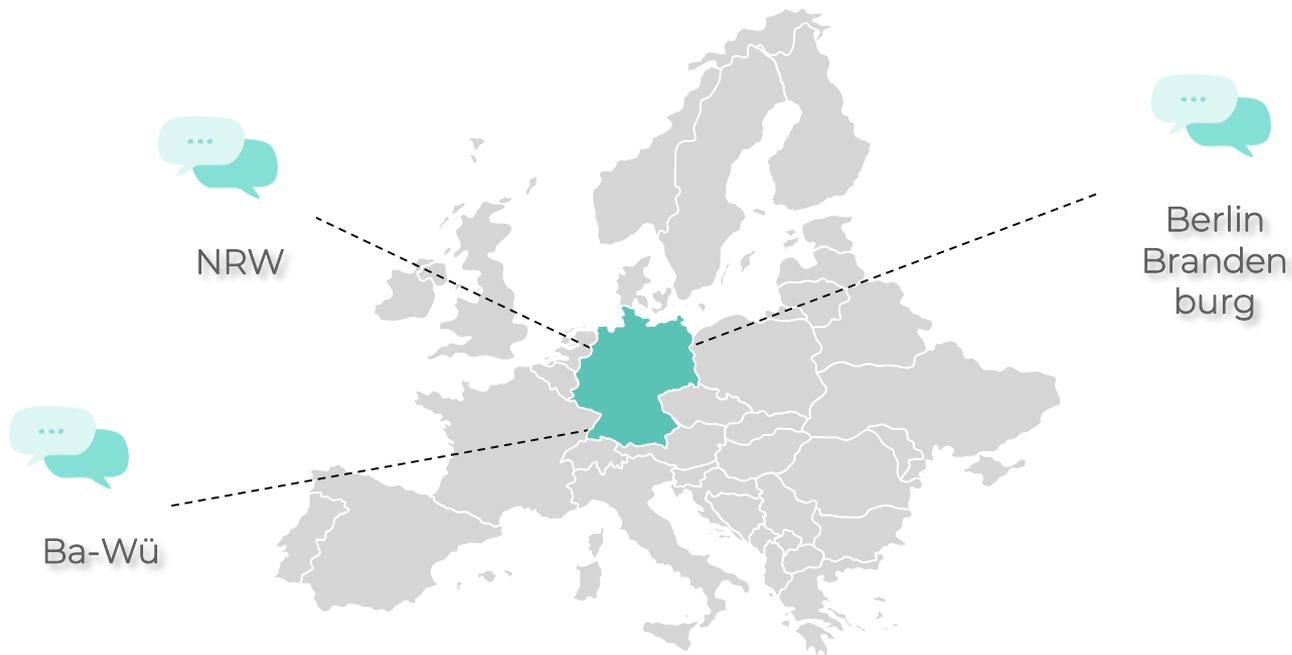
Together with Experts and Stakeholders GREEN Home Aims to...



- ...understand barriers to retrofitting measures in HOA and jointly develop practical solutions for these barriers
- ... support the stakeholders involved and raise their awareness of future challenges
- ... develop needs-oriented financing instruments for energy-efficient refurbishments in HOAs using design thinking (SCRUM, customer journey, agile sprints)
- ... further develop the individual renovation roadmaps to make them suitable for HOAs
- ... provide policy makers with concrete recommendations for action
- ... initiate 10 HOA renovation pilot projects



Regional Round Tables as Innovation & Network Platform for Regional Stakeholders, Ideas and Local Projects



Triggering More EE Renovation in HOAs With New Financial- & Business Models



Analysis phase

Needs analysis including expert interviews, survey, regional round tables



Development phase

Agile workshops with administrators, owners, financiers, energy service providers, ministries



Implementation phase

Implementation of the jointly developed solutions in products by the project consortium, always in close contact with the advisory group/key stakeholders



Dissemination phase

Testing, dissemination and use of the newly developed solutions



Setting the Scene – Context and Status Quo in Germany



Regulatory Level: Increasing Political Demands on the Building Stock

EU level:

- **EPBD: Currently under revision (trilogue)**
- MEPS 2030 onwards energy performance class E in residential sector; energy performance class D by 2033
- Harmonized energy efficiency certificate (2025)



National level: Climate Protection Act (2021)

- Climate neutrality until 2045 in Germany
- It is estimated that 30% of Germany's buildings are in classes G and below (EU buildings factsheets)

Energy Efficiency of Real Estate in Germany

Nur 13 Prozent aller Wohnhäuser in Deutschland weisen einen positiven Energiekennwert auf.



Regulatory Level: Increasing Political Demands on the Building Stock



National level: Building Energy Act (GEG 2020) → Replacement and Retrofit Obligations

- ✓ **First GEG amendment:** new building standards to EH 55 (January 2023)

- ✓ **Second GEG amendment:** Applies to new construction and existing buildings
 - Obligation to all newly installed heating systems in Germany to be operated with 65% renewable energy (from 2024)
 - Limiting the operating time of old heaters
 - Over 75% of buildings are currently heated with gas, oil or coal

- ✓ **Third GEG amendment:** Implementation of the European specifications of the EPBD
 - Regulations on the mandatory installation of solar systems
 - Serial refurbishment is introduced to the market and obstacles to contracting are removed

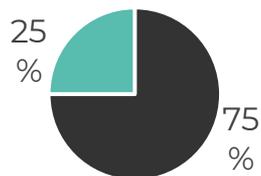


The Housing Stock in Germany

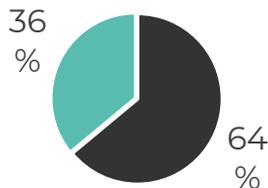
- 19,4 million residential buildings with 40,5 million apartments (DENA 2023)
 - **>10 million apartments** organized as HOAs & >15 million people in Germany live in HOA apartments
 - Buildings built between **1949** and **1990** particularly large potential for energy efficiency (especially built before 1978) upgrades
 - The refurbishment rate of these HOA buildings is well **below** the **national average**
 - Has worsened due to
 - Delivery bottlenecks, craftsman capacities (obtaining three offers), the lack of energy consultants, construction price increases
 - Corona pandemic as owners meetings did not take place for over two years
- 1,008,000 existing HOA buildings with **high refurbishment potential**



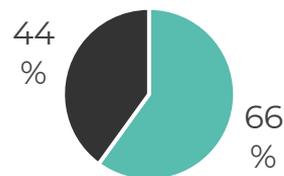
HOAs Have Gained Attention Due to their High Potential for Reducing Energy Usage and CO₂ Emissions



HOAs make ¼ of all apartments in Germany (2020: 42,8 Mio.).^{1, 2}



36% of all apartments in multi-family buildings.²



66% percent of MFB were built before 1979; before the first heat insulation ordinance



54% of the apartments in HOA are rented.³

1 Destatis 2020

2 Cischinsky, D. H., & Diefenbach, D. N. (2018). Datenerhebung zu den energetischen Merkmalen und Modernisierungsraten im deutschen und hessischen Wohngebäudebestand. IWU, Darmstadt 2018

3 Zander, C. (2014). Investitionsprozesse bei Wohnungseigentümergeinschaften mit besonderer Berücksichtigung energetischer und altersgerechter Sanierungen. Bundesinstitut für Bau-, Stadt- und Raumforschung (BBSR) im Bundesamt für Bauwesen und Raumordnung (BBR)





Quantitative and Qualitative Expert Interview Results



> Expert interviews between 11/2021 – 01/22 N= 33 ; meanwhile > 50

HOA property managers, banks/financial institutions, energy service companies, political decision makers

> Survey of German HOAs and property managers

- **Time frame:** 01.04.2022 - 31.05.2022
- **Sample size:**
 - Cleaned: 78; total 150 property managers
 - Cleaned: 63; total 130 homeowners associations



Challenges in HOAs



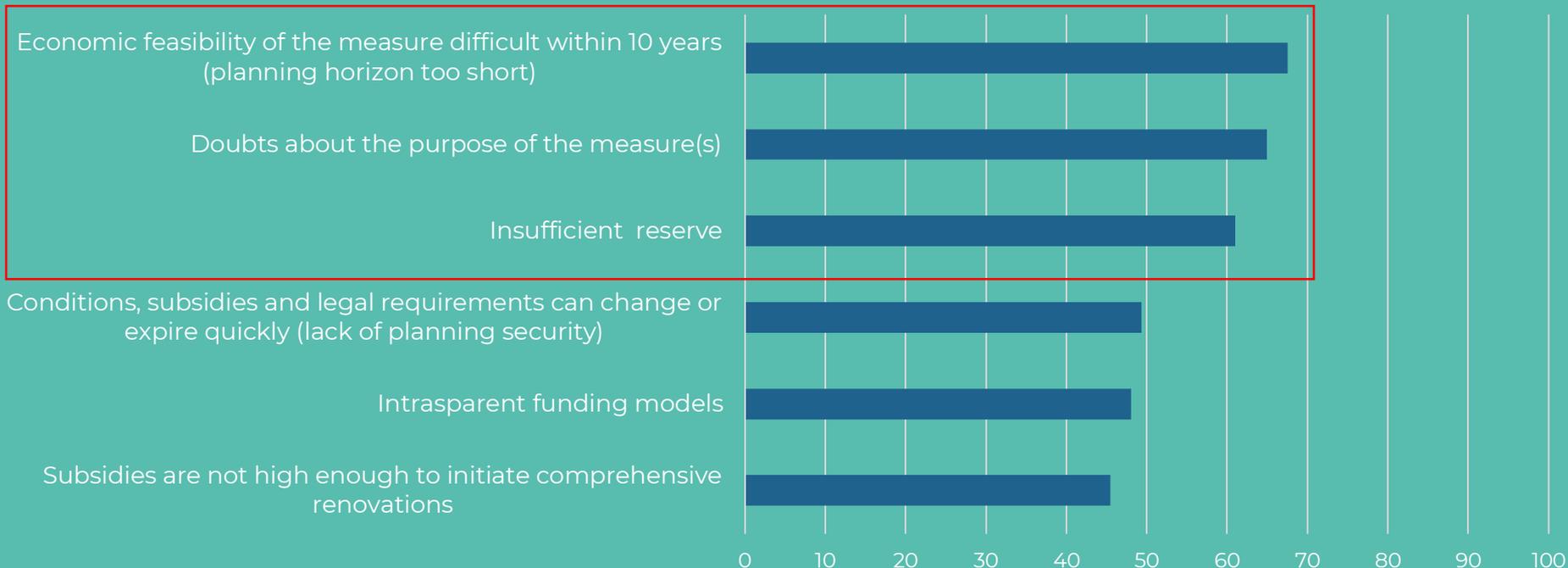
- Long-term **decision-making** processes lasting several years in HOAs > 3-4 years
- Lack of **awareness** of climate protection and property value preservation
- **Misinformation** about negative effects of renovation measures
- Monthly **housing payments** are too low (insufficient maintenance reserves)
- Excessively high investment volumes
- No long-term **planning horizon** (stop and go of subsidies)
- Urgency of necessary repair work prevents the long-term development of a renovation strategy
- Insufficient/ **not targeted** funding programs and uncertainty
- Unresolved **liability** issues and questions
- Complexity and lack of capacities of the actors involved
- Low uptaking rates of individual renovation roadmaps in HOAs
- **Heterogeneous** structure with opposing interests (e.g. use of residential property: landlord/tenant dilemma, age + gender)

"A financing instrument must do justice to the heterogeneity of the homeowners' association"

"I don't want to leave my grandchildren in debt" (elderly woman)

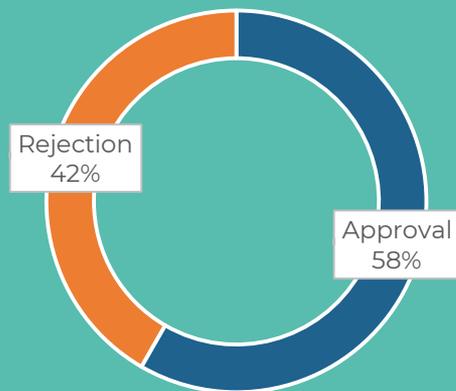


What are Obstacles to Renovation From the Point of View of Property Managers (Top 6)?

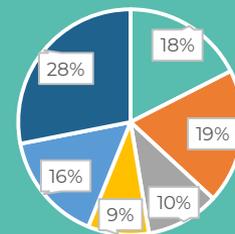


Long-term Renovation Planning, Please?

HOA perspective: My property manager addresses the topic of energy efficiency investments within the framework of necessary renovation options



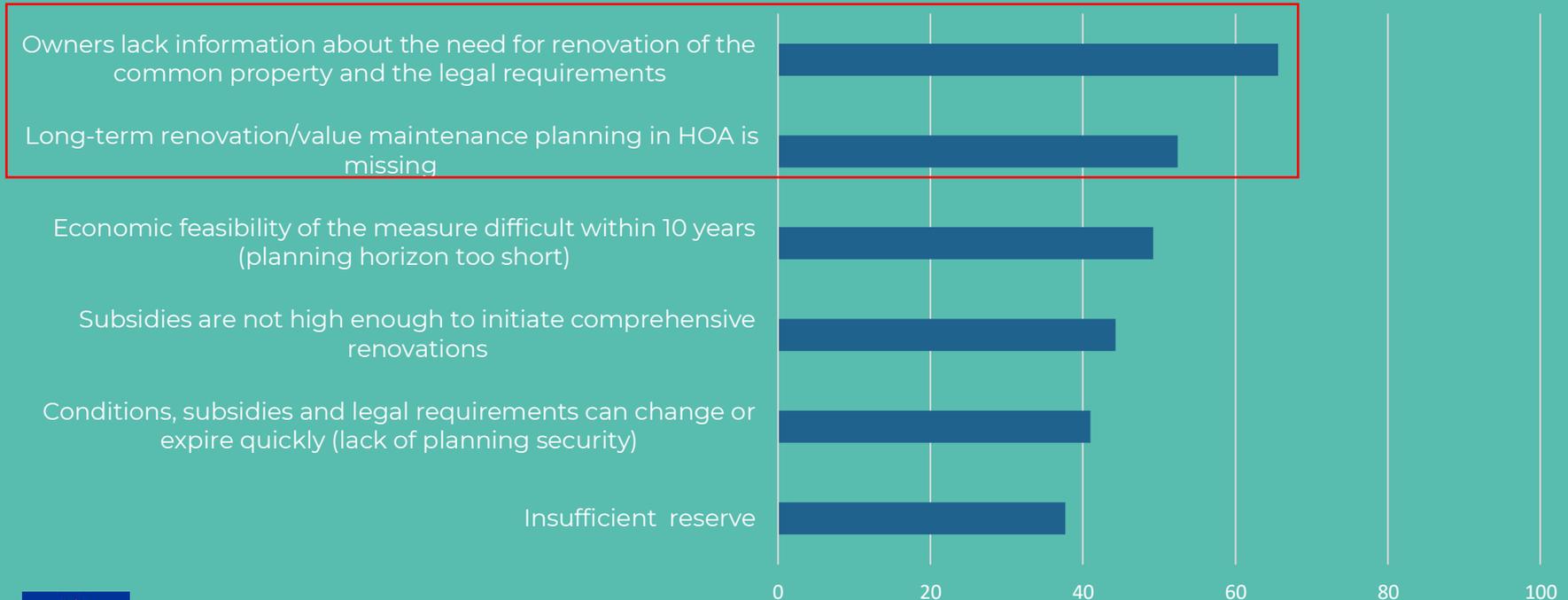
Property managers perspective: Reasons for not placing the topic of long-term renovation planning



- Human resources are lacking (qualification, employees).
- the preparation effort is great.
- Contacts to experts are missing.
- Liability risks are difficult to calculate.
- appropriate remuneration is not sufficiently regulated.
- Owners are not interested.

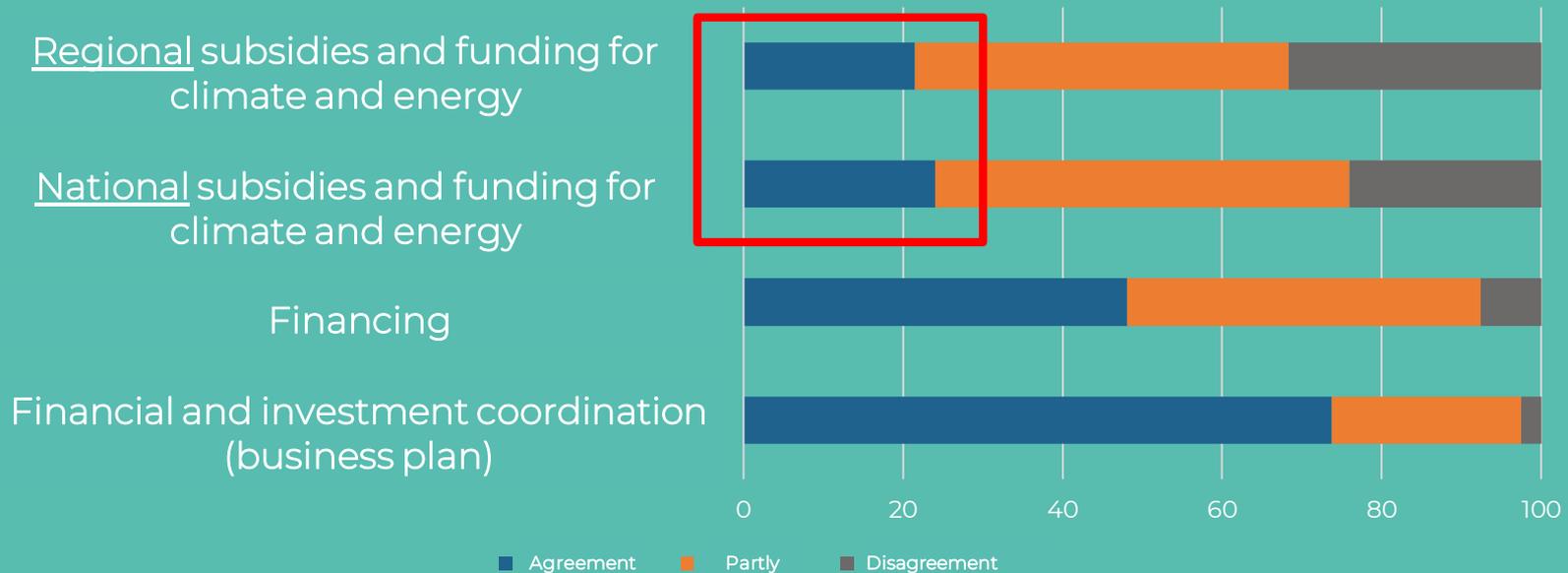


What Are Obstacles to Renovation From the Point of View of the Owners (Top 6)?



What Do Property Managers Bring to the Table?

I have very good specialized knowledge in the following areas ...



HOA Perspective: What is the Problem?

My HOA administration has profound knowledge in the following areas of HOA administration ...



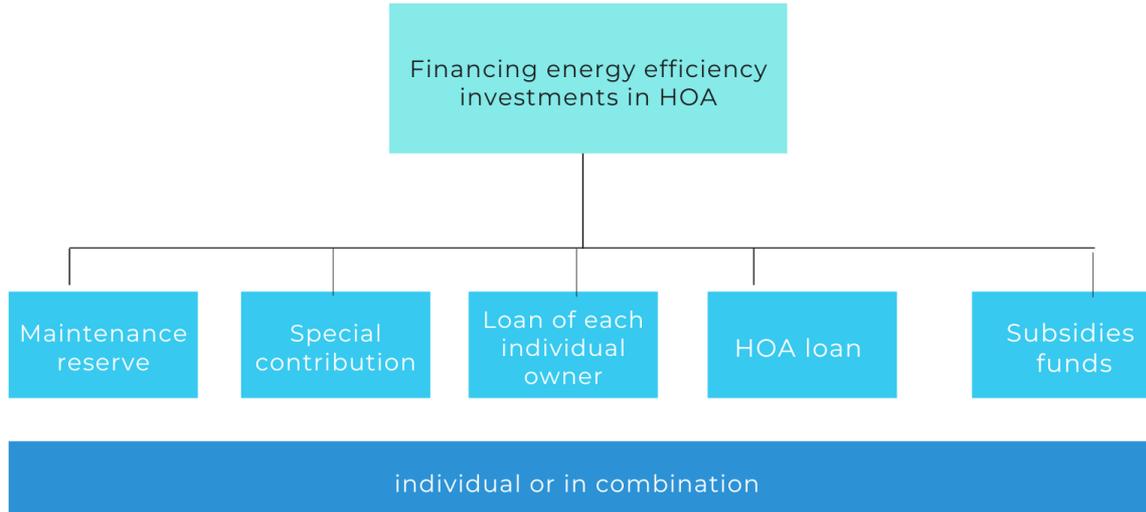
- Financial and investment advice/coordination
- Financing
- National subsidies and funding for climate and energy (KfW, BAFA)
- Regional subsidies and funding for climate and energy



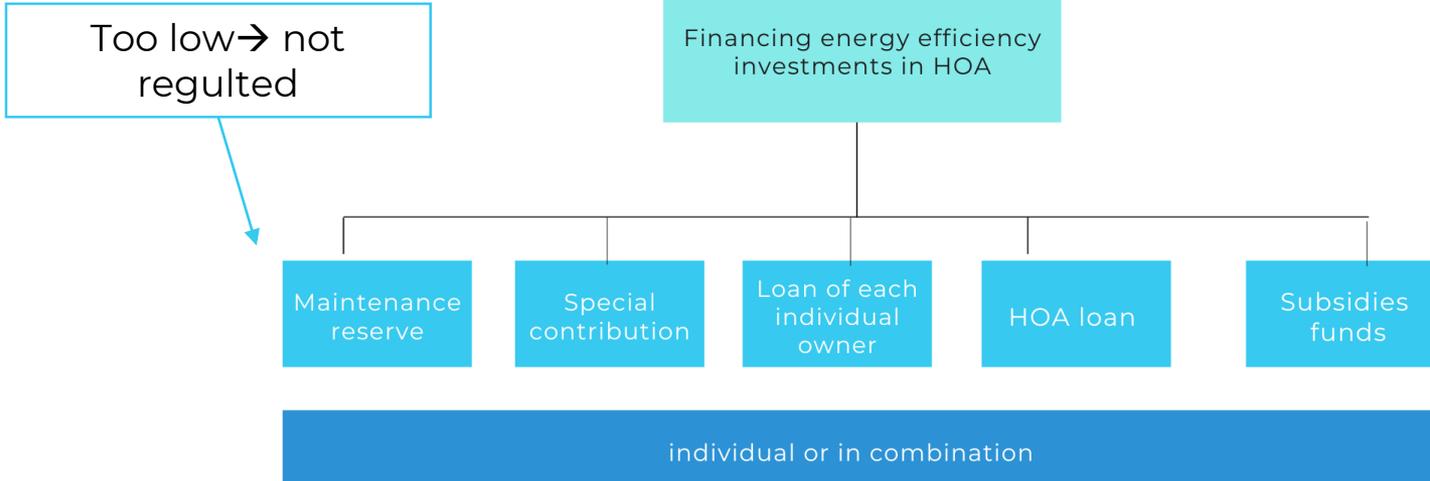
Financing EE investments in HOA



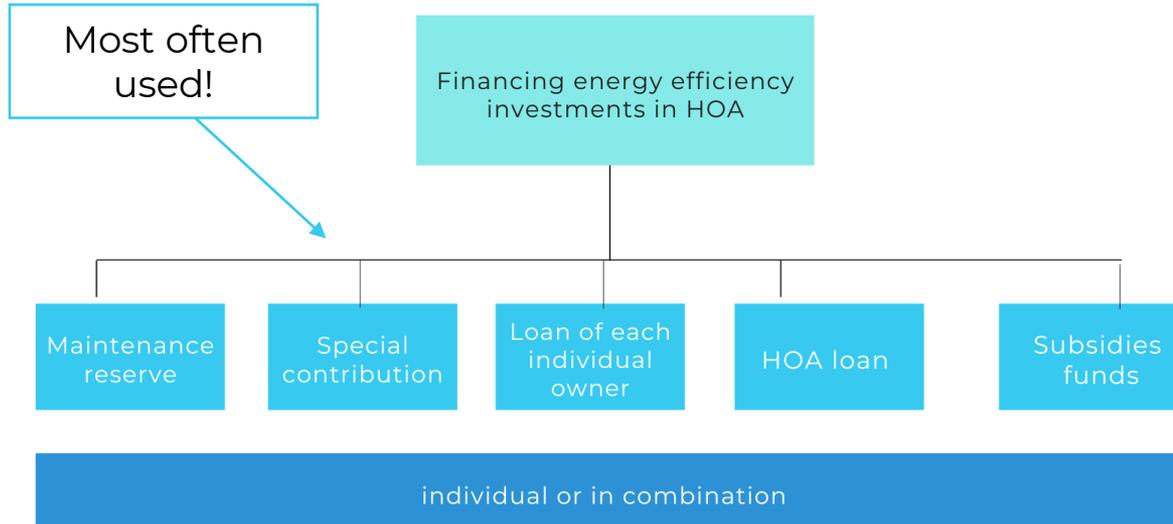
How to Finance Energy Efficient Investments In HOAs?



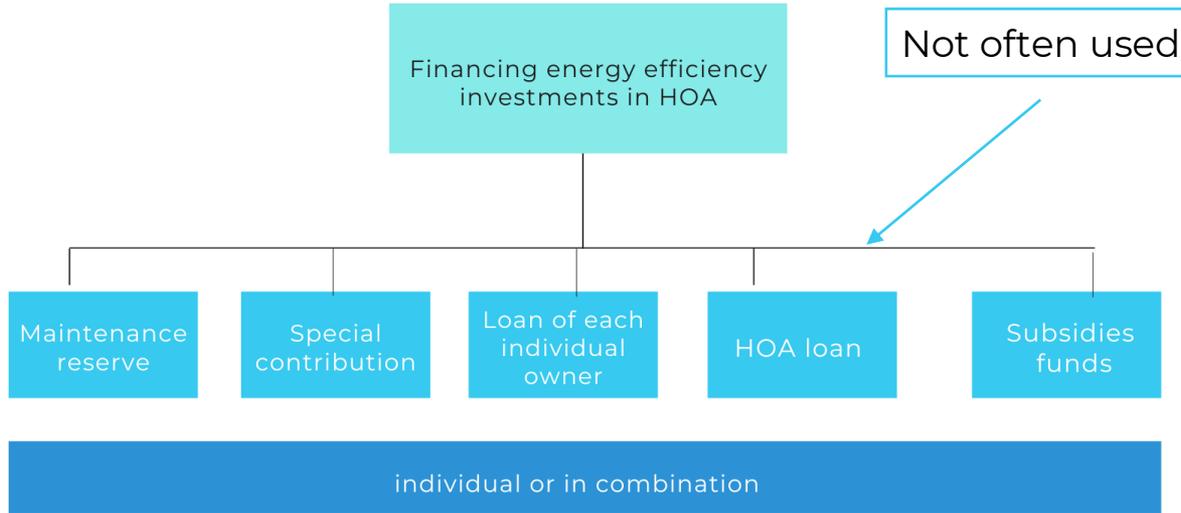
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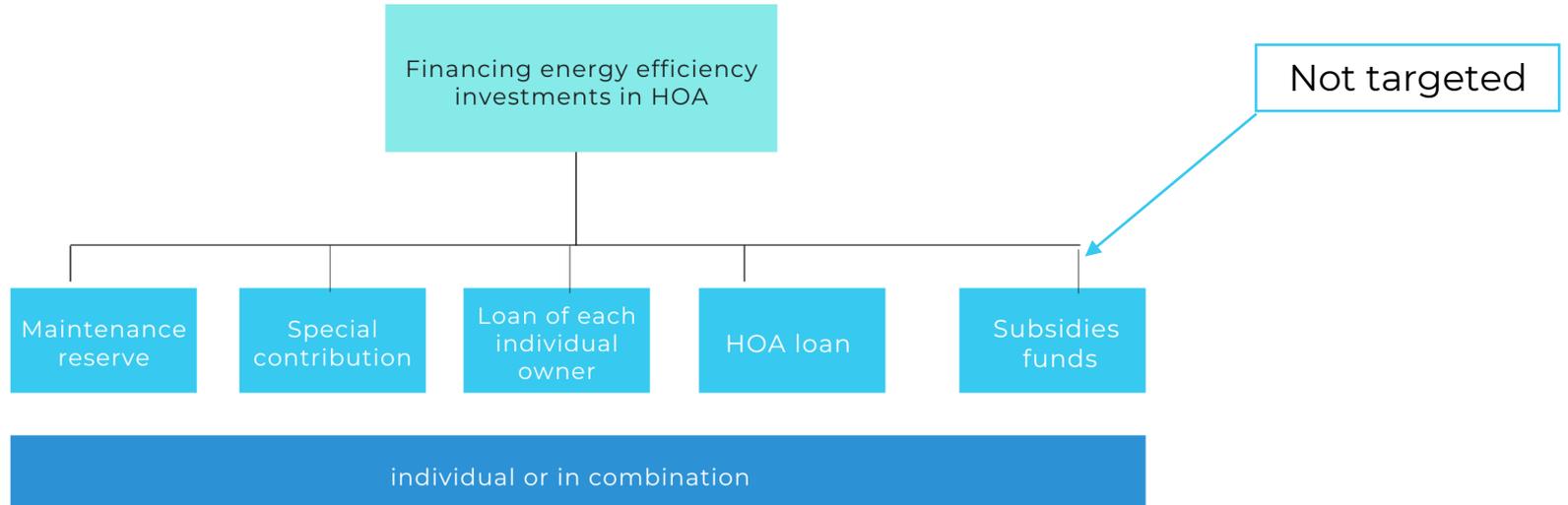
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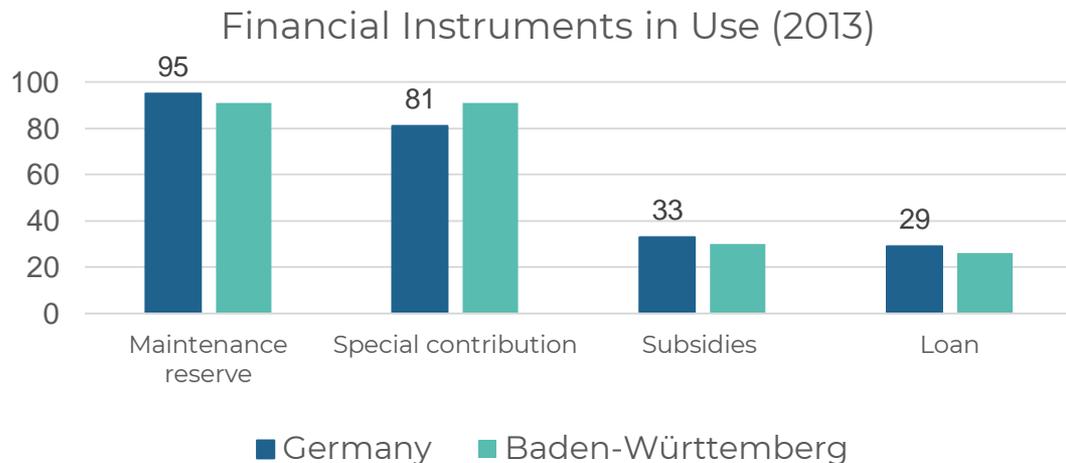
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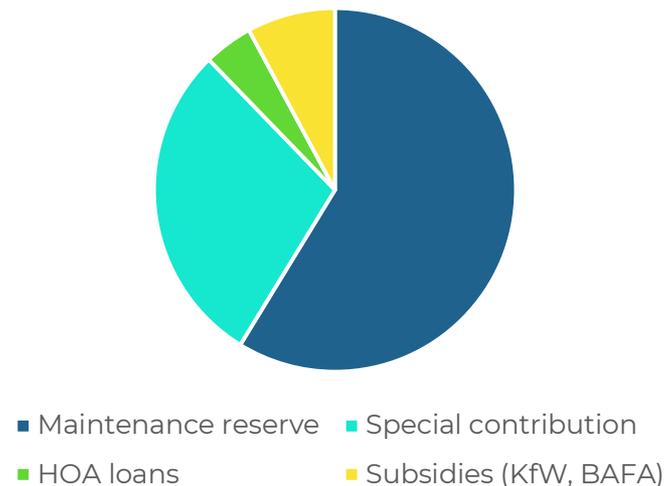


How to Finance Energy Efficient Investments in HOAs?



Source: KfW DDIV 2013

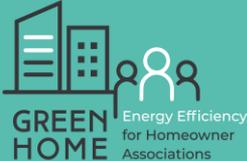
Used Financial Instruments



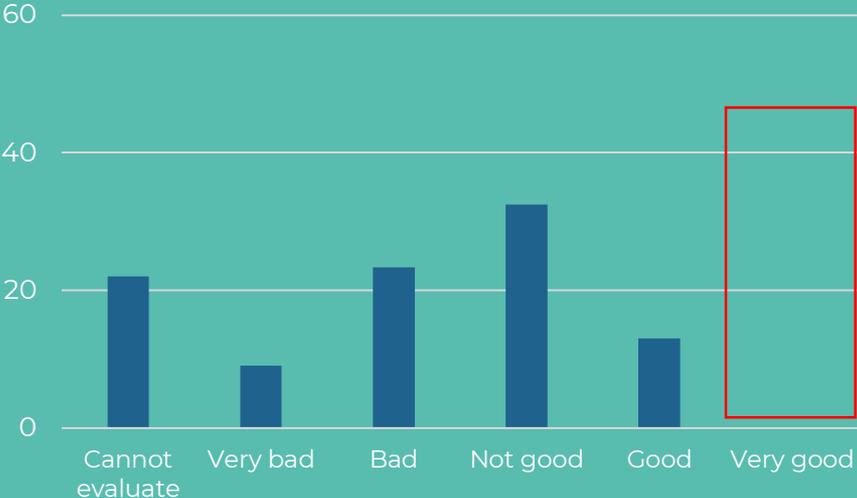
Source: GREEN Home 2022



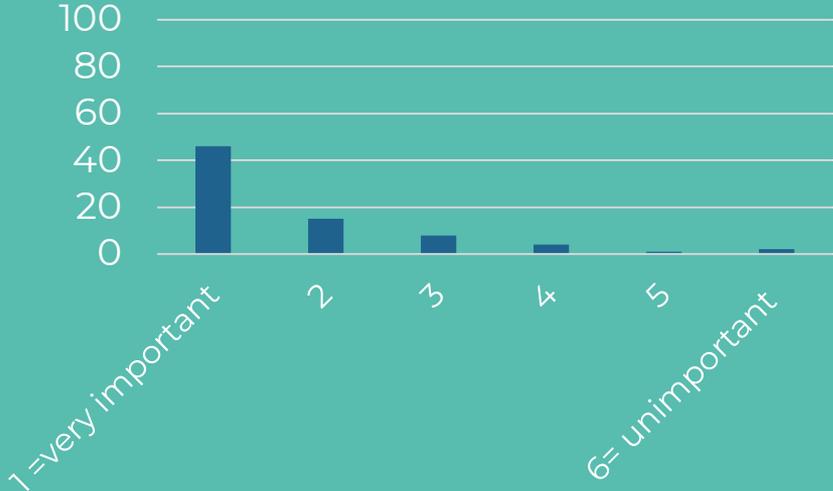
How to Finance EE Investments In HOAs?



How do you rate the application for nationwide funding programs?



Today the maintenance reserve plays a _____ role



Structure of a HOA Loan



Structure of a HOA Loan

- Since 2007: HOAs entitled to borrow a HOA loan
- Blank loan [loan without security] ≠ Private loan
- Borrower is the HOA – Application and contract is signed by property manager (WEG § 9b Abs.1)
- Federal Court ruling (BGH 25.9.2015, (Az.: V ZR 244/14))
 - “Borrowing is a useful and even mandatory financial instrument”
 - “Even the taking out of a long-term, high loan by the HOA can comply with proper property administration”
- **Current German banks providing HOA loans**: Hausbank München, DKB, BfW, TEN31
- **Rejection rate**: very low



Structure of a HOA Loan

Advantages:

- No collateral required in the register/ Not creditworthiness dependent
- No disclosure of the financial circumstances/ no credit check, and no Schufa (German credit reporting agency)
- No guarantees/ securities from owners required
- Special repayments: up to 10% of the loan amount as annual special repayments
- Personalized support (e.g. presentation at HOA meetings)
- Uncomplicated: fast application and payment
- Property managers a one direct contact person
- Loan instalment (interest and repayment) is settled via the house charges

Credit worthiness: none; the property manager must confirm that the HOA has no debts/ regular payment of house money



Structure of a HOA Loan

Duration: Typically 5-8 years

- HOAs don't ask for longer periods: preference for gradual step-by-step renovation
- Reason: lack of long-term planning and urgency of repairment/ measures
- Federal Court ruling (2015):
 - **too long debt** is not desirable for HOA, even though it would reduce the monthly burdens
 - "**reasonable period of time**" (§21 Abs. 2 Nr. 2 WEG): amortization of the measurement within 10 years

Details: 20% use of own funds/equity - 80% loan

Amount (depending on the bank): up to 25.000/ 50,000 € per owner

Frequency of payment defaults: **never** (<1%)! HOA banks consistently experience that there are no defaults from the owners at all! "*HOA is a very good borrower*"



Structure of a HOA Loan: Challenges

Liability (§ 9a WEMoG): If one or more owners fail to pay the housing allowance, the HOA is jointly liable. The other co-owners are therefore forced to "step in"

- Obligation to make additional payments if individual owners do not meet their obligations and the assets of the community are not sufficient
- BUT: The loan installment is to be regarded as part of the house money debt and thus all known legal remedies are available (including foreclosure with priority satisfaction)!
- Obligation to make additional payments need to be discussed in the owners meeting before loan decision → created mistrust!

Solutions:

- Policy recommendation: creating attractive conditions (incentives) for longer durations to finance deep renovation measures
- HOA: increase duration (20 years) + State and federal guarantees to cushion HOA loans (e.g. Hessen, Lower Saxony)
- 20% of the construction volume could be deposited as state guarantees → Liability risk thereby reduced



Structure of a HOA Loan: Challenges

- **Lack of know-how:**

- Property managers: fear + no experience → not part of their core competency
- HOAs: credit aversion (particularly in the south of Germany)

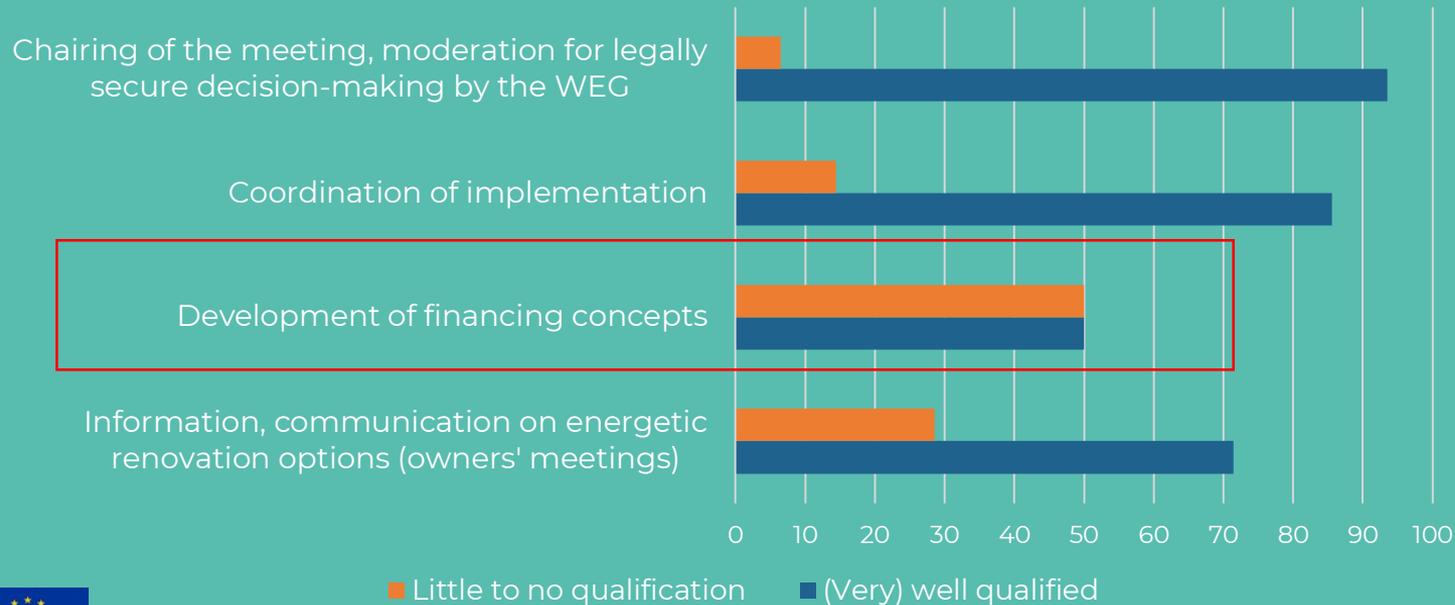
Property managers have a key position and need further training in the development of financing concepts → Show financing possibilities, "take away the fear of loans" for the HOAs

- **Misinformation:**

Some banks offer loans for individual owners, which they call "HOA loans": in fact consumer loans

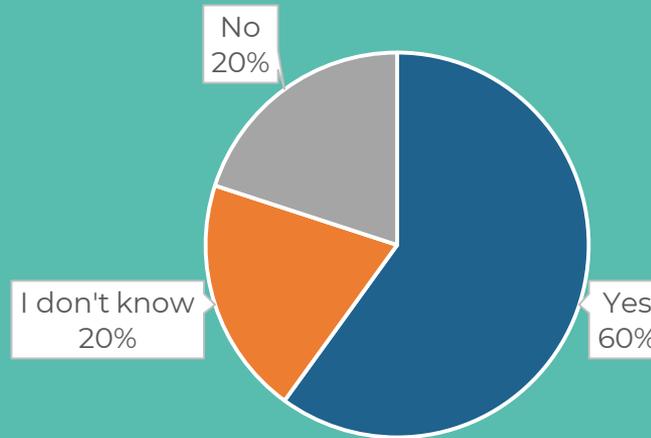


How Well Qualified Do You Feel for the Support and Implementation of Comprehensive Renovation Measures in HOA?



HOA Loan

Are you willing to take out a long-term loan (10-15 years) for a major renovation if the cost of the loan is covered by the energy savings?

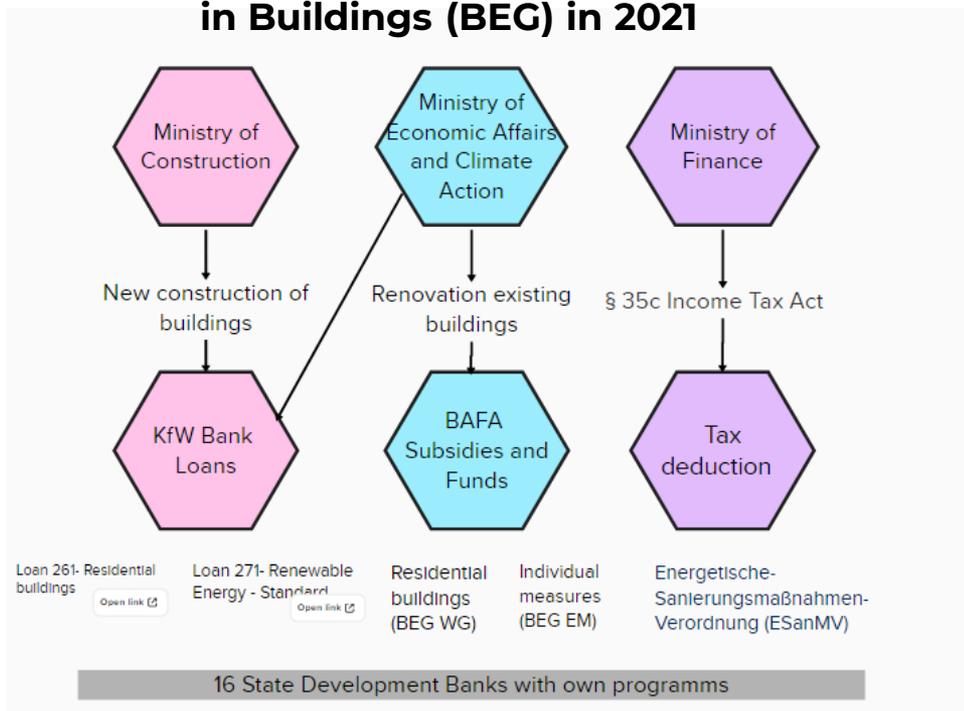


Germany A Best Practice Example for Subsidies?



Current Developments

Amendment of the Federal Promotional Support for Energy Efficiency in Buildings (BEG) in 2021



Current Developments: BEG Amendment

- Significant increase in demand for renovation funding after the start of the Ukraine war
- Reform necessary due to limited funding
- The first stage of the reform was implemented in summer of 2022
- Concentration on renovation (12-13 billion euros/year) and reduction of new building subsidies to 1 billion euros/year)
- Mandatory involvement of a so-called BAFA energy expert from the beginning of the application process until the completion of the construction or refurbishment project

Central elements of the BEG restructuring

- No more subsidies for fossil heating, instead:
- Heater Replacement Bonus
- Bonus for worst performing buildings
- NEW! From January 1st, 2023 bonus for serial renovation in the BEG (Energiesprong)
- Lowering of subsidy rates; shutdown of subsidy funding via the KfW → BAFA



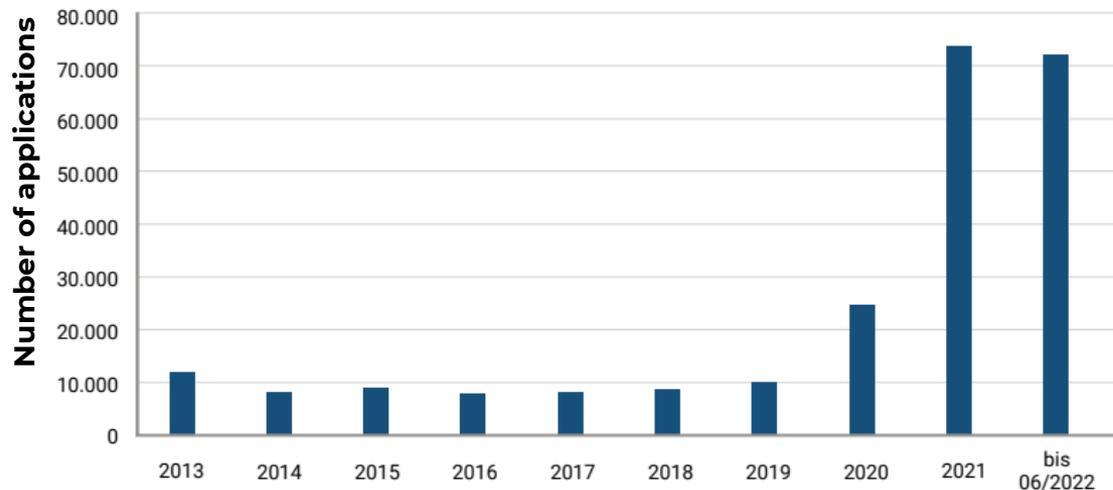
(Source: BMWK, Hoppenbrock 07.11.2022)

Individual Measures for Renovation		Funding Rate	Road Maps	Heating Exchange	Heat Pumps	Max. Funding Rate	Planning
Building Envelope	Dämmung von Außenwänden, Dach, Geschossdecken und Bodenflächen; Austausch von Fenstern und Außentüren; sommerlicher Wärmeschutz	15 %	5 %			20 %	
	Einbau/Austausch/Optimierung von Lüftungsanlagen; WG: Einbau „Efficiency Smart Home“; NWG: Einbau Mess-, Steuer- und Regelungstechnik, Kältetechnik zur Raumkühlung und Einbau energieeffizienter Innenbeleuchtungssysteme	15 %	5 %				
Systems (excl. Heating)	Solarkollektoranlagen	25 %		10 %			
	Biomasseheizungen	10 %		10 %		20 %	
	Wärmepumpen	25 %		10 %	5 %	40 %	
	Brennstoffzellenheizungen	25 %		10 %		35 %	
	Innovative Heizungstechnik auf Basis erneuerbarer Energien	25 %		10 %		35 %	50 %
	Errichtung, Umbau und Erweiterung eines Gebäudenetzes (ohne Biomasse)	30 %				30 %	
	Errichtung, Umbau und Erweiterung eines Gebäudenetzes (mit max. 25% Biomasse für Spitzenlast)	25 %				25 %	
	Errichtung, Umbau und Erweiterung eines Gebäudenetzes (mit max. 75% Biomasse)	20 %				20 %	
	Anschluss an ein Gebäudenetz	25 %		10 %		35 %	
Heating Optimization	Anschluss an ein Wärmenetz	30 %		10 %		40 %	
	Maßnahmen zur Optimierung bestehender Heizungsanlagen in Bestandsgebäuden	15 %	5 %			20 %	

Individual Roadmap (80% and 5% on Top) if BAFA EE expert

* Der Wärmepumpen-Bonus beträgt maximal 5%, auch wenn gleichzeitig die Anforderungen an die Wärmequelle und an das Kältemittel erfüllt werden.

Subsidies: Individual Roadmaps



Source: BAFA 2022



Uptaking Rate of HOAs

- Although there are several subsidies and incentives for the energy-efficient refurbishment of buildings in Germany, it has not yet been possible to significantly increase the refurbishment rate of existing buildings, especially those of the HOAs
- Renovation rate <1.0% (Umwelthilfe 2021): this is because a majority of the funding went to new buildings
- BAFA individual measures: 1,1 % approved applications for HOAs
- KfW HOA loan: 0,8 % approved applications for HOAs
- KfW individual measure loan: 0,3 % approved applications for HOAs



ELENA Projects at a Glance



[Interactive map](#)



What Criteria Are Needed to Make EE Investment More Feasible for HOA?

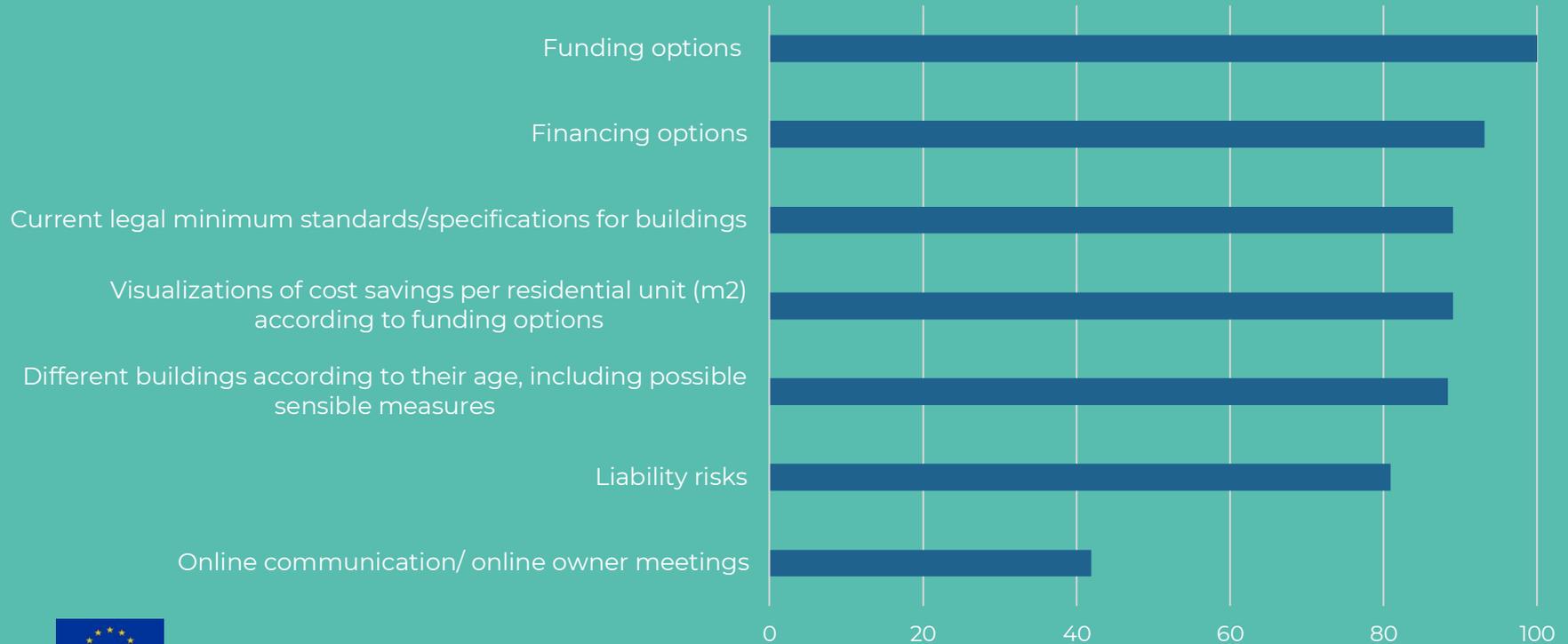


Some Criteria for EE Investments in HOAs

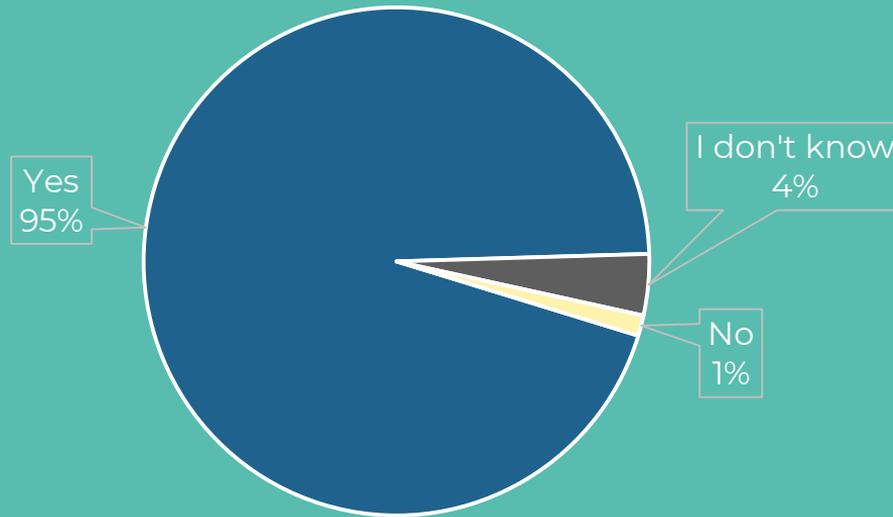
- **Information:** Take away the **fear** of HOA loans (property managers/ owners)
 - Greater clarity on which funding opportunities are relevant for HOA
 - Regional and national funding programs are hard to find, to compare and to understand according to the applicability to the HOA
- Political regulations must be in place to allow a HOA loan term of > **15 - 20 years**
- **Incentives** for property managers to place the topic at the HOA meeting
- Default guarantees by Federal States: only available in two Federal States Hessen and Niedersachsen
- Reversed mortgages - not yet established in Germany
- Establish market maturity of **contracting**
- Climate manager [Klimaverwalter]
- **One Stop Shops** (see ProRetro) that target HOAs + property managers
- Pooling of services to „**all in one service provider**“
- HOA-ready individual **renovation roadmaps**



What Information Do HOAs Need to Make an Investment Decision? HOAs Need Information Material, Checklists, and Guidelines for...



Do You Think “One-Stop Shop Solutions” for Energy Refurbishments in HOAs Are Useful?





Thank you!
-lichen Dank

Further questions?
I'm looking forward to hearing from you!



Kristina Einfeld
k.eisfeld@vdiv.de



Our Preliminary Results

Financing

- Heterogeneity of HOA complicates investment decisions (e.g. age)
- Lack of knowledge about financing options (especially HOA loans) and difficulties to access subsidies
- High equity ratios are necessary for financing HOA loans
- Lack of long-term value preservation planning
- Comprehensive measures (incl. building envelope) have long payback periods

Communication

- Administration must advise, but does not want to sell energetic refurbishment
- Visualization of costs/qm2 (per unit) in comparison to funding options
- Misinformation and myths
- Owners' meetings are overloaded with many topics
- Decision-making processes in HOA are lengthy
- Individual roadmaps are not common practice

Law

- Unsteady funding programs
- Uncertainties regarding liability issues
- Up to date legislation and monitoring of the legal framework
- Insufficient maintenance reserves
- No equal access to subsidies for energy service providers
- Reasonable payback period of 10 years is hardly realistic for extensive refurbishments

Efficiency

- Energy services/energy consulting must be geared to the needs of HOAs, corresponding consulting services and knowledge of the special features of HOA are lacking
- Feasible economic efficiency calculation
- Property manager remuneration/salary → high coordination efforts
- HOAs have special needs that roadmaps do not yet offer

