



SUPER i

D1.2 National workshops report

WP1: Creation of the Framework: stakeholder engagement and policy co-creation

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- * PU = Public
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 RE = Restricted to a group specified by the consortium (including the Commission Services)
 CO = Confidential, only for members of the consortium (including the Commission Services)

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Abbreviations

DHW	Domestic Hot Water
EE	Energy Efficient
EPC	Energy Performance Certificate (rate A, B, C etc)
EPC	Energy Performance Contract
ESCO	Energy Service Company
IEE	Intelligent Energy Europe programme
PPP	Public-Private Partnerships
PV	Photovoltaic
REC	Renewable Energy Communities
RES	Renewable Energy Sources
SHM	Social Housing Managers
SME	Small and Medium-Sized Enterprise
SHO	Social Housing Organisations
SH	Social Housing
HA	Housing Association
VRV	Variable Refrigerant Volume
NHP	National Housing Plan
NRRP	National Resilience and Recovery Fund
MIT	Ministry of Infrastructures and Transports

Partners' abbreviations

York University - Department of Economics and related studies	UoY
Agenzia Per la Promozione della Ricerca Europea	APRE
Fondazione ICONS	ICONS
Energy Efficiency in Industrial Processes ASBL	EEIP
Fundación CIRCE	CIRCE
European Green Cities	EGC
Tender Capital	TENDER
COMITE EUROPEEN DE COORDINATION DE L'HABITAT SOCIAL AISBL	HE
Danmarks Almene Boliger	BL
ATER Trieste	ATER
Housing Fund of the Republic of Slovenia	HFROS
Element Energy	ELE

1. Executive Summary

The current document is the output of **Task 1.2 – National policy co-creation workshops**, and, more in detail, of the two rounds of policy-centred workshops held in the six SUPER-i countries (Italy, Slovenia, Belgium, United Kingdom, Spain and Denmark).

From the Italian policy dialogue, a new commitment from the national and regional government to issue a National Housing Plan that takes into account the needs of operators in the sector emerged, and the dialogue with the most relevant stakeholders initiated by SUPER-i workshops strongly contributed to the suggestion of the most important elements to be considered in the upcoming NHP (e.g., a human-centred approach integrating economic, environmental, and social perspectives for the requalification of marginalised districts and building, the encouragement of a closer cooperation between public and private actors, and the openness to new forms of financing tools for the operational implementation of housing policies, considering the existing doubts on the effectiveness and sustainability on the long-term of yet recommended contracts like PPP).

The need for a human-centred perspective, as well as the request for the creation of consulting tables among public authorities, tenants associations, energy providers, and civil society representatives, was an element shared also by the Slovenian stakeholders, who stressed their accent on demanding the establishment of dedicated grants for energy rehabilitation in SH, as well as increasing SHO's share of existing grants. The ESCO model was discussed as a promising opportunity in terms of opening new possibility for the SH sector.

The Danish dialogue showed a significant orientation towards practical solutions, through the discussion about new emerging cooperative models to face the lack of technical and technological capacity among housing companies: the main suggested solution was exploring financing options such as ESCO models, presented in updated and innovative versions, like the "ESCO 2.0 Model".

As for Denmark, Spain case insisted on best practice of SHOs actively collaborating with ESCOs on several energy-efficient refurbishment projects. On their hand, SH managers should explore specialised green financing options, government-backed programs, and public-private partnerships that may offer more favourable terms and lower interest rates, as well as evaluating financing options like shared saving models, and engaging with financial institutions that have a proven track record in funding EE projects.

The UK dialogue lead to significant findings for the country's readiness to proper capillary EE interventions for SH: the meetings showed how the supply chain is not sufficiently developed, and a huge upskilling programme is required, as well as an increase in availability of funding pots for local authorities through central government allocation.

The Belgian policy dialogue highlighted how regulatory and urban planning challenges in implementing energy renovation measures currently require innovative approaches to renovation, from adopting the use of prefabricated components as a mean for faster, less disruptive renovations, to the emphasis on material reuse and minimisation of material use, to urban temporary use strategies, and establishing energy communities.

2. Introduction

Built upon the scenario of knowledge and data formed after the national roundtables held under Task 1.1, this report represents the first systematised result of what, in the vision of the project, aims at becoming a continuous dialogue between the most relevant stakeholders of SUPER-i, from social housing organisations to public authorities and policy makers, passing through private and public financial institutions, SMEs, and energy service providers.

Indeed, it contains the most significant problems perceived by the audience of the twelve workshops (two rounds per country) held at the national level in the six SUPER-i countries (Italy, Slovenia, Belgium, England, Spain and Denmark) during the second and the third years of the project lifespan, together with hypothesis of solutions, co-created by the stakeholders, with the support of the SUPER-i internal and external experts, in order to contribute to the overcoming of the aforementioned criticalities.

As envisioned by Task 1.2 – National policy co-creation workshops objectives, the document constitutes an ensemble of informal recommendations that could support national and European public authorities and policy makers in providing adjustments specifically tailored to each country's needs, as well as those of the European Union as a whole.

The approach with which the workshops were conducted has been solution-oriented, trying to elaborate possible solutions coming from various perspectives (according to the expertise and field of competence of the respective group of stakeholders), but, at the same time, identifying unsolved questions to bring to the attention of the European Commission.

For a brief overview of the two rounds of workshops, below a list divided per country:

- **Italy:** The first Italian co-creation workshop, organised by APRE and University of York with the support of the union SICET Palermo and held on the 19th of May 2023 in Palermo, Sicily Region, focused on discussing public policy and fundings to support energy efficiency intervention and the refurbishing of social houses districts inhabited by low-income population. The second Italian co-creation workshop, organised by APRE and ATER Trieste, and held on the 14th of June 2024 in Trieste, Friuli Venezia Giulia Region, focused on drafting and discussing the Italian legislative and regulatory framework for energy efficiency interventions in public and private buildings, with particular attention to the specific situation of the city of Trieste, where ATER is a key player in the public housing sector, and of the autonomous Region of Friuli Venezia Giulia, which represents a virtuous example for other Italian regions.
- **Slovenia:** The first Slovenian co-creation workshop, organised by HFROS, was held in Ljubljana on the 15th of May 2023 and focused on financial options and barriers for the Slovenian Housing Sector. The second Slovenian co-creation workshop, organised by HFROS, was held in Ljubljana on the 11th of April 2024 and focused on investments in energy efficient renovation projects of public housing and buildings in Slovenia.
- **Denmark:** The first Danish co-creation workshop, organised by the Association of Social Housing Companies, BL, and European Green Cities and held on the 11th of May 2023 in Copenhagen, focused on improving the financing of investments in energy renovations for social housing companies. The second Danish co-creation workshop, organised by BL and European Green Cities in Aarhus, Denmark and held on the 12th of September 2023, focused on financial models and energy efficiency in social housing.
- **Spain:** The first Spanish co-creation workshop was held in Barcelona, on the 8th of June 2023, and organised by CIRCE as a side event of the International Social Housing Festival (ISHF). The 2023 ISHF conference held in Barcelona was an event that focused on housing and urban development. The conference brought together a diverse group of experts, practitioners, policymakers, and researchers from around the world to engage in discussions and share insights about the latest trends,

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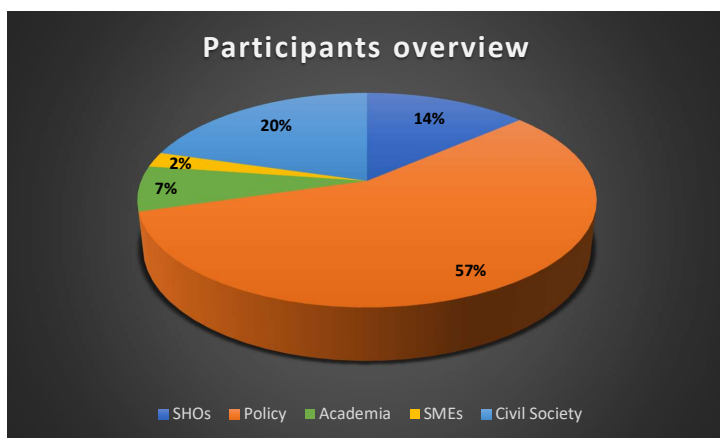
innovations, and challenges in the field. The second Spanish co-creation workshop was held in Zaragoza, on the 6th of May 2024, and organised by CIRCE. During the frontal sessions, speakers presented several topics, among which: Technology & Implementation; Finance & Business Models; Social Innovation.

- **United Kingdom:** The first UK co-creation workshop was held in Glasgow, as a side event of the “International Retrofit Conference – BE-FEST ‘23”, on the 11th November 2023. The organisers, ELE and UoY, set the discussion on the financial returns analysis, the model structure, and whether that would be useful for other Housing Associations, as well as opportunities to collaborate on SUPER-i’s twin project HE SUPERSHINE. The second UK co-creation workshop was held in London, on the 19th of June 2024, and was organised by ELE and UoY. The main focus of the meeting was discussing barriers, challenges and drivers for investing in Energy Efficiency in Social Housing in England.
- **Belgium:** The first Belgian co-creation workshop, organised by EEIP and HE, was held on the 22nd of May 2024, in Brussels, during the morning session, dedicated to Energy Renovation in Social Housing in Belgium and targeting a French speaking audience. The second Belgian co-creation workshop, organised by EEIP and HE and held on May the 22nd, 2024, in Brussels, during the afternoon session, was dedicated to Energy Renovation in Social Housing in Belgium and targeting a Flemish speaking audience, conducting the event in English for simplify the communication.

3. Italy

3.1. First workshop

Date and location	19 th of May 2023 at 9.30-13.00, Palermo, Sicily Region
Target group level (Local, regional or national)	Local, Regional and National
Topic of workshop	“Presentation of the intervention project path for the regeneration of the urban, economic and social fabric of ZEN 2 district in Palermo”.
Participants	
Total number of participants	44



3.1.1. Introduction

The first Italian co-creation workshop, organised by APRE and University of York with the support of the union SICET Palermo and held on the 19th of May in Palermo, Sicily Region, focused on discussing public policy and fundings to support energy efficiency intervention and the refurbishing of social houses districts inhabited by low-income population.

During the workshop, the stakeholders have been involved in reflections and suggestions in perspective of building a common vision for the future of the city of Palermo, with particular attention to the low-income peripheral ZEN2 district.

To build actually useful opportunities for relaunching the city, it was deemed necessary to address the issues and discuss the initiatives to be implemented in terms of EE intervention and general wider renovation, going

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beyond sectoral and party logic. The general opinion was that the target could be achieved in the future through collecting contributions from local actors and strengthening the participation of local stakeholders to build upon concrete outputs from the directly impacted community.

In fact, those are the principles that guide the Union for tenants and territory “SICET Palermo-Trapani” towards their goal of promoting values of solidarity and social justice, as well as encouraging a closer cooperation between public and private actors.

With this premise, the workshop was conducted with the aim of supporting the discussion and the building of a new general vision for the city to tackle the environmental and the territorial decadence. Furthermore, the centrality of human wellbeing and sense of belonging was highlighted as the basis of socially oriented building projects, tailored for the local tenants in Palermo with the will of distributing roles and responsibilities within all levels of the value chains and the actors on the territory.

With this goal in mind, an integrated project for redevelopment, renovation and promotion of social inclusion for the San Filippo Neri Neighbourhood, in the ZEN2 district, was presented.

Furthermore, as part of the Regional Program (PR) Sicily FESR (European Fund for Regional Development), within the Strategic Objective of Policy 4 - Priorities for a more inclusive Sicily, actions that can be developed to respond to the needs related to the housing emergency were mentioned. In particular:

- Tackling the housing hardship through interventions aimed at supporting the quality of living of fragile and marginalised categories in the Region.
- Supporting structural actions to fight extreme poverty (not only from an energy point of view) and the risk of social marginalisation also through the valorisation of public real estate assets.
- Strengthening of services and territorial networks to support marginalised people, also with the aim of promoting work-life balance.

During the workshop, the Union SICET Palermo Trapani and IACP Palermo (Independent Housing Board of Palermo), together with Neighbourhood Associations, presented a project idea able to deal at the same time with urban regeneration, energy redevelopment and social inclusion for the ZEN2 district in Palermo, with the following three activities as main focus:

1. Recovery and renovation of the buildings.
2. Energy efficiency interventions.
3. Creation of a path towards social inclusion by creating job opportunities for self-maintenance of the technological systems installed, and by directly involving local communities in all the renovation phases for the district, also providing people accessible recreational spaces, as well as updated structures and equipment.

3.1.2. Key Findings

<i>Obstacles</i>	<i>Possible solutions</i>
Sectoral and party logics influence the approach to overcoming criticism and implementing interventions.	Collecting contributions from local actors and strengthening the participation of stakeholders, to co-design the interventions starting from concrete outputs coming from the communities directly involved and impacted.

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Lack of a proper general vision to tackle environmental and territorial decadence.	Creation of new models of metropolitan and urban welfare, as well as encouraging new models of management that supports social inclusion.
Scarce perceived social justice and solidarity, and need to tackle energy poverty.	Promoting dialogue and cooperation between public and private actors, in order to co-design human centred energy efficiency interventions and renovations in disadvantaged districts (in the design phase by the public authorities, but also in the implementation phase by the enterprises).
	Human-wellbeing oriented perspective in the design and implementation of the renovation, in order to rebuild people's trust in public authorities.
	Designing tailored projects with a strong social focus based on a need analysis.
Lack of perception of economic benefits from the energy efficient renovation for the community.	Involving the local communities in maintenance jobs, allowing people to be involved both in the design phase of the interventions, but also in the aftermath, with a long-lasting benefits for the community. Furthermore, the self-maintenance approach guarantees timely small maintenance and guardianship of the communal areas of the districts.
	Increased value of the building as a result of EE requalification, improving the social image of the district and revitalising its economy.
	The participation of the communities to the investment (e.g. Crowdfunding) has proved to be successful in improving social acceptance.
	Using of the "keep it local" approach, involving the community in the decision making process and the local SMEs in the supply chain.
Community involvement for maintenance jobs is not present in the current procurement codes.	The proposed solution is to insert the preference for local manpower in the writing phase of the procurement codes. Existing doubt: concerns about the limitations on free competition obtained by including within the procurement

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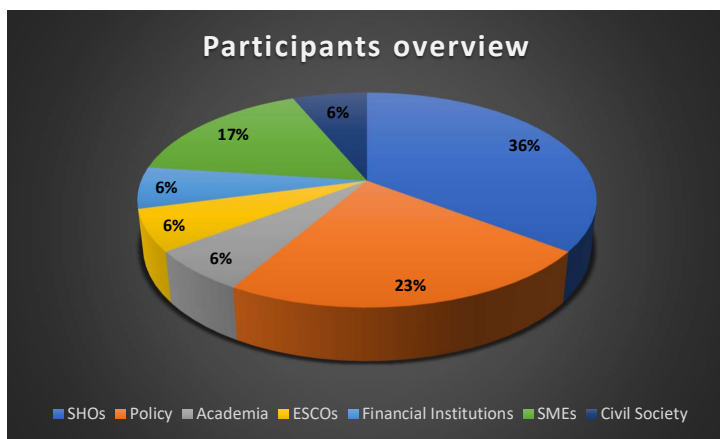
	code the preference towards local communities for maintenance work, as well as a possible lack of experienced manpower.
Public interventions unclear in terms of their sustainability in the future.	Integrated approach (economic, environmental, and social) to be adopted in the construction sector (also at the national level), for the requalification of marginalised districts and buildings.
Uncertainty from social housing organisations (SHO) about the best financial solution for energy efficiency (EE).	For large operations, the PPP proved to be the most concrete hypothesis, since it allows the Public Body to concentrate on defining the objectives to be achieved in terms of public interest and quality of the services offered, leaving the costs and related risks of planning, construction, implementation and financing to the private partner.
Scarce use or misuse of Public Funding.	Development of specific implementing regulations for the use of Public Funds at disposal of the Region, and tailored policies for a better use of money, also streamlining the authorisation process and the bureaucratic procedures.
Scarce use or misuse of real estate assets.	Redevelopment and reorganisation of the assets intended for public and social residential construction, increasing their amount by putting back into use decommissioned properties and housing.
Existing doubt: a PPP contract for energy efficiency may NOT provide guaranteed savings in consumption.	The PPP procedures are complex but can be managed in a fairly short time, even if it is essential for the future to move to a more complete contractual structure such as that envisaged by RepowerEU.
Community disconnected and not interested in the future of the district.	Supporting the local social promotion associations and organisations as facilitators of the dialogue of the community with the public authorities.
	Promoting the use of digital tools to encourage the participatory approach.
Doubts on how to effectively involve legally white-listed enterprises (not involved in criminal affairs).	Promoting both legal and operational protocols to tackle organised crime infiltration.
Lack of perception of the social benefits of the interventions.	Improvement of accessibility and safety to communal places and living services, also through the installation of new urban-local equipment.

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	Interventions in areas accessible to all, such as green areas and communal spaces, and advertising on the benefits for people's health, coming, e.g., from improved air quality.
	Promotion of awareness-raising actions towards both benefits and conscious use of energy resources by the inhabitants.

3.2. Second workshop

Date and location	14 th of June 2024, Trieste
Target group level (Local, regional or national)	Local (Trieste), Regional (Friuli Venezia Giulia Region), National (Italy)
Topic of workshop	"The Italian legislative and regulatory framework for energy efficiency interventions in public and private buildings"
Participants	
Total number of participants	48



3.2.1. Introduction

The second Italian co-creation workshop, organised by APRE and ATER Trieste, and held on the 14th of June 2024 in Trieste, Friuli Venezia Giulia Region, focused on drafting and discussing the Italian legislative and regulatory framework for energy efficiency interventions in public and private buildings, with particular attention to the specific situation of the city of Trieste, where ATER is a key player in the public housing

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sector, and of the autonomous Region of Friuli Venezia Giulia, which represents a virtuous example for other Italian regions.

The meeting began with an overview of the Italian legislation of reference for the public residential housing sector: it emerged that the legislation is complex and regulated by various legislative acts at national level, but especially at regional level. The main legislation can be listed below:

- Law 5 August 1978, n. 457 (Law for residential building): this law was one of the main regulations for residential building in Italy, and established the general framework for the planning and implementation of ERP interventions.
- Law 17 February 1992, n. 17: with this law the criteria for the assignment of public residential building housing were introduced, introducing the main priority criteria and the main requirements of the beneficiaries.
- Regional laws: in Italy, each region has developed its own legislation on SH, starting from national laws in consideration of the specific needs of each territory, essentially regulating the requirements for access to social housing, the methods of assigning housing, the management of housing and the determination of rental fees.

As regards the Friuli Venezia Giulia Region, the following legislations were mentioned as pivotal:

- Regional Law 6 August 2019, n. 14 - "Organisation of the Territorial Companies for Residential Construction, as well as amendments to the Regional Law 1/2016 on public residential construction".
- Regional Law 6 November 2018, n. 24 - "Amendments to the Regional Law 19 February 2016, n. 1 (Organic reform of housing policies and reorganisation of the Ater)"
- Regional Law 19 February 2016, n. 1 and related implementing decrees (Regulations) - "Organic reform of housing policies and reorganisation of the ATER", and subsequent amendments and additions [with LR 14/2019, letter c) of paragraph 3 of art. 1 and articles 36 to 47 were repealed].

Subsequently, the public-private partnership (PPP) instrument was presented as a tool capable of responding to some of the critical issues in the sector. In Italy, the PPP instrument is regulated by a series of regulations that define the framework for their implementation. The main legislative references are listed below:

1. European legislation: the European directives on public procurement (2014/23/EU, 2014/24/EU and 2014/25/EU) have been transposed into Legislative Decree 36/2023, harmonising Italian legislation with European legislation on PPPs and concessions.
2. Public Contracts Code (Legislative Decree 36/2023): the Public Contracts Code is the main regulatory reference for PPP contracts in Italy. This legislative decree transposes the European directives on public procurement and concessions. Part I of Book IV is specifically dedicated to public-private partnership contracts, defining the methods of programming and implementation of the instrument.
3. Law 23 December 1998, n. 448 (Financial Law 1999) which introduces for the first time in Italy the concept of project financing, one of the forms of PPP, allowing public administrations to resort to private capital for the construction of public works.
4. Law 15 March 1997, n. 59 (Bassanini Law), which introduces important innovations in administrative simplification, also facilitating the use of PPPs in local administrations.
5. Law 11 November 2014, n. 164 (Sblocca Italia) which includes provisions that encourage the use of PPPs for the construction of public infrastructure.
6. Guidelines of the National Anti-Corruption Authority (ANAC), which provide operational indications for the management of PPP contracts, with particular attention to transparency, efficiency and prevention of corruption.

The meeting continued with an overview of the proposals for the formulation of a new National Housing Plan (NHP) capable of overcoming the critical issues encountered in the SH sector, both from the institutional point of view of the governance of housing companies and from that of new operational and regulatory tools that can lead to a real simplification of the procedures of the companies themselves.

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The discussion then focused on the proposal that emerged from the Conference of Regions and Autonomous Provinces (RAP), that of FEDERCASA Italia (i.e. the federation of companies that manage the most important part of the public residential buildings in Italy), and finally on the working tables of the Italian Ministry of Infrastructure and Transport (MIT) for the formulation of the New National Housing Plan. The solutions proposed by these plans, together with the critical issues of the sector that emerged during the discussion, are presented in the table in the next paragraph.

In general, from the debate it has emerged that, although the political framework would be ripe to change things, no real intervention was being done on a system of management of public housing in Italy that does not work, until recently, when a turning point has begun to be perceived in the intention of the MIT of regulating a “facilitation path” to solve the current criticalities.

In fact, before this point, the perception of territorial public companies for SH management such as ATER was that the political intention is to close them, giving all the housing to the state-owned assets of the Municipalities: this is because ATER continues to ask for funds for new housing and to renovate the current ones (also considering that the cost of the interventions has doubled since 2022). These funds would also be present, but the allocation system is not clear, so they remain stationary, also due to the absence of an appropriate National Housing Plan (such as to include an expansion of the tools available compared to the past). In addition, ATER is also being pressured by the MIT to address the growing “grey band” (low-income people who do not meet the criteria for allocating public housing but who are also unable to pay rent due to rising costs across the country), despite ATER already having difficulty providing housing to the so-called “black band” who would be entitled to it under the traditional allocation criteria.

It has been pointed out that Italy lacks actors who are truly capable of providing social support, and ATER is expected to address this issue as well. In addition, ATER is also being asked to manage the housing stock of municipalities, without receiving funds from the latter, who in turn claim that ATER can support itself with the very low and often delinquent rents of the aforementioned managed housing. In addition, municipalities are demanding Municipality Property Taxes on the housing owned by ATER.

Therefore, from SUPER-i, ATER would require the proposal of financial instruments that do not entail further indebtedness for them: ATER currently has no own funds to spend, and cannot take out loans.

In conclusion, it can be stated that, in the face of the reported critical issues arising from the Italian regulatory framework on public SH and the application of PPP tools to the reality of Italian housing companies, there is a new commitment from the national and regional government to issue a Housing Plan that takes into account the needs of operators in the sector.

The participatory approach, the establishment of specific working tables, as well as the openness to new forms of financing and new, even experimental, tools for the operational implementation of housing policies, represent a new starting point that is presumed to lead to a shared Housing Plan tool capable of responding to the real critical issues and operational difficulties encountered.

The changes to be introduced must necessarily concern both housing policies and SH in particular, and the institutional structure, currently fragmented and heterogeneous, of housing companies, to unify the governance aspects, but also the financial and fiscal ones.

3.2.2. Key Findings

Obstacles	Possible solutions	
Bureaucracy and slow processes: the bureaucratic process	The RAP proposal for the NHP suggests: <ul style="list-style-type: none">• Creating a unique regulatory text on SH: reorganisation of the regulatory framework for both	The MIT tables for NHP suggests:

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for the approval and implementation of SH projects is often very long and complex, often because of the multiplicity of bodies involved in the processes.	<p>Public Residential Building (public housing - the rent is determined by income and the characteristics of the accommodation) and Social Residential Building (all other types of social housing).</p> <ul style="list-style-type: none"> Rationalising the system of constraints in projects financed through the Italian National Resilience and Recovery Plan (NRRP). 	<ul style="list-style-type: none"> Streamlining the bureaucratic procedures.
<p>Insufficient funding: in recent years, funding for SH has been reduced, making it difficult to start and complete new projects. New forms of financing, new tools and new ways of implementing interventions are therefore needed.</p>	<p>The RAP proposal for the NHP suggests:</p> <ul style="list-style-type: none"> Rationalisation of financial resources for the implementation of Public and Social Housing programs. Flexibility of the rental fund for private market tenants. Support for rentals, reorganisation and integration of existing tools- Elimination of the Municipality Property Tax on public SH. 	<p>FEDERCASA proposal for NHP suggests:</p> <ul style="list-style-type: none"> To plan public financing funds for the construction of SH, or a Fund to cover the guarantee of Financing at the European Investment Bank/Italian Deposits and Loans Fund, assumed by the Ex-IACP (Independent Housing Board) on projects with economic-financial plans capable of repaying the financing by making the best use of the BIM tool, or urban planning compensations in the urban planning Conventions that lead to the same result. National financing for the renovation of unused SH to be renovated, refinancing Art. 4 L. n. 80/2014. To verify the actual effectiveness of the F.I.A. (Housing Investment Fund) and the reintroduction of a Guarantee Fund that can represent an element of endorsement for the bank guarantee. To provide facilitated paths for restructuring (PPP), access to Regional or State guarantees that can allow financing even in capital but without interest, subsidised prices for Services and energy supplies. All this to make the SH system able to support itself in a complementary manner to the non-repayable financing (in any case necessary).
	<p>The MIT tables for NHP suggests:</p> <ul style="list-style-type: none"> PPP. Allocation of public resources to reduce construction costs Use of patient capital. Refinancing of the rental support fund. Tax incentives and corrections 	

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<p>Age of buildings: a significant part of the public building stock is old and of poor construction quality, requiring heavy and very costly renovations, both in terms of financial resources and construction times.</p>	<p>The RAP proposal for the NHP suggests:</p> <ul style="list-style-type: none"> • To maintain, improve and recover the existing public housing stock. 	
<p>Management and maintenance: the age of the buildings is often exacerbated by insufficient maintenance due to limited resources and inefficiencies in property management</p>	<p>The RAP proposal for the NHP suggests:</p> <ul style="list-style-type: none"> • To maintain, improve and recover the existing public housing stock. 	<p>FEDERCASA proposal for NHP suggests:</p> <ul style="list-style-type: none"> • To define qualitative and quantitative standards for Public Service performance. • To compensate for arrears with ordinary maintenance work that allows vulnerable individuals who have lost their jobs to carry out community service work in compensation for rent payments in SH. • To manage maintenance for public bodies: the former IACP (Independent Housing Board) companies have accumulated a great deal of experience and capacity in the maintenance and management of properties. The idea would be to assign direct contracts that would guarantee the bodies income to be allocated to the management and maintenance of SH.
<p>Access to housing: the criteria for allocating housing are very complex and result in long waiting lists for obtaining SH, with a very high demand compared to the available supply.</p>	<p>The RAP proposal for the NHP suggests:</p> <ul style="list-style-type: none"> • To promote the increase in the public housing stock, including through the purchase of existing housing stock, building replacement and enhancement interventions. • To support rentals, reorganisation and integration of existing tools. 	<p>FEDERCASA proposal for NHP suggests:</p> <ul style="list-style-type: none"> • To provide access to the databases of the Courts, Revenue Agencies and Motor Vehicles to be able to carry out checks on the conditions of the assignees. • To plan a significant increase in public and social housing (for at least 250,000 units), through the use of abandoned public areas or through the demolition and reconstruction, with volumetric increase, of SH buildings that have reached the end of their building life. It is necessary to have the capacity to plan urbanistically in this direction. • To refinance the National Innovative Program for the Quality of Living (PINQuA), to allow the implementation of all projects admitted to the ranking that contemplate the construction of new SH housing.

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		<ul style="list-style-type: none"> To act also at a European level (FEDERCASA adheres to Housing Europe) and build a path that allows for the diversion of large amounts of funding from the European Central Bank to projects of great economic value that can be joined by Regions or even Nations. With coordination at the European Community level, it would be possible to collect projects in homogeneous territories, channel them into different geographical sectors and proceed with their financing. The coverage in terms of guarantees for projects of this size would come from the individual States or (depending on their size) also from the individual Regions.
	<p>The MIT tables for NHP suggests:</p> <ul style="list-style-type: none"> Offering public housing and social housing. Building recovery of SH assets. Enhancement of social housing areas. Redevelopment and revitalisation of smaller centres. Replacement market. 	
<p>Illegality: SH buildings can be subject to illegal occupation, further complicating management and planning.</p>	<p>The RAP proposal for the NHP suggests:</p> <ul style="list-style-type: none"> Integrating Housing and Social policies. Fighting against growing energy poverty in SH. 	<p>FEDERCASA proposal for NHP suggests:</p> <ul style="list-style-type: none"> Activating social management would improve interpersonal relationships between residents and create the conditions for compliance with the rules (arrears, use of shared spaces, illegal occupations, condominium and neighbourhood dimension).
<p>Legislation: the regulatory framework on SH is often complex and difficult to interpret, making it difficult to apply the rules. Legislation on public procurement, and the resulting digitalisation of procurement processes, has in fact made the workload of</p>	<p>The RAP proposal for the NHP suggests:</p> <ul style="list-style-type: none"> Creating a unique regulatory text on SH: reorganisation of the regulatory framework for both Public Residential Building (public housing - the rent is determined by income and the 	<p>FEDERCASA proposal for NHP suggests:</p> <ul style="list-style-type: none"> To choose a uniform legal nature of public bodies and public companies. To choose whether or not to maintain the civil ownership of the SH. To modify and integrate the definition of SH. To frame the public SH as a Service of General Interest and not as, currently, a Service of General Economic Interest (current definition) similarly to the Private SH. This would also determine the general condition for addressing the issue of Municipality

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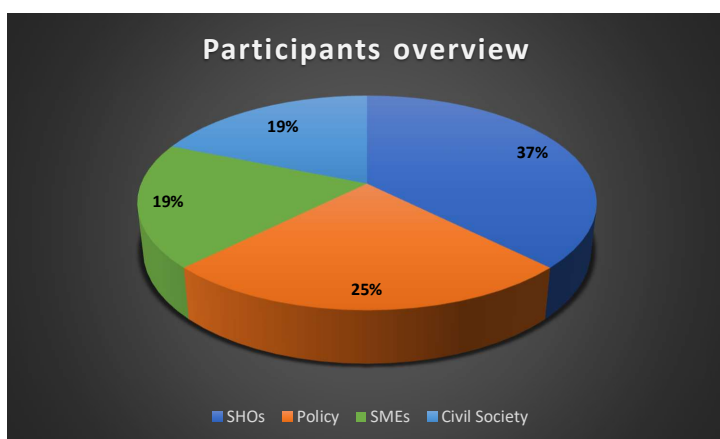
public contracting authorities more difficult.	<p>characteristics of the accommodation) and Social Residential Building (all other types of social housing).</p> <ul style="list-style-type: none"> Changing the non-economic relevance of SH (transition from SIEG - Services of General Economic Interest to SINEG - Non-Economic Services of General Interest). 	<p>Property Tax and, above all, clarifying the distinction between public and social residential housing with respect to the issues of verifying the presence of undue State aid.</p> <ul style="list-style-type: none"> To introduce by law a structured social management of the inhabitants and not simply a mediation of conflicts. To have the management and maintenance of the properties used for student accommodation, also in light of the investment that the State has in place to increase the SH endowment. Within the national legislation, although not interfering with the Region's delegation for housing, it is necessary to open an <i>ad hoc</i> window that regulates public SH.
Social impact: failure to involve local communities in project planning and implementation can lead to resistance and social conflict.	<p>The RAP proposal for the NHP suggests</p> <ul style="list-style-type: none"> The promotion of urban regeneration, therefore reducing social marginalisation phenomena. Integrating Housing and Social policies. Fighting against growing energy poverty in SH. 	<p>FEDERCASA proposal for NHP suggests:</p> <ul style="list-style-type: none"> Funding a social management of the SH residents, to ensure inclusion and reactivate community dimensions in residential contexts and with the neighbourhood in which the home is located, in order to improve interpersonal relationships between residents and create the conditions for respecting the rules. Activating social management offices in the former ATER and networking them with the territory (social services, health services, law enforcement and volunteer organizations), to be able to offer accompaniment to Housing and the management of fragility. Social sustainability also passes through a protection system that must be guaranteed (in a targeted and detailed manner, but necessary to identify needs, determine people's necessities and intervene in a direct and immediate manner).
<p>Doubts about the PPP instrument as a solution for the SH sectors criticalities:</p> <ul style="list-style-type: none"> Contractual and regulatory complexity of PPP contracts: very complex and require advanced legal and technical skills to be negotiated and managed correctly, professionalism not always present within the host companies. Furthermore, the Italian legislation on PPPs can be fragmented and subject to frequent changes, making it difficult for the parties involved to manage the projects. 		

- **Risk of inadequate risk transfer in PPP contracts:** often, risks are not equally distributed between the public and private partners, with the risk that the public body ends up assuming most of the financial and operational responsibilities, also due to a difficulty in assessing in advance the risks associated with the PPP.
- **Financial sustainability of PPP:** it can be compromised if the expected revenue flows have not been properly assessed. Furthermore, there is a problem of access to credit for private companies, especially in unstable economic contexts such as those that have characterised the last period.
- **Transparency and governance in PPPs:** lack of transparency in PPP negotiation and management processes can lead to suspicions of corruption and conflicts of interest. Furthermore, governance structures and monitoring mechanisms are often not robust enough to ensure that projects are executed efficiently and in accordance with agreements.
- **Operational effectiveness and maintenance of PPP contracts:** the quality of SH buildings and services can vary significantly, with the risk that expected standards are not met. Furthermore, PPP contracts must include clear provisions for the long-term maintenance of buildings, but this aspect is often overlooked or underestimated.
- **Risk of project failure:** PPP projects can be subject to significant delays and cost overruns, which undermine their effectiveness, and are also subject to the risk of failure of the private partner, resulting in the public body having to take control of the project, with additional costs and risks.

4. Slovenia

4.1. First workshop

Date and location	15 th of May 2023, Ljubljana
Target group level (Local, regional or national)	National
Topic of workshop	“Financial options and barriers for the Slovenian Housing Sector”
Participants	
Total number of participants	32



4.1.1. Introduction

The first Slovenian co-creation workshop, organised by HFROS, was held in Ljubljana on the 15th of May 2023 and focused on financial options and barriers for the Slovenian Housing Sector. Among the participants, many Social Housing companies intervened as speakers and participated to the round table, as well as financial companies, and State and local institutions.

The main topics discussed were:

- Financial issues, with specific attention to the still existing barriers to the actual implementation of several financial options suggested by the policy framework.
- The rental policy, both for public SH that for the population in general, as the price increasing affected the low-income people who would not fit the criteria for obtaining SH.

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- Administrative problems, caused by a too complex system of funding allocation and distribution of social housing.

An open discussion was carried out about those barriers and available options, trying to figure out possible solutions that could solve an increasingly demanding social problem. For example, both the owners and the social housing companies would like to have more dedicated grants, or to receive a larger share of existing grants. The entire audience agreed on the significant impact that educating tenants on reducing consumption and promoting energy renovations would bring to the country: with that regard, the presentation of the SUPER-i project, with its participatory approach and financing options, was well received, as well as the detailed presentation of the activities held in the Slovenian demo case. Other virtuous practices about energy efficiency and EE renovations through participatory approach were presented and discussed, in order to highlight the most significant lessons learnt.

4.1.2. Key Findings

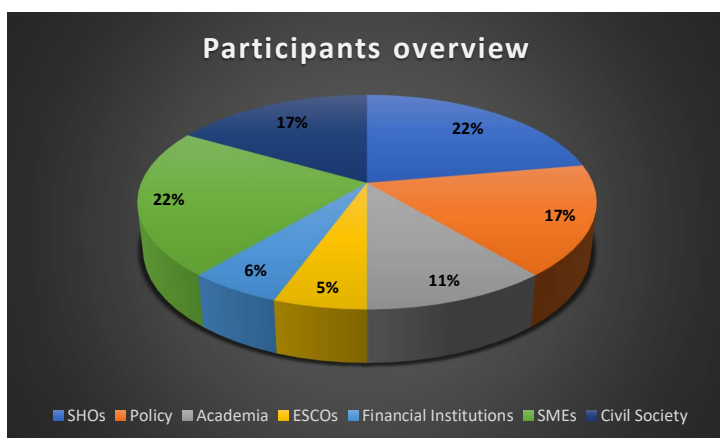
<i>Obstacles</i>	<i>Possible solutions</i>
Insufficient grants and incentives for the Social Housing Sector, as usually the entire EE renovation of the building in funds ownership is not credited and does not obtain loans, leaving grants as the only solution. Anyway, the amount of grant received depends on the form of ownership of the company (public enterprise vs. private limited company).	Establishment of more targeted and dedicated grants for SHO, as well as increasing their share of existing grants.
Lack of dedicated funding sources for energy rehabilitation.	
Insufficient lending funds.	Need to multi-level cooperation among actors, especially between SHOs and ESCOs, for energy contracts, financial supports and EE refurbishment projects.
Difficulties in getting consents to begin the EE process, due to fragmented ownership issues and many unreceptive landlords.	Educating tenants and owners on reducing consumption and promoting energy renovations.
Need to deal with tenants for EE renovations from the design phase.	Improving the current method of tenants engagement and involvement, that has up to date already proven effective, as well as keep communicating the social and economic benefits of the interventions (e.g., decreasing energy bills, improved quality of life).
Lack of interest in energy renovations from investors, due to regulatory and administrative complexities.	Targeted regulatory adjustment, also aimed at streamlining the bureaucratic processes.

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The energy rehabilitation of the building is frequently perceived as having scarce to none impact on increasing the owner's revenues from rental income (limited motivation to invest).	Reducing the requirements for energy performance of buildings, which will lead to a greater number of smaller investments in the energy rehabilitation of the building.
Despite the large volume of applications for economic subsidies to build photovoltaic systems, the processing of applications requires too much time.	Need to streamline the bureaucracy for obtaining subsidies and incentives.
Low-income residents cannot afford EE renovations on their own.	

4.2. Second workshop

Date and location	11 th of April 2024, Ljubljana
Target group level (Local, regional or national)	National
Topic of workshop	"Investments in energy efficient renovation projects of public housing and buildings in Slovenia".
Participants	
Total number of participants	18



4.2.1. Introduction

The second Slovenian co-creation workshop, organised by HFROS, was held in Ljubljana on the 11th of April 2024 and focused on investments in energy efficient renovation projects of public housing and buildings in Slovenia. The workshop's frontal session hosted three speakers, Nina Pečar from the Housing Fund of the Republic of Slovenia, Maja Kos from the Public Housing Fund of the City Municipality of Ljubljana, and Primož Krapež, a consultant for energy renovations at Eco Fund. In general, the workshop shed light on ongoing projects, funding mechanisms, and hurdles encountered in promoting EE building renovations and ensuring sustainable housing solutions. Through comprehensive analysis and stakeholder discussions, the session identified barriers and proposed actionable solutions to enhance EE, promote renovation efforts, and address the complex landscape of housing ownership and management in Slovenia. Then, a presentation of current Eco Fund tenders, tenders for grants and crediting of energy renovations followed, after which the audience was presented with the Public Housing Fund of the City Municipality of Ljubljana.

Among the main challenges identified during the co-creation session, the following should be mentioned, to be explored further in detail in the table of paragraph 4.2.2.:

- Working with the complex system of energy renovations.
- Legal barriers.
- Long payback periods.
- Insufficient and unattractive grants.
- Lack of possible reimbursement of investment.
- Outdated regulations for non-profit public rental housing.
- Fragmented ownership structure that makes decision-making difficult.
- Lack of awareness about EE renovation projects and their benefits.

Despite that, the debate showed that there is a lot of potential for energy renovations, as it is a much felt need all over the country.

4.2.2. Key Findings

<i>Obstacles</i>	<i>Possible solutions</i>
Long payback period for investing in Social Housing renovation.	Development of dedicated grant to encourage investments in EE renovations.
Insufficient attractiveness for investors.	Lower interest rate on loans for the energy renovation of buildings.
	Lower requirements and application conditions for the allocation of funds.
Insufficient grants for the SH sectors, and lack of dedicated grants for energy efficiency renovations.	New calls for grants and increase in existing grants sharing for SHOs.

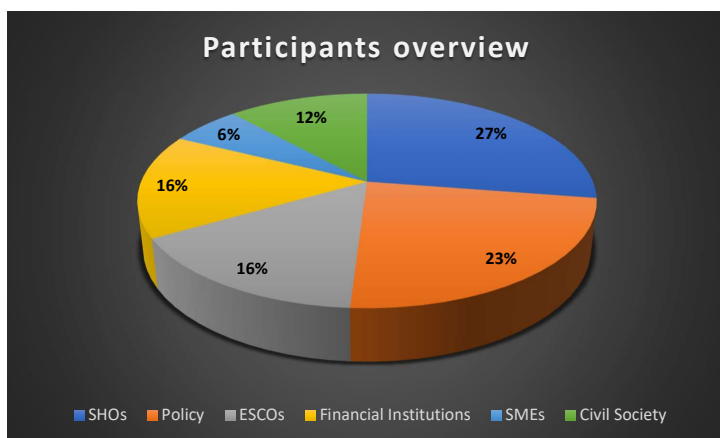
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Fragmented ownership structure for SH sector that blocks a coherent decision-making.	Building consulting tables among public authorities, tenants associations, energy providers, and civil society representatives.
Outdated regulatory framework for non-profit public rental housing.	New regulatory adjustments with a human-centred perspective.
Low-income tenants cannot afford EE renovations without support.	Financial institutions now offer more favourable loans for energy renovations compared to the past.
Poor information about the renovation measures and the expected effects on the health and quality of the user's stay, as well as insufficient understanding of the technical possibilities.	Campaign to improve awareness and involve the community.

5. Denmark

5.1. First workshop

Date and location	11 th of May 2023, Copenhagen
Target group level (Local, regional or national)	Regional, National
Topic of workshop	“Energy saving, data, and financing energy efficiency in the social housing sector”
Participants	
Total number of participants	51



5.1.1. Introduction

The first Danish co-creation workshop, organised by the Association of Social Housing Companies, BL, and European Green Cities and held on the 11th of May 2023 in Copenhagen, focused on improving the financing of investments in energy renovations for social housing companies. It brought together 51 stakeholders from the sector to discuss the utilization of ESCO financing models for energy renovation initiatives.

The primary objective of the co-creation workshop was to facilitate the exchange of information and experiences among stakeholders. The aim is to establish a permanent dialogue among relevant stakeholders at a regional and national level to develop suggestions on financial support for energy refurbishments in social housing and to later replicate successful activities and showcase best practices, ultimately leading to the development of recommendations at the EU level.

During the workshop, participants had the opportunity to discuss financial models and identify barriers related to energy measures in housing associations. The workshop also explored how intelligent data management tools can optimise energy efficiency as a crucial aspect of the green transition in the social

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housing sector. As part of the event, a competition was held to provide ESCO financing guidance for an energy renovation project supported by the energy service company SUSTAIN.

One significant outcome of the workshop was the recognition of the necessity to develop and implement an "ESCO 2.0 Model". This model would adopt a holistic approach to financing energy savings and leverage data management tools in social housing residential buildings.

Commentato [GB1]: Non ci sono informazioni aggiuntive su questa "competition", vero?

5.1.2. Key Findings

Obstacles		Possible solutions
High initial investment costs for energy renovations.		Exploring financing options such as ESCO models or seeking government grants and incentives to offset these costs. Existing doubt: the option of ESCOs is generally regarded as a good idea, but complex in its realisation also due to bureaucratic aspects.
Confusion in roles and responsibilities among private and public actors.		ESCOs should operate with municipal approval. The Municipality should supervise the financing in social housing companies, and there must be a motivation if, for example, suspensions are used for financing.
Limited knowledge and awareness among residents and tenants.		Emphasising the importance of education and knowledge-sharing through communication material to inform and engage residents in energy-saving practices. Clear information and incentives can encourage behavioural changes.
Technical complexities and outdated infrastructure.		Working closely with utility companies e.g., HOFOR to assess and upgrade the building's technical systems, improving energy efficiency and reducing heat consumption.
Lack of motivation and commitment from housing associations.		Setting clear green objectives and integrating sustainability into the CSR profile of housing associations. This can be achieved through knowledge sharing, benchmarking, and showcasing successful case studies.
SHOs expressed need for guidance in EE investments.	lengthy and resource-intensive process for social housing organisations to access financing sources for energy measures from the Danish National Building Fund.	Supporting the SHOs in understanding the bureaucratic process, as well as and identifying ways to streamline it.
Perception of the risks associated with giving loans to social housing organisations for energy refurbishments.		Having financial guarantees from organisations, like the Danish National Building Fund or the local Municipality, can significantly reduce or eliminate the risk for lenders. In Denmark, there are banks offering "green loans" on more favourable conditions, issuing green bonds.

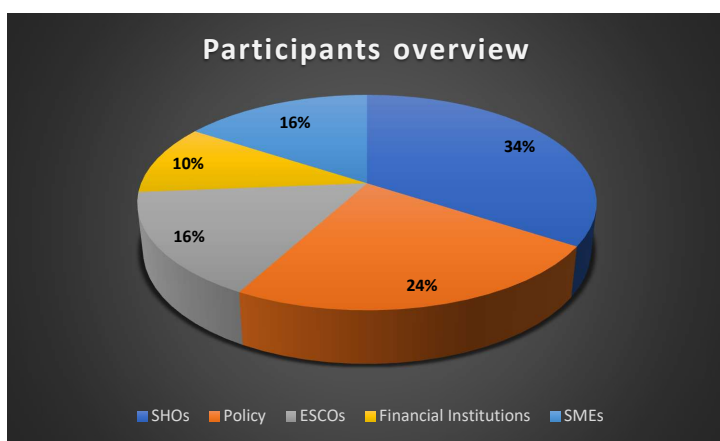
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There are currently no regulations requiring public authorities to provide guarantees for profitable energy measures in social housing.	Regulations should be implemented to make these guarantees mandatory, providing financial security for social housing organisations undertaking such projects. This would streamline the implementation of energy efficiency initiatives in social housing.
Daily communication with tenants can be time-consuming and difficult, with concerns raised about miscommunication due to the use of technical language that tenants may not understand.	<p>Making operational success visible to residents, but also potential benefits for the future, in terms of financial savings, energy poverty tackling, improved living conditions, and environmental impact mitigation.</p> <p>Informing residents using simplified language, providing educational materials, and engaging tenants in the decision-making process.</p> <p>Showcasing how to set goals to reduce energy consumption.</p>
Strengthen the competence level of the operating employees.	Training operation employees, otherwise the process will be costly and inefficient.
Lack of ownership for community towards the intervention.	<p>Raising awareness of energy consumption and its impact on both the environment and cost savings to encourage a larger degree of ownership.</p> <p>Promoting awareness about the importance of energy management and its impact on both the environment and cost savings is crucial.</p> <p>Fostering a sense of responsibility, engagement, and empowerment the staff members and residents will become active participants in achieving energy efficiency goals and creating a sustainable future.</p>
A continuous new roll of staff members.	Identifying adequate resources and providing adequate training to new staff members. Fostering a sense of ownership and encouraging active participation to give them a voice and involve them in energy-saving initiatives.
No prior experience with Computer Technology Services (CTS) software, an identified crucial tool in supporting energy operations.	Training program for employees: providing adequate training to new staff members on the usage of the data management software.
Time management problems.	Using management tools.

5.2. Second workshop

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Date and location	12 th of September 2023, Aarhus
Target group level (Local, regional or national)	National
Topic of workshop	“Energy saving, data, and financing energy efficiency in the social housing sector”
Participants	
Total number of participants	38



5.2.1. Introduction

The second Danish co-creation workshop, organised by BL and European Green Cities in Aarhus, Denmark and held on the 12th of September 2023, focused on financial models and energy efficiency in social housing. Involving 38 stakeholders, the workshop was a continuation of the previous workshop held in Copenhagen on 11th of May, 2023, with a specific focus on the local perspective in this region. The main objective was to foster dialogue among stakeholders, leading to regional and national suggestions for financial support in social housing energy refurbishments. The workshop also delved into financial models, identified barriers, and explored data management systems for optimal energy efficiency. Additionally, a competition provided ESCO financing guidance for an energy renovation project supported by SUSTAIN.

5.2.2. Key Findings

Obstacles	Possible solutions
Tenants find it difficult to act sustainable on a daily basis.	Setting clear green objectives to integrate sustainability into the department.
Limited knowledge and awareness among residents and tenants.	Education and knowledge sharing through communication material to inform about energy-saving practices. Clear

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	information and incentives can encourage behavioural changes.
Lack of communication among stakeholders to effectively tackle energy poverty.	Enhancing communication between financial institutions, investors, and housing organisations, addressing energy poverty challenges in a more concrete way.
Lack of technical and technological capacity among housing companies, leading to a significant pool of unrealised energy retrofitting measures within the social housing sector.	Involvement of ESCO companies. An innovative “ESCO2.0” model was presented, in comparison with the “ESCO1.0”.
Political barriers hindering social housing companies from engaging in PV electricity production.	
Confusion in responsibilities distribution.	Setting clear procedures to know who in the organisation is responsible for what.
Need for innovative approaches for sustainable and efficient energy utilisation.	Optimising energy efficiency through data management tools tailored for social housing.
Need for additional funding means, regulated at government level, as well as alternative financing models and investments in energy consumption.	Aarhus Municipality highlighted the creation of the Division of Funding, that focuses on EU funding projects as a supplement for other financial initiatives
Need to implement a holistic approach, focusing on overall housing costs rather than isolated rent expenses.	Reduced operational and repair costs emerged as a positive factor associated with energy measures. These savings need to be factored into cost models.
Technical barriers: implementing PV electricity production for tenants requires the installation of secondary electricity metres in each apartment.	A business model that streamlines the funding process for energy initiatives was presented by NAVITAS. Under NAVITAS's model, the social housing department legally owns the facility with the installations, with the bank requiring a guarantee for facility repayment. In NAVITAS eyes, this approach ensures a clear ownership structure and financial stability. Crucial to the arrangement is the electricity price, which places the associated risk on the department. Any decrease in the agreed-upon rate per kW shifts the risk burden to the department. In the event of resignation, the entire savings burden falls on the department. NAVITAS is no longer part of the financial calculation, emphasising on the importance of strategic planning and risk assessment.
Regulations on side activities prevent social housing companies from being full members of energy communities.	
Lack of understanding regarding obtaining loans, resulting in missed opportunities for energy projects.	Fostering a widespread adoption of the ESCO models in the SH sector.
Too high risks for entities lending money for SH EE renovations.	Obtaining financial guarantees from entities like the Danish National Building Fund or the local municipality.
	Widespread engagement and replication guidelines based on positive outcomes.

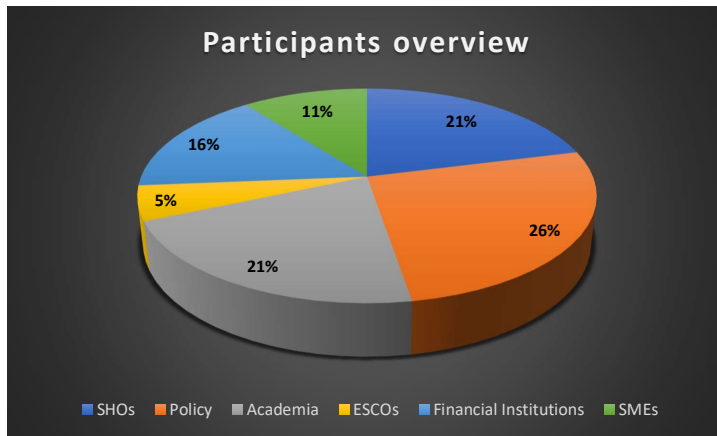
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Need to advance clean energy production, promote energy savings, and enhance the diversification of energy supplies.	Creation a platform for knowledge-sharing and elevating the overall standard of energy efficiency initiatives.
Challenges in making recycling accessible and the role of human behaviour complicates the process	Emphasising the environmental impact of recycling practices, especially the significance of reusing materials and the energy-saving potential in aluminium recycling.
A key theme explored was the disparity between energy consumption and environmental sustainability within the energy value chain.	
No external enthusiasm about the work.	Highlighting the successful story of the department to foster behavioural changes within departments.
Need to strengthen the competence level of employees.	Enhancing employee expertise is deemed essential. Aarhus Municipality has identified the need for training operation employees.
Need to avoid abrupt adjustments could significantly impact the health of individuals, necessitating a nuanced approach to avoid adverse consequences against highly vulnerable population.	Developing reliable data management systems (e.g., for heating control). Implementation of proactive monitoring systems, to avoid repercussions if technical failures occur, affecting both consumption and financial aspects.
Lack of perception of how critical is the role of continuous consumption monitoring, especially from a financial point of view.	Establishing effective facility regulation becomes a prerequisite for ensuring energy-efficient operations.
Need for heat reuse strategies.	Utilising excess heat for cooling purposes rather than ventilation

6. Spain

6.1. First workshop

Date and location	8 th of June 2023, Barcelona
Target group level (Local, regional or national)	National, European
Topic of workshop	Side event to “International Social Housing Festival 2023”
Participants	
Total number of participants	38 to the side event, >500 to the conference



6.1.1. Introduction

The first Spanish co-creation workshop was held in Barcelona, on the 8th of June 2023, and organised by CIRCE as a side event of the International Social Housing Festival (ISHF). The 2023 ISHF conference was an event that focused on housing and urban development. The conference brought together a diverse group of experts, practitioners, policymakers, and researchers from around the world to engage in discussions and share insights about the latest trends, innovations, and challenges in the field.

During the conference, a wide range of topics related to housing were explored, including affordability, sustainability, architectural design, technological advancements, social equity, and community development.

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Attendees had the opportunity to participate in informative keynote speeches, engaging panel discussions, interactive workshops, and valuable networking sessions. These activities provided a dynamic platform for fostering collaboration and exchanging knowledge among the diverse array of stakeholders present.

The 4th ISHF centred its focus on extracting insights from both well-established and emerging housing systems, in response to emerging global social and economic challenges. A special emphasis was placed on Southern Europe, while encouraging active participation from regions including Asia, Latin America, North America, and other parts of Europe. Overall, the ISHF 2023 conference in Barcelona successfully contributed to advancing the discourse around housing and urban development strategies. By addressing complex issues and exploring potential solutions, the conference aimed to promote the creation of more inclusive, sustainable, and liveable cities.

The specific session titled "Tech Camp: Demonstrating the renovation wave in the affordable housing sector" featured the participation of Riccardo Coletta, the Coordinator of the SUPERSHINE Project, and Paola Zerilli. They presented three perspectives on integrated renovation methodologies aimed at transforming social housing districts into inclusive smart neighbourhoods.

6.1.2. Key Findings

Obstacles	Possible solutions	
Financial risks.	Financial support from government and private institutions.	
	Financial risk mitigation through grants (including research grants) and subsidies.	
	Support to SMEs and local based value chains.	
	Evaluating financing options like shared saving models.	
Lack of information on green technologies.	Training and awareness programmes on green technologies.	
	Dissemination of research findings on green technologies.	
Legal restrictions/administrative procedures.	Streamlining legal and administrative procedures.	
	Advocacy for policy changes to ease legal restrictions.	
Lack of skilled labour.	Developing partnerships with educational institutions for workforce training.	
Problems with the inhabitants of social housing.	Community engagement and education programmes.	
While there is recognition of the importance of energy efficiency in social housing, the availability of loans at rates in line with market rates has varied in time.	In some cases, financial institutions have offered competitive rates, particularly when the energy efficiency project has been well-structured and demonstrated a clear path to cost savings over time.	The growing emphasis on sustainability and energy efficiency in housing has created opportunities for collaboration between social housing managers and financial institutions, and innovative financing models are emerging to address these challenges more effectively.
Securing loans for EE in SH often requires a rigorous process of presenting a comprehensive project plan that outlines the expected energy savings, return on investment, and the ability to repay the loan.		
Financing requirements and loan conditions can vary widely among institutions.		

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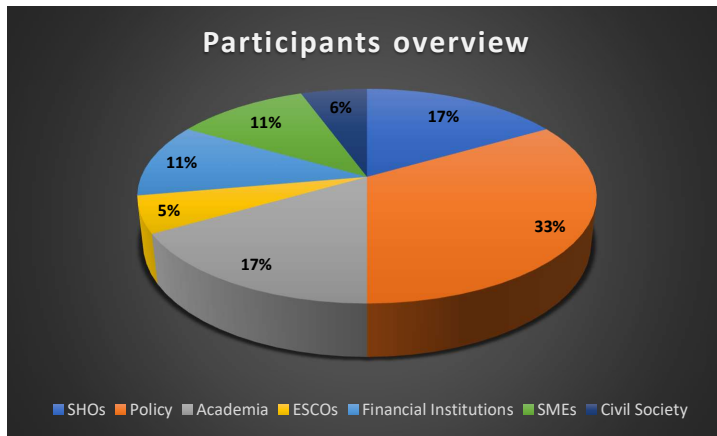
<p>The profitability of loans given to SH for EE may not always match traditional lending products.</p>	<p>Financial Risks.</p>	<p>Awareness campaign for financial institutions in about the benefits of lending funds to SH managers specifically for investing in EE: investments are seen as contributing to environmental sustainability and improving the living conditions of residents, aligning with institutions' commitment to responsible lending.</p> <p>Loans to SH for EE offer a stable and predictable return on investment over the long term.</p> <p>The perceived riskiness of providing these loans is often mitigated through careful project assessment, including energy audits and feasibility studies.</p> <p>Many energy efficiency projects in social housing are structured with performance-based contracts, where the repayment is tied to realized energy savings. This approach reduces the risk for both the housing manager and the financial institution, ensuring that loans are repaid as the expected energy efficiencies are achieved.</p>
<p>Need to address tenants' concerns about the scope of the EE renovation, timelines, and how the refurbishment will impact their living conditions.</p>		<p>Engaging tenants throughout the process, explaining the benefits of energy-efficient upgrades, addressing their concerns, and minimising disruptions to their daily lives. Open and clear communication is key.</p> <p>Fostering a sense of cooperation and ownership in the tenants towards the project.</p> <p>Highlighting the economic, social and environmental benefits (e.g., reduced energy costs, more sustainable house environment, improved air quality and thermal comfort, reduced exposure to hazards like Mold, increasing the social image of the community for commitment for sustainability).</p>
<p>Collaborating with ESCOs is complex.</p>		<p>Best practice of SHOs actively collaborating with ESCOs on several energy-efficient refurbishment projects. These collaborations involved:</p> <ul style="list-style-type: none">comprehensive energy audits to identify areas for improvement, including insulation upgrades, window replacements, and heating system enhancements.ESCOs have played a crucial role in project implementation, providing expertise in energy-efficient technologies and project management.SHOs engaged in Energy Performance Contracts (EPCs) with ESCOs, specifying energy savings targets and performance guarantees to ensure the successful realisation of energy efficiency improvements.Financial support arrangements have also been established, often involving shared savings models

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	<p>where the ESCO's compensation is tied to actual energy cost reductions achieved.</p> <ul style="list-style-type: none">• minimising financial risks and ensuring the benefits of energy-efficient refurbishments as a result.
	<p>ESCOs can help SHOs identify the most cost-effective energy-saving measures tailored to each property's unique needs. The development of Energy Performance Contracts (EPCs) outlines energy savings targets, project timelines, and performance guarantees, ensuring that the energy efficiency improvements meet our objectives.</p>

6.2. Second workshop

Date and time	6 th of May 2024, Zaragoza
Target group level (Local, regional or national)	Local, Regional
Topic of workshop	Investing in Social Housing Energy Efficiency Renovations in Zaragoza
Participants	
Total number of participants	18



6.2.1. Introduction

The second Spanish co-creation workshop was held in Zaragoza, on the 6th of May 2024, and organised by CIRCE. During the frontal sessions, speakers presented several topics, among which:

- Technology & Implementation: energy efficiency, renewable energy production & storage, energy communities, nature based solutions, Positive Energy Buildings (PEB).
- Finance & Business Models: innovative financial tools, mobilisation of private investments and investments in energy efficiency.
- Social Innovation: citizen engagement, social innovation, inclusive transition, and energy poverty.

The roundtable covered several topics and critical points of discussions, which could be summarised as follows:

- Governance: analysis of the components at governance level that affect the decision-making for EE in social housing:
 - i. Multilevel governance;
 - ii. Multi Stakeholder engagement;
 - iii. Proper internal structures.
- Social Innovation: analysis of the collaboration and involvement of the local communities, institutions, stakeholders, and citizens in the decision-making process of urban transformation towards climate neutrality.
- Implementation and technology: analysis of the different technology gaps existent in the cities for the design and implementation of EE in social housing.
- Finance and Business Models: analysis of the city's gaps in their financial capacity and readiness for the acceleration and implementation of the climate action and EE plans.

6.2.2. Key Findings

<i>Obstacles</i>	<i>Possible solutions</i>
Limited access for SHOs to financing and high upfront costs.	Leveraging government grants and subsidies.

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Tenant resistance and lack of engagement.	Enhanced tenant engagement strategies, including education on EE benefits.	
	Using tailored communication strategies to reach different tenant groups, consider factors such as age, language, and technological proficiency to ensure that the information provided is accessible and relevant.	
Complexity for SHOs in managing large-scale refurbishment projects.	Collaborating with experienced ESCOs for technical and financial support.	
High risk and uncertainty in energy saving projections (perception of financial institutions).	Developing risk mitigation tools such as green bonds or public-private partnerships.	
Lack of tailored financial products for EE in Social Housing.	Creating specific loan products to cover the needs of social housing projects with flexible terms.	
Difficulty for ESCOs in securing long-term contracts with reliable payment mechanisms.	Implementing robust measurements and verification processes.	
Challenges for ESCOs in ensuring guaranteed savings.	Offering performance guaranteed and structuring contracts to align with client capabilities.	
Lack of awareness and understanding of energy efficiency benefits.	Community engagement initiatives: involvement of the community for the earliest stages through information meetings, followed by regular updates through newsletters, notices and dedicated meetings about the progress and any changes in the project timeline.	Communicating through examples of previously performed renewable energy renovation works, has led to improved living conditions and tenant satisfaction.
Financial constraints among tenants.	Exploring mechanisms to balance the cost of EE investments.	
Insufficient policy framework and support mechanisms.	Developing local policies that incentivize EE in Social Housing.	
Limited coordination among stakeholders.	Facilitating stakeholder collaboration through joint activities or forums.	
Limited technical expertise and resources for SMEs to participate in large-scale projects.	Providing training and capacity-building programs.	
Difficulty for SMEs in competing with larger firms for contracts.	Encouraging partnership and consortiums to pool resources and expertise.	
Challenges in obtaining loans from financial institutions for EE projects: interest rates on loans for EE projects are generally aligned with market rates, but they can still be high, reducing the financial attractiveness of the investments, especially in these cases where elderly people are involved as tenants.	SH managers should explore specialised green financing options, government-backed programs, and public-private partnerships that may offer more	Engaging with financial institutions that have a proven track record in funding EE projects, preparing thorough project documentation, and

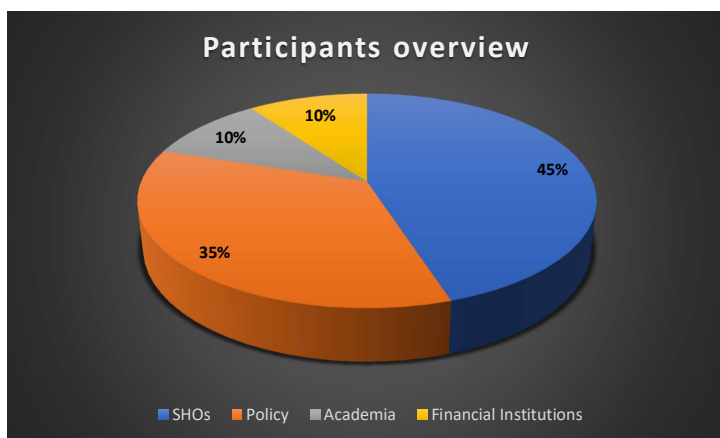
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Loan conditions usually include comprehensive financial documentation, significant guarantees, a clear demonstration of energy savings potential, and compliance with varying local and national regulations in Spain.	favourable terms and lower interest rates.	leveraging future energy savings as collateral.
The application process for loans is complex and time-consuming, requiring detailed feasibility studies, energy audits, and alignment with diverse regional legislation.		

7. United Kingdom

7.1. First workshop

Date and time	11 th of November 2023, Glasgow
Target group level (Local, regional or national)	Regional (for Scotland) and National (for UK)
Topic of workshop	Side event inside the “International Retrofit Conference – BE-FEST ‘23”: Strategy and Development towards meeting Net Zero Emissions for social housing
Participants	
Total number of participants	20 (to the side event), >500 to the conference



7.1.1. Introduction

The first UK co-creation workshop was held in Glasgow, as a side event of the “International Retrofit Conference – BE-FEST ‘23”, on the 11th of November 2023. The organisers, ELE and UoY, set the discussion on the financial returns analysis, the model structure, and whether that would be useful for other Housing Associations, as well as potential synergies and opportunities to collaborate on SUPER-i’s twin project HE SUPERSHINE.

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The stakeholders involved, including Changeworks, discussed Strategy and Development towards meeting Net Zero Emissions for social housing providers in Scotland. As an example, Changeworks manages housing association decarbonisation programmes for six local authorities in Scotland, which defines a pathway to net zero, focusing on demand reduction. Their pathway involves:

- performing a technical analysis;
- archotyping, which identifies quick wins (such as getting rid of mould);
- testing of air pressure, thermography, CO2 and humidity levels; and produces a cost vs energy saving curve.

Element Energy discussed the scale of the challenge for EE renovations in SH: 4.1m of the %m social homes across UK need substantial retrofit by 2050, and the policy set devised by the Scottish Government to drive the operation is the [Energy Efficiency Standard for Social Housing \(EESH\)](#), whose first version of which was published in 2019, and updated in 2023. The latter set a target for all homes to reach Energy Performance Certificate (EPC) rate B by the end of December 2032, a more ambitious target than the analogous E&W target - all homes to EPC rate C by 2030. ELE discussed the barriers to this retrofit, and how the allocated funding compares with the estimates of the total demand, calculated by the CCC. He noted that 17% of residents in social housing in the UK are in fuel poverty, and that some additional funding can be leveraged in these cases.

Scottish Federation of Housing Associations (SFHA) focused mostly on the “Energy Efficiency Standards for Social Housing post 2020 (EESH2)”: what emerged is that there is still some uncertainty around the policy targets that this will make into statute. SFHA also discussed the draft of the Heat in Buildings bill, which required all local authorities to produce a Local Heat and Energy Efficiency Strategy (LHEES) by the end of 2023, and allocated £1.8bn to support delivery of low carbon heating. Furthermore, they mentioned the Green Heat Taskforce, set up under the Heat in Buildings bill, whose purpose is to develop a portfolio of innovative financial solutions for building owners to ensure that, by 2045 Scottish homes, no longer contribute to climate change, as part of the wider transition to Net Zero.

7.1.2. Key Findings

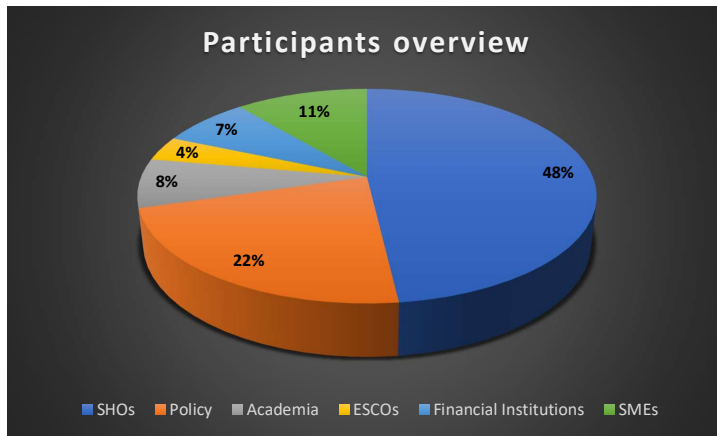
Obstacles	Possible solutions
Mixed tenure buildings pose a particular challenge as building scale works will need agreement from other tenants and building owners, and other building owners may have to part fund the works.	Establishing clear, long-term policy commitment and financial support from central government.
Even though some funding is available, it is usually much below what is needed. Across the UK for example, about £4 billion is available until 2033 for social landlords for decarbonisation. CCC modelling estimates £3-8 billion needed for energy efficiency alone by 2030.	
Similar to E&W, the workforce and supply chains needed to carry out the required work are not fully developed.	
Where smart technologies are installed, such as cogeneration, or smart ventilation,	Making awareness raising and educational resources available.

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residents are often unaware of how to use them.	
Heat networks could represent a guaranteed income stream, and could be simply financed.	Mandate the use of heat networks in housing of a particular density.
The ESCO model is not common in Scotland, and Housing Associations and Local Authorities are not accustomed to using them.	Awareness raising campaigns.
No major funding streams are specifically available to local authorities to meet energy efficiency or fuel poverty targets in their areas.	Increasing funding pots available to local authorities through central government.
Low property values often lead to social housing being sold by councils, so it is lost to private renting where policy is less able to drive retrofit.	Funding to support these at-risk properties.

7.2. Second workshop

Date and location	19 th of June 2024, London
Target group level (Local, regional or national)	Local, Regional and National
Topic of workshop	"Investing in Energy Efficiency in Social Housing: Drivers and Barriers in England"
Participants	
Total number of participants	27



7.2.1. Introduction

The second UK co-creation workshop was held in London, on the 19th of June 2024, and was organised by ELE and UoY. The main focus of the meeting was discussing barriers, challenges and drivers for investing in Energy Efficiency in Social Housing in England.

The speakers introduced at first the scale of the challenges, highlighting the following key points:

- Getting a home to Energy Performance Certificate (EPC) rate C in GB typically involves fitting insulation, but does not require low carbon heat, heat networks or cogeneration, though some HAs are looking at these options. Heat network feasibility assessments are required in densely populated areas, particularly in central London.
- Across the Housing Associations consulted, around 20% of homes do not meet this target, and the cost of meeting that target is around £30,000 to £40,000 per dwelling, SHDF covers around £10,000 - 15,000 of this.
- Getting to net zero will require further improvements of at least as much again, as deep decarbonisation measures will be needed in many cases.
- Around 15 to 20% of the UK population lives in social housing.
- There is a large range of providers, most of which are private firms.
- The key government target is EPC rate C by 2030, though this target is not mandated – it is specified as a target in the 2014 Fuel Poverty act and “generally accepted” as a target, though funding to meet the target is available under the Social Housing Decarbonisation Fund, which allocates tens of millions in each funding round. This funding does not specifically target fuel poverty, and housing associations may have to do this targeting themselves.

Then, the scale of support were presented, revealing that:

- Not all Housing Associations draw on these funds;
- Social Housing Decarbonisation Fund (SHDF) matches HA funding – providing up to half of the costs of each renovation.
- In the current inflationary environment, actual costs may exceed modelled costs for particular retrofits, and the SHDF input does not increase, so that HAs can end up paying 70 or 80% of the cost of a measure. Inevitably, this means fewer measures are implemented, and the demand for new homes makes other demands on the capital resources of GB housing associations.

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- Economies of scale are also difficult to access, and retrofits are often done flat by flat, rather than block by block; SHDF funding is available only up to EPC C, and therefore where a block has a mix of EPC C and below flats, measure such as cladding which would improve the thermal performance of the entire building are not eligible for support.
- The Recycled Capital Grant is also available to HAs and has lower administrative overheads, but as it sits on the balance sheet it doesn't move the Profits & Losses (P&L).
- Some Housing Associations felt that in addition to the absence of clear policy targets to get to net zero housing, and the issues with funding and supply chains, the issue had fallen down the political priorities.
- An election in early July is expected to bring in a new government, there was some cautious optimism that net zero and housing would become more politically relevant.
- Some participants also felt that the relevant set of regulations was changing too fast, and that having got to grips with operational and embodied carbon, now e.g., ecological compliance requirements were making this task more complicated.

Furthermore, the meeting showed how the supply chain is also not well developed, and a huge upskilling programme is required, there does not appear to be the required level of support for this. Heat pumps and district heat are particular areas where there is insufficient expertise, the new heat network regulations and zoning were raised as helpful policies.

Another main finding of the workshop was that contracts with residents are an issue; some developers had looked at Energiesprong¹, but could not demonstrate to an adequate standard that there would be a benefit to residents. Residents in some cases turn down improvements to their homes – in these cases the same measures can usually be fitted to other properties in the HA portfolio. Often residents prioritise lack of disruption over marginal energy savings, especially where they are at home during the day.

In conclusion, a reflection on the opportunity of the ESCO business model was made: the ESCO model is not widely used in E&W, and housing associations are not familiar with instances where this model has been successfully deployed. Some of the HAs that attended the meeting were consulted to issue sustainable bonds, which fund energy efficiency measures across their portfolios.

7.2.2. Key Findings

Obstacles	Possible solutions
Limited funding available through SHDF, especially in the current inflationary environment.	Peg funding is based on an index of prices, such as the CPI.
Economies of scale are hard to access given SHDF funds only available on a per dwelling basis, up to an EPC of C.	Blended funding, or funding available on a per block or development basis.

¹ <https://energiesprong.org/>

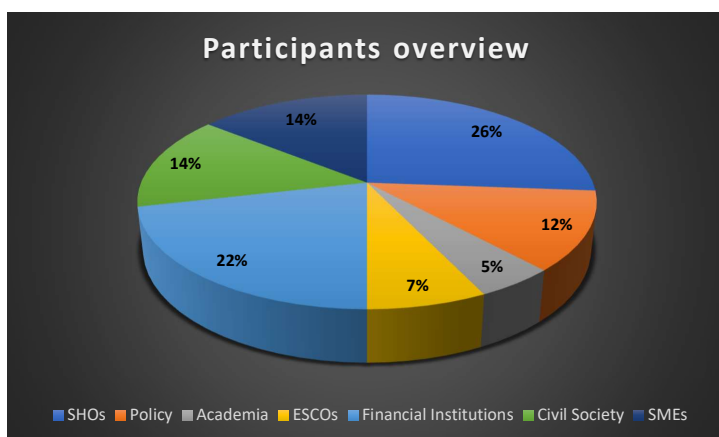
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Recycled capital grant sits on the balance sheet, not P&L.	Restructure the way support is given to HAs, based on environmental performance, shadow price of carbon, etc.
Limited supply chain, and limited skilled workers for low carbon heat and heat networks.	Large up-skilling programme required.
UK housing associations have limited experience of working with ESCOs, and their building models.	Awareness raising could be achieved through pilot schemes.
Local authority funding through the central government fell by over 50% between 2011 and 2021.	

8. Belgium

8.1. First workshop

Date and location	22 nd of May 2024, morning session, Brussels
Target group level (Local, regional or national)	Local, Regional, National (French speaking audience)
Topic of workshop	“Energy Renovation of Social Housing in Belgium – French Event”
Participants	
Total number of participants	42



8.1.1. Introduction

The first Belgian co-creation workshop, organised by EEIP and HE, was held on the 22nd of May 2024, in Brussels, during the morning session, dedicated to Energy Renovation in Social Housing in Belgium and targeting a French speaking audience. Forty-two people attended the event, including representatives from the social housing sector, public authorities from the Brussels Region, public agencies financing social housing in Brussels and Walloon region, and the European Investment Bank.

The workshop focused on energy renovation of social housing in Belgium, covering:

- European and regional energy renovation targets.
- Financing opportunities and challenges for energy renovation projects.
- Regional strategies and programs for social housing renovation.
- Challenges in implementing renovation projects.

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- Public-private partnerships and their potential in social housing renovation.
- Tenant support and engagement in renovation projects.
- Regulatory and administrative challenges in renovation projects.
- Innovative approaches to renovation, including prefabrication techniques.

An overview of the European funding opportunities was presented as well, through a presentation of the main funding instruments listed below:

- ❖ Overview of EU funds: Cohesion Policy (€377 billion), Just Transition Mechanism (€100 billion), InvestEU (€16.6 billion).
- ❖ European Investment Bank (EIB) loans: €2.2 billion for the sector (2022-2024).
- ❖ Recovery and Resilience Facility (RRF): €52.4 billion allocated to energy efficiency investments.
- ❖ Social Climate Fund (2026-2032): Expected €65 billion from emissions trading system.

A discussion sprung from the presentation of the Belgium's Recovery & Resilience Fund allocation, distributed as such:

- Over €1 billion for renovating public and private buildings, including social housing.
- €133.44 million specifically for social housing renovation across regions.

The Walloon Region renovation strategy was then presented and discussed with the audience.

- Overview of 101,780 social housing units across 62 housing companies.
- 80.57% of housing stock built between 1950 and 1990.
- "Plan RENO 2020-2025": Target of renovating 25,000 homes (adjusted to 20,000 due to market conditions i.e. rapidly increasing cost of construction/renovation).
- Qualitative objectives: Minimum Label B energy performance, safety and health compliance.
- Budget: €875.625 million subsidised for renovation works, plus additional funds for social support.

Brussels-Capital region renovation strategy was outlined through the following points:

- a) Long-term investment strategy and funding challenges.
- b) Focus on quality objectives in renovation projects.
- c) Importance of tenant support and neighbourhood context in renovation.

In conclusion of the presentation part of the event, the innovative points of the Modul'Air project was presented:

- i. Innovative prefabrication approach for social housing renovation.
- ii. Partnership between Alliance Bruxelloise Coopérative and Buildwise.
- iii. Benefits include reduced on-site construction time, less disruption for tenants, and improved energy performance.

The main findings in terms of barriers and drivers from the round table and co-creation sessions are listed in the table below.

8.1.2. Key Findings

Obstacles	Possible solutions
Challenges in achieving energy renovation targets within budget constraints, market conditions, and regulatory issues.	Providing stable, long-term financing to support renovation projects, as well as streamlining the administrative procedures.
	Using a more integrated approach to renovation, considering not just energy efficiency but also safety, comfort, and neighbourhood context.

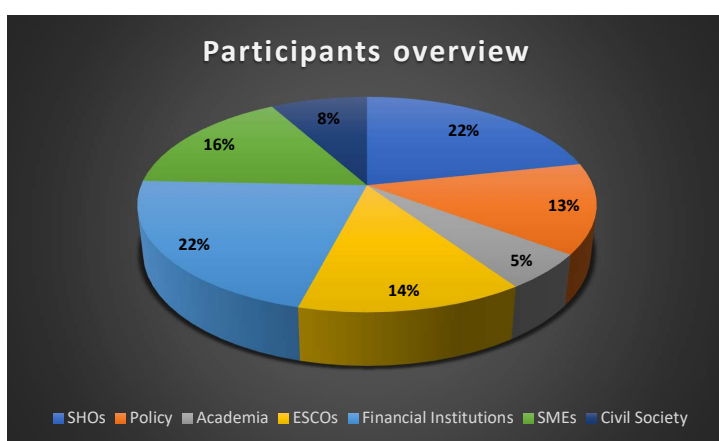
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	Flexibility in renovation strategies.
Administrative burdens associated with EU funding and lack of consistency/coordination between the different tools available.	The need for innovative financing solutions to support large-scale renovation projects.
The impact of market conditions on renovation costs and project implementation.	
The impact of public debt concerns on accessing certain types of financing, especially in the light of de-activation of the general escape clause of the Stability and Growth Pact at the end of 2023.	
ESCO models from scarce to no use in Brussels. To HE's knowledge, there are currently almost no examples of ESCOs working in renovation of social housing in Brussels. One exception is a project which covered renovation of heating systems and installation of PV panels by the ESCO EDF Luminus in buildings owned by Foyer Anderlechtois.	Energy performance contracts as potential financing models, including guaranteed savings and shared savings models.
Regulatory and urban planning challenges in implementing energy renovation measures.	Innovative approaches to renovation, such as prefabrication (Modul'Air project example) and energy communities, were presented as potential solutions to accelerate renovation and improve outcomes.
Challenges in accessing European Investment Bank loans due to minimum thresholds and administrative requirements.	Examples of successful EIB loans, such as the €1.1 billion loan to Société Wallone du Logement for renovating 25% of its housing stock.
The importance of tenant support and engagement in renovation projects.	Best practices to follow: in Wallonia, 2% of the renovation budget allocated for tenant support.
Challenges of renovating occupied housing and the need for patience from tenants.	Development of partnerships with local social organisations to support tenants.
	Modul'Air project example of engaging tenants in the renovation process and addressing their specific needs.

8.2. Second workshop

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Date and location	22 nd of May 2024, afternoon session, Brussels
Target group level (Local, regional or national)	Local, Regional (Flanders), National (Flemish speaking audience)
Topic of workshop	“Energy Renovation of Social Housing in Belgium – English Event”
Participants	
Total number of participants	37



8.2.1. Introduction

The second Belgian co-creation workshop, organised by EEIP and HE and held on the 22nd of May the 2024, in Brussels, during the afternoon session, was dedicated to Energy Renovation in Social Housing in Belgium and targeting a Flemish speaking audience. The event was conducted in English to simplify the communication. Thirty-seven participants attended, including representatives from the social housing sector in Flanders and Brussels Region, the public agency financing social housing in Flanders, an energy service company, and researchers at the Vrije Universiteit Brussel.

The main topic discussed can be summarised as such:

- Social housing landscape and renovation challenges in Flanders.
- Innovative approaches to energy-efficient renovations.
- Data-driven solutions for smart retrofits.
- Circular economy strategies in large-scale renovation projects.
- Financing models and obstacles for sustainable renovations.

More in detail, concerning the first point, an overview of social housing in Flanders was provided:

- 165,000 dwellings, 7% of total building stock.
- 41 local social housing organisations (SHOs), average size 2000-3000 dwellings.
- Challenges: ageing building stock, need for renovation, fragmentation in districts.
- Renovation goals: increase energy-efficient (A-label) dwellings from 6.8% in 2022 to 90% by 2050.

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- Financing: Loans at -1% interest rate, subsidies for infrastructure and energy savings.

A focus on sustainable renovation in expensive regions between Leuven and Brussels followed, as well as the presentation of a pilot project in Hoeselt (9-day renovation system using prefabricated facades) and of case studies in Ghent, Bruges, and Landen. The SLRB, the real estate directorate, provided an insight into social housing companies in Brussels' 10 year renovation plans (80% in inhabited buildings).

The main findings in terms of barriers and drivers from the round table and co-creation sessions are listed in the table below.

8.2.2. Key Findings

Obstacles	Possible solutions
Challenges: ageing building stock, need for renovation, fragmentation in districts.	Rather than pilot/experimental projects, need to work on the scale of renovation, developing general models that are replicable and viable over the long term.
	Use of prefabricated components for faster, less disruptive renovations.
	Emphasis on material reuse and minimisation of material use.
	Exploration of urban-scale solutions, including densification and temporary use strategies.
	Importance of involving both social housing companies and private homeowners in large-scale renovation strategies (at district/neighbourhood level), for both collaboration and upscaling.
Tension between innovative sustainable techniques that are highly expensive and need to renovate large parts of the stock.	Integration of circular economy principles in renovation projects.
High upfront costs for sustainable technologies (e.g., geothermal heat pumps).	Need for innovative financing models, such as split incentive schemes, next to government investment.
Limited financial returns, thin operational margins, need for social housing companies to increase staff/capacity to handle renovations.	Implement split incentive models to balance costs and benefits between housing companies and tenants (based on the experience of ASTER project, financed by EIB)
	In the case of Flanders there's interest in using more private finance to complement government investment.
Need for energy-neutral renovations, carbon-neutral, all-electric techniques.	Best practice of pilot project in Hoeselt: 9-day renovation system using prefabricated facades: <ul style="list-style-type: none"> • Energy performance contracting with bonus/malus system • Monitoring system for energy consumption and living quality • Two years into the project data show residents' behaviour have huge impact • Financial model: combination of investment, subsidies, and energy savings.

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Importance of accurate data in measuring energy performance, especially for decision-making and optimisation of renovation strategies.	Use of smart connected sensors and monitoring systems for real-time data acquisition.	Potential for data-driven energy performance contracting and new value streams.
Limitations of current Energy Performance Certificates (EPCs)		
Case studies showing discrepancies between theoretical and actual energy performance		
Challenges of renovating occupied dwellings (e.g., SES project's 9-day renovation system).	Importance of being able to show tenants they are saving money after renovation and exactly how much.	
	Communication and education programmes targeting tenants.	
	Emphasis on tenant engagement during renovation projects.	
Need for energy coaching to help tenants adapt to energy-efficient homes	Use of monitoring systems and dashboards to provide feedback to tenants.	
Main challenges for SHOs: unavailability of vacant homes, high financial and human costs of forced transfers, tenants reluctant to leave their home or neighbourhood.	Integration of circular strategies in large-scale renovation projects.	
	Multi-stakeholders collaboration in renovation projects, e.g., through a Living Lab approach combining technical, process, and socio-economic aspects.	
	Focus on urban-scale solutions, material reuse, and involvement of private homeowners	
	Collaboration between academia, construction firms, civil society, and financial experts	
	Dedicated working group and toolbox for housing providers.	
Limited financial resources and thin operational margins for social housing companies.	Dedicated funding for staff as well as communication and education programmes targeting tenants	
	Exploration of collective tendering and financing mechanisms for private homeowners.	
	Potential for new value streams through accurate energy performance data	
	Potential for upscaling solutions through knowledge sharing and policy development	

9. Conclusions & Recommendations

Despite having quite different scenarios in terms of structure of the sector and regulation of the Social Housing, all six of SUPER-I countries considered as case studies showed common challenges, especially in terms of bureaucracy and slow processes, insufficient funding (and, most of the time, uncertainty on existing funding allocation criteria) due to recent years SH funding reduction, making it difficult to start and complete new projects. New forms of financing, new tools and new ways of implementing interventions are therefore transversally needed, without weighing more on the already burdened condition of territorial public companies for SH management, as well as other non-private SHO. Therefore, from SUPER-i, ATER would require the proposal of financial instruments that do not entail further indebtedness for them.

Another common criticality is the non-fitting condition of the SH asset, both in terms of insufficient amount and of age of buildings, management and maintenance unmet requirements, and increasing in the population in need of social accommodation, due to rental price rises.

The social impact must be dealt with, in terms of current general failure in involving local communities in project planning and implementation, leading to resistance and social conflict.

Furthermore, regulatory adjustments are generally required, in order to make the structure of housing companies less fragmented (sometimes they are structured but the responsibilities are not clearly allocated), to systematise and institutionalise participatory approach in decision-making, to establish specific working tables, and to explore new forms of financing tools for the operational implementation of housing policies (PPP, Energy Performance Contracts), as well as to make economic benefits for the population clearer, e.g. through supporting the development of locally based value chains for EE interventions, including the community, with the creation of new jobs in self-maintenance of technologies.

The Italian policy dialogue was conducted through the analysis of apparently different contexts, meaning the Sicily Region, affected by all the difficulties of Southern Italy, and the virtuous Northern Friuli Venezia Giulia Region: this comparison allowed to outline a scenario of the problems of the Social Housing sector at the national level, while starting a successful process of collecting stakeholders' contributions towards overcoming the current criticalities.

The necessity of a new general vision for urban ecosystems to tackle the territorial decadence emerged from the dialogue: not only interventions in terms of energy efficiency, but a general wider renovation, going beyond sectoral and party logic, are required, with a human-centred integrated approach (economic, environmental, and social) to be adopted in the construction sector, both at the regional and the national levels, for the requalification of marginalised districts and building, while encouraging a closer cooperation between public and private actors.

The ultimate goal would be the creation of a path towards direct economic benefits for the communities (giving prominence to a locally based value chain), as well as towards widespread social inclusion, obtained by creating job opportunities for self-maintenance of the technological systems installed during the EE interventions, and by directly involving local communities in the decision-making, also providing people accessible recreational spaces, as well as updated structures and equipment.

Another relevant conclusion of the dialogue is the inadequacy of the current management system for SH: anyway, a new commitment from the national and regional government to issue a National Housing Plan that takes into account the needs of operators in the sector emerged. In order to achieve this goal, a participatory approach, the establishment of specific working tables, as well as the openness to new forms of financing tools for the operational implementation of housing policies, are very much needed.

In fact, despite the suggestion of the PPP contracts as a possible solution and current best options, there are unsolved existing doubts, concerning their financial sustainability, the frequent changes in the related

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legislation, the lack of transparency in PPP negotiation and management processes, and the weakness of governance structures and monitoring mechanisms.

In conclusion, it would be important to unify the governance aspects, but also the financial and fiscal ones, for what concerns both housing policies in general and SH in particular, as well as making the institutional structure of housing companies less fragmented. Furthermore, the audience requested the development of specific implementing regulations for the use of Public Funds at disposal of the Region, as well as tailored policies for a better use of money, also streamlining the authorisation process and the bureaucratic procedures. Another element to be addressed, hopefully in the new NHP, is the reorganisation of the assets intended for public and social residential construction, increasing their amount by putting back into use decommissioned properties and housing. In this holistic perspective, governance should not forget to regulate proper support for local associations for social promotions in their role as facilitators of the dialogue among the communities and the public authorities.

From the Slovenian policy dialogue, the establishment of dedicated grants for energy rehabilitation in SH, as well as increasing SHO's share of existing grants for the sector in general, emerged as a quite critical need. Furthermore, to face the confusion and delays in the decision-making process, mostly due to the fragmented structure of SH ownership, a multi-level cooperation among actors, especially between SHOs and ESCOs, for energy contracts, financial supports and EE refurbishment projects, is required: the audience strongly recommended building consulting tables among public authorities, tenants associations, energy providers, and civil society representatives.

In general, targeted regulatory adjustments, with a human-centred perspective, are utmost urgent, also aimed at streamlining the bureaucratic processes, in order to attract investors, who are currently discouraged by the regulatory and administrative complexities.

Furthermore, the Slovenian audience agreed on the significant impact that educating tenants on reducing consumption and promoting energy renovations would bring to the country: to that end, it is necessary to improve the current method of tenants engagement and involvement, maybe using digital tools as support for continuous exchange of best practices, as well as keep communicating the social and economic benefits of the interventions (e.g., decreasing energy bills, improved quality of life).

In addition to the requirement for regulatory adjustment for responsibility distribution among public and private actors for what concerns the SH sector as a whole, the Danish dialogue showed a significant orientation towards practical solutions, through the discussion about new emerging cooperative models. In fact, to face the lack of technical and technological capacity among housing companies, leading to a significant pool of unrealised energy retrofitting measures within the social housing sector, exploring financing options such as ESCO models or seeking government grants and incentives was presented as a possible solution. Nevertheless, considering that cooperating with ESCOs is generally regarded as a good idea, but complex in its realisation also due to bureaucratic aspects, the alternative "ESCO 2.0 Model" was presented and discussed, receiving the endorsement of most of the audience. This model would adopt a holistic approach to financing energy savings and leverage data management tools in social housing residential buildings. Furthermore, the audience agreed on the fact that ESCOs should operate with municipal approval, meaning that the Municipality should supervise the financing in social housing companies, and there must be a motivation if, for example, suspensions are used for financing. Furthermore, in terms of financing criticalities, having financial guarantees from organisations, like the Danish National Building Fund or the local Municipality, can significantly reduce or eliminate the risk for lenders.

In general, a significantly enabling factor was found in enhancing communication between financial institutions, investors, and housing organisations, addressing energy poverty challenges in a more concrete way. In fact, with regard to energy poverty, the need for innovative approaches for sustainable and efficient energy utilisation strongly emerged, together with the requirement for optimising energy efficiency through

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data management tools that should be specifically tailored for social housing, as well as for the creation of a platform for knowledge-sharing and elevating the overall standard of energy efficiency initiatives.

Furthermore, reduced operational and repair costs emerged as a positive factor associated with energy measures, as these savings need to be factored into cost models.

A business model that streamlines the funding process for energy initiatives was presented by NAVITAS. Under NAVITAS's model, the social housing department legally owns the facility with the installations, with the bank requiring a guarantee for facility repayment. In NAVITAS eyes, this approach ensures a clear ownership structure and financial stability. Crucial to the arrangement is the electricity price, which places the associated risk on the department. Any decrease in the agreed-upon rate per kW shifts the risk burden to the department. In the event of resignation, the entire savings burden falls on the department. NAVITAS is no longer part of the financial calculation, emphasising on the importance of strategic planning and risk assessment.

The social perspective was also considered, in terms of recommending to strengthen the competence level of the operating employees, and to raise tenants' awareness of energy consumption and its impact on both the environment and cost savings to encourage a larger degree of ownership.

Spanish policy dialogue stressed how the growing emphasis on sustainability and energy efficiency in housing has created opportunities for collaboration between social housing managers and financial institutions, and innovative financing models are emerging to address these challenges more effectively. In fact, the need for financial support to SHO from the government and the country's private institutions clearly emerged, as well as the one for financial risk mitigation through grants and subsidies. In addition, on a national level, regulation should support local SMEs and locally based value chains.

In general, an awareness campaign for financial institutions about the benefits of lending funds to SH managers specifically for investing in EE should be implemented: investments are seen as contributing to environmental sustainability and improving the living conditions of residents, aligning with institutions' commitment to responsible lending. The perceived riskiness of providing these loans is often mitigated through careful project assessment, including energy audits and feasibility studies. Many energy efficiency projects in social housing are structured with performance-based contracts, where the repayment is tied to release energy savings. This approach reduces the risk for both the housing manager and the financial institution, ensuring that loans are repaid as the expected energy efficiencies are achieved.

On their hand, SH managers should explore specialised green financing options, government-backed programs, and public-private partnerships that may offer more favourable terms and lower interest rates, as well as evaluating financing options like shared saving models, and engaging with financial institutions that have a proven track record in funding EE projects, preparing thorough project documentation, and leveraging future energy savings as collateral.

As for Denmark, Spain's case focused on best practice of SHOs actively collaborating with ESCOs on several energy-efficient refurbishment projects. In fact, ESCOs can help SHOs identify the most cost-effective energy-saving measures tailored to each property's unique needs. The development of energy performance contracts (EPCs) outlines energy savings targets, project timelines, and performance guarantees, ensuring that the energy efficiency improvements meet our objectives. These collaborations involved:

- Comprehensive energy audits to identify areas for improvement, including insulation upgrades, window replacements, and heating system enhancements.
- ESCOs have played a crucial role in project implementation, providing expertise in energy-efficient technologies and project management.
- SHOs engaged in energy performance contracts (EPCs) with ESCOs, specifying energy savings targets and performance guarantees to ensure the successful realisation of energy efficiency improvements.

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- Financial support arrangements have also been established, often involving shared savings models where the ESCO's compensation is tied to actual energy cost reductions achieved.
- Minimising financial risks and ensuring the benefits of energy-efficient refurbishments as a result.

As per the other countries, the social perspective was dealt with in Spain as well: community engagement and education programmes were required, especially training and awareness programmes on green technologies (also with dissemination of research results). Engaging tenants throughout the entire renovation process was deemed necessary, explaining to them the benefits of energy-efficient upgrades (economic, environmental, and social), addressing their concerns, and minimising disruptions to their daily lives, fostering a sense of cooperation and ownership.

The UK dialogue led to significant findings for the country's readiness to proper capillary EE interventions for SH: to start, the meetings showed how the supply chain is not sufficiently developed, and a huge upskilling programme is required, but, to date, there does not appear to be the required level of support for this, meaning that regulation adjustments to advance the supply chain are necessary.

Furthermore, concerning the intervention funding, even though some is available, it is usually much below what is needed, and no major funding streams are specifically available to local authorities to meet energy efficiency or fuel poverty targets in their areas, to which the solution proposed was to increase funding pots available to local authorities through central government.

Funding is also required to support at-risk social housing properties, whose low property values often lead to them being sold by councils, with the result of losing them to private renting, where policy is less able to drive retrofit.

Mixed tenure buildings pose a particular challenge as building scale works will need agreement from other tenants and building owners, and other building owners may have to partly fund the works, therefore requiring the establishment of a clear, long-term policy commitment, as well as of financial support, from central government.

Furthermore, another main finding of the dialogue was that contracts with residents are an issue: some developers had looked at [Energiesprong](#), but could not demonstrate to an adequate standard that there would be a benefit to residents. Residents in some cases turn down improvements to their homes (but in these cases the same measures can usually be fitted to other properties in the HA portfolio): in fact, residents frequently prioritise lack of disruption over marginal energy savings, especially where they are home during the day. In addition to those elements, it must be considered that, where smart technologies are installed (such as cogeneration, or smart ventilation), residents are often unaware of how to use them, making awareness raising and educational resources very much needed.

In conclusion, compared to other SUPER-I case study countries, like Denmark and Spain, for what concerns the UK the ESCO model is not common neither among Housing Associations nor local authorities, making necessary proper awareness campaigns on how to properly use this kind of model for both categories.

Belgian policy dialogue, conducted both with French and Flemish stakeholders, showed significant challenges for the country in achieving energy renovation targets within budget constraints, market conditions, and regulatory issues. Stakeholders agreed on the necessity to use a more integrated approach to renovation, considering not just energy efficiency but also safety, comfort, and neighbourhood context. In fact, rather than focusing on experimental projects, the policy framework needs to regulate general models that are replicable and viable over the long term.

In addition, the government must regulate tools for stable, long-term financing to support renovation projects, as well as streamlining the administrative procedures. Energy performance contracts emerged as potential financing models, including guaranteed savings and shared savings models, split incentives schemes.

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Regulatory and urban planning challenges in implementing energy renovation measures currently require innovative approaches to renovation, and the dialogue brought on the table several best practices coming from already implemented projects: those approaches goes from adopting the use of prefabricated components as a mean for faster, less disruptive renovations (Modul’Air project example) to the emphasis on material reuse and minimisation of material use, to urban temporary use strategies, and establishing energy communities.

The request for collaboration between academia, construction firms, civil society, and financial experts reaffirmed the importance of involving not only social housing companies and private homeowners in large-scale renovation strategies (at district/neighbourhood level).

The audience highlighted the challenges in accessing European Investment Bank loans due to minimum thresholds and administrative requirements, to which the suggestion was to implement split incentive models, in order to balance costs and benefits between housing companies and tenants (based on the experience of the ASTER project, financed by EIB). Furthermore, examples of successful EIB loans for renovating housing stocks were studied as best practice, as well as the case of Wallonia, where the 2% of the renovation budget is currently allocated for tenant support. In the social enhancement perspective, the development of partnerships with local social organisations to support tenants was suggested, on the Modul’Air project example of engaging tenants in the renovation process and addressing their specific needs.