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in the Private Rented Sector

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1 OVERALL APPROACH

At the core of the ENPOR project is the (re)design and implementation of ten diverse energy efficiency policies to alleviate energy poverty that are tailored to the specific characteristics of the Private Rented Sector (PRS) and can be clustered in **a)** grants for building renovations, including fuel switch and small-scale renewables; **b)** training & information, soft measures; **c)** programme support action, including guidelines to better identify energy poverty; and **d)** Energy Efficiency Obligation Scheme (EEOS).

The chosen approach aims to consider the needs of both tenants and property owners and integrate them into broader policy contexts (including structural policies), where possible. To achieve this, ENPOR partners have closely collaborated with different stakeholders in the, so called, Regional Action (REACT) groups to:

- Co-design targeted and practical policies,
- Promote the exchange and dissemination of information and network building within and across national contexts,
- Facilitate the adoption of the policies by households, property owners and related market players, and
- Gather data for monitoring purposes.

The members partaking in the REACT groups are organisations involved in the energy efficiency value chain that can contribute to the policies' co-design (the list is not exhaustive), including:

- Landlords / co-owners' associations,
- Charitable and social work associations,
- Energy agencies / energy consultants,
- Municipality / regional / national policymakers,
- Citizens groups / NGOs, and
- Utilities

The role of these stakeholders within the process is detailed in ENPOR's Engagement Strategy (D4.1), while the relevance of each type of stakeholder for the development and implementation of the ENPOR policies is outlined in the table below:

Table 1: REACT Groups stakeholders and their roles

Stakeholder	Role
Landlords/ Co-owners' associations	To validate the feasibility of policies from the owners' perspective and help them to renovate their stock and identify tenants at risk of energy poverty
Charitable and social work associations	Experience how to identify and communicate with energy poor households, support landlords in making their stock more energy efficient (e.g., following the social rented agencies type of model)
Energy Agency/ Energy consultants	To provide insights on how to improve energy consulting and realise effective policy implementation
Municipality/regional/national policymakers	To give feedback on proposed policy design, help replicability and provide legislative and policy support and infrastructure
Citizens groups/NGOs	To demonstrate the needs, types of support they require, provide information on acceptability of the support scheme, provide bottom-up insights
Utilities	As main actors in rolling out social tariffs, discounts and various other energy poverty alleviating schemes, utilities can give feedback on their viability

The implementation of the ENPOR approach with the REACT groups at its core can be divided into three consecutive steps:

1. Preparation and setup of REACT groups
2. Implementation of policy co-design including capacity building
3. Monitoring of policy implementation and further adjustment of the re-design

The following chapters provide guidance to potential facilitators of policy re-design on how to implement these steps in other contexts.

2 STAKEHOLDER AND TARGET GROUP ENGAGEMENT (PREPARATION AND SETUP)

To prepare the setup and implementation of future REACT groups, a stakeholder engagement strategy should be developed which identifies the relevant stakeholders to be involved along with their (foreseen) roles in the process. In ENPOR, a guideline has been developed (D4.1 Stakeholder Engagement Strategy), which can inform the implementation of this step. Specifically, the framework provides guidance on:

- Risks and responses of the envisioned stakeholder engagement
- Target stakeholder groups and expected contributions
- A strategy for stakeholder analysis and resulting key message development
- Guidelines regarding the involvement of vulnerable groups in the PRS in the co-design process

The following sections outline the above-mentioned steps and provide insights from their application within the ENPOR project. Additionally, Annex 1: Templates for adapted engagement strategiesprovides interested facilitators with a template to apply the different steps described in the following sections within their own context.

2.1 Risks and responses (rationale for a stakeholder analysis)

A number of issues can crucially affect the facilitation's successful outcome, thus it is important to identify these issues for each policy and find respective mitigation strategies. Generally, the most important risks capable of jeopardising the facilitation's success are a decreasing engagement of REACT group members, a mismatch between policy design and target groups as well as inactive housing and co-owners' associations as central change agents. Ensuring long-term engagement of these stakeholders is a key challenge. Therefore, it is highly important to analyse their interests and existing barriers as well as to adapt communication, benefits and engaging formats respectively to keep the stakeholders engaged. A varied schedule of capacity building activities should be offered, and different, suitable and attractive participatory formats should be designed that appeal to the stakeholders.

Equally important are possible disadvantages for energy poor households within the co-creation process (see section 2.4). Adequate formats fitting the situation and interests of vulnerable households should be chosen. The engagement of intermediates like local organizations with established, trustful relationships through former activities could thereby help to represent these actor groups (see section 2.4.2).

Lastly, the COVID-19 pandemic has affected the onsite implementation of co-creation processes and depending on its further development it might in some instances still be difficult to hold physical gatherings for the REACT group meetings in the cold season. During the summer season, finding suitable locations with stringent hygiene concepts might be an option. If not, online exchange formats are suitable alternatives.

Table 2: Implementation risks and mitigation strategies

Risks	Mitigation measures
Decreasing engagement of REACT group members	Use tools such as power-interest analyses, communication plans, and Letter of Support (LOS) to maintain engagement. Attempt to keep motivation high by offering a varied schedule of capacity building activities, designing different and attractive participatory formats, widespread through national territory, appealing to all related stakeholders. Aim for an efficient implementation of the group sessions to facilitate the participation of members with little time to spare; Allow for the provision of written statements/comments prior or after meetings.
Mismatch between policy design and targeted audiences, i.e., tenants are not responsible for their buildings	Creating incentives for landlords to conduct energy efficiency measures in regions with a high concentration of energy poor people.
REACT groups are being led by narrow interests or underactive	Facilitators may undertake actions to increase group diversity. Conduct verification/cross-referencing of discussion findings across the various national REACT groups. Municipalities and coordination authorities for policy implementation should be included as respectable actors that encourage cooperation.
Disagreements within REACT groups (e.g., between tenants and landlords' representatives)	The co-creation of policies to improve building energy efficiency in the PRS has to consider the structural division between the financial burden of investment (incurred by landlords) on the one hand and its benefits on the other (reaped by tenants), known as the split-incentives issue. To avoid this issue dominating or hampering the process, a balanced approach should be envisioned for the stakeholder consultation process, in which non-biased project partners (e.g., energy agencies or facilitators themselves) are undertaking the role of the moderator. Any arising issues should undergo a conflict resolution process that suggests actions and measures to create consensus among participants. Facilitators in charge for setting up REACT groups will analyse the different dynamics of participants and suggest actions and measures to create consensus among participants. Principles for conflict resolution as well as possible methods are listed in section 3.2.
Housing and co-owners' associations are not active	Facilitators engage further with the housing and co-owners' associations to support their inclusion in the policies through REACT groups.
Imbalanced consideration of stakeholder perspectives	Follow principles/use tools for inclusive implementation of REACT group meetings (see section 3.2).

Difficult access to/engagement of energy poor households	Engage with local social or community organisations who have already gained the trust of their beneficiaries. Design participatory formats in consideration of target group constraints. Distinct focus group discussions with affected households to create a safe space and avoid stigmatisation.
Physical meeting constraints due to COVID pandemic	Choose suitable locations with stringent hygiene concepts. Switch to online exchanges. Adapt data collection approach to bilateral formats (e.g., via telephone interviews).

2.2 Stakeholder analysis/mapping

Conducting a stakeholder analysis is an important step in the preparation phase of the co-creation process to avoid potential risks reducing project success such as decreasing stakeholder engagement, a mismatch between policy design and target groups, or an imbalanced consideration of stakeholders' views[1]. The analysis aims to understand, assess and group the involved stakeholders, while determining their relevance to a project or policy by elaborating their positions, interests, influence, interrelations, networks as well as other characteristics regarding the envisioned issues and targets, present positions and future potential.[2] The results allow facilitators to design adequate incentives accordingly, and carefully target communications and messaging so that the undertaking receives the expected attendance, quality contributions and feed-back for the development of the selected policy proposals.

The framework for stakeholder mapping can be designed with regard to different dimensions/stakeholder characteristics (knowledge, support, time, ownership, etc.). A commonly applied option is to choose interest and power as categories and group stakeholders according to their assumed position on these dimensions. The results help to highlight possibly conflicting perspectives to be considered within the co-creation process, including opposing stakeholders and resulting adverse effects on the project. They can be mapped into a diagram with a power and interest axis ranging from low to high specification of the variable.

[1] Zsuzsa Varvasovsky; Ruari Brugha (2000): "How to do (or not to do)... a stakeholder analysis," Health Policy and Planning 15 (3): 338.

[2] Lindenberg M, Crosby B. (1981): "Managing development: the political dimension". Hartford, CT: Kumarian Press; Freeman, R.E. (1984): "Strategic management: a stakeholder approach". Boston, MA: Pitman.

Figure 1: Scheme for power-interest analysis

Source: LITS Project Management Office, How to Conduct a Stakeholder Analysis (Emory, Libraries and information technology) [2].

Out of the resulting four quadrants that reflect four types of stakeholders, those with high power, but varying interest, and those with high interest, but low power will be especially important to address in the co-creation process, while stakeholders with low interest and low power are of less relevance. This classification helps to develop typical stakeholder communication and engagement strategies to sustain or increase the stakeholders' willingness to cooperate over the lifespan of the project. Stakeholder analyses can be repeated to track changes in stakeholder attitudes over time, as the involved groups may migrate from one to another category. Over the course of the project, transitions and movements of members from peripheral to core group and vice versa are also possible.

2.2.1 Types of stakeholders and expected contributions

Identifying the relevant stakeholders for the co-creation process of policy measures is the first important step. This task can be guided by asking the following questions:

- Who are potential beneficiaries of a policy?
- Who could be adversely affected?
- Who would resent change and mobilise resistance against it?
- Who has which rights and responsibilities?
- Who has access to relevant resources, skills or key information?
- Who could be the voiceless groups?
- Whose behaviour has to change for success?

The ENPOR project consortium identified six key stakeholder groups in the energy efficiency value chain (from ministries to households) without excluding the option to add further stakeholders.

These stakeholders will be expected to discuss project findings, provide monitoring data and facilitate the adoption of the policies by households, property owners and related market players. The following table shows the identified groups and the main motivation for their engagement for the project.

Table 3: Stakeholder groups and expected contributions (based on internal ENPOR survey)

Stakeholder Group	Expected contributions
Landlords/Co-owners' associations	**Validate the feasibility of policies from the owners' perspective and help them to renovate their stock; Identify tenants at risk of energy poverty.** *Provision of real estate market insights and housing policy expertise at national level. Communication of project achievements and results with key stakeholders and policymakers at national level. Promotion of solutions once these have been identified, sharing information with their members.* *To be further specified depending on policy*
Charitable and social work associations	**Share experiences on how to identify and communicate with energy poor households; Support landlords in making their stock more energy efficient (e.g., following the social rented agencies type of model).** *Provide contacts to relevant political representatives and authorities. Participate in, or provide inputs to the measure (e.g., informing people about offers of help, etc.).* *To be further specified depending on policy*
Energy Agency/Energy consultants	**Share insights on how to improve energy consulting and realise effective policy implementation; Provide access to anonymised data/results-based evidence for different approaches; Contribute capacity building material.** *Insights on how to identify and communicate with energy poor households. Connect the technical stakeholders (utilities, engineering/technical design companies etc.) with the public administration and social actors. Communicate project achievements and results with key stakeholders at national level* *To be further specified depending on policy*
Municipality/regional/ national policymakers	**Provide feedback on proposed policy design and Policy Fiches; Enable replicability and provide legislative and policy support and infrastructure.** *Communicate project achievements and results with key stakeholders at national level; Changing national/regional/municipal policy* *To be further specified depending on policy*
Citizens groups/NGOs	**Demonstrate the needs, types of support they require; Provide information on acceptability of the support scheme; Provide bottom-up insight.** Contribute their experience with the groups of people they represent to improve chances of uptake of the newly developed measures. Sharing project information inside their organization and networks *To be further specified depending on policy*

Utilities	**As main actors in rolling out social tariffs, discounts and various other energy poverty alleviating schemes, utilities can give feedback on their viability.** *Contribute to the design, development, implementation and testing of innovative energy poverty schemes. Contribute their experience with various instruments to support energy poor households to ensure the feasibility and impact of new measures.* *To be further specified depending on policy*

The facilitators will have to identify the relevant stakeholders in their country-specific context, complete the list, adapt the specific roles and refine the expectations with view to the respectively co-created policy type.

2.2.2 Power-interest-analysis

Identifying the stakeholders' key interests is crucial for targetting the project messaging accordingly in order to incentivise their (long-term) engagement in the project. Furthermore, these insights can help to strengthen the bonds of the REACT groups in the respective country to enable a fruitful exchange leading to higher acceptance of the developed policies, and lastly also to anticipate and prevent unwanted conflicts.

To better understand the stakeholders' interests, characteristics and circumstances, the following questions can guide the analysis[3]:

- What are the stakeholder's experiences with or expectations towards the policy/the co-creation?
- What are the current and potential future benefits and costs of the policy (redesign) for the stakeholder?
- What stakeholders' interests conflict with the goals of the policy?
- What resources has the stakeholder mobilised, or is willing to mobilise?

The interests may be differentiated regarding the respective ENPOR policy schemes and the engagement in the REACT groups' co-creation process, including the support of the implementation and dissemination activities.

Benefits for stakeholders

The framework analysis on energy poverty in WP2 Framework on Energy Poverty in the private rented sector (D2.1) indicated various relevant topics in the financial, regulatory, social or environmental fields that could be of interest for the engaged stakeholders. However, these groups

[3] *Stakeholder power analysis*. Available from: https://www.researchgate.net/publication/329585973_Stakeholder_power_analysis [accessed Dec 21 2020].

will join with very different perspectives on the issue and assess a potential engagement seeking to ensure that their benefits in this demanding co-creation process will exceed potential expenditures. Limited capacities or opposing interests with other stakeholders could negatively affect the willingness to join. It is therefore important to carefully analyse and understand each stakeholders' specific viewpoints, potential needs and interests to identify suitable messages to incentivize their participation.

In an internal survey, the ENPOR project partners responsible for supporting the engagement strategy development were asked to provide their respective assessments on different stakeholders' interests. The results have been summarized in Table 4 by stakeholder type. They represent examples for the variety of interests existing within a stakeholder group. However, for application within a specific case, they have to be revised with view to the respective policy and should be validated, adapted and completed based on the interests expressed by stakeholders themselves in the first REACT group meetings.

Table 4: Potential interests of stakeholders and barriers for engagement

Stakeholder	Main interests to join the REACT group	Potential barriers for engagement
Landlords/ Co-owners' associations	• Promote their interests, needs, concerns at national level • Gain new insights into renovation strategies in the PRS, including strategies to address energy poverty and support energy conservation behaviours / energy efficiency among tenants • Support members with better knowledge on building retrofitting • Better understanding of the correlation between energy efficiency / improving living conditions of tenants and the value of properties (in the context of the National Energy and Climate Plan (NECP), and renovation targets foreseen in the building sector by 2030) • Provide apartments with lower utility costs; not becoming a burden to owners or tenants • Make a contribution to the issue	• Lack of time • Lack of resources • Lack of knowledge/ information • Lack of awareness on how energy efficiency and improving living conditions of tenants correlate to the value of properties • Lack of interest in energy poverty, lack of interest to participate • Fear of a non-constructive/ one-sided discussion
Charitable and social work associations	• Improve the situation of affected households • Participate in the elaboration of new mitigation measures in a dialogue with important stakeholders from the policy level • Transfer knowledge • Learn from other relevant stakeholders' perspectives on energy upgrades in the PRS (novel forms of inclusion and participation, new financial schemes)	• Lack of time • Lack of resources

Energy Agency/ Energy consultants	• Improving assistance to municipalities in the development and implementation of local sustainable energy plans • Receive input to develop their working materials in cooperation • Transfer knowledge • Learn from other relevant stakeholders' perspectives on energy upgrades in the PRS (particularly novel forms of inclusion and participation, new financial schemes) • Facilitate a fair transition on regional/municipal level • Provided advice for energy poor households • Direct interest due to former involvement in related projects	• Lack of time • Lack of resources • Lack of interest for the PRS
Municipality/ regional/ national policymakers	• Update of the National Energy and Climate Plan (NECP) in view of the 2023's Global Stocktake (referred to in Article 14 of the Paris Agreement) • Development and implementation of local sustainable energy plans • Combat energy poverty and make further progress • Opportunity to receive input from experts resulting in assistance in the development of new policy instruments • Cooperate and learn from other countries' experiences; Connect with local authorities doing similar work elsewhere • Improve the energy performance on state, municipal, building and household level • Make a targeted contribution	• Lack of time • Lack of resources • Lack of responsibility • Little awareness of the problem • Perception that the participation will not really lead to any achievements
Citizens groups/ NGOs	• Share experience and information about people in need • Support their members (local citizens) on building retrofitting; Have better and cheaper accommodation possibilities for students • Strengthen energy democracy by placing citizens, local municipal authorities and mid-sized businesses at the heart of the energy transition. Increased understanding on energy poverty may help to increase their understanding on the energy communities-energy poverty nexus. • Opportunity to participate in a project that focuses on the PRS • Build transnational networks and transfer knowledge • Interest due to former involvement in the development of related reports	• Lack of time • Lack of interest for the PRS • Lack of awareness of the issue • No perceived connection between the topic/working group and their own agendas • Possible conflict of interests

Utilities	• Obligation to implement various measures to protect vulnerable customer groups. Some already operate offices to offer advice and support in case of problems with the payment of energy bills. • Obligation to promote the conservation and efficient use of electricity by all classes of consumers through information campaigns and other measures (in case of EEO). • Utility companies lose money and time dealing with customers in (energy) poverty who are unable to pay their bills or do it on time. • Interest in new policy instruments that are practical in supporting these households.	• Lack of time • Lack of interest for the Private Rented Sector • Private data protection regulations/access to the private data owned by utility companies to the business interests • Possible conflict of interests (e.g., energy savings vs. energy sales)

Information on targets, process and expected contributions

Referring to more practical questions of the engagement in the co-creation process, stakeholders also need to have a clear idea of the project's targets and their expected contributions as well as the schedule, formats and contents of the first meetings, so they can plan and decide on necessary preparations, and align with their other work-related obligations. Section 3 outlines the common framework and describes the first REACT group meetings.

Power analysis: Stakeholders' areas of influence

The stakeholder power analysis aims to help understand how the considered stakeholders can impact the policies' development, implementation and outcomes, and to determine how relevant they are for the project success. It is useful for identifying potential beneficiaries and "losers" of a policy, and to identify the challenges that need to be faced to change behaviour, build capacities and tackle inequalities. Therefore, the power and potential roles of different stakeholders, their characteristics and operating environment as well as patterns and contexts of interactions between stakeholders should be identified and assessed. The goal is to clarify which stakeholders are particularly important and need to be kept engaged, but the analysis can also shed light on where to empower important but marginalised groups, in order to improve policies and institutions.

Questions that can support the power analysis[4] include:

- Who is dependent on whom?
- Which stakeholders are organised? How can that organisation be influenced or built upon?
- Who has control over which resources? Who has control over information?
- Which problems, affecting which stakeholders, are the priorities to address or alleviate?
- Which stakeholders' needs, interests and expectations should be given priority attention with respect to the policy in question?

[4] *Stakeholder power analysis*. Available from: https://www.researchgate.net/publication/329585973_Stakeholder_power_analysis [accessed Dec 21 2020].

In a concluding step, the results of the power and interest analyses will be combined, and for each policy scheme a power-interest-grid will be developed with two axes depicting the power and interest continuum respectively. The resulting four quadrants summarize four categories of stakeholders, as shown in Table 5. Stakeholders to the right have the highest 'stake' or 'interest' in the considered issues, but their power to impact the co-creation outcome varies. Stakeholders in the upper two categories hold more power to affect or influence the project outcome, but may or may not actually be concerned about the issue. With regard to promoting progress of the facilitation, it thus needs to clarify the stakeholders' roles that would be necessary for a change, and - if necessary - to assess if and how this could be achieved, given the interests of the respective stakeholder. These preliminary considerations in the run-up of the engagement will help to choose the relevant stakeholders, to develop adequate communication and management strategies, to moderate possible conflicts and create a balanced, fair and fruitful co-creation process.

Table 5: Power-Interest Scheme: stakeholder categories and corresponding engagement strategies

Power-Interest Category	Engagement focus
High interest and high power	*Key Player* Stakeholders being mapped into this category need to be managed closely. Their existing interest on the issue helps to involve them in projects and decisions. They have a high degree of power to support, which makes them key players. Facilitators should show them sustained management attention, engage them on a regular basis and maintain the relationship.
Low interest, but high power	*Meet their Needs* Stakeholders being mapped in this category are an equally important group due to their strong influence. They can influence the future overall contact. However, their low interest is a challenge. Decreasing engagement could make them a risk to the project target. Facilitators need to engage, consult and offer them attractive contents and formats in order to raise awareness and to maintain or increase the level of interest. Convert them into Key Players.
High interest, but low power	*Keep informed* Having little influence, but high interest in the issue, a strategy for this stakeholder group should be to keep them informed. They may serve as important ambassadors for the project. It could be discussed, however, if this group, bringing in important insights and expertise, should be supported in their involvement (e.g., by creation of protected space, etc.) to balance their lack of power. A risk could be that stakeholders with greater influence otherwise dominate the discussion and design of policies.
Low interest and low power	*Monitor* Stakeholders with little interest and limited influence should be kept updated.

Regarding the simultaneous engagement of landlords and tenants in the co-creation process, facilitators need to be aware of not only differing interests, but also differing abilities to improve energy efficiency of the PRS. Regarding the barriers and drivers for increasing energy efficiency in privately rented homes, D2.1 pointed out that the implementation of energy efficiency measures is also a question of conflicts, displacement, and injustice. With some actors being able to assert their interests more than others, conflicting views must be carefully analysed. Some patterns of institutional or resource related power distributions within the group could otherwise affect the ENPOR co-creation process in an undesirable way.

The results will differ depending on the type of policy measure in the respective national context. Table 6 shortly describes the roles of the different stakeholder groups regarding the development and implementation of policies and provides a preliminary assessment of their ability to impact different policy types.

Table 6: Stakeholders' role and ability to impact the co-creation of policies (qualitative assessment based on internal ENPOR survey)

Stakeholders	Role and potential interference with ENPOR policy implementation	Policy type			
		training and information	grant for renovation	programme support	EEOs
Land-lords/Co-owners' associations	*One of the key players in ensuring that planned measures actually reach the tenants. As property owners, they (or their employed building manager) are responsible for the implementation of many options, over which the tenants have no control. It is therefore important to bring in their point of view, and to keep them engaged. Can negatively affect the project via (omitted) communication towards their members.*	++	+++	o	+++
Charitable and social work associations	*Can play and important role regarding the engagement of vulnerable tenants and the communication of ENPOR policies towards the target group. Can support municipalities / obligated parties to identify and reach out to energy poor tenants and facilitate service delivery.*	++	o	+	+
Energy Agency / Energy consultants	*Will carry out the consultations for energy-poor households planned in the project in cooperation with ENPOR partners and will also develop their working materials further. Important participants in the REACT group, as to bring in the view of the households themselves and own experiences in the work there.*	+++	++	++	++

Municipality/ regional/ national policymakers	*Representatives of various important bodies, all key players in the implementation of mitigation measures. On the one hand, they can play a key role in the development of appropriate measures and instruments, and on the other hand they can / have to play a key role in the implementation itself.*	**+++**	**+++**	**++**	**+++**
Citizens groups /NGOs	*Can support the policy development and shape public perception of the topic via agenda setting activities and dissemination of co-creation outcomes.*	**+**	**o**	**+**	**o**
Utilities	*Big local utility companies always have a stronger voice than small NGOs. Also, they have direct contact with tenants and owners and access to energy consumption data and can promote training and information activities within their customer base. Utilities already have experience with various instruments to support energy poor households and may be the responsible parties for ENPOR policy implementation (EEO).*	**++**	**+**	**++**	**+++**

Note: o = no ability to impact, + = low ability to impact, ++ = moderate ability to impact, +++ = strong ability to impact

2.3 Communication strategies for engagement

The stakeholder analysis provides the basis for the development of targeted communication strategies. It identifies the key stakeholders for the project, elaborates in which direction these stakeholders might need to be moved and helps to develop messages and offer incentives to attract them with to keep them engaged and provide the necessary contributions over the whole project time. Communication work can 'make or break' the co-creation process. Well-established communication can help to reduce the friction of the engagement process and create collaborative environments for the people and organisations that usually do not meet. Communication and dissemination activities can add value to the collaborative work of the REACT groups while presenting this work to the public, policy makers and international audiences. Communication activities can increase the legitimacy of policy processes providing transparency and well-explained procedures. Most importantly, well implemented communication routine can save time both for the facilitator and for the REACT group members. The personal or professional time is the real currency that the stakeholders are investing into the participatory processes and respecting the value of this time is crucial for the REACT group leaders while setting up the work schedule and communication routines for the groups.

Stakeholder specific messages and incentives

The previous analysis of the stakeholders' interests allows the specification of messages according to the different policies and stakeholders. The following contents are derived from the survey among ENPOR partners and the project dissemination plan (D5.1). They need to be further differentiated by facilitators according to the respective policy measure and the national context.

Table 7: Potential incentives and corresponding messages (based on internal ENPOR survey)

Stakeholder	Incentives	Messages
Landlords/Co-owners' associations	Promotion of own interests (Financial) added value of improved energy efficiency Knowledge exchange on renovation strategies, regular checks, financial support and behavioural approaches Direct involvement in policy making/building efficiency policies Meeting environmental targets / obligations Increased understanding for the issue and problems of the tenants (social responsibility) Improving the relationship with the tenants Networking Supporting own members	• Chance to contribute their point of view in order to develop solutions that add value for both sides! • Energy poverty schemes can lead to renovation interventions that improve the energy efficiency of a property; Higher energy efficiency corresponds with higher value of properties; Chance to grant higher credits • Share best practice, services and products • Free access to information and knowledge on possible solutions to create additional value for yourselves and your tenants • Access to new funding, financial support, retrofitting grants • New insights into renovation strategies in the rented sector (How to effectively address energy behaviours and energy efficiency among tenants; how to support them) • Increase preparedness for achieving political climate targets for the building sector • Help to achieve their own sustainable development goals • Improve profitability, environmental credentials and social responsibility • Find out information about energy poverty issues and engage with topics and targets specific to their needs • Increased understanding of landlords-tenants dilemma that can improve relations between them • Energy poverty is an issue affecting both tenants and landlords! • The project does not consider property owners as a problem but as part of the solution!
Charitable and social work associations	Improve the situation of affected households and heighten the awareness of the issue among relevant actors Knowledge exchange	• Chance to increase awareness for the issue and transfer practical knowledge on best practice to other relevant stakeholders • Opportunity to participate in a working group and to work out ways to reduce energy poverty! • Platform to increase awareness of their role, organisation and the projects that they are involved with

	Strengthen the own publicity and impact Direct involvement in policy making	• Chance to learn from other relevant stakeholders' perspectives on energy upgrades in the PRS, particularly novel forms of inclusion and participation, as well as new financial schemes • Opportunity to contribute to the Energy Poverty Dashboard (EPD), providing another channel for their message
Energy Agency/ Energy consultants	Direct involvement in policy making Knowledge exchange: finance, best practice, behavioural aspects of the issue, etc. Improving the own consulting capacities Facilitate a fair transition Access to energy data Networking Increased awareness of the issue	• Opportunity of increased involvement in energy poverty-related developments • Possibility to transfer knowledge and cooperate with the political level, Opportunity for Energy Agency to improve its capacity in the field • Opportunity to communicate with other target groups • Improved cooperation with market actors • Learn from other relevant stakeholders' perspectives on energy upgrades in the PRS (particularly novel forms of inclusion and participation, new financial schemes) • Platform to learn about and share best practice. Learn about new tools and information to improve energy consulting • Develop greater understanding of behavioural aspects of citizen's use of energy • Improved cooperation with the organisations involved in the energy efficiency value chain • Opportunity to access local energy data and new knowledge • Increase awareness about the importance of reducing energy poverty
Municipality/ regional / national policymakers	Knowledge exchange Overcoming energy poverty, meeting the needs of their citizens, social responsibility Meeting environmental targets / obligations Increased political legitimacy Increased capacity, effective measures Direct involvement in (national) policy making Access to information	• The focus on the PRS is an important unique selling point of ENPOR; Accordingly, they can really add value by their involvement (depending on national context). • Opportunity to connect with local / regional / national authorities doing similar work elsewhere • Expert engagement and public dialogue to support policy decisions • Direct and trustworthy information • Knowledge exchange, replication possibility • Platform to learn about and share best practice within their field of expertise • Chance to increase their understanding on the landlords-tenants dilemma and realise effective policy design and implementation • Opportunity to communicate with other target groups • Defragmentation of initiatives • The project aims to ensure an uptake by involving both sides from the private sector, both landlords and tenants! • Opportunity to achieve urban energy poverty goals

	Awareness building Exchange with other local authorities	• Opportunity to include the energy poverty dimension/ concerns to the building retrofitting support measures • Policy engagement, increase political legitimacy • Ability to meet the needs of their citizens and answer questions from them • Improvement in service delivery for aspects of city management e.g., city planning, infrastructure growth, retrofitting, energetic modernisation • Reinforce trust of citizens about energy poverty services • Awareness raising on the key issues
Citizens groups/ NGOs	Raise awareness for the people in need Knowledge exchange, Access to information Improve own capacities to consult or create suitable accommodation Strengthen energy democracy Direct involvement in related policy making Networking	• Opportunity to rise energy poverty into the focus of public discussion; Chance to speak for the groups they represent and jointly work out solutions to support affected persons • Increase awareness and preparedness • Enable citizens to save money and contribute to saving natural resources locally • Opportunity to find out information about energy poverty issues and engage with topics and targets specific to their needs • Opportunity to exchange views with representatives of other groups, to cooperate and transfer knowledge • Free access to information and knowledge • Chance to gain an improved understanding of local energy issues • Possibility to improve the understanding on the actual impact that energy communities could have with regard to combating energy poverty • Reduce energy consumption by promoting the use of energy saving tips • Reinforce trust of citizens • Opportunity to get in direct contact with political actors in a working group
Utilities	Obligation to protect vulnerable customer groups Obligation to achieve energy efficiency (in case of EEOs) Customer care, improving public relations Improving the own financial situation Direct involvement in related policy making	• Opportunity to actively contribute to the relevant issue of energy poverty and to develop and evaluate mitigation concepts together with the political level! • Chance to fulfil their energy efficiency obligations (where applicable) • Opportunity to help reducing total energy consumption • Chance to improve public relations and promote Corporate Social Responsibility strategies • Chance to build stronger customer relationships and acquire new customers • Competitive advantage, introducing differential pricing models (dynamic billing) to the market

		• Chance to increase the financial stability by reducing the number of customers in utility debt / decreasing costs of debt management

Communication with the REACT group

After these preparatory steps, the REACT group facilitator will start to establish the REACT groups by inviting the stakeholders to join the initiative and asking them to confirm their participation and intended contributions (e.g., via a Letter of Support). Invitations that are sent out should contain a brief description of the undertaking.

The ENPOR Communication Plan (D6.1) gives further guidance on how to establish and maintain the contact with the potential group members throughout the undertaking, how to select suitable communication channels (official emails, personal phone calls, etc.) and how to set up internal communication procedures for the REACT groups. The initiative of communication with the stakeholders should always come from the facilitators, adequate frequencies and forms of stakeholder communication should be defined. Equally important is the establishment of a suitable platform for virtual meetings (see section 3.2). D6.1 underlines that formal communication inside of the REACT group must be monitored and reported, and explains how to manage the collected personal data.

Engaging some REACT group members may require a special approach and procedures: As will be discussed in the following chapter, setting up an initial contact and including tenants of energy poor households and their property owners can turn out to be a challenge in the ENPOR project. This applies to the initial communication, but also for the further co-creation process. The REACT group coordinators should consider alternative ways of engagement (see section 2.4).

2.4 Engagement of energy poor tenants (and landlords)

The engagement of energy poor tenants (and their landlords) within the co-creation is crucial to ensure the development of targeted policies that match their needs and challenges. As experts of their experiences, prospective beneficiaries of policies can be important contributors to transformative service design and the improvement of wellbeing and it is important they are recognized as such. This section first provides an overview of vulnerable groups in the European PRS and reflects on their (specific) challenges with regard to the participation in the co-creation process. This exercise builds on the analysis of the energy poverty framework in the PRS (cf. D2.1a). The second part then outlines possible strategies to engage energy poor tenants (and their landlords) within the process, including suitable means of outreach and engagement formats. In doing so, it builds on a six-step framework for the involvement of vulnerable consumers in co-design processes developed by Dietrich *et al.* (2017)[5]: 1) Resourcing, 2) Planning, 3) Recruiting, 4) Sensitizing, 5) Facilitation and 6) Evaluation. With regard to the recruiting stage, a particular focus will be on gender sensitive approaches to adequately reflect the disproportionate distribution of (energy) poverty risks

[5] Dietrich, T., Trischler, J., Schuster, L., Rundle-Thiele, S. (2017): Codesigning services with vulnerable consumers. In: Journal of Service Theory and Practice, 27: 663-688.

among female citizens.[6] The information provided here is based on a collection of experiences of ENPOR partners, literature on co-designing public policy with vulnerable groups and a review of strategies employed by other European energy poverty projects.

2.4.1 Identification of target groups

The identification of the target group(s) is a fundamental step for the implementation of project activities. While the project focus of ENPOR is by definition narrowed to energy poor tenants, this is clearly not a homogenous group. Acknowledging differences in terms of socio-demographic characteristics (e.g., age, gender, ethnicity, family situation, employment status), housing and energy supply conditions thus represents a suitable strategy to identify subgroups of vulnerable households in the PRS and specific aspects to consider with regard to their engagement. Table 8 displays the tentative identification of some of the most vulnerable groups in the European PRS, which could be specifically targeted by ENPOR policies. This classification is based on three axes of vulnerability – socio-demographic (involving factors such as income, ethnicity, gender etc.), housing (involving the regulation and structure of the housing stock in particular), and energy (concerning the efficiency and type of energy supply). The classification highlights intersections among the different types of vulnerability, and households that are more likely to be vulnerable based on one of the axes (as listed in the vertical column).

Table 8: Overview of vulnerable groups in the European PRS

Primary axis of vulnerability	Socio-demographic	Housing	Energy supply
Socio-demographic	-	Single parent tenants; Ethnic minority tenants; Tenants with unemployed or older family members; Tenants with small children; Tenants with disabled or chronically ill members.	Tenants suffering from other vulnerabilities beyond the home (e.g., high transport costs).
Housing	Households in short- term lets	-	Tenants in unaffordable and inflexible energy pricing arrangements (e.g., all utility payments wrapped in one).
Energy supply	Tenants living in energy inefficient homes	Tenants in homes with an expensive energy supply (e.g., electric only); Households without electricity and / or gas.	-

Source: Deliverable 2.1a Report on Energy Poverty in the PRS – Overview & Framework

[6] Corsi, M., Botti, F., & D'Ippoliti, C. (2016). The gendered nature of poverty in the EU: Individualized versus collective poverty measures. Feminist Economics,22(4), 82–100.

This tentative classification reflects the variety of constellations and multidimensional causes of energy poverty, which translate into correspondingly diverse needs and challenges to be considered within the engagement strategy. Barriers for tenant engagement could consist of:

- Lack of trust
- Lack of interest
- Lack of time
- Low sense of self-efficacy
- Lack of resources (e.g., public transport fares to join physical meetings, money to pay for babysitter etc.)
- Lack of Information and Communication Technology (ICT) hardware or skills
- Language issues
- Low visibility / low representation in citizen groups

While most of the listed barriers apply to all target groups, some will only or more strongly impede the engagement of specific subgroups. The following table displays the assumed relevance of different barriers for the socio-demographically defined subgroups and provides possible strategies to overcome them.

Table 9: Barriers for tenant engagement, relevance for socio-demographic subgroups and possible strategies to overcome them

Barriers for engagement	Target group(s)	Possible strategies
Lack of trust	All; Ethnic minority tenants	Engagement via intermediary organisations, e.g., NGOs, etc. Privacy-sensitive design of engagement
Lack of time	All; Single parent tenants (mostly female)	Enable individually scheduled participation Ensure efficient implementation of engagement formats Use of digital formats
Lack of interest	All; Female tenants	Communication of benefits Focus on function/benefit rather than characteristics of technical solutions Provision of incentives
Low sense of self-efficacy	All; Tenants with unemployed family members	Transparent communication of co-creation approach (role of tenants as experts in their own realm)
Lack of resources	All; Single parent tenants	Implementation of engagement activities in spatial proximity Use of digital formats
Lack of ICT hardware or skills	All; Tenants with older family members	Reliance on offline formats Bilateral training on how to use tools
Language issues / low literacy	All; Ethnic minority tenants	Engagement via intermediary organisations Non-technical language Translation of material
Low visibility / low representation in citizen groups	All; Ethnic minority tenants	Active recruiting in specific areas based on e.g., building data, unemployment rates, proportion of migrants etc.

In addition to the (country) specific circumstances of subgroups, incentives (and barriers) for their engagement within the co-creation may also differ depending on the policy type (i.e., financial or non-financial). While the further development of, for example, an energy advice measure is tangible and promises immediate benefits to participating tenants, the improvement of a national renovation grant scheme may seem more abstract and additionally require the involvement and activation of landlords. This aspect is considered in the following section describing the recruiting process.

2.4.2 Engagement strategies

The successful engagement of vulnerable households for co-designing policies requires a well thought through preparation and execution. To guide facilitators within this process, the following sections shortly discuss the six steps of vulnerable consumer involvement and reflect on their implementation within ENPOR.

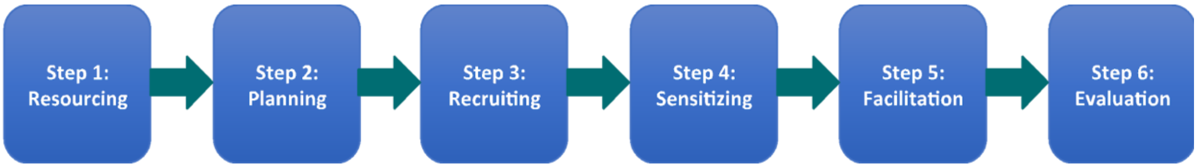

Figure 2: Steps for co-designing public policy with vulnerable groups

Resourcing

As a first step, facilitators need to reflect on the resources they have to provide to facilitate the engagement. As vulnerable households might not have either the willingness or the ability to innovate independently, co-designing with them requires an active role of the facilitator in terms of structuring the process and sourcing relevant and targeted inputs such as the results of different preparatory analyses and the initial policy proposal. Furthermore, in case of providing material (e.g., energy saving lightbulbs) or immaterial (e.g., energy advice) incentives for participation, the required financial and human resources for their purchase anddelivery should be calculated/estimated. Another task at this stage is the anticipation of potential barriers that may hinder participation and thinking of possible solutions and strategies to overcome these. The reflections made at this stage will help facilitators to gain a better understanding of the underlying problem(s) and task(s) to be addressed and to develop the topic-specific design tools (e.g., cards with images and words) to be used in the co-design sessions.

Planning

A second and closely related step is the planning of the practical implementation of tenant involvement. This comprises the definition of concrete actions that are necessary for recruiting participants, prepare them for the co-designing process (Sensitizing), organize and run the co-design sessions (Facilitation) and capture and assess their outcome (Evaluation). As not all facilitators may have direct access to the target groups or may face reluctance of tenants to cooperate with them, the scheduling and resource planning needs to allow for a number of interactions with facilitating intermediary organisations (by phone or face-to-face) to coordinate and agree on the methods of recruiting participants (e.g. screening methods and (subgroup specific) advertising methods) as well as coordinating co-design session venues/platforms and times, and their role in the co-design facilitation (e.g., providing unskilled tenants with IT-Support). An important consideration here relates to whether the co-design will be implemented online or in person. Due to the necessary contact restrictions in the current global COVID pandemic, the co-design process may largely have to be implemented in a digital format or employ alternative methods such as phone interviews to reach households lacking ICT equipment and / or an internet connection. Associated practical challenges with regard to e.g., building a trusting atmosphere, keeping participants engaged or including less ICT savvy participants in the process need to be considered when planning the facilitation. Also, the aimed size and composition of the group (i.e., whether facilitators will focus on a specific subgroup or aim for balanced representation of all subgroups) will be relevant for planning the following steps. As a rule of thumb, co-design sessions should not exceed more than 10 participants (excluding the facilitator(s)) in order to allow for a professional moderation and to give all participants the opportunity to share their perspective. Furthermore, the planning of the duration of co-design sessions (and correspondingly of the facilitators' inputs) needs to be aware of limitations of both participants' availability and ability to concentrate (particularly with regard to digital interactions). If possible, sessions should not exceed three hours (with built in flexibility though to extend/shorten if needed) with further restrictions applying to digital formats. Lastly, at this stage facilitators should also plan ahead for unexpected events that might occur during the co-design session (e.g., drop-out/disengagement of participants, conflicts, off-topic discussions, etc.) and develop suitable responses to deal with them.

Recruiting

A recent systematic review of European energy poverty research and innovation projects found the engagement of energy poor households to be the main challenge for successful project implementation.[7] Vulnerable households may not have the motivation to contribute to collaborative design activities, especially in sensitive topics such as energy poverty. In addition to a possible uneasiness about acknowledging and discussing own disadvantages with strangers, energy poor tenants may perceive their possibilities for reducing their energy consumption and lowering their energy bills as limited. Setting up an initial contact is thus the most critical part of this process.

A promising strategy for recruiting a sufficient number of energy poor tenants for involvement in co-design activities needs to adequately consider these challenges. In order to overcome possible distrust towards the co-creation and to locate energy poor tenants in the first place, close collaboration and the development of on-going partnerships with trusted intermediaries is a recommended approach. These intermediaries need to be ideally community based, and have a visible and long-standing presence in areas where private renting is common. Going through these intermediaries may also facilitate the engagement of different sub-groups (e.g., among pensioners, single parents (which may also address to some extent the gender dimension), etc.) and gain valuable insights regarding local specificities to be considered. Possible intermediaries in the context of ENPOR (not exhaustive and with some possible overlap) comprise consumer associations, tenant associations, social welfare associations, religious organisations, quarter management, community groups, pensioner and women organisations. Particularly the latter can play a crucial role, to ensure the adequate representation of female tenants in the process. Alternative or complementary approaches for tenant recruitment could be to use a public call for a query, published in local media/news or “by foot”, i.e., identifying areas in which beneficiaries are likely to be found based on the visual appearance of buildings and / or evaluation of spatial socio-economic data and knocking on doors. However, these approaches may be less fruitful due to the more indirect nature of communication or impractical to be implemented during the pandemic situation respectively.

In addition to using adequate channels for outreach, the second important aspect to consider within recruiting is to use the right messaging content. In light of the assumed reluctance to participate in the process, the direct benefits of doing so should be at the core of the communication. To this end, key messages must be developed that clearly set out the specific benefits of i) joining the co-design process itself, and ii) the respective policy (type) to be further developed. Depending on the available resources, incentives offered by facilitators for participating in the co-design process can be the provision of practical energy saving advice in combination with low-effort technical solutions (e.g., energy-saving bulbs, water-saving shower heads, socket strips with a switch, thermostats, etc.). Benefits related to the policy itself may be used as an incentive only if the co-design target relates to

[7] Gangale, F., and Mengolini, A.,Energy poverty through the lens of EU research and innovation projects, EUR 29785EN, Publications Office of the European Union, Luxembourg, 2019

a policy, which participants can be offered to make use of later in the implementation phase (e.g., a training and information programme). In cases, where the co-design aims at the further development of grant schemes or other investment related policies, tenants may only benefit from the result if their landlords can be convinced to make the respective investment decisions. In these instances, recruiting should thus aim to bring both parties on board in order to establish relevance of the process for the tenants. In fact, given their central role, a more conducive approach here could be to initially approach interested landlords (e.g., via associations) and ask them to engage their tenants in the process. A precondition for this is an existing trustful landlord-tenant relationship and a commonly shared interest of achieving an equitable solution for both sides. The value for both co-design participants and the project can be further improved, if the recruiting achieves to involve landlord-tenant couples that have already successfully implemented innovative and equitable solutions under the current policy regime to share their experiences and insights. This aspect will then have to be included in the call for participation.

Given that a part of energy poor households tends to under-consume basic energy services, an appealing messaging should in general go beyond monetary savings and place a stronger emphasis on possible health and comfort improvements. In addition, their central role within the process and opportunity to shape the further development of national policy to better match their needs should be highlighted. Table 10 lists incentives and key messages to be used in the communication differentiated by the policy type to be co-created.

Table 10: Policy type specific incentives and key messages for tenant engagement

Policy type	Incentives	Key message(s)
Behaviour related (landlord independent)	Provision of energy saving advice Provision of small energy saving devices Possibility to exchange with other affected tenants	Opportunity to shape national policy/ programmes to better match their needs Energy efficiency improvements save money and can improve health and comfort Explore ways of saving energy and money in your household
Investment related (landlord dependent)	Provision of energy saving advice Provision of small energy saving devices Possibility to exchange with other affected tenants (and landlords) Agreement with landlord on energy efficiency improvements	Opportunity to shape national policy/ programmes to better match their needs Energy efficiency improvements save money and can improve health and comfort

Sensitizing

The sensitizing stage refers to the preparatory actions to be undertaken before the implementation of the co-design sessions. This step aims to further prepare and familiarize participants with the underlying concept, process and target of the co-design and to clarify mutual expectations and requirements of the co-design sessions or the actual policy to be re-designed.[8] To this end, if possible, facilitators should make bilateral contact with the recruited tenants before the sessions in order to elaborate on the named aspects and to start building a trustworthy relationship. This exchange can also serve as an opportunity to collect preliminary ideas and questions for the session and to anticipate potential issues with the session design. While an interaction in person would be preferable, particularly regarding the establishment of a trusting relationship as a crucial condition for open exchange, facilitators will have to rely on other modes of interaction, with videoconferencing being the second-best option. As a complementary action, participants should be provided with a document outlining these aspects in a concise and easily understandable manner.

Facilitation

Dealing with a sensitive issue, skilled facilitation of the co-design sessions by facilitators is crucial to both avoid stigmatization of participants and to enable the elaboration of the results aimed for. To this end, it is important that facilitators create a trusting environment, in which participants feel comfortable and inspired to share their experiences and ideas and to collaborate with other participants to develop novel solutions. This also entails choosing the most appropriate tools and methods to enable people to communicate and engage with each other. Furthermore, facilitators should clearly communicate that the session is a safe space and that confidential treatment of participants' private information is a guiding principle unless granted permission of use. In this instance, permission for recording the session for evaluation purposes should also be formally obtained (though this approval should optimally already be obtained during the sensitizing stage in order to allow for sufficient time to adapt the documentation approach if necessary). Lastly, facilitating collaborative activities with diverse participants requires careful observation of individual needs and group dynamics and the ability to re-calibrate the process based on those observations.

After a short introduction of the project and its targets, the co-design process might start with an 'ice-breaker' activity to allow participants to become familiar with the facilitator and other participants as well as the objectives of the co-design activity. Such activities should enable participants to learn something personal about the other group members to generate mutual empathy without touching upon sensitive matters at this point. For example, a harmless question to start with could be "Do you have a passion project or hobby you look forward to doing in your time off?" In case someone doesn't have a pet project, switch the question to: "If you had unlimited time or money, what would your pet project be?". Alternatively, the facilitator can ask all participants to respond to a general question by means of signalling and thus visualise commonalities (for digital application see section 3.2).

Once the warming up has been completed, the focus of the session can turn to individual activities and/or in-group discussions corresponding to the session target, followed by the development of ideas. During this stage, all co-design tools (e.g., role playing, mock-ups, cards, canvas) should be considered and selected based upon the potential to empower participants and encourage collaboration and creativity. The pertinent literature recognizes three main types of techniques for

[8] Steen, M., Manschot, M., & Koning, N. (2011), "Benefits of Co-design in Service Design Projects", International Journal of Design, No. 5 Vol. 2, pp. 53-60.

co-design: telling, enacting, and making.[9] Using these techniques can help facilitators to reveal 'real rather than assumed behaviours'[10] and to make tacit knowledge explicit that is ingrained in people's everyday experiences. Suitable methods to reveal such knowledge are diaries, collages, card sorts, model building, and various forms of mapping and roleplaying.[11]

Box: Things to consider during co-design facilitation

- Take 5-10 minutes in the beginning of a session to describe the project as a whole, its goals, and how participants' contribution relates to the entire project.
- Take another few minutes to communicate with the participants what the session entails and what is expected from them. Projecting a step-by-step schedule of the session and making a hard copy available for each group helps some participants to know where they are in the process and what they should expect next.
- Throughout the session, try not to break the groups' workflow with too many interruptions, announcements, and breaks.
- Recommend flexible breaks, so groups can take breaks as needed and spend longer and less interrupted chunks of time on a task.
- Provide some reminder/preparation prior to the transitioning to a new task (e.g., 5 min reminder).
- Be mindful of each participant's needs and group dynamics. If there are several facilitators, assign each facilitator to specific groups, so they can become more familiar with members of those groups, their needs and their interactions.
- When conversations are fading down, join groups to prompt them with additional questions, share personal experiences, and provide other examples or introduce them to the next task / step. But be mindful that you are there to facilitate, let the group steer the conversation as much as possible and contribute their own ideas.
- When group members have conflicting physical needs, join the groups to help with physical tasks, such as note taking, drawing, building prototypes, etc.
- To reduce negative group dynamics, ask group members to switch their seats/breakout rooms. Often a simple change in perspective will reset the dynamic of the group.
- Try to speak slowly, with an audible voice, and avoid using technical terms/acronyms or at least provide a description for them.

Source: https://cities.inclusivedesign.ca/resources/co-design-facilitation-techniques/

Evaluation

As a final step, facilitators will perform the evaluation of the session outcomes. This task will be implemented with view to capturing the full breadth and depth of participants' stated perspectives on the subject and summarizing them in a concise way to inform the redesign of the policy or policies in question. The basis for this task is laid within the conceptualisation phase of the co-design sessions, in which both the session targets and documentation approach to capture the outcomes are defined. With the co-design process being both iterative and interactive between the tenant / landlord group and the REACT group (see section 3), the accurate evaluation and communication of the outcomes

[9] Sanders, E. 2014. 'Perspectives on Participation in Design.' In C. Mareis, M. Held, and G. Joost (eds.), Wer gestaltet die Gestaltung? Praxis, Theorie und Geschichte des partizipatorischen Designs (pp. 61–75). Bielefeld: transcript Verlag.

[10] O'Rafferty, S., A. de Eyto and H. J. Lewis. 2016. 'Open Practices: Lessons from Co-Design of Public Services for Behaviour Change.' In P. Lloyd and E. Bohemia (eds.), Proceedings of DRS 2016: Design + Research + Society (pp. 3573–3590). Brighton: Design Research Society.

[11] Akama, Y. and A. Prendiville. 2016. 'Embodying, Enacting and Entangling Design: A Phenomenological View to Co-Designing Services.' Swedish Design Research Journal 8(1):29–40.

of tenant/landlord involvement is crucial to ensure adequate recognition of their perspectives and needs within the redesigned policies and thus avoid frustration and possible drop-outs. Furthermore, it helps to avoid a possible (costly) failure of the policy design to properly address the needs and challenges of their respective target group. Besides a first assessment by the facilitator, evaluation of inputs in terms of their practicality will be jointly performed by REACT group members, particularly on the part of the coordinating authority with regard to administrative restrictions and requirements. An additional step of evaluating the outcomes of the co-design process will relate to the impact monitoring of the redesigned policies (cf. section 5).

2.4.3 Gender-sensitive approach

Finally, it should be emphasized that ENPOR is committed to set a special focus on improving the situation of women, and that it will make every effort to examine the role of gender within the context of energy poverty and to include these issues during the co-creation process and within the policy conclusions. Evidence exists that there are significant gendered differences in both people's energy-related practices and their relationship with the energy system, which can also affect their risk of energy poverty, their experience of being energy poor, and their capacity to overcome it. There are increasing numbers of one-person households in the EU, the majority of which are female, which has been declared as a result of greater female longevity leading to greater numbers of women living alone at pensionable age.[12] In the last decade, also a substantial increase of the number of households with children that are headed by a single adult (2019: 14%) could be observed. Statistics show clearly that single parenthood is strongly gendered: many more households with a single adult and dependent children are headed by women (almost 80 %) compared to men.[13] Despite having higher educational aspirations, women still often face structural inequalities in the labour market, being employed in professional fields with lower income levels. Combined with part time models due to family role patterns, this can raise the risk of poverty. ENPOR thus seeks to particularly integrate women into the co-creation process in order to ensure that the developed policy recommendations are gender sensitive and that proposed policy instruments and suggestions for support measures will be gender mainstreamed. In addition to the descriptions in sections 2.4.1 and 2.4.2, gender specific needs, challenges and barriers have to be analysed in the recruiting, planning, sensitizing and facilitation steps, concluding in respective communication, incentives and engagement approaches for women.

Lack of time due to work, shift work and family duties can prevent female target groups among energy poor households to join the co-creation process. Although it bares the risk of reproducing gender prejudices, facilitators may also consider that a rather technical framing of the co-creation process relating to energy efficiency issues may not attract female tenants due to a perceived lack of knowledge, technical language skills and related low self-efficacy. This can turn into a lack of trust, or they simply do not see any link to their personal life. Among these target groups, a considerable share of women may simply be unfamiliar with such formats or be uncomfortable with speaking up in big

[12] Clancy, J., Daskalova, V., Feenstra, M., Francechelli, N., Sanz, M., 2017. Gender perspective on access to energy in the EU. European Parliament Policy Department for Citizens' Rights and Constitutional Affairs, Brussels.

[13] https://www.europarl.europa.eu/RegData/etudes/STUD/2020/659870/IPOL_STU(2020)659870_EN.pdf

rounds. On the other hand, representation in various citizen groups and NGOs who could serve as trusted intermediaries could be an advantage regarding their involvement.

As a conclusion, through the whole process, women should be especially encouraged and empowered to join the process. Therefore, in the preparatory actions for the co-designing, it will be important to approach and attract women through the right outreach channels and with the right messaging: This starts with the design and preparatory materials that should be in line with gender focused communication, e.g., warm/friendly colours or title motives which do not focus on technical devices, but for instance comfortable family life and others. Informational posters and calls could be placed in social networks and places where women socialize (e.g., single mothers groups, women's gym, churches, citizen centres/centres for social work, facilities of child care, circles of handicraft), the envisioned programme could be mentioned in the local radio or TV programmes, especially in ones that specifically address women. The messages should invite and encourage the different female groups, assuring that the project really wants to hear about their situation (i.e., that they and their experience and participation in this process are important) and underlining that this project does not only speak about technical issues, but seeks to provide benefits in the field of health, comfort improvements, and monetary savings for them and their families and children. Language should be largely non-technical and places for physical meetings should be selected, where women feel comfortable. A trusted and inspiring environment could be built by smaller groups to share their experience, or setting groups consisting only of women (at least in a first step). In the preparation of the sessions, generally, bilateral and sufficient instructions for the digital participation and use of online tools should be offered. If physical meetings are not possible, it should be carefully weighed, which communication channels are suitable for which female target groups, with regard to their media preferences and time availability/flexibility (e.g., phone interviews for female pensioners instead of online meetings or online surveys). Finally, engagement of these target groups is also possible via intermediary organisations and local actors that work with women.

3 CO-DESIGN

3.1 Co-design approach

The applied co-design approach which was developed within the framework of D4.1 "Stakeholder Engagement Strategy", consists of three steps in order to ensure the effective re-design of the targeted policies. The main characteristic is the conduction of a co-creation[14] procedure with the actual involvement of all of the crucial stakeholders in regards to the alleviation of energy poverty in the PRS. More specifically, the approach consists of the following three steps:

- **Step 1:** Elaboration of an initial proposal by the facilitator: An initial proposal should be elaborated by the facilitator including the requirements and the guidance on integrating PRS policies in the respective country's policy and financing framework. The formulation of the initial proposal should be accomplished taking into account various parameters, such as the priorities and needs of energy poor households and property owners, potential legal or market-related obstacles, gender issues and the implementation of incumbent social and other policies in each country, ensuring the proposal of consistent policy packages to tackle the multiple dimensions of energy poverty.

- **Step 2:** Co-creation with the REACT groups, ensuring realistic design and buy-in for both property owners and tenants: The targeted policies should be discussed, consulted and adapted with the national REACT groups taking into consideration both the findings of the previous step and the analysis of the best practices, structural factors and conditions of energy poverty policies as resulted by the ENPOR project. In the co-creation phase, the initial proposal and guidelines prepared in the previous step should be improved and tailored to the actual needs, priorities and expectations of the REACT groups so as to result in more effective policies for the alleviation of the energy poverty.

- **Step 3:** Finalization of the design elements, setting in place the necessary procedures: The design of the policies is finalized following the completion of the required modifications, and the proposals from the REACT groups.

According to the proposed methodological approach, the co-design process is based on the conduction of three REACT group meetings. A key input to this process is the perspective of energy poor tenants (and landlords). While both groups' interests should be represented in the meetings by representatives of tenant/landlord associations, charitable organisations or similar, direct exchange with members of the target group is deemed essential to ensure the development of practical and targeted policies. Dealing with a sensitive and personal issue, on which energy poor tenants may not

[14] Co-creation can be described as the involvement of citizens in the initiation and/or the design of public services to develop beneficial outcomes. The co-creation process includes essential principles such as a systems perspective (assuming emergence, local adaptation, and nonlinearity), the framing of research as a creative enterprise with human experience at its core, and an emphasis on process (the framing of the policy/programme, the nature of relationships, and governance and facilitation arrangements, especially the style of leadership and how conflict is managed).

be willing to talk about in a high-level stakeholder setting, ENPOR thus offers an alternative tiered approach to organize the inclusion of target group perspectives and ideas. Instead of having energy poor tenants directly participate in the REACT group meetings, separate formats should be implemented in between REACT group meetings to inform the policy co-creation (Target group meetings) ensuring that the design of the policies will be fulfilled according to the needs of the group they represent. The process is visualised in Figure 3.

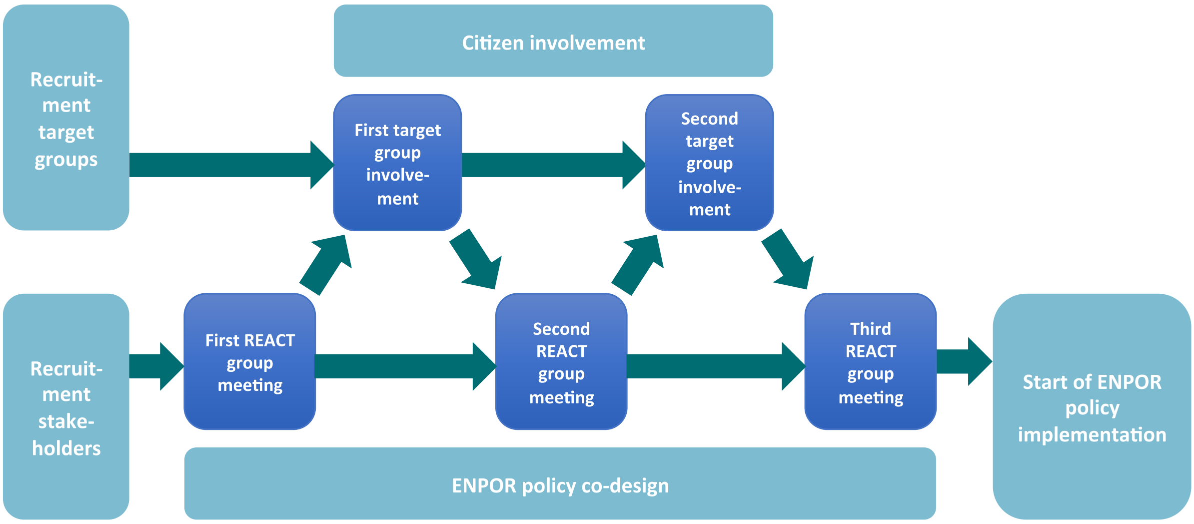

Figure 3: Visualisation of ENPOR policy co-design process

According to the proposed methodology, the first REACT group meeting can serve as a constituting session, in which the REACT group members should get to know each other and should be introduced to the project setup and objectives. Limited content should be provided by the facilitator on the national energy poverty framework and (where sensible) results from the analysis on energy poverty in the PRS conducted within ENPOR project. The facilitators should provide a brief analysis of the selected policies to be further developed, including their linkages to social and other relevant policy, and highlight the main challenges to be addressed by the co-creation. Moreover, the participants should be presented an initial mapping of the main elements, which according to the facilitator, must be adapted. Further meeting targets relate to the identification of different (and possibly conflicting) stakeholder interests, expectations and perspectives, and the definition of a joint vision of the co-creation target. The collection of stakeholder perspectives should both serve to update the stakeholder analysis guiding the communication strategy as well as inform the further policy improvement co-design process. At the end of the meeting, participants should have a clear understanding of the general objective, the process towards that objective and the expectations of the facilitator regarding their contributions (such as engagement of target groups, provision of monitoring data, dissemination of results etc.).

In a second step, the collection of energy poor tenants' perspectives should be implemented in the first Target group meeting to identify their needs and practical challenges vis-à-vis the policies to be further developed. Depending on the national context, the identified relevant sub-groups and pre-existing channels for outreach, the most suitable method/format for data collection may vary. Possible ways of capturing qualitative information are workshops, focus groups or bilateral interviews. Considering the ongoing pandemic situation, probably most of these activities might not be done in person but online or via telephone. Surveys are also an option (or an add-on) in case of direct or indirect access to contact information (such as addresses, email addresses). Within this step, facilitators should carefully evaluate sub-group specific needs and challenges, which may be multidimensional and thus require an equally multifaceted approach to address them. Accordingly, the analysis could well point to the need for going beyond improving the delivery of a particular benefit (such as behavioural advice) and to (additionally) reflect on ways to (better) integrate different services/benefits within a targeted policy package.

The second REACT group meeting should start off the actual co-design process. Within this meeting, stakeholders should be presented different content relevant to the co-creation such as European best practice regarding the delivery of the services/benefits in question, insights on structural factors impacting energy poverty in the PRS (see D2.1a and D2.3) and tenant/landlord perspectives collected in the previous step to be considered within the policy design. Following this, the initial policy proposal informed by these insights should be presented and discussed. To this end, the group should provide feedback and highlight potential flaws in the design and barriers for its implementation as well as possible solutions to overcome them. To structure this process, the facilitator should categorise the identified barriers with regard to their type (such as regulatory, economic, social, technical), possible solutions, and the actors to be involved to overcome them (insofar applicable). In case there are several solutions for a distinct issue, suitable tools (such as SWOT analyses, decision trees) should be employed to identify the best approach. Particular consideration should be given to gender-related differences with regard to the perception and/or utilisation of policy related benefits. An additional aspect to be discussed in the meeting is the monitoring framework, including minimum data requirements as well as the methods, timeline and responsibilities for their collection. Finally, the design components of the further developed policies should be agreed upon by all stakeholders and be ready for presentation to the target group for final feedback.

To ensure its practicality and utility to match the target group needs, the second Target group meeting should be organised in order to collect feedback from energy poor tenants (and landlords) on the further developed policy proposal. To this end, the proposal and its inherent steps of services/benefits delivery should be described to the target group(s) by the facilitator within a dedicated session (either within another workshop/focus group meeting or a second round of bilateral interviews). Subsequently, tenants and/or landlords should be asked to point out any remaining barriers for them to benefit from the proposed policy or perceived mismatch between the provided benefits and their needs. Based on this feedback, possible practical solutions to further improve the policy utility should be discussed and documented for the following REACT group meeting.

The third REACT group meeting should aim to finalise the policy design process based on the tenants' feedback and to prepare the policy implementation and its monitoring. In case there are several (mutually exclusive) adaptation options on the table, the group should decide which option provides the greatest benefit to a previously defined target group and/or is considered to maximise the overall policy impact. Furthermore, the mode and timeline for policy monitoring should be defined while including milestones, after which the accompanying policy delivery and impact evaluation should inform potential adjustments. If necessary, feasible adjustments should be discussed and decided at an early REACT group meeting in the second phase of co-creation to enable timely and effective delivery of benefits within the project duration.

The REACT group meetings in the second phase of the co-creation will largely serve three main purposes: monitoring of the policy implementation and possible design and delivery adjustments, (stakeholder specific) capacity building activities for its members and dissemination of project results. As pointed out, content of those meetings will differ to some extent depending on the issues arising with the respective policies. Moreover, also composition of REACT group participants may be varied depending on the respective meeting targets.

It should be noted that the proposed methodological approach can be modified taking into consideration the national characteristics and peculiarities of the examined countries ensuring in any case that the planned impacts of the facilitator in regards to the alleviation of energy poverty in PRS will be achieved.

Finally, all performed activities within the framework of the conducted REACT group and Target group meetings should be described analytically using the template, which is presented in the Annex 2: Minutes Meeting template. According to the developed template, specific information must be provided for each meeting separately about the organizational issues, the list of stakeholders (invited and participated), the agenda, the objectives, the main discussed issues for each objective, the main conclusions and the open issues and preliminary arrangements for the next meeting.

3.2 Co-creation methods and tools

While the overall target of the co-creation process to (further) develop the design of policies is clear, the following section provides some guidelines for its operational implementation. To this end, a range of possible methods and tools to structure the REACT group meetings and to achieve the desired outcomes are outlined. To facilitate the selection of the most suitable method for the facilitator's purpose, they are sorted according to their function (i.e., the target which their application can help to achieve). Furthermore, given the ongoing restrictions with regard to the implementation of physical meetings, a special focus is given to digital formats and tools. With regard to their application, facilitators need to consider restrictions of use by stakeholders with a low digital skillset and thus plan to provide technical support where needed. Most of the below methods are applicable both offline and online with some adaptation. In case of online conduction, there are certain guidelines for successful workshops. Online events should in general be shorter than their physical counterparts. Also, it is a good idea to include breaks more frequently, for e.g., every hour or at least once every 90 minutes. To facilitate a friendly climate especially to speakers, it has proven to switch on cameras in video-conferences, even during presentations.

Table 12 provides an overview of methods, tools, their fields of application and their suitability for the different stakeholder groups.

Table 11: Overview of methods, tools, fields of application and their suitability for the different stakeholder groups

Field of application	Method	Necessary tools for online adaptation	Preparation	Suitable for
Collect qualitative data	*Focus groups*: qualitative research method based on group discussions	Video-conferencing	In online settings, it is useful to limit the number of each group to 4-5 participants. The sessions last about 60-90 minutes instead of the more common 2 hours for in-person focus groups.	Target groups
Break the ice	*Everyone-Who:* warm-up game	Video-conferencing	All participants cover their webcam with a post-it. The moderator asks a question following the "everyone-who"-scheme, for example: "Everyone who slept well last night" or "everyone who lives in a big city". Participants to whom this applies remove the post-it and are allowed to ask the next question for all remaining participants in the game.	Target groups
	SpatialChat: Virtual conference room	SpatialChat	To set up a virtual conference room where participants can "walk around" and join different groups, the facilitator has to generate a link at SpatialChat. Participants can then join without prior registration. The room might be used to get to know each other before the actual meeting or as a space for further communication after the group meetings.	Target and REACT groups
Elaborate sensitive issues	*Open spaces:* work on one aspect of the topic	Video-conferencing (break-out function) and collaboration tools	The participants come together in subgroups. Only a rough topic is agreed upon, for which the attendees are to develop ideas and proposals for solutions. There is no timetable or even a fixed agenda. If a participant finds that he is better off in another group, he may change the group after a short break. It is important, however, that no results are lost in the process. Therefore, one person from the group must record the ideas. The results are to be presented later on in the plenum.	REACT groups
Include all perspectives	*Table sessions:* short speeches and discussion	Video-conferencing (break-out function)	The participants are divided into small groups. In each group, one of the participants gives a short impulse lasting a maximum of 15 minutes. This is followed by a joint discussion in the entire group. If necessary, the facilitator can plan the impulses with the stakeholders before the workshop.	REACT groups
	World-Café: successive rounds of short talks	Video-conferencing (break-out function) and collaboration tools	Subgroups of 3-4 people are formed. In successive rounds of talks lasting 15-20 minutes, questions or problems are discussed simultaneously in all subgroups. In each round, the participants use collaboration tools to articulate what's most important to them. After each round the participants mix again.	REACT groups

			There are moderators for each topic who welcome the newcomers, summarize what has been discussed so far and start the discourse again.	
Solve conflicts	*Six thinking heads:* elaborate different perspectives	Video-conferencing and collaboration tools	This method encourages a group to approach the issue at hand from a number of different perspectives. Each participant is assigned one of six "hats" that represent different ways of thinking: process, facts, feelings, creativity, benefits and cautions. The process works best with a time limit (5 minutes maximum) for each hat. This encourages the group to 'try on other hats' and helps people consider the idea from different perspectives.	REACT groups
Decide	*SWOT-Analysis:* evaluate and select design options	Video-conferencing and collaboration tools	In the context of policy co-design, SWOT analysis is suitable for a detailed discussion, evaluation and selection of different design options. For a given option, the 4 dimensions strengths, weaknesses, opportunities and threats / risks are brainstormed by all participants. The perspective on strengths and weaknesses is an internal view. Opportunities and risks arise from an external perspective. The time required for the brainstorming depends on the desired level of detail of the analysis.	REACT groups
	Surveying	Interactive presentation tools	Interactive presentation tools allow for an ad hoc survey among all participants, which can be useful both for online and offline workshops. Participants are provided a link for a survey and the results of their voting are instantly shown at the facilitators screen.	REACT groups

Video-conferencing tools should allow face to face interaction with the participants, video recording and streaming. Also, options to break out groups into subgroups or private spaces are needed for most workshop setups. They enable the facilitator of the video-conference to divide the participants into different subgroups and to reunite them again after a certain time. This option is available with applications such as Google Meet, Zoom, Jitsi or GoToWebinar. Classical video conferencing tools often have a static character due to their setup. There are alternative tools who facilitate a rather informal atmosphere. For example, SpatialChat provides a virtual conference room where participants can "walk around" and join different groups. Additional to video-conferencing, **further communication tools** might prove to be helpful in the co-creation process. Ad-hoc instant chats can be generated with Freenode. Ideas and other notes can be collaboratively written down in so-called Pads, for e.g., with Systemli.

Interactive presentation tools can provide the following functions: writing comments and questions and upvoting comments and questions from others, conducting surveys and graphic presentation of the results, interactive quizzes, and joint production of keyword clouds. Exemplary providers are Mentimeter and AhaSlides.

Software for digital collaboration replaces in a certain way the whiteboard or flipchart that is used in the sessions. Some example exercises are collective brainstorm activities in which the participants write down ideas on virtual post-it notes, plotting post-it notes in a matrix or map to prioritize items, or simply keeping track of inspiration and solutions that come up during the session in a visual way. Digital whiteboard providers are Whimsical and Miro as well as Jamboard by Google.

Digital work platforms, on which documents will be uploaded and shared for joint editing can facilitate the exchange of information and the collaborative work on REACT group outputs beyond the meetings. Within the ENPOR consortium, Microsoft Teams has been used as a common work platform and can also be used for REACT groups. However, in light of the complex two-stage registration process, facilitators likely need to assist REACT group members, particularly less experienced ICT users. Alternatively, Google also provides a comprehensive platform service for registered users, which can be used to share files and jointly work on documents. Table 12 provides an overview of the possible different tools, providers and their requirements (as of August 2022).

Table 12: Overview of different digital tools, providers and their requirements

Tool	Provider	Requirements	Link
Video-conferencing	Google Meet	Registration of facilitator	https://meet.google.com
	Zoom	Registration of facilitator	https://zoom.us
	SpatialChat	Registration of facilitator	https://spatial.chat
	Jitsi	No registration necessary	https://meet.jit.si/
	GoToWebinar	Registration of facilitator	https://www.gotomeeting.com/webinar
Communication tools	Freenode	No registration necessary	https://webchat.freenode.net
	Systemli	No registration necessary	https://pad.systemli.org
Interactive presentation tools	Mentimeter	Registration of facilitator	https://www.mentimeter.com
	AhaSlides	Registration of facilitator	https://ahaslides.com
Digital collaboration tools	Whimsical	Registration of all participants	https://whimsical.com
	Miro	Registration of all participants	https://miro.com
	Google Jamboard	Registration of all participants	https://jamboard.google.com
Digital work platforms	Microsoft Teams	Registration of all participants	https://www.microsoft.com/en/microsoft-teams/free

	Google Drive / Docs	Registration of facilitator	https://drive.google.com

4
CAPACITY BUILDING

Depending on the configuration of the REACT group and the co-creation target, capacity building for members may be a prerequisite for a successful policy co-design. The objectives of the awareness raising and training actions are strictly related to the role that is foreseen for stakeholders in the process (see Table 1), and the expected contribution they could provide. As the stakeholder groups are heterogeneous, their activities and contributions differ: some need to be trained in specific subjects and, at the same time, they are experts in other relevant topics. For this reason, the REACT groups could take advantage involving their members in the capacity building activities, not only as beneficiaries, but also as content providers.

Furthermore, a very important element is to address capacity building activities not only at the stakeholders' representatives directly involved in the REACT group meetings, but also at their networks, associations, and organisations of which they are members. This will allow for a refraction process and a real and effective change in the policies implementation at the national level.

4.1 Capacity building objectives

The first step when planning the capacity building activities is to identify the training needs of the different stakeholders. This is done using a matrix with stakeholders, topics on which the training should be provided, and single objectives per exchange. An example of such a matrix is provided in Table 13, which depicts the assumed capacity building needs of different stakeholder groups in Italy with regard to different energy related topics.

The matrix shows the type of potential beneficiary and the level of attainment that should be aimed for in each resource and in each topic category. For each intersection of a course and a type of participant, the level of understanding expected is identified as one of the following:

- **Awareness (AW):** familiarity with the terms, understanding of the financial and technical benefits and the relevance of the issue of energy poverty in the PRS.

- **Knowledge (KW):** AWARENESS plus familiarity with the identification of the measures, understanding of their scope and how to access/implement them.

- **Skill (SK):** AWARENESS and KNOWLEDGE plus the ability to use logical, intuitive and creative thinking as well as methods, materials, tools and instruments, in order to participate in the development of policies and implementation of measures.

The attainment of the Awareness level provides an introduction for everyone and can act as the appropriate level for managers and decision-makers. The attainment of the Knowledge level would be appropriate for architects and engineers, academics and students, consultants, and related partners. Skill is related to cognitive and practical knowledge. Therefore, it is a level for all those who need to put something into action and need related specific training; this is associated to the "Responsibility and autonomy" concepts meaning the responsibility ability of the learner to apply knowledge and skills autonomously.

Although these definitions refer to the ones of the European Qualifications Framework (EQF)[15], here they are not used to build a path for obtaining a qualification, but rather to take into consideration the learning outcomes associated to the material selected, to understand, in a comparable way, what can be useful, for whom and at which level.

Table 13: Example of Capacity Building Matrix (Italy used as reference)

	Municipality Policymakers	**Energy Agency / Energy consultants**	**Charitable and social work associations**	**Landlords Co-owners' associations**	**Citizens groups NGOs**	**Utilities**
Technical						
RES Installations	AW	SK	AW	AW	AW	-
Green roof and walls	AW	KW	KW	AW	AW	AW
Building automation	AW	KW	SK	AW	AW	-
Building envelope	AW	KW	KW	AW	AW	-
Indoor comfort and IAQ	AW	SK	AW	KW	AW	AW
Energy Audit	KW	SK	AW	AW	AW	-
Financial						
National energy efficiency financial measures and fiscal incentives	KW	SK	KW	KW	AW	-
Thermal account	**KW**	**SK**	**AW**	**AW**	**AW**	**-**
EE National Fund	AW	KW	SK	SK	SK	-
Environmental						
SECAP	SK	KW	-	-	AW	-
Behavioural / social						
Energy saving tips	-	-	SK	SK	SK	-

15 https://europa.eu/europass/en/european-qualifications-framework-eqf

Energy label	AW	-	AW	AW	SK	-
Legal / regulatory						
…….						

4.2 Capacity building priorities

Based on ENPOR's reports "Analysis of Private Rented Sector Policies and Measures", "Report on Energy Poverty in the Private Rented Sector in Europe", "Structural factors impacting energy policies in the European Private Rented Sector" and an ad hoc questionnaire submitted to the REACT group leaders, the following priorities for capacity building activities within ENPOR have been identified, which can inform facilitators' activities in this regard:

1. To provide tenants independent advice on energy efficiency at home using their appliances and at how to read electricity bills, boost sustainable behaviour in energy use and energy saving.

- ✓ Tips and advice on how consumption can be reduced sustainably through simple measures and changes in behaviour.
- ✓ Understanding energy bills, finding appropriate tariffs and services.
- ✓ Visual aids are extremely useful in conveying the information in a clear, simple and effective way.

2. Training staff members of health and social services that have direct access to energy poor households.

This target group has already established a trusted relationship with energy poor households and hence it will be much easier for them to be listened to when proposing solutions and to understand which ones are those appropriate for their client's needs and financial capacity.

3. To train energy advisors on social aspects related to energy poverty to build their confidence when dealing with vulnerable households.

They could also carry out a free domestic energy audit (during a visit at home) to identify where vulnerable households can use energy more efficiently, provide advice on affordability and incentivise the implementation of efficiency measures. Energy advisors should also be trained on an ongoing basis in order to stay up to date on the technological solutions for energy efficiency available in the market so that they are able to suggest the most convenient and appropriate ones.

4. Training on how to access financing, how to process subsidy applications, social vouchers for energy support, about measures that provide financial help to pay electricity bills or to buy more energy efficient appliances (if available nationally).

Measures that target vulnerable groups should also take into consideration how these groups might perceive the procedures and conditions involved in applying for support. If the process is perceived as time consuming, complex and/or difficult, vulnerable groups, or rather all groups, can be more reluctant to apply. Hence, it would be very useful to train professional that have both the knowledge on these procedures and that are capable of communicating effectively and support energy poor households.

5. Training for landlords aimed at giving them the necessary knowledge on possible technical solutions or costs of energy efficiency interventions.

A lack of technical knowledge is a barrier that prevents the implementation of energy efficiency measures, whereby tenants and landlords are not fully aware of the benefits that the renovation could bring or are mistrustful of certain solutions. Mistrust in new technologies is often connected to lack of technological knowledge. Moreover, most energy users think in a traditional way, and thus focus more on initial investment costs rather than operating costs and money saved over time.

A more active role of landlords should be stimulated by providing them information and support to better understand the advantages energy efficiency retrofit could bring to themselves and to their tenants.

6. To inform tenants about the benefits of energy efficient buildings, including those related to health.

✓ To highlight the health component as a key benefit. Awareness raising for vulnerable groups about the healthy impact of indoor comfort with the help of health care workers.

✓ Renters have generally poor maintenance standards; awareness on this topic should be stimulated.

✓ People tend to focus on price and costs rather than returns and ignore small energy saving opportunities.

7. Training for policy makers on the energy poverty issue and best practices for the rented sectors tenants, creating the conditions for implementing new policies.

Factors to take into account when thinking of the capacity building activities to propose

➔ An important factor is to ensure that the advice given to the intended beneficiaries is credible, unbiased and not exaggerated. Eligible beneficiaries, especially more vulnerable ones, need trustworthy advisers who are not trying to “sell” them goods and services.

➔ A mediation figure between landlords and tenants could help to remove frictions and facilitate renovation interventions and energy efficiency upgrading in homes to achieve the minimum standard required for existing buildings in each country.

➔ Independent and trusted guidance should be provided by local authorities and national property owners’ associations. They should be directly involved in providing a comprehensive service package with information on the most efficient technologies, available funding instruments, fiscal measures, lists of certified building professionals, etc. to property owners at the local level.

➔ Insecurity is a core component in tenants’ attitude; empowering their skills means unleashing their potential in playing a key role as consumers in changing landlord’s behaviours by demonstrating growing expectations about indoor comfort.

A possible solution to provide information and training is represented by the one-stop- shop, where it’s possible to find: expertise and bespoke services, tips and advices on how consumption can be reduced sustainably through simple measures and changes in behaviour, explanation on energy bills, support to find appropriate tariffs and services, how to come across technological solutions for energy efficiency available in the market, consult EPC to estimate heating costs. However, currently one-stop-shops are not yet designed in an appropriate way to reach low-income households who require specific outreach and engagement. To do this their service should be coordinated with existing social service networks and run by trusted local actors.

Minimum Data Set of learning resources

ENPOR has developed an inventory of the most useful related resources and best practices, which are assessed and organised in a series of “Minimum Data Set (MDS)”. The MDS aims at providing an easy way to identify the most useful available learning resources based on the specific needs of each partner. The catalogue is included in D4.8 “Capacity building material final version” and can be improved and updated.

4.3 Organisational aspects

Capacity building activities should be carefully planned, managed, monitored, and promoted in order to reach the right beneficiaries in a successful way. Although each facilitator will have to decide which is the most suitable way to provide training for the chosen target, below some general suggestions are provided.

Checklist for training actions and awareness raising activities

✓ Design the interventions by making clear scope/objectives for specified targets
✓ Promote the initiatives internally through your organization’s networks
✓ Involve the communication and dissemination working group
✓ Collect data of participants for building a database of interested people
✓ Insert GPD in the registration format
✓ Evaluate and monitor each initiative

After each training and informative session, an evaluation questionnaire should be distributed to participants to gather their feedback and level of appreciation to adjust the approach accordingly.

5 MONITORING

Following the policy co-design including possible capacity building activities, in the third phase, REACT groups will be tasked to reflect on the performance of the redesigned policies based on information collected for monitoring purposes. To this end, a monitoring framework has been developed that aims to identify potential problems and ineffective design elements in the policies, ensuring early course correction and improvement. The monitoring process will also identify early successes and bottlenecks and communicate them to the policy co-design process to facilitate improvements as needed. The framework includes key performance indicators and simplified monitoring sheets to track the effectiveness of the policies and considers the EU Governance Regulation[16], which foresees the monitoring of the energy poverty levels including the number of the energy poor households and the reporting of the implemented policies for the alleviation of energy poverty.

5.1 Monitoring framework

Monitoring and evaluation are a constant and important activity. Proper monitoring ensures that potential issues are captured in advance so that there is enough time to correct actions to enable the set impacts to be achieved. As such, the monitoring framework provides the means for determining if the policy developments in a country are on course to achieve the envisaged impacts.

There are two sets of monitoring activities in ENPOR, which are presented in Table 14.

Table 14: ENPOR Monitoring sets

Monitoring set	Description
Short-term impacts	Monitoring the co-creation impacts in terms of effectiveness of policies as well as number of policymakers and stakeholders influenced. It also includes monitoring of the capacity building activities implemented within the REACT groups.
Policies (long-term) impacts	Monitoring of energy savings, CO_2 reduction, investments triggered, energy poverty alleviation, and other factors related to the implementation of the policy. It will include key performance indicators and simplified monitoring sheets. Many of the same KPIs can be applied to the monitoring of different policies; however, key metrics and parameters might have to be adjusted according to the police type and country context.

Aside from the monitoring sets, the monitoring framework also covers the process of development and implementation of the monitoring activities, which follows the three phases below:

[16] Available at: https://eur-lex.europa.eu/legalcontent/EN/TXT/?toc=OJ:L:2018:328:TOC&uri=uriserv:OJ.L_.2018.328.01.0001.01.ENG

Phase 1 – Definition of monitoring framework:

- Definition of KPIs
- Determination of the monitoring concepts (e.g., energy poverty, wellbeing, etc.)
- Establishment of key metrics and parameters of each KPI
- Definition of the baseline data for the purpose of monitoring the policies' performance
- Preparation of the monitoring framework

Phase 2 – Monitoring:

- Consistent monitoring and collection of data
- Monitoring policies' implementation

Phase 3 – Evaluation and continuous monitoring:

- Evaluation of the monitoring outcomes for adjustments of the activities
- Continuous monitoring of the activities after adjustments, ensuring feedback loops with the design of the policies, their implementation, capacity building activities and the overall project management.
- Continuous monitoring of policies' implementation

The following sections further describe the monitoring methods and indicators for each of the two monitoring sets. In addition, as part of the monitoring framework the necessary tools (e.g., survey links, excel sheets) for the data collection and monitoring activities to evaluate the monitoring outcomes and to inform the facilitators are provided. The facilitators responsible for the policies and/or implementing the capacity building and other activities will also be responsible for collecting the necessary data and providing technical support for the effective monitoring and quantification of the impacts from the implementation of the policies.

5.2 Monitoring of short-term impacts

The monitoring methodology to assess the short-term impacts includes the collection, documentation, and analysis of data for monitoring purposes. Data collection should be realised by the facilitator, through varied methods, and saved in files dedicated to monitoring purposes.

To ensure a clear and easy monitoring process, the following monitoring files were created in ENPOR to save the collected data:

1. "Stakeholder Engagement Monitoring" file: An excel file in which quantitative information related to the meetings and other stakeholder engagements is gathered, from REACT Groups workshops to bilateral calls. It is mainly used to assess the number of meetings and participants, types of stakeholders involved and gender aspects, amongst other.

2. "Meeting minutes template" word file: A meeting minute template to be used by facilitators for documenting relevant qualitative and quantitative information about the meetings with stakeholders from the REACT Groups.

The files support the documentation of relevant data for monitoring purposes and templates are provided for use by facilitators in Table 15 and Annex 2: Minutes Meeting template.

Table 15: Stakeholder engagement monitoring table

			Stakeholders (number)				Gender		
Meeting type (co-creation workshop, interview, capacity building…)	**Date**	**Short description / goal**	**Landlords**	**Tenants**	**Policy makers**	**…..**	**Male**	**Female**	**Notes**
Workshop 1									
Workshop 2									
….									

A set of the performance indicators and source of data is shown in the table below.

Table 16: Short-term impacts indicators and data source

INDICATORS	TARGET	MONITORING METHOD OR DATA SOURCE
Number of policy makers in REACT Groups	X	REACT Groups - Stakeholder Engagement Monitoring file
Number of stakeholder groups in REACT Groups	X	REACT Groups - Stakeholder Engagement Monitoring file
Number of implemented capacity building activities	X	REACT Groups
Quality of implemented capacity building activities	Share of participants giving an event a good rating on a scale from 1- poor to 5 - excellent	Satisfaction survey
REACT group workshops contribute to policymaker's work with combating energy poverty	Respective statements by involved policymakers	Satisfaction survey, Bilateral exchange with stakeholders

The monitoring files with information about the REACT Groups are considered as data sources for monitoring activities. However, data can also be collected through monitoring methods such as:

- **Bilateral interviews with REACT group members** to report country context and policy changes: During the policy co-creation phase, the facilitators should routinely contact the REACT Group stakeholders to ensure that the workshops contribute to their work with combating energy poverty.

- **Satisfaction survey with REACT Groups:** An evaluation form was developed and translated to all ENPOR country languages and developed to assess if the REACT Groups participants consider the planned policies to be realistic and achievable, as well as their satisfaction with the entire co-creation process.

- **Literature review and observation:** For collecting statements from policy makers or national policy legislative documents.

- **Regular (e.g., monthly) meetings:** in which the facilitators reflect on the status of the policy co-creation process, potential challenges and solutions to overcome such challenges.

5.3 Monitoring of (long-term) policy impacts

In terms of long-term policy impacts, facilitators are tasked with the monitoring of energy savings, CO_2 reduction, investments triggered, energy poverty alleviation, and other factors related to the implementation of the policy. To this end, both suitable KPIs (cf. Table 17) as well as methodologies to capture them need to be defined.

Given that facilitated policies may refer to financial, information and market-based ones, bottom-up methodologies are recommended to calculate total energy savings. To this direction, within ENPOR the methodological framework of the multEE project[17] was utilised. There is a risk that the monitoring of energy savings by way of theoretical savings in kWh does not adequately reflect the effectiveness of the interventions as an intrinsic risk of all schemes that promote energy efficiency and calculate energy savings on theoretical values. Actual measurement of savings through monitoring energy consumption would of course increase the reliability of the assumptions made. Yet, their implementation cannot be guaranteed (due to cost, unwillingness to install monitoring system, etc.). If possible, facilitators should gather information based on energy bill pre and post renovation (in a representative sample). In the cases where energy providers are responsible for the action (e.g., under EEOs) they will provide their own data from their customers.

Table 17: List of possible KPIs for long-term policy impact monitoring purposes

Key performance indicators	Source
Primary energy savings triggered by the project	Bottom-up calculations, household energy consumption data

[17] https://multee.eu/

Investments in energy retrofit triggered by the project	Administrative data on policy outputs from implementing entity
Reduction of greenhouse gases emissions (in tCO2- eq/year)	Bottom-up calculations
Number of influenced documents - Statements from policy makers or national policy legislative documents	Literature review, REACT Groups
Number of (energy poor) households impacted by the policy	Administrative data on policy outputs from implementing entity
Changes in energy poverty levels using different indicators	Own surveys, EPAH indicator dashboard
Reported welfare improvements by impacted households (e.g., in terms of wellbeing/health, indoor comfort levels, energy cost savings, etc.)	Surveys among beneficiaries/energy poor tenants

In order to keep track of the achievement of energy savings and the other impacts, the implementation of the policies must be closely monitored. Therefore, the monitoring of the policies' impacts has three main objectives:

1. To monitor the long-term impacts explained before;
2. To monitor the energy poverty alleviation impact;
3. To monitor the policy implementation for the identification of potential problems, ineffective design elements and for early course correction. The monitoring process also identifies early successes and bottlenecks and communicates them to the policies design to facilitate improvements.

In this process, the facilitator responsible for policies will also be responsible for:

- Providing technical support for the effective monitoring and quantification of the triggered impacts from the implementation of the policies.
- Collecting the required data for monitoring and identifying areas for improvement.
- Quantifying additional impacts (e.g., comfort level increase) based on questionnaire surveys with the involved energy poor households.
- Suggesting proposals for the potential readjustment of the policies according to the established targets and requirements.
- Proposing additional and more effective data collection procedures.

The monitoring methodology includes key performance indicators and simplified monitoring sheets. Overall, the implementation of the policies can be monitored as follows:

- **Monthly meetings:** facilitators should regularly review the status of implementation of the policies, potential challenges (e.g., related to collecting data and information), and discuss solutions and ideas to overcome challenges and/or improve the implementation of the policies.

- **Questionnaires and/or interviews:** conducted by the facilitator with the implementing bodies, to collect relevant information and data.

- **Questionnaire surveys:** For energy poor households and property owners, a baseline setting and an outcome evaluation (before-after-comparison) should be implemented based on questionnaire surveys (half yearly), which are an integral part of on-site activities such as energy consulting, funding applications or technical installations.

- **Monitoring sheet:** Excel file to gather relevant information from the policies implementation collected by the facilitator for continuous assessment and feedback loops with the policy design.

6 IMPLEMENTATION RESULTS

Within ENPOR, the consortium partners responsible for the implementation of REACT groups have successfully applied the described approach in varying forms to account for the differing requirements resulting from the respective policy cases. All of the targeted countries implemented the proposed co-design process according to the developed methodological approach combining both REACT group and Target group meetings. Nevertheless, alternative formats were selected in few countries arranging lower number of meetings or applying a different sequence of the meetings according to the needs of the public authorities, which were responsible for the administration of the pilot policies. The following sections provide an overview of ENPOR partners' results when implementing the approach, focusing on selected qualitative and quantitative success indicators regarding the engagement of stakeholders in the co-design process. Furthermore, a summary of the commonly encountered challenges throughout the three phases of REACT group implementation as well as applied strategies and enabling factors is provided.

6.1 Overview of ENPOR partner activities

This section provides an overview of the activities performed by the national partners implementing the ENPOR approach in quantitative and qualitative terms. Table 18 presents indicators of success regarding the engagement of stakeholders throughout the co-design process in the different countries. In the case of the Austrian policy, an adapted approach for co-design was implemented starting with a classic workshop and then continuing with smaller meetings on an ongoing basis, which taking place monthly with policy makers at the ministry level to discuss energy poverty and the current situation on the energy markets. Otherwise, the figures in many cases show a declining number of participants, stakeholder groups represented and overall participation rate over time reflecting the challenge of competing with other obligations of stakeholders and upholding interest in the matter by all groups involved. A more detailed description of the encountered challenges and applied strategies to overcome them is provided in the following chapter.

Table 18: Overview of quantitative success indicators

ENPOR partner	Policy	Number of stakeholders invited	1st REACT Group meeting	2nd REACT Group meeting	3rd REACT Group meeting	4th REACT Group meeting	Number of energy poor tenants or representatives involved
		(1st / 2nd / 3rd REACT group meeting)	(# participants / # stakeholder groups represented / participation rate)				
AEA	Energy advice & policy coordination for energy poverty alleviation	24	18 / 8 / 75%	N/A	N/A	N/A	4*

CRES	**EEO Scheme and Energy Upgrade of Buildings**	33 / 33 / 6	20 / 13 / 61%	18 / 13 / 55%	6 / 2 / 100%	N/A	4*
DOOR	**National programme for renovation of buildings**	6 / 6 / 18	6 / 5 /100%	6 / 4 / 100%	18 / 14 / 100%	N/A	12*
ENEA	**Training and information campaign**	21 / 21 / 21	24 / 19 / 90%	20 / 16 / 76%	19 / 12 / 57%	N/A	2*
HU	**Energy Box**	6 / 22 / 12 / 21	6 / 1 / 100%	12 / 4 / 55%	8 / 4 / 67%	5 / 3 / 25%	425
TREA	**National retrofitting fund**	54 / 54 / 54	29 / 16 / 40%	16 / 8 / 20%	14 / 6 / 13%	N/A	2*
WI	**Heating related energy advice**	20 / 20 / 20	20 / 13 / 100%	12 / 9 / 60%	12 / 9 / 60%	N/A	10*
	Pre-paid app	11 / 11	11 / 8 / 100%	7 / 5 / 64%	pending	N/A	118

* Involvement of energy poor tenant's perspective via intermediary organisations (e.g., charitable or social work associations) or energy advisors working with energy poor tenants

In terms of the co-design implementation, ENPOR partners applied different methods and tools to enable the co-creative development of novel ideas to improve the respective pilot policies. These comprised focus groups, small-group work/world café and/or plenary discussions in some instances supported by visual aids and white boards to stimulate and collect ideas. While the majority of meetings were held online due to the pandemic, easing of the restrictions in summer time enabled in person meetings. Not the least due to the pandemic, direct involvement of energy poor tenants in the co-design has proved challenging in many cases. As a consequence, these ENPOR partners have resorted to a) engage with representatives of advocacy groups, b) employ intermediaries to collect information on household needs and feedback on the planned improvements or c) administer surveys among the target group. In addition, information gathered within the monitoring phase will be used to inform possible adjustments in the policy design.

Table 19: Overview of applied approaches

ENPOR partner	Policy	Applied co-design methods / tools	Approach for target group involvement

AEA	Energy advice & policy coordination for energy poverty alleviation	Ongoing exchange via online and offline meetings, possibility to provide feedback on developed drafts directly	Direct questioning via intermediary, collection of feedback during monitoring phase
CRES	EEO Scheme and Energy Upgrade of Buildings	Digital work platforms / (Zoom workshops) Focus group	Videoconference with representatives of citizen organisations Physical meeting with the authorities, which are responsible officially for the coordination of the two pilot policies
DOOR	National programme for renovation of buildings	Ongoing exchange via online and offline meetings Consultations on the creation of new programmes on e-citizen platform	Meeting with the authorities, which are responsible officially for the coordination of programme. Participation in the public discussion during the creation of a new program for the renovation of multi-apartment buildings 2021-2030. Surveys that collect relevant data on energy-poor households where extended families or renters live.
ENEA	Training and information campaign	Exchange through online meetings, physical meeting foreseen to get direct feedbacks. Online exchange of feedbacks on the material drafted during and after the meetings.	Indirectly via representative association / building managers, household questionnaires during monitoring phase
HU	Energy Box	Sensitizer, white board (virtual: Mural and Miro) applied in online and offline meetings, breakout groups, timeline with initiative cards and visualisation of Energybox approach.	Online surveys, observations of energy coaching, interviews with tenants, direct mailing (by mail, post and door-to door visits)
TREA	National retrofitting fund	Digital work platforms / (Teams workshops) SharePoint for working document of policy changes	Energy poor tenants' involvement is planned with a survey (online and paper). In person seminar after survey to introduce the results and public discussion how to change national retrofitting grant so it would help people in energy poverty
WI	Heating related energy advice	Virtual world café / breakout groups, virtual white board (Mural)	Video group interviews with representatives of energy poor tenants, household questionnaires during monitoring phase
	Pre-paid app	Virtual white board (Mural)	Online survey with pre-paid users (pre and post rollout), rapid prototyping with pre-paid users

6.2 Challenges and strategies

Regarding encountered challenges, the pandemic situation was considered as a major obstacle for both the engagement of stakeholders in general and the energy poor tenants in particular in the co-design process. While the fallback solution of online formats lowered barriers for participation, it also impeded networking among participants and face-to-face interactions to build a trusting environment. Another -anticipated- issue that was experienced by multiple partners was a lack of interest on the part of different stakeholders to participate in the process and/or to keep them interested over the duration of the project. This was the case in several pilots with tenants and/or landlords (or their associations) but also other stakeholder groups. Applied strategies were to broaden the scope of topics discussed in the REACT group meetings to match their interests while at the same time pursuing the actual co-design target. A landscape factor promoting interest in the subject of energy poverty in general and correspondingly in ENPOR activities were the steeply rising energy prices. While the latter development can of course not be planned, the experienced issues with the engagement highlight the need of clearly defined roles and benefits for achieving and maintaining stakeholder participation. The following Table 20 presents the challenges encountered by the ENPOR partners within each phase of the REACT group implementation in more detail and highlights the strategies applied to overcome them.

Table 20: Challenges encountered and applied strategies to overcome them by ENPOR pilot policy

ENPOR partner	Policy	Co-design	Capacity building	Monitoring
AEA	Energy advice & policy coordination for energy poverty alleviation	Ensuring that new advisory materials are developed in a way that is appropriate for the target group required many feedback loops in the development, especially for the involvement of the counsellors as a bridge to the energy-poor households There was interest in the materials from many stakeholders, but comprehensive provision through the project itself (printing and translation into several languages) is not possible and therefore a solution had to be found for this through partnership with already existing programmes. The elaboration of new long-term measures to support energy poor households is complex, as the competences on relevant agendas in this context (energy and social affairs) are divided between the federal government and the federal provinces and require a longer lead time if new structures are to be established in the process. Also, due to the current framework conditions, the focus of policy makers is on measures that can be implemented quickly, but which usually do not lead to any long-term relief.	There are no real challenges here. Interest in the material for use and extension of capacities is present from various sides.	The application of the materials in consultations itself can be directly quantified, but the resulting savings cannot be measured. Assumptions will therefore need to be made about what savings the materials have resulted in for the households reached through use on different channels and stakeholders, with channel-specific assumptions for each. Direct feedback from the households used to evaluate the materials will provide the basis for this.
CRES	EEO Scheme and Energy Upgrade of Buildings	I. Technical challenges in regards the utilization of the platform for the virtual co-design with the implementing partners from different organisations → Use highly compatible and user-friendly tools → Provide clear instructions for connection → Allow sufficient time for connection → Foresee the potential provision of technical support II. Limited capacity, time and interest of the implementing partners → Involve an experienced facilitator to ensure the active and equal participation and the formulation of interesting questions	I. Reduced interest of the implementing partners → Send the minutes and presentations for sharing the required information and obtaining approval → Distribute on a regular basis useful dissemination material of the project providing valuable insights for energy poverty issues → Integrate also additional energy poverty issues at national, regional and local level for further discussion and analysis	I. Challenges for collecting the required data by the responsible authorities for the coordination of the two pilot policies in regards the number of the participated energy poor households and the delivered energy savings. → Organize dedicated meetings to ensure the unhindered collection of the available data → Focus on additional data, such as the implementation cost, the experienced

		→ Present valuable insights and results of the project → Allow the presentation of results from other projects and initiatives III. Achieving an acceptable consensus among the implementing partners → Involve an experienced facilitator to resolve potential disputes → Encourage the thorough discussion of all potential aspects pinpointing the different advantages and disadvantages → Ensure the conduction of adequate rounds to discuss and common level of understanding → Establish a commonly agreed procedure for reaching a consensus among the implementing partners		improvements of comfort or wellbeing and the knowledge transfer → Share potential results to validate the obtained conclusions
DOOR	National programme for renovation of buildings	Although it was emphasized by the participants that it is important to have it, it is still not implemented: The implementation of financing measures within Energy renovation programme for multi-apartment buildings for supporting both landlords and tenants The integration of specific measures and criteria will be considered as option to alleviate energy poverty in the PRS There is interest in the Programme and Public calls, but most citizens are concerned about too complicated administrative paperwork and application. After the analysis of the survey, the obtained data can be used for further action on the alleviation of energy poverty in the area of Buševec, Zadar County and Križevci.	Capacity building activities are always interesting for all stakeholders. The conclusion of all stakeholders is that events where they will learn more about energy poverty about programme itself, exchanging data and help in preparation of documentation for application on public call are needed. More systematic education about energy poverty and alleviating energy poverty in PRS for citizens should be conducted.	During the ENPOR project we will keep track of: • Dynamics of publishing public calls • Type of program (Programme of energy renovation of family houses or Programme of energy renovation of multi-apartment buildings) • Type of calls (public calls for all households or public calls for energy-poor households (with emphasis on particularly vulnerable groups as tenants in the PRS or for so-called free – based tenancy, which always includes two separate families/households in the same dwelling and extended families living in a joint household) • Funds allocated for the call • Number of households with signed contracts under the call • Primary energy savings (GWh/year) • Reduction of greenhouse gases emissions (in tCO2-eq/year)
ENEA	Training and information campaign	Ensuring that the communication material developed was appropriate for the target group, meaning it provides useful information, in a language that can be easily understood and then applied, required several rounds of feedbacks.	There were not specific issues in this regard. Capacity building activities are always interesting for the stakeholders. In general, also here there	Energy savings are complex to be measured after a training and information action. Hence, assumptions about what savings the communication

		There was an interest for the material itself but since it was not a priority for the stakeholders involved their participation in the drafting had to be constantly stimulated. In general stakeholders were more attracted by specific technical / policy issues that could have a direct impact on their sphere of interest. While their behaviour concerning the communication activities was more passive even if during the discussion these activities were considered very useful and important.	was a clear interest for capacity building on technical topics.	materials have triggered for the households reached through use on different channels and stakeholders will have to be made. It has been noted that concerning energy poor households we believe that would be more important to quantify indoor comfort levels more than just savings.
HU	Energy Box	In the beginning of the project, it was difficult to engage people in the topic of energy poverty, due to the rising of energy prices this changed. A challenge in co-design was online meetings. Participation of tenants in the process was limited. Contact with the private sector is limited to the larger investors with a better energy efficient housing portfolio. Smaller property owners with a smaller and less energy efficient portfolio are difficult to engage. There was no existing network of institutional investors and landlord on regional level. There is limited time, budget and interest to change the Energybox approach. Adaptation takes time and it requires a change in mindset by all stakeholders.	I. In the beginning of the project, it was difficult to engage people in the topic of energy poverty. → due to the rising of energy prices this changed. A lot of events are organized, but the events become competitive. II. Some of the stakeholders have difficulty or are less willing to participate in virtual meetings. → It proved easier to reach the target group with physical (face-2-face) meetings than online.	Monitoring data were limited to self-reporting of implemented energy saving (measures). Due to privacy legislation, there is no access to energy consumption data. The real behaviour of people can differ from the shared behaviour. Objective data about energy poverty was difficult to obtain because of the sensitive character of this type of information. More time is necessary to monitor the long-term effects of the Energybox.
TREA	National retrofitting fund	The main challenge within the co-design process were online meetings. Luckily people adapted quickly and everybody could work together. But still we think that someone who was not with so loud voice didn't have opportunity to say nothing. Although we tried to give word to everybody. Also, it was hard to maintain the same audience than in the first meeting. Meeting by meeting there were less participants.	With every meeting the number of participants decreased. So not all involved stakeholders had the opportunity to discuss with us. But all invited stakeholders got meeting minutes and presentations so if they were interested, they had the opportunity to get all the information. Also, we asked written feedback to policy changes from stakeholders and this opportunity was available for everyone.	REACT group work impact is monitored by data collected on national level yearly from the national grant holder concerning the number of households influenced by the renovation programme. The energy efficiency and greenhouse gas emission indicators will be developed using the data from the grant holder and analysed by the experts of TREA.

WI	Heating related energy advice	I. Technical challenges regarding platform used for virtual co-design with stakeholders from different organisations → apportion sufficient time for tech-support → use highly compatible tools II. Limited capacities of implementing partner → increased engagement of facilitator	N/A	I. Data for impact monitoring purposes is only partly collected due to a mix of limited time, attention or awareness → emphasize relevance within trainings of energy advisors II. Limited availability of heating bills for estimating energy (cost) savings → focus on experienced improvements of comfort or wellbeing and knowledge transfer
	Pre-paid app	I. Budgetary constraints / Shifting budgetary priorities by implementing partner → adapt co-design target accordingly, modular design of options for stepwise further development	N/A	I. Developed options for re-design are rather passive, might by methodologically difficult to estimate impact → focus on qualitative data for impact assessment

6.3 Enabling factors

Besides the described challenges, ENPOR partners also identified a range of enabling factors that facilitated the REACT Group implementation. While some of them are related to macro level developments such as an overall increasing political saliency of the issue in light of exploding energy prices others referred to the value of pre-existing connections with relevant stakeholders (and their networks), the pull-effect of having government officials in the REACT groups and the reduction of transaction costs for participation due to the implementation of online meetings. A more detailed description of enabling factors by country and implementation phase is provided in Table 21.

Table 21: Enabling factors for the implementation of the ENPOR approach by country and phase

ENPOR partner	Policy	Stakeholder engagement	Co-design	Capacity building
AEA	Energy advice & policy coordination for energy poverty alleviation	The gap in target group-oriented advisory and information material was also recognised as such by various stakeholders. As we are addressing this gap with our project, there has been interest from various parties. Working with an already established facilitator who works a lot with energy poor households and has contact with various relevant parties related to	The cooperation with energy advisors for energy poor households, which was planned from the beginning, ensured a targeted development of the new materials and at the same time their suitability for the target group, as they were able to contribute their experiences and the views of affected households. They also test the materials directly in the counselling sessions and thus provide	By cooperating with existing programmes in Austria, such as klimaaktiv, it was possible to ensure that the new materials will also be presented and used in the training of new energy advisors in the future. This will enable long-term and broad use. This also enabled the translation into several minority languages and the printing of extensive editions, which will make the new consultation

		the topic was very helpful in reaching key stakeholders. Especially to reach those who can use the materials themselves to build their capacity.	the project with direct feedback from affected households. Involvement and contact with relevant experts from the ministry have led to the establishment of ongoing contact on this topic, which has intensified again due to the energy crisis. This has enabled us to provide expert input on energy poverty at the political level and to participate in the development of new measures.	materials available to as many stakeholders as possible.
CRES	EEO Scheme and Energy Upgrade of Buildings	Contact the implementing partners to explore their willingness and availability to participate Invite the responsible authority for energy poverty issues to demonstrate the importance of the project Clarify the targets and the expectations of the project Maximize the interest of the implementing partners allowing win-win opportunities for exchanging information and productive cooperation Create trust among the participants	Apply structured procedures for the design and implementation of the meetings Clarify the targets and the expectations of the foreseen initiative Foster the active engagement by participants Involve a dexterous moderator Ensure the well-balanced composition of REACT group bringing together diverse perspectives in a productive manner Utilize efficient and user-friendly tools for digital collaboration Allow the conduction of sufficient rounds of discussions in order to achieve in consensus Distribute timely the minutes of the meetings including also supplementary information material	Update continuously the implementing partners with of the recent developments of the project using multiple and diverse means of communication Distribute valuable, attractive and readable dissemination and communication material Maximize synergies and enable cooperation with other relevant initiatives and projects
DOOR	National programme for renovation of buildings	Stakeholder to the REACT group were invited by method used in D4.1 for Croatia: Landlords / Co-owners' association, ns, Charitable and social work associations, Energy Agency / Energy consultants, Policymakers / Public institutions, Citizens groups / NGOs and utilities.	The different stakeholders participating in all ENPOR events helped to better understand the implementation of the program for the period 2014-2020 and for a better design of the program for the period 2021-2030.	REACT group and TARGET group will be organized through various forms of events such as meetings, info days, workshops, round tables and so on. By involving all stakeholders, we hope that the period of implementation of the Program 2021-2023 will be more successful than the period of the Program

		Most important groups for policy change were represented in all meeting except from utilities.		2014-2020 in the number and dynamics of opening public calls, in number of type of program, in number of type of Calls, amount of funds, number of households covered by the Call, primary energy savings (GWh/year) and reduction of greenhouse gases emissions (in tCO2-eq/year)
ENEA	Training and information campaign	Fiscal incentives during the project timeframe have been a "hot" topic in Italy. The idea to discuss how to communicate the advantages of these incentive to poor households and what they needed in terms of information kept the interest of the participants.	The different stakeholders participating to the process were really helpful to better tailor communication needs of the energy poor households and possible barriers.	- Capacity building activities benefitted from the high experience of ENEA in this area that reassured the one attending of the quality of the material presented. - The material developed for the project besides being spread through the stakeholders participating, will be further spread thanks to the training and communication campaign organised by ENEA. - Online meeting are easier to attend because of less travel time.
HU	Energy Box	- During the project the interest in the topic of energy prices grew due to the rising of energy prices. Especially at municipality level. - The available RREW subsidy scheme for municipalities to finance Energybox programmes. - We were able to make use of our stakeholders' networks. - Growing focus of municipalities to bring together the policy fields of poverty and energy.	- The willingness of our partners to send out surveys to the target group and to share data. - The availability of virtual collaboration tools.	- During the project the interest in the topic of energy prices grew due to the rising of energy prices. - Cooperation with other projects. - Online meeting are easier to attend because of less travel time.
TREA	National retrofitting fund	Stakeholder to the REACT group were invited by method that there is someone from every group: landlords, charitable and social work associations, energy agency, municipality,	Estonia is a small country so most people who participated were acquaintances before. So, they were not afraid to talk with each other and discuss.	In our 4 REACT group meeting there were always someone from ministry responsible for the grant, someone from KredEx (ministry financial organisation who gives out actual money and work

		national policymaker, citizens group, utilities. Luckily most important groups for policy change were represented in all meeting.	Thanks to this, very good results were achieved within just 4 meetings. Online meetings were also good. Because TREA situates in Tartu and ministry whose area of responsibility is the renovation grant situates in Tallinn. If we had face to face meetings it would have mean 5 hours driving for one part. This means bigger risk to miss some meetings.	with applications), someone from Tartu City government. Also, there were someone who represented tenants and landlords. Someone from bank and building company. So most important factors got information from meetings and they had opportunity also share their knowledge.
WI	Heating related energy advice	• Pre-existing contacts by the implementing partner • Political saliency of energy poverty	• Structured design and implementation of meetings • Active engagement by participants • Composition of REACT group bringing together diverse perspectives in a productive manner • Tools for digital collaboration	Against the background of the energy crisis, there was increasing interest in the materials to support the communication of heating related advice. Accordingly, the approach and the corresponding material was presented to the consumer association, also implementing similar advice services.
	Pre-paid app	• Intrinsic interest by invited participants • Prospective involvement in scientific publication • Creation of mutual interest by connecting services	• Tools for digital collaboration • Provision of empirical base for co-design (survey results)	N/A

7 CONCLUSIONS

Deliverable D4.2 presents a guideline for interested facilitators to replicate the ENPOR approach for designing and monitoring energy efficiency policies tailored to alleviate energy poverty in the Private Rented Sector. The guideline differentiates between the three phases dedicated to different implementation activities 1) *Preparation and setup of REACT groups*, 2) *Implementation of policy co-design including capacity building* and 3) *Monitoring of policy implementation and further adjustment of the re-design* and provides detailed recommendations on strategies to overcome barriers and achieve the best possible outcome. In addition, the replication guideline is complemented with insights based on the ENPOR partners' experiences with the implementation of the approach so far.

The implementation results underline that the approach may not be uniformly applied to different contexts but may need adaptation by facilitators to account for the specific policy environments (e.g., with regards to welfare institutions, structure of the residential sector, actor constellations, and overall policy framework) and requirements related to the policy (type) in question. This relates to all phases, in which implementation activities for the co-design, capacity building and monitoring approach should be tailored to context-specific practical needs and possibilities. Furthermore, the observed declining participation in the REACT group meetings over time in some countries reflect the challenges to engage a wide array of stakeholders, particularly in instances, where no immediate or tangible benefits of the policy development were imminent (e.g., as for landlords with regard to information and training measures). The existence of pre-existing networks with relevant organizations has been identified as a key enabling factor for the initial engagement of stakeholders. This particularly applies to relations with government representatives, whose involvement boosted the legitimacy and perceived relevance of the process in the eyes of other stakeholders. Another enabling factor across the different policy cases has been the virtual implementation of REACT group meetings, which has allowed for the participation of stakeholders with limited time resources.

Pending the final results from the impact monitoring, the ENPOR approach has proven to provide a suitable forum for networking between different stakeholder groups and enable the co-creative development of innovative solutions to further develop existing energy efficiency policies tailored to the private rented sector.

8
ANNEXES

8.1 Annex 1: Templates for adapted engagement strategies

Table 22: Table template for short policy overview

ENPOR Partner	**Country**	**Name of Support Scheme**	**Short description**	**Obstacles and challenges**	**Policy design improvements**

Identification and analysis of stakeholders

Table 23: Table template for stakeholder identification and analysis

Stakeholder Group[1]	**Representative organisation(s)**	**Expected contributions**	**Interests[2]** *(Evaluation of relation to the project (opposed/supportive): -, --, 0, +, ++)*		**Power[3]** *(Evaluation of relation to the project: o, +, ++, +++)*	
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						

[1] *Who are potential beneficiaries of a policy? Who could be adversely affected?; Who would resent change and mobilise resistance against it?; Who has which rights and responsibilities?; Who has access to relevant resources, skills or key information?; Who could be the voiceless groups?; Whose behaviour has to change for success?*

[2] *What are the current and potential benefits and costs of the policy (redesign) for the stakeholder? What stakeholder's interests conflict with the goals of the policy? What resources has the stakeholder mobilised, or is willing to mobilise? What are the stakeholder's experiences with or expectations towards the policy/the co-creation?*

[3] *Who is dependent on whom? Which stakeholders are organised? How can that organisation be influenced or built upon? Who has control over which resources? Who has control over information? Which problems, affecting which stakeholders, are the priorities to address or alleviate? Which stakeholders' needs, interests and expectations should be given priority attention with respect to the policy in question?*

Stakeholder mapping (Power-Interest-Grid)

Table 24: Table template for stakeholder categorisation / mapping

Power-Interest Category	Stakeholders
High interest and high power (Key Players)	
Low interest, but high power (Meet their Needs)	
High interest, but low power (Keep informed)	
Low interest and low power (Monitor)	

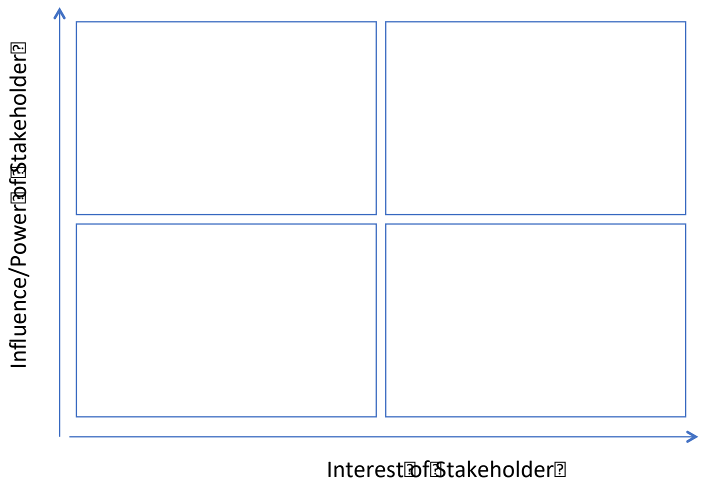

Figure 4: Template for Power-Interest-Grid

Stakeholder communication/initial engagement

Table 25: Table template for collecting stakeholder specific barriers, incentives and communication approaches

Stakeholder organisation(s)	Barriers for participation	Incentives	Messaging	Communication channels
1.				
2.				
3.				
4.				
5.				
6.				
7.				

8.				
...				

Involvement of energy poor tenants

Table 26: Table template for planning the involvement of energy poor tenants in the co-creation process

Target (Sub)Group(s) of support scheme	**Resourcing** (required inputs and barriers to be addressed)	**Planning** (engagement target(s), timeline, number of tenants to be involved)	**Recruiting** (means and channels of outreach (intermediary organisations), messaging)	**Sensitizing** (mode, content, timeline)	**Facilitation** (tools, methods, setup, documentation)	**Evaluation** (analysis and preparation of results for REACT groups)
1.						
2.						
3.						
4.						

8.2 Annex 2: Minutes Meeting template

Minutes of the 1st REACT GROUP Meeting

1. Meeting information (date, place, mean of conduction etc)

The 1st REACT group meeting was conducted via teleconference/on site in ….. on .....

2. List of stakeholders (invited and participated)

Stakeholders from XX different organizations were invited taking into consideration the outcomes of the conducted mapping of the relevant stakeholders.

The organizations, which participated into the first REACT group, are presented in the following table.

Table 27: Overview of the participated and not participated organizations in the 1st REACT group meeting.

Participated organizations	Non-participated organizations

Finally, XX participants participated representing XX different organizations.

3. Agenda

4. Objectives

The first REACT group focused on the fulfilment of the following objectives:

Objective 1: ….

Objective 2: ….

Objective 3: ….

5. Main discussed issues for each objective

Objective 1: …..

Objective 2: …..

Objective 3: ….

6. Conclusions

7. Open issues and preliminary arrangements for the next meeting

8.3 Annex 3: Co-creation satisfaction survey

Monitoring questionnaire
TARGET: Participants of the REACT Group meetings

ENPOR satisfaction survey

Please take a few minutes of your time to comment on the REACT Group meeting you have attended for co-designing energy poverty policies.

About the event

1.1 Please rate the following aspects of the event on a 1-5 basis

The event met my expectations/needs	(1) strongly disagree (2) somewhat disagree (3) undecided/neutral (4) somewhat agree (5) strongly agree
I gained useful knowledge and information	
The information exchanged was relevant for my work	
I will be able to apply the knowledge and information gained to my work	
I was given the opportunity to express my opinions in the meetings.	
My (organisation's) points of view were adequately considered in the process.	
The meeting targets were sufficiently clear to me	
The meeting has achieved its defined target(s)	

1.2. What information or message(s) did you take back home from the meeting?

(write your answer)

1.3. What did you find to be the most useful aspect of the meeting?

(write your answer)

About the input and process of the meeting

2.1 Please assess different aspects of the event on a 1-5 basis

Quality of support from the facilitator (not considering what you learned from the facilitator, but rather the organisation, communication and assistance provided by the facilitator)	(1) no opinion or not applicable (2) not adequate (3) satisfying (4) good (5) very good
Quality of and input received in the meeting (either from your peers, from the facilitator or any other expert present)	
Quality of networking and interaction between participants	
Quality of tools provided by the facilitator in general	
Efficiency of the meeting to achieve its targets	
General structure of the meeting / Suitability of the meeting format	

2.2. Any additional comments about the input and process of the co-design?

(write your answer)