REHOUSE

D1.1

Analysis of Social innovation activities for retrofitting projects

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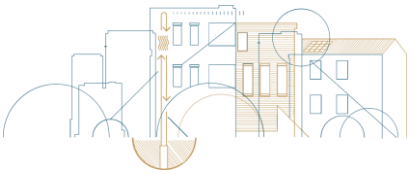

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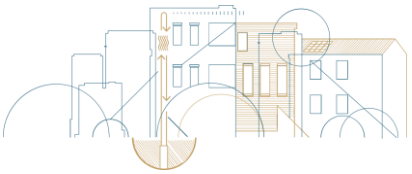

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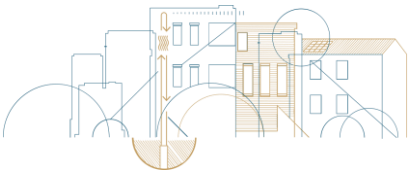


EXECUTIVE SUMMARY

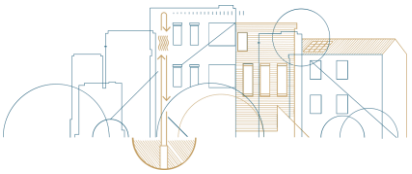
REHOUSE project targets not only to be innovative during the energetic renovation of the buildings but to apply a novel approach to social engagement besides the new technologies. For the project to be successful technologically and socially speaking, the experience and competencies of the project members should meet the expectations described in the project plan. The technical capabilities and proficiency are well covered by the technical partners. In the field of so-called social innovation, however, this is more challenging for the project as some project members do not have in general terms too many previous social experiences and should be complemented by the expertise of other partners.

As the determined aim of the project is to apply the TEPSIE method of social innovation, this presents a unique challenge to the project members. The method is so new, and it was not even a decade before it became widespread, as a result, a large amount of experience is not available to the public. The existing experiences of the project members are more relevant to participation in the technical implementation of previous projects and less typical in shaping social awareness.

In order to increase the experience of project partners in the process and applicable methods of social innovation, this document highlights the academic background of the TEPSIE method. The author emphasizes the phases of social innovation and the possible associated activities and pays special attention to the methods used in the interactive workshops.

The best practices of the social innovation activities for retrofitting projects of the project members are analysed based on the knowledge of the expected method.

In addition, this document includes a description about the creation of the Social Task Forces for each of the demo-sites in the REHOUSE project highlighting their main activities in which Social Task Forces will be involved in the next phases of the project.



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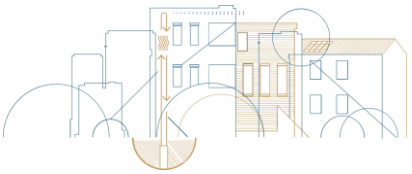

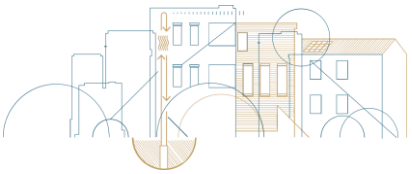

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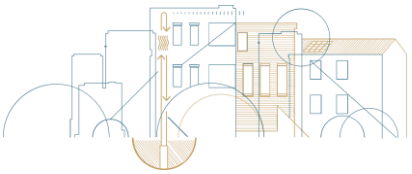
LIST OF ABBREVATIONS

ACRONYM	DESCRIPTION
BIM	Building Information Modeling
D	Deliverable
EC	European Commission
GA	Grant Agreement
GDP	Gross Domestic Products
IDP	Integrated Project Delivery
KPI	Key Performance Indicator
MEL	Measurement, Evaluation and Learning
NTO	Non-Technological Objective
SRI	Smart Readiness Indicator
STF	Social Task Force
STO	Scientific and Technological Objective
T, ST	Task, Subtask
TEPSIE	Theoretical, Empirical and Policy Foundations for Social Innovation in Europe
WP	Work package



LIST OF PARTICIPIANTS SHORT NAMES

SHORT NAME	LEGAL NAME
ARCA	AGENZIA REGIONALE PER LA CASA E L'ABITARE
CARTIF	FUNDACION CARTIF
CEA	COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES
DUTh	DIMOKRITIO PANEPISTIMIO THRAKIS
ENEA	AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE, L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE
FCHURCH	HIT GYULEKEZETE
PLATAN	PLATANPLAN KFT.
RINA-C	RINA CONSULTING SPA
TWR	TECHNIWOOD
WOODS	FAFORRAS FAIPARI KFT.

1 INTRODUCTION

The civil society plays a vital role in articulating social needs. The REHOUSE vision contains a paradigm shift as besides the innovative technologies, the new approach targets the development of local communities based on social and environmental, so-called societal needs and challenges.

Exploration of the social needs, demonstration of the technologies and explanation of the renovations as well lead to a high level of social acceptance of the innovations, moreover energy and environmental awareness.

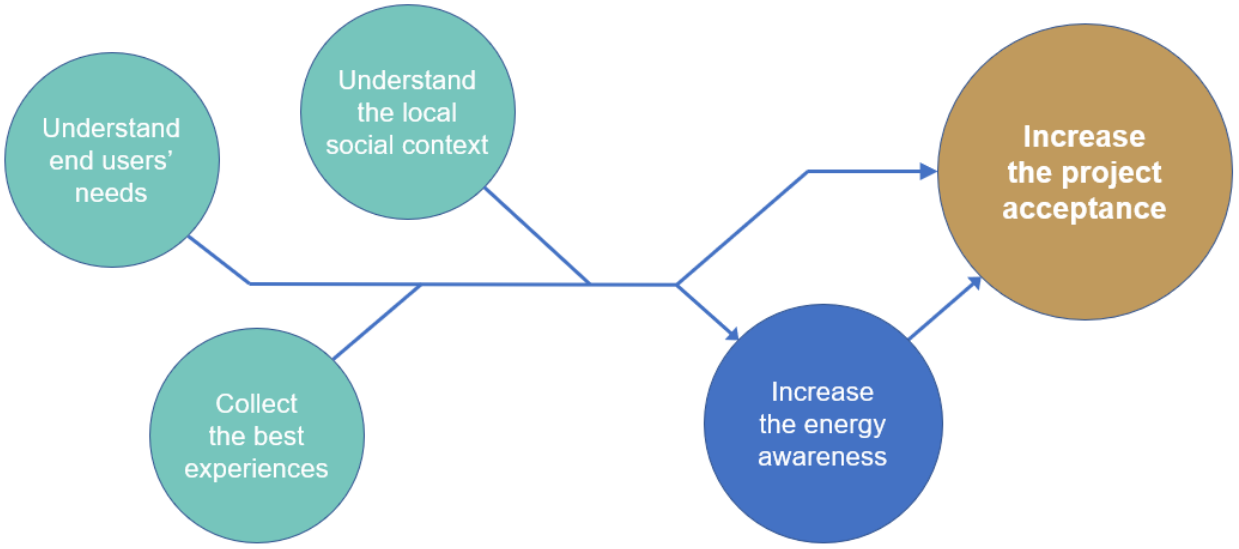
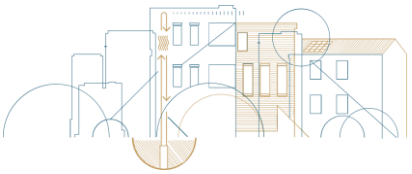


Figure 1 Prerequisite actions to ensure the social acceptance of the REHOUSE solutions

In addition to getting to know the social environment, the successful implementation of the project requires practical knowledge of social innovation. Integrating social needs and ideas into technological projects serves the people-centred social engagement strategy.

The concept and methods of social innovation are an essential component of the Horizon Europe Research and Innovation Programme to solve and tackle many societal challenges. It is an important warning of the risk that the use of tools and approaches from different projects without due care and knowledge of local social contexts can cause more harm than good. The proper ability to support, manage and develop innovations of this kind should become a core competence of the project member organizations by which projects could be analyzed and planned with greater confidence.



1.1 PURPOSE AND SCOPE OF THE DOCUMENT

Based on the previous experiences of the project partners, by analyzing the retrofitting projects which had a great impact in achieving changes in the behavior, habits and awareness of the users, the document tries to get closer to creating effective and practical social innovations.

The purpose of this document is to present the possible methods of creating social contacts, starting from basic information to co-design. Although the scientific overview was not one of the original aims of the document, in addition to reviewing the previous experiences of the project members, it provides background knowledge on the theory and possible practical implementations of contact creation.

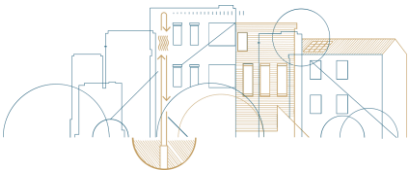
1.2 CONTRIBUTIONS OF PARTNERS

A disadvantage of the novelty of social innovation is the limited experience in the practical implementation of building social engagement. Mainly, the demo site responsible partners, as well as CARTIF, were able to contribute with experiences related to social innovation.

Table 1 Contributions of partners

PARTICIPANT SHORT NAME	CONTRIBUTIONS
CARTIF	Experience
CEA	Experience
DUTh	Theory
ENEA	Experience and Theory
FCHURCH	Experience and Theory

As the purpose of the project social plan is to apply the TEPSIE method, the applicability of the relevant experiences must be interpreted in a new approach.



1.3 RELATION TO OTHER ACTIVITIES IN THE PROJECT

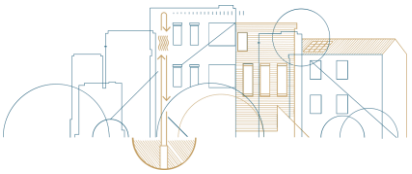
The tasks under WP1 together serve the proposal for social innovations to be implemented on the four demo sites. The three pillars of the first deliverables of the WP1 (D1.1, D1.2 and D1.3) are the current study of the existing experiences of the project members, as well as getting to know the user's social contexts and needs setting the basis for the next social activities in the REHOUSE project.

Table 2 Relation to other Deliverables

ACTIVITY (DELIVERABLE NUMBER)	DESCRIPTION
D1.2	Social situation of the four local contexts
D1.3	Report of Social requirements identified in the elicitation activities
D1.4	Design of social activities tailored to the local contexts
D4.6	Report of the social innovation activities launched in the four demos

In terms of social aspects, it is relevant to remark that the objective of the WP4 is to introduce an integrated project implementation (IPD) methodology. The IPD stands in contrast to the traditional delivery model, where a company organizes and implements the investment using a top-down approach. Instead, the IPD promotes collaboration and communication between the various parties and seeks to accommodate grassroots needs or initiatives.

The demonstration of the renovation packages carried out on the four demo buildings is part of the social innovation activity. The primary goal is to involve users and owners in the detailed planning processes of the renovation packages, as well as to achieve an appropriate change in habits and awareness. Through the WP4 social actions the support of the Social Task Forces is vital to secure the co-creation and co-design of the solutions.



2 OBJECTIVES

2.1 PROJECT OBJECTIVES

The core objective of REHOUSE is to design and demonstrate in an operational environment innovative Renovation Packages. Two types of actors meet in the project, technical partners in charge of the design and development of technologies, so-called *renovation packages* and the organizations providing buildings, so-called *demo sites*. As the project members arrive on two lines, the project has two threads twisted together in the project: a technological and a social approach. This duality is also reflected in the division of the objectives into two groups:

- ***STO*** *– Scientific and Technological Objectives*
- ***NTO*** *– Non-Technological Objectives*

REHOUSE differs from traditional solutions not only in the innovative concept of the technologies deployed during the renovations but also in that it pays attention to promoting social engagement to endow the renovation and increasing energy awareness. As the project threads are woven together, the ideas will be intertwined to each other.

In general, the objectives can be result-oriented or process-oriented. The two orientations are never sharply separated but we always apply a kind of their combination. The term result-oriented is used to describe the purpose of an organization or project that focuses on the outcome. The process-oriented approach focuses more on the values to be considered during the implementation of a project. We have to imagine it as a scale and our project and its objectives will be located between the two extreme values of this scale. Both STOs and NTOs may have more result-oriented or more process-oriented objectives.

2.2 SOCIAL OBJECTIVES

At the core of the renovation, the aim stands that renovation packages contribute to a better quality of living, a healthy indoor environment and the users' comfort. Affecting the residents and the building owners and maintainers, the interventions should be economic effective to reduce the energy and maintenance costs. In addition to the expected outcomes, countless methods are defined that must be applied from the design to the implementation of the project.

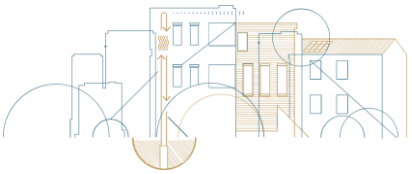


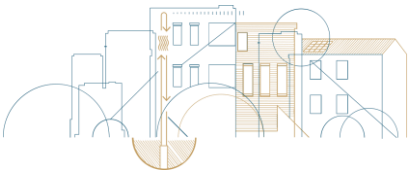
Table 3 Non-Technological Objectives for the REHOUSE project

NTOs	DESCRIPTION
NTO#1	People-centric social engagement strategy
NTO#5	Novel business models
NTO#6	Market uptake, scalability and replicability
NTO#7	Dissemination and communication

NTO#1 is not expressed as a result, but it is a procedural objective as a principle to be followed during the implementation. REHOUSE has to rely on a solid social basis. Efforts must be made to ensure that technical objectives meet social needs. In order to increase the renovations and technologies acceptance, the residents' and owners' perspectives should be taken into consideration in the project, the citizen-centric validation approach should be applied.

'NTO#1: Implementing an inclusive people-centric social engagement strategy to endow the renovation wave with a resident and owner perspective towards affordability, satisfaction and attractiveness of sustainable renovation. Renovation packages design in line with the TEPSIE approach to include social innovation in technology projects by simultaneously meeting technical and social needs more effectively than existing solutions.'

REHOUSE Grant Agreement Annex – Description of the Action (Part B)



3 SOCIAL INNOVATION

The broader interest in social innovation has been a fairly recent phenomenon in recent years. More systematic innovation methods are being applied to some of the most challenging social problems of our times. Often the most effective solutions develop through collaborations between the private and public sectors, including the civil society actors created by combining several approaches.

3.1 TEPSIE

The first stage of REHOUSE methodology is focused on ensuring a people-centric approach to buildings renovation, in line with the TEPSIE definition of social innovation. As the name suggests,

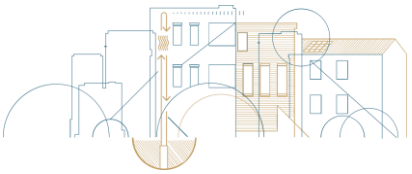
'Theoretical, empirical and policy foundations for building social innovation in Europe'

is one of the methodologies for social engagement. Researchers and experts were involved in an EU project to create a consensus over the definitions of social innovation and to build knowledge of TEPSIE. Some factors motivated the creation of the method:

- *Innovation must be supported. Otherwise, it can be unrealized because it stumbles over obstacles ranging from regulations, rigidities and scarce resources to prevailing practices and resistance of counter-interested stakeholders.*
- *New actors can be empowered to become agents of change. We need a better understanding of how civil society can be effectively used, encouraged and supported.*
- *Social innovation should be increasingly a component of technological innovation as technological innovation affects social context. For example,*

> *"a shift towards renewable energy sources is unlikely to succeed unless accompanied by initiatives to change social habits and ingrained ways of working."*
>
> *Theoretical, Empirical and Policy foundations for building Social Innovation in Europe*[1]

[1] **https://cordis.europa.eu/project/id/290771/reporting**



The researchers sought to synthesize numerous approaches and as a result TEPSIE's definition of social innovation was created based on complex, theoretical, empirical and policy foundations with the following five criteria:

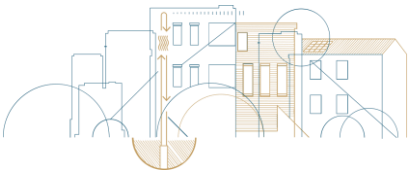
- *Social innovation is new to those involved in its implementation.*
- *Social needs are recognised, articulated, shaped and legitimised.*
- *Social ideas are put into practice.*
- *Beneficiaries and stakeholders are involved or engaged in the development of social innovation or its governance.*
- *Social relations are transformed by improving the access to power and resources of specific target groups.*

Social innovation is different from traditional project management techniques and it can face old routines and obstacles. The project members have to count on potential negative effects and a high level of uncertainty due to its novelty, but its success can only be seen in hindsight.

Eventually, social innovation means a bunch of activities involving stakeholders and representatives of civil society in the project. Some solutions make excellent use of bottom-up models exploiting the local know-how. This process is successful because the activities fit the social and environmental conditions. To determine the so-called zero point where the social activities will be started, we have to gain accurate knowledge of the local social context by statistical data collection, end users survey and background information and this is the main outcome of T1.1 activity.

3.2 SOCIAL ACTIVITIES

Social activities are very diverse. In a scientific approach, they can have a variety of typologies and taxonomies, depending on the dimension we take as the basis of the investigation: organizational forms, regulatory forms, financial forms, potential targets, expected services and products as well. In a practical approach, however, it is more important to recognize the factors that help us choose appropriate activities to involve people in the project.



The people-centric social engagement as a social objective of the REHOUSE covers primarily activities to endow the acceptance of the renovations, from identifying the technical and social needs to promoting the solutions. For building a higher social acceptance, in the case of energy renovation, especially applying innovative technologies, a piece of essential and advanced technical knowledge is needed. The secondary social objective of the project, to increase the energy and environmental awareness of the people, is practically establishing the appropriate knowledge so that stakeholders can articulate their needs. Logically, the secondary objective precedes and prepares the primary one. As the applied technologies have specifications, and the technical planning of the project requires a high level of technical knowledge, this roughly marks the end point of potential involvement. Concisely, in the REHOUSE project, social innovation starts from a relatively low knowledge level and likely lasts until social acceptance increases.

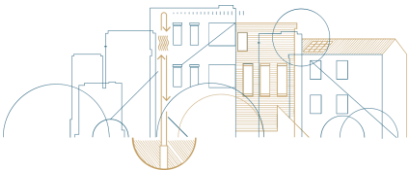
Social activities always face challenges and barriers, including the absence of participation intention or learning skills. Generating interest in the project, developing competencies, promoting collaboration among the stakeholders and maintaining motivation require different methods. As the applicable social innovation activities depend on the level of motivation and knowledge of the audience, it is worth first defining its phases.

3.3 PHASES

The phases are the successive functional periods of the social activities to build and increase the engagement of the end-users and other actors. Starting with discovering the potential stakeholders through acknowledging their interests to involvement in the project.

Table 4 Phases of social innovation

PHASES	DESCRIPTION
Connection	Mapping of the potential stakeholders and introduction of the project
Exploration	Understanding the needs of the stakeholders
Planning	Design of the implementation with the stakeholders
Commitment	Ensuring the acceptance of the project by the stakeholders



3.4 ACTIVITY TYPES

The types are several forms of materials and events in certain phases of social innovation. According to the project plan, a specific set of social actions is preferred, like peer learning and co-design workshops with professionals, specific thematic schools with workers, and co-creation events with citizens. The common feature of the abovementioned actions is interactive communication. Both understanding and learning need a certain knowledge basis, so the workshop activities have to be preceded by information material and events. Ultimately, the goal is to have a sequence of contents and events that leads the end users and other stakeholders from information to active participation in the project. The following activity types will constitute the backbone of the REHOUSE social innovation approach:

3.4.1 ONLINE CONTENTS

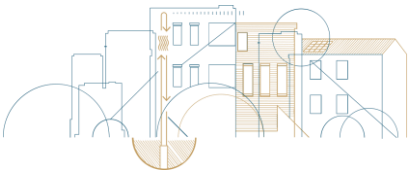
Any website or newsletter can provide the stakeholders with general or detailed information about the project. Efficiency can be increased with infographic diagrams or thematic videos. Typically, there is no interaction with users. It can be helpful to draw attention to the project before making contact.

3.4.2 OFFLINE MATERIALS

The primary activity for attracting attention, especially if we do not have online access to stakeholders. This covers flyers, printed newsletters and announcements. In some cases, this may include various works of art. It is mainly important in the initial phase, but it accompanies the entire project.

3.4.3 INFORMATION POINT

Permanent or temporary, one-stop physical contact point. Its advantage over events is that it offers continuous availability. In addition to the distribution of printed content, visual publications with diagrams or illustrations help people to grasp complex issues quickly. A technique often used in real estate investments, it is suitable for demonstrating developments and improvements with models. In the case of operation with a team, it is possible to establish interaction and active contact, and without staff, it is also accessible without opening hours.



3.4.4 PUBLIC FORUMS

Meetings are organized for a defined circle of stakeholders to inform them personally. It is worth creating appropriate media activities before the events to motivate participation. The efficiency of the event can be increased by the participation of experts. It covers several versions of group meetings, such as boards, assemblies or demonstrations. Sometimes, it can also function as a decision support board like the Social Task Forces (STFs) created as part of the REHOUSE project.

Its primary purpose is to provide personal information to stakeholders. It may be a guided event applying prototyped tools to demonstrate the development, generating insight into the pros and cons of each idea before implementation. It opens the possibility for interactive communication, where people can express their opinions and ideas, and the manufacturer can get feedback.

3.4.5 INTERVIEWS

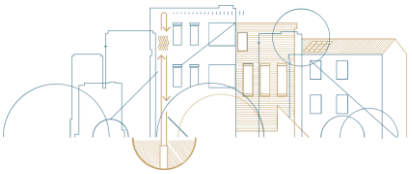
It aims at a deeper understanding of consumer situations and needs through personal interactions. The individual or group discussions can include closed surveys or semi-structured interviews is open to receiving interviewees' ideas. It is a very important type of social innovation in the phase of exploration.

3.4.6 WORKSHOPS

Thematic events are dedicated to learning processes. Several methods can be adapted to the level of knowledge of the audience. The lectures and practical training given by experts typically use the vertical approach. Although knowledge expansion is essential, a horizontal approach helps to avoid a classroom-like feeling and creates a productive atmosphere for group work.

Bringing different stakeholders and different communication cultures into one space is an essential part of the project. For the reason of smooth communication, the set of ground rules can help to open the opportunity for brainstorming. Incorporating technology boosts interactivity making for a more exciting result.

The workshops promote an assertive understanding of different aspects and thus lay the foundation for peer learning, later the co-design. In different periods of the project and different phases of social innovation, the training and workshop should be organized recursively.



3.4.7 VISITS

Its function is to present an existing method or solution. Due to the cost involved, these events are organized for a limited range of stakeholders, mainly for the representatives of interested parties. It is usually applied when catching social engagements and acceptance is more complicated or more difficult due to obstacles.

3.5 WORKSHOP METHODS

Several methods can promote interactivity and facilitate engagement in the project. According to the project plan, the workshops are the most efficient type of social activity. Before listing the applicable tools in alphabetical order with nut-shell descriptions, to understand what methods are associated with workshops, it is essential to know the difference between conference, seminar and workshop. These terms may be related or overlapping, but they have imperative distinguishing features.

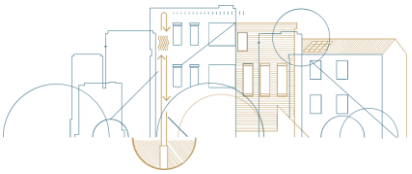
Table 5 Types of meetings

MEETINGS	KEYWORDS
Conference	Large groups, overarching themes, lectures
Seminar	Small groups, specific topics, debates
Workshop	Small groups, practical topics, interactive discussions

The conference is a large-scale, frontal meeting where you can listen to lectures related to overarching theme. It typically lasts for several days, and conferences can be supplemented by accompanying symposiums, even at several locations or in several rooms.

The seminars – whether at a university or an academic conference – are events that accompany lectures, where small groups of participants can gain more profound knowledge about a topic and debate any queries regarding the specific subject.

In contrast, the workshop is less scientific and more practical. The people do intensive discussions in small groups in an interactive way. They strive to get to know each other's experiences and create common knowledge.



3.5.1 ADJUST GROUP SIZE

Although public forums are necessary, especially in the initial phases of social innovation, for meaningful interactive communication, it is worth avoiding the dreadful plenary sessions or the meeting dominated by only a few participants. The adjustable group size is helpful to ensure that the best possible contributions from all participants are heard and considered.

3.5.2 CARD CLUSTERING

Participants share their ideas or even additional questions about a central question or topic. Everyone can write three questions on cards and put them on a board. As a result, all the opinions related to the subject will appear, and the cards must be grouped and synthesized, thus creating a cluster. This method facilitates gathering ideas from people and encourages all participants to give their feedback. The ideas will be captured, clustered, prioritized or elaborated further. It can be linked to *storyboard* method.

3.5.3 CITIZEN JURY

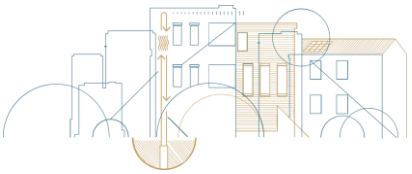
The jury consists of people representing the perspectives of the community. The powerful participant's views or recommendations can be crucial for linking citizens to policy and decision-making. It can be used mainly in the planning and commitment phase as a decision support board or oversight panel.

3.5.4 FISH BOWL

A controlled event to facilitate a group discussion. The supervisor explains the objectives, the issue to be discussed and the process. The participants are physically split into two groups and sit in two circles, one inner and one outer. Insiders do the discourse. Outsiders just observe and prepare notes to be ready to enter the inner circle. At certain intervals, the members of the two circles can change places individually or even as a group. Participants should be allowed to draw conclusions and express themselves freely. The method brings transparency to the decision-support or making process and increases trust. This method can be compared with *world café*.

3.5.5 FIVE COLORS OF CHANGE

The method is based on the theory that change is a collaborative practice that requires communication and partnership. Distinguishing five fundamentally different ways of thinking about change are labelled by color. The blue thinking is based on design and implementation. The



yellow lie in socio-political ideas. The red focus on motivation. In the opinion of the green, the change and learning are inextricably linked. The white is not explicit supporters of change, but they can catalyze the processes with their background knowledge.

The purpose of the color model is to provide a language that facilitates discussions about change leading to possible strategies. Collective exercise requires communication and cooperation with other stakeholders involved. A prerequisite is a commitment to change.

3.5.6 GAMIFICATION

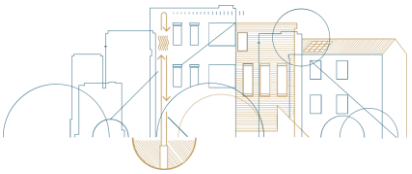
One of the most popular ways to increase audience participation. The word comes from the combination of 'game' and 'modification', which means adding game mechanics into nongame environments relying on the people's natural desires. It is more of a principle that can be used well than a specific method.

In a partnership context, gamification can relieve tension arising from the project subject or low level of knowledge by funny tasks. It is worth preferring group games because they promote the development of cooperation and the exchange of experience, thereby preparing for later group work. People like to receive gifts or receive recognition. Rewards for efforts, like points, badges or small presents, belong to gamification.

There is another aspect of gamification when its application is based on competition. In this case, the rewards for completing tasks become visible. The points or virtual currency are displayed on progress bars or scoring boards with personal celebrations. These methods can work in a performance-oriented environment but can be disadvantageous in a cooperation-based context.

3.5.7 HANDS-ON LEARNING

Hands-on learning is another term for experiential learning. Participants learn by involvement in activities rather than passively attending a lecture, reading an article or watching a video. In fact, it is the opposite of frontal education. This type of learning can lead to the expansion of competencies, stronger practical knowledge, more effective ability to adapt and problem-solving skills. In a school, the students do lab experiments in chemistry class or write a poem in a foreign language class. In a project environment, it means demonstrations and can be connected with gamification.



3.5.8 RICH PICTURE

Developing a rich picture is a group exercise where everyone can add to it and explain their perspectives. A rich picture helps to see relationships and connections that the participant may otherwise miss. It promotes holistic understanding in exploration phase of social innovation.

The supervisor draws the current situation or key issue of a problem in the center of brown paper or flip chart paper. Each participant extends the picture based on their perspective. Everybody has just a few minutes to draw, after that the marker should be given to others to continue the picture explaining what is drawn. Both facts and subjective information are allowed. As a result, the group will develop one rich picture of that case.

3.5.9 SIX THINKING HATS

Enabling individuals in groups to look at a problem or a decision and its effects from different perspectives. The six thinking hats mean six different bases: factual, emotional, cautious, logical, out-of-the-box, and management. Similar to the *Five colors of change* method.

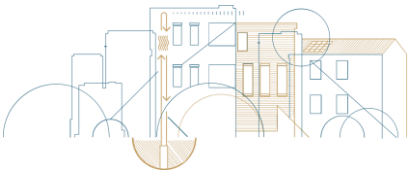
Facilitators get people involved by handing out hats. Putting on and taking off the hat allows the thinker to switch roles. The goal is to separate thinking from the ego. The supervisor asks questions about the problem, and each participant has to answer with the appropriate attitude for that hat. The six different points of view force participants to think outside a habitual thinking style.

3.5.10 STORYBOARD

The stakeholders put their ideas into a bucket, similar to card clustering the supervisor synthesizes them. With the selected ideas, they pretend to write the script for a movie. A playful method of project planning, a productive and effective tool to stimulate participants to think creatively as they engage in dialogue with others. The participants explain their hopes, expectations and assumptions. The visualization also promotes the future vision of the group.

3.5.11 WORLD CAFÉ

Similar to *Fish bowl*, it is hosting a large group dialogue. The supervisor explains the objectives of the discussion, the participants are split into small groups sitting at tables like people in a café. At certain intervals, they change places individually to talk with others in several rounds. It can more easily encourage networking between group members and inspire creative thinking, and help to bring together individual ideas into one comprehensive message.



3.6 SOCIAL TASK FORCES

REHOUSE set the goal that social relationships and collaboration play an important role during the project and within it in the process of social innovation. The so-called Social Task Forces should involve primary stakeholders, building teams, representatives of the civic society and research organizations at each demo site. It is not enough to create working groups, their activities must be dynamized, and they must act as agents of the project following the principles of IPD.

Facilitating stakeholders with co-design workshops emphasizing the applicable technology and peer learning allows more effective social activities for the higher acceptance of the renovation process.

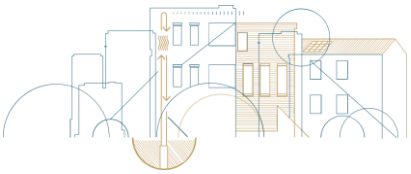
Some models of group formation have similarities with social innovation. The essence of team building is to increase acceptance and engagement. Just as a group must go through different stages to become a team, social innovation must go through phases to strengthen engagement.

The original four phases in Tuckman's theory[2] have overlapped with the phases of social innovation. All stages have their own focus with different sets of feelings, behaviors and tasks:

- ***Forming*** *– The team is formed in a positive and polite atmosphere. Strong guidance is needed to define the group tasks.*
- ***Storming*** *– Disagreements and conflicts may occur. Disappointment due to a lack of progress is typical when different interests come to the surface.*
- ***Norming*** *– Team members start to resolve their differences. A consensus is formed on the tasks of the group.*
- ***Performing*** *– The team becomes efficient, tasks are achieved, and problems are prevented or solved.*

The phases are only ideally linear. In practice, however, there is a risk that the process will stall or reverse. By raising awareness, the process can be controlled, and productivity can be positively influenced.

[2] https://en.wikipedia.org/wiki/Tuckman%27s_stages_of_group_development



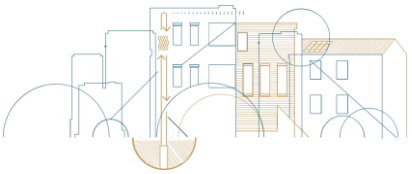
Social Task Forces were created for each of the demo sites promoting a participatory process in social innovation in the REHOUSE project and with the following points as the main activities to be deployed through the project duration.

- to identify each unique social local context and requirements for co-design,
- to define the new forms of collaboration,
- to design the specific local social innovation activities for each of the local contexts/demo-sites,
- to deploy the social activities in the demo-sites before the final deployment of the Renovation Packages in order to ensure the success in the acceptance of the solutions.

In the following tables are described the Social Task Forces created in the first phases of the project for each of the demo-sites. Social Task Forces will include additional members through the project execution if it were needed to increase the capabilities of the team.

Table 6 Social Task Force for the Italian Demo-site

CATEGORY	ORGANIZATION	MEMBER TYPE	ROLE / EXPERTISE
KEY STAKEHOLDER – owner	ARCA	representative	Engineer / Director
		expert	Economist
			Lawyer
KEY STAKEHOLDER – end-users	ARCA – Residents	representative	Resident representing all households
KEY STAKEHOLDER – operator	Catholic Church	representative	Episcopal Curia / Church
PUBLIC AUTHORITIES – other	ENEA	expert	Researcher
			Researcher
			Researcher
			Researcher
			Researcher
PUBLIC AUTHORITIES – local government	Apulia Region	expert	Architect and social policy expert
PUBLIC AUTHORITIES – local government	Municipality of Margherita di Savoia	representative	Mayor
PUBLIC AUTHORITIES – local government	Province of Barletta Andria Trani	representative	Prefecture
			Prefecture
PUBLIC AUTHORITIES	Department of	representative	Engineer / Manager



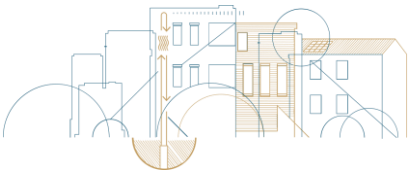
CATEGORY	ORGANIZATION	MEMBER TYPE	ROLE / EXPERTISE
– local government	Welfare and Housing Policies		
PUBLIC AUTHORITIES – Education	School located in the neighbourhood	representative	Director
CIVIL SOCIETY – Foundation	Fondazione Mediolanum	representative	Curator
SPECIALIST – other	RINA	expert	Engineer

Table 7 Social Task Force for the French demo-site

CATEGORY	ORGANIZATION	MEMBER TYPE	ROLE / EXPERTISE
CIVIL SOCIETY – research organizations	CEA	expert	Research engineer
			Scientific director
			Research engineer
KEY STAKEHOLDER – manufacturer	TWR	expert	Technical director
			Engineer
KEY STAKEHOLDER – owner	Le Toit Vosgien	expert	Technical director
SPECIALIST – architect	Ajeance	expert	Architect
SPECIALIST – other	Terranergie	expert	Head of thermal engineering office

Table 8 Social Task Force for the Greek demo-site

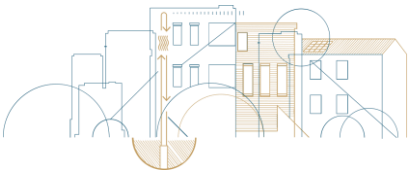
CATEGORY	ORGANIZATION	MEMBER TYPE	ROLE / EXPERTISE
KEY STAKEHOLDER – owner	DUTh	expert	Scientific Co-ordinator
KEY STAKEHOLDER – operator	DUTh	representative	Research Associate
			Technical Services
KEY STAKEHOLDER – end-users	DUTh – Students' Dormitories	representative	Dormitory resident
			Dormitory resident
			Dormitory resident
CIVIL SOCIETY – startup support	Anthology Ventures	expert	Innovation Strategist



CATEGORY	ORGANIZATION	MEMBER TYPE	ROLE / EXPERTISE
CIVIL SOCIETY – science	Xanthi Tech Lab	expert	Co-ordinator
CIVIL SOCIETY – other	SEEMS	expert	Co-Founder
PUBLIC AUTHORITIES – other	Directorate of Secondary Education	representative	Elementary School Teacher

Table 9 Social Task Force for the Hungarian demo-site

CATEGORY	ORGANIZATION	MEMBER TYPE	ROLE / EXPERTISE
KEY STAKEHOLDER – owner	FCHURCH	representative	Executive Manager for Administrative Head Office
KEY STAKEHOLDER – operator	FCHURCH	expert	Project Manager
			Technical operator
KEY STAKEHOLDER – end-users	St. Paul Academy	representative	Director
	St. Paul Academy – Dormitory students	representative	Resident
	St. Paul Academy – Student Union	representative	Member
KEY STAKEHOLDER – manufacturers	PLATAN	representative	Engineer / Manager
KEY STAKEHOLDER – manufacturers	WOODS	representative	Engineer / Manager
PUBLIC AUTHORITIES – local government	X. District of Budapest	representative	Mayor
PUBLIC AUTHORITIES – licensing authority	Budapest Building Authority	representative	Head of Department
SPECIALIST – suppliers	Construction Consortium	expert	Engineer
			Engineer
SPECIALIST – other	Architect Studio	expert	Architect
CIVIL SOCIETY – Foundation	Garden Foundation	representative	Curator



4 BEST PRACTICES AND EXPERIENCES

The experiences of the project members can be divided into three parts: involvement in complex projects in which social innovation plays a role, practical experience in organizing workshops, and further experience in other social innovation activities.

4.1 PROJECTS SOCIAL INNOVATIONS

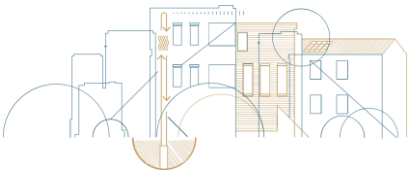
4.1.1 CENTOC'È

ENEA's project in collaboration with the University of Luiss Guido Carli and Transition Italia. The project activities are located in Centocelle (a suburb of Rome), where tested best practices of Circular Economy (Km0, group purchasing, water house, urban garden), living labs with habitats. Here ten smart homes have been tested by creating an intelligent LAB, and at the moment, a cooperative community called CooperACTiva has been created.

PROJECT	Centoc'é
PROVIDER	ENEA
LOCATIONS	Rome (Italy)
WEBSITE	www.centoce.it
ACTIVITY TYPES	WORKSHOPS

Implementation of an Urban Living Lab for the co-design of shared public spaces through:

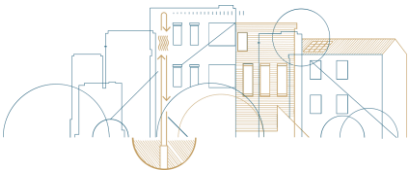
1) Community engagement and activation
2) Information and awareness meetings on circular economy concepts
3) Mapping, together with the citizens, of urban circular economy practices applicable to their own territory: civic green zones, sharing economy, solidarity purchasing groups, houses of the water, second-hand markets and bulky goods collection systems.
4) Identifying the environmental benefits of these initiatives and selecting/co-designing practices for the local context
5) Concrete implementation of the first solutions identified: shared regeneration of abandoned green areas through shared gardens and urban vegetable gardens.



4.1.2 ES-PA

Integrated sustainable development projects facilitate the transition towards circular economy models and encourage urban redevelopment with the involvement of local actors and citizens. Among these activities, an Urban Living Lab initiative was designed in a technical and professional higher education institution which, starting from the involvement of the school community at the micro level, envisages the involvement of the urban community in a second phase of the neighbourhood at the meso level, and finally subsequently of the entire urban area at the macro level.

PROJECT	ES-PA
PROVIDER	ENEA
LOCATIONS	Policoro (Italy)
WEBSITE	www.espa.enea.it
ACTIVITY TYPES	WORKSHOPS



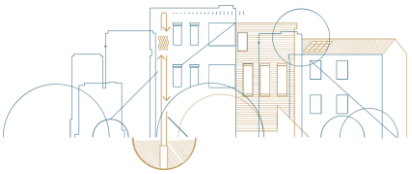
4.1.3 GECO

Project of community management of the local energy resources, which reduces the distances between production and consumption, involving inhabitants, commercial activities and local businesses to increase the generation and self-consumption of renewable energies in Pilastro and Roveri (Bologna, Italy). In the wake of the recent legislative changes approved as part of the clean energy package (CEP) at the European level, GECO aims to encourage the development of the national regulatory framework, providing support to national stakeholders (ARERA, GSE, RSE, Terna) for the creation of the new regulation of the energy sector in the Italian territory.

PROJECT	GECO – Green Energy Community
PROVIDER	ENEA
LOCATIONS	Bologna (Italy)
WEBSITE	www.gecocommunity.it
ACTIVITY TYPES	PUBLIC FORUMS, WORKSHOPS, VISITS

The includes the below social innovation activities:

- Training halfway between informative and training, supported by the energy experts of the GECO project: environmental engineers, legal consultants, anthropologists and economists, activators of specialized knowledge that the project intends to democratize and bring a wider audience. This area includes the Decalogue of the Energy Community and the cycle of webinars on the topics of renewable energy and the collaborative economy.
- Involvement of educators in the field of environmental education as a precious and exemplary resource in the city area. The goal is to give them additional information on environmental sustainability issues related to the GECO project (advantages deriving from the use of renewable energies and the implementation of an Energy Community in a perspective of collaborative economy) so as to favour the widespread diffusion and permanent knowledge in the area. The involvement and co-planning process began in January 2020 and involved educators from local associations and citizens who met to interact and discuss the issues of education, ecology and sustainability.
- Urban eco-conscious trekking days. Engagement actions and aiming at boosting citizens activation, trust and commitment in the project and co-creation activities.



4.1.4 HOUSEFUL

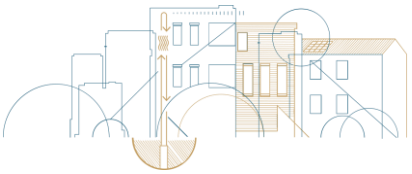
The HOUSEFUL proposes an innovative paradigm shift towards a circular economy for the housing sector. The main goal is to develop and demonstrate an integrated systemic service (HOUSEFUL Service) composed of 11 circular solutions co-created by stakeholders in the current housing value chain. The HOUSEFUL Service will aim at the circular management and efficient use of water, waste, energy and material resources for all stages of a European building's life cycle.

PROJECT	HOUSEFUL
PROVIDER	CARTIF
LOCATIONS	Sabadell and Sant Quirce del Vallès (Spain) Fehring and Wien (Austria)
WEBSITE	www.houseful.eu
ACTIVITY TYPES	INTERVIEWS, WORKSHOPS

4.1.5 ITALIA IN CLASSE A

The Italian National Training and Information Programme on Energy Efficiency is more than a project. The national long-term campaign based on different types of programs (information, social interaction and cognitive education) targeted to large companies and SMEs, public administration, citizens, school students. ENEA coordinates this Programme on behalf of Italian Ministry of Environment and Energy security.

Objectives are to raise awareness and encourage large companies and SMEs to perform energy audits and to use the incentive tools available aimed at installing efficient technologies; to promote programs for the energy retrofit of public buildings and to stimulate behaviour in public employees that contribute to reducing the energy consumption of Public Administration; to stimulate behavioural change in every stratum of the population; to educate school students of all levels and degrees to a more conscious and efficient use of energy; to promote new forms of financing to improve the energy efficiency of buildings; training activities and dissemination of good practices.



PROJECT	Italia in Classe A
PROVIDER	ENEA
LOCATIONS	more cities and regions, Italy
WEBSITE	italiainclassea.enea.it
ACTIVITY TYPES	PUBLIC FORUMS, WORKSHOPS, INTERVIEWS, OFFLINE APPEARANCE

The programme has more projects and applied more social activities:

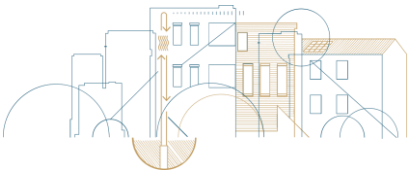
- General assembly to define the objectives and messages in the framework.
- Clustered groups of stakeholders representing the beneficiaries to co-design the objectives and messages in the framework. Experts stimulated the work of the groups, and after a public presentation of ideas by leaders selected by the group, a common document was produced.
- Interviews carried out by TED Home Energy Advisors to co-design informative tools to support households' behaviour in renovated buildings and in relation to new technologies.

4.1.6 MYSMARTLIFE

The **mySMARTLife** aimed to create sustainable cities, more environmentally friendly by reducing CO2 emissions and increasing the use of RES. One hundred fifty smart actions took place in the lighthouse cities Nantes, Hamburg and Helsinki, while follower Cities Bydgoszcz, Rijeka and Palencia will learn from these experiences. "Smart Citizens" play a vital role in their city's development, and "Smart Economy", as an innovative and dynamic economic concept, will be the basis of this urban transformation.

The interventions planned and carried out in the lighthouse cities include innovative technological solutions connected to high-performance buildings, usage of RES, clean transport and supported by ICT solutions.

The knowledge exchange was implemented through mentoring activities, where some cities presented their projects such as energy-efficient new and refurbished buildings, RES integration, energy storage, domotics & smart controls; energy efficient city infrastructures like smart grids, district heating, public lighting, urban RES, or thermal and electric storage, mobility aspects as private and public EV's fleet, charging stations, or management of urban freights, and also Non-Technical actions.



PROJECT	mySMARTLife
PROVIDER	CARTIF
LOCATIONS	Nantes (France) Hamburg (Germany) Helsinki (Finland)
WEBSITE	www.mysmartlife.eu
ACTIVITY TYPES	WORKSHOPS

The mySMARTLife generated an open, innovative urban coaching and mentoring methodology to foster collaboration between participating cities in the project based on three main steps.

The mySMARTLife generated an open, innovative urban coaching and mentoring methodology to foster collaboration between participating cities in the project based on three main steps.

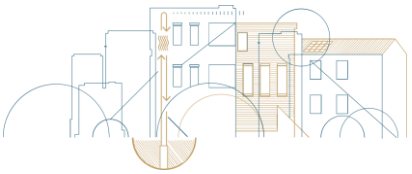
1) **First selection** of projects by each participating city means reference projects that have been somehow successful in these cities and have replication potential on different topics.
2) **Coaching** activity performed with technical experts to evaluate proposed projects so that only those with higher replicability potential and interests are selected.
3) **Dynamic mentoring activity** includes study tours complemented by specific presentations from other experiences and focused workshops and roundtables guaranteeing participatory scenarios for all participants.

It is crucial in this methodology to select not only the correct stakeholders but also the correct coaches and mentors for a dynamic and fruitful result.

4.1.7 RECIPROCO

The project was born in the collaboration framework among ENEA and MISE (Ministry of Enterprise and Made in Italy) for the "*Creation of tools and initiatives on the circular economy for the benefit of consumers*". The project objectives are:

- Mapping of the activities carried out by consumer associations on the issues of energy efficiency, the fight against energy poverty and the circular economy for the purpose of further enhancing and implementing system projects also through collaboration with other bodies;

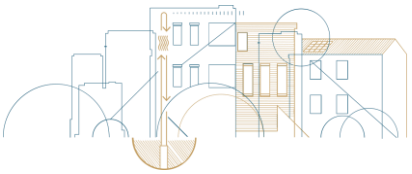


- Development ways and tools for recognizing products and services with reduced environmental impact: a methodology for measuring and communicating the circularity of products and definition of circularity indicators on water resources;
- Implementation of a smart governance pilot project: education on the circular economy, training and active involvement of citizens, promotion and dissemination of good practices in the area (with particular reference to the efficient management of water resources).

PROJECT	RECiProCo
PROVIDER	ENEA
LOCATIONS	Anguillara / Bologna / Taranto (Italy)
WEBSITE	www.reciproco.enea.it/chi-siamo.html
ACTIVITY TYPES	WORKSHOPS

Within the smart governance issues the following activities have been carried out by ENEA's CE experts and local expert on facilitation and community engagement:

1) Mapping and scouting of local stakeholders to be involved in the Living Labs (LLs).
2) Listening process for local needs analysis in the field of conscious and responsible lifestyles and consumption.
3) Implementation of Living Labs (LLs) providing a cycle of meetings organized according to 3 phases:
   - 1st step – Participation phase (capacity building)
   - 2nd step – Executive Phase (co-design of EC models and actions to be implemented on the territory)
   - 3rd step – Realization Phase: (output realization)
4) Final event for project outputs presentation

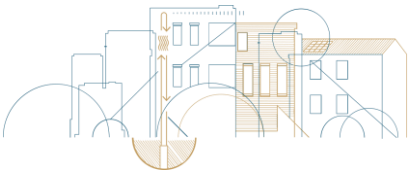


4.1.8 SMARTENCITY

SmartEnCity's main objective was to develop a highly adaptable and replicable systemic approach towards urban transition into sustainable, smart and resources-efficient cities in Europe. This will be achieved through the integrated planning and implementation of measures aimed at improving energy efficiency in main consuming sectors in cities while increasing their supply of renewable energy and demonstrating the benefits. The project has more subprojects in several cities.

PROJECT	SmartEnCity
PROVIDER	CARTIF
LOCATIONS	Vitoria-Gasteiz (Spain) Tartu (Estonia)
WEBSITE	www.smartencitynetwork.eu
ACTIVITY TYPES	PUBLIC FORUMS, INTERVIEWS, INFORMATION POINT, WORKSHOPS, OFFLINE MATERIALS

In Vitoria's case, there were no house associations that could be used to communicate the project's value proposition. There are 108 community owners (1305 private owners) who need to be engaged in the project and agree to refurbish their houses and change their heating system from natural gas to biomass. In this case, gradual involvement is recommended. This means starting from an information strategy that enables people to have an overall idea of the project goals, stakeholders and value proposals and engaging them more depending on the development of the products and services included in the offer. The more the products and services are defined, the more the engagement process will succeed. But how can innovative products and services be defined so that citizens would understand their real value? How can citizens validate whether the product information is clear enough or not? How can some property owners help to involve other property owners? These are the main questions to be answered during the process.



The case has been developed as follows:

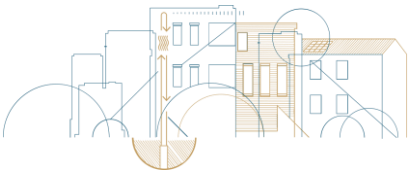
- **Public forums**: Disseminating the SmartEnCity project at events where the neighborhood is invited.
- **Interview**: Contacting the pilot area residents to explain the value offer.
- **Information point**: Setting up an information office in the neighborhood.
- **Workshops**: Attracting a small number of early adopters and organizing co-creating sessions on how to engage more people in the neighborhood.
- **Offline materials**: Spreading the experience of the early adopters in the neighborhood.

Face-to-face interactions are combined with events, exhibitions and group meetings. This means both individual and collective engagement spaces are created because people want to share their issues and concerns personally as well as collectively (as they can talk about their experiences). Is also important to create spaces with early adopters and neighborhood agents who help communicate the project's advantages.

Once owners decide to join the project, it is the public company VISESA (VIS) who works as a delegate promoter of the retrofitting actions on their behalf. Through agreements signed between both parties, VIS manages, contracts, supervises and finances the correct design and execution of the rehabilitation works of the buildings, delivering the final product “turnkey” to its owners and charging them the cost difference fewer subsidies. VIS also manages the different subsidies administrative tasks (application, justification, etc.) as "one-stop shop agency“, discharging the owners of these cumbersome tasks.

The first step of the citizen engagement process is that the local project team invests time to make the project and value proposal understandable. The second step is to share this information with the citizens – in this case, through a big event that brings everyone together. The third step is to develop the offer as clearly and precisely as possible. Although this phase can take a long time, this period can be used to introduce other aspects of the project to the citizens. For the fourth step, once the product/service is defined clearly and in sufficient detail, it is time to share it. This will be done through an exhibition with small conferences and roundtables with the project team explaining the retrofitting package to the visitors. The fifth step is about communicating a deadline by which the people have to make up their minds. Some important lessons learned along this process were:

- Where to have the citizen engagement activities? Location is the key!
- Keep close to the citizens!



4.2 EXPERIENCE IN WORKSHOPS

4.2.1 STORYBOARD WITH GAMIFICATION

ENEA, as part of the PON Governance, 2014-20 **ES-PA** project, has launched a School Living Lab on circular economy issues at the Pythagoras Secondary Education Institute in the city of Policoro, involving the class specializing in Chemistry, Materials and Biotechnology. The School Living Lab process began with the delivery of 5 training modules to the 13 students in the class.

The first year's output has been the co-designed storyboard of two popular films on sustainable consumption education. Currently available online with the titles: "Myth of the Cave and Smartphone Story". In the second year, a nudge activity was designed and implemented as a game: proposing, within the school, a series of "challenges" between well-known characters (or goods/services). Each student or teacher could vote for their favourite character in the proposed challenges by inserting plastic caps into the corresponding ballot box.

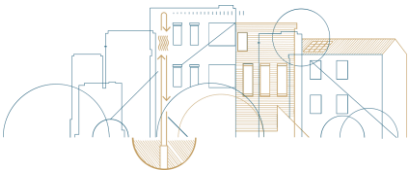
The students collected 30.5 kilos of corks in 4 challenges. The caps were delivered to a company that uses recycled PE (polyethene) as a secondary raw material to produce street lighting lamps.

4.2.2 CASCADE APPROACH

Within the **mySMARTLife** project presented above, a specific approach to the workshops was used. The cascade approach covers several interrelated and consecutive workshops which always built on the conclusion of the previous one along the logic of '*objectives – barriers – solutions*':

1) The first workshop would serve to establish the objectives of the city.
2) The second workshop would be to identify the critical processes and possible bottlenecks to achieve those selected objectives in the previous workshop.
3) The third workshop is the one dealing with solutions and analysis from the two previous workshops and devoted to providing strategies and specific actions or projects to solve the barriers identified in the second workshop.

The process was generated as a general one serving as a basis and was afterwards adjusted or defined in more detail depending on the specific areas and objectives that each city participating in the project wanted to address. The possible combination of workshops can vary in each city depending on the stage of progress of their transformation strategy and their specific context circumstances, adapting the structure of the workshops to the actual needs, in order to maximize participation and correctly handle participant´s expectations.



4.2.3 BACKCASTING PLANNING METHOD

The **HOUSEFUL** co-creation strategy is based on the *backcasting* planning methodology to generate co-creation ideas that were to be implemented in the project duration. The process consisted of implementing three types of workshops in each of the four demo-site buildings of the project, aiming at engaging with key stakeholders to identify, plan and validate generated co-creation ideas. During the workshop, the discussions focused on how the stakeholders are satisfied and how relevant the information is for effective communication and participation.

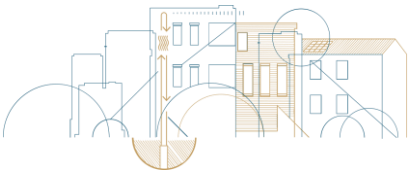
4.3 EXPERIENCE IN OTHER ACTIVITY TYPES

4.3.1 INTERVIEWS

The abovementioned **HOUSEFUL** project successfully applied interview techniques. The main objective was to analyse the specific factors influencing behavioural choice-making structures of people and the potential social risks and barriers affecting the successful demonstration of the proposed HOUSEFUL solutions as new services. With regards to the purpose of this document, the results provided us with guidance for an effective engagement strategy at each building as well as to deduce interesting ideas for co-creation.

The following research questions were addressed during these consultations:

- How are decisions made regarding the implementation of circularity models at each demo site?
- What knowledge is required to be ready to participate in HOUSEFUL social engagement activities?
- What are the primary environmental considerations and priorities perceived by the different stakeholder groups, and how this may affect the housing sector and the implementation of circularity solutions?
- What risks or benefits are perceived by implementing CEBOs in the demo sites?
- What are the motivations of stakeholders to create a change in behaviour towards circularity models in the housing sector?



4.3.2 PUBLIC FORUMS

Within the **mySMARTLife** project presented above, the "PLANNING AN ENERGY-EFFICIENT CITY" lecture series was launched in cooperation with the University of Tartu Department of Geography and the SmartEnCity project. The lectures focused on various smart city topics, they were open to students and the public alike and they featured local and international speakers. The initial events were related to:

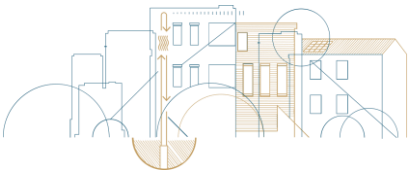
- Mobilizing actors for the local energy transition
- Architecture and sustainability. Experiences from Austria, theory and performance in practice
- Governmentality and performance of smart cities
- Smart city and smart citizens – how to control the environmental burden?
- Urban indicators for monitoring progress and transformation towards smart cities
- Urban processes

The objective of the lectures was to disseminate expert knowledge and educate citizens on various topics that related to the development of smart city initiatives, smart living and environment, and in case of presenters from abroad, introduce initiatives from elsewhere. The main aim was thus to raise smart city awareness among citizens, local experts, researchers, city officials etc. Special attention was on developing cooperation with academia – it was expected that students, researchers and lecturers will integrate smart city topics more in their studies, e.g. evaluating the outcomes of the SmartEnCity project.

More lectures and seminars were organized, covering a wide range of topics related to smart city planning (energy, governance, mobility etc.). 2-3 lectures were planned for each year. The decision about which topics to include and who are the best presenters available depends on the project workflow.

4.3.3 OFFLINE MATERIALS

Within the **SmartEnCity** project presented above, the City of Tartu has planned another activity for turning the pilot area into a unique and attractive urban space. For this, the "ART SOLUTIONS FOR PILOT AREA BUILDINGS" is an international art competition organized to find artists to create works for the Khrushchev-era buildings in the city centre. A total of 54 artists from Estonia and abroad were interested in contributing to the urban design project.



The artworks were created from scratch, taking the specific location and surroundings of the buildings into account and based on the wishes of the residents in terms of what kind of art they would like to see on their buildings. In order for all of the works to fit together as a whole, the project was overseen by curators who themselves are art experts and artists. Working with residents, the curators chose which artists will make artwork proposals for which building.

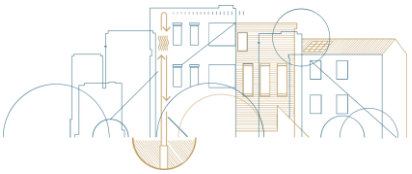
The art project was carried out as part of Tartu's SmartEnCity activities related to energy retrofitting, which focused on transforming the Khrushchev-era buildings in the center of Tartu into smart and energy efficient buildings. Since most of the smart solutions that were implemented in the project were technological in nature, the visual appearance of the buildings is now also considered in cooperation with artists. By the time the refurbishment activities come to an end in 2019, the city center in Tartu was boast a unique urban space as well as a distinctive urban gallery for the enjoyment of both locals and visitors.

The artworks were completed during the renovation activities and for this, the financial support of the City of Tartu was combined with the housing association's own funds (a total of 8000 EUR for each piece). The renovation contractors helped prepare buildings for the artwork and in the process, cooperated with the respective curator who was responsible for the end result.

The art project heavily engaged citizens and pilot area inhabitants into creating the visual urban environment for their community. With the help of the SmartEnCity members and curators, all decisions were made together with the citizens who also had the final voices for selecting artworks for their houses. A number of meetings with the pilot building residents were organized in order to reach a solution for each house that was also approved by the citizens. Benefits gained by this action were:

- Unique and aesthetically pleasing urban environment
- Opportunity to design facades as a cohesive gallery
- Motivating residents to improve their houses
- Attracting visitors to the city
- New way for artists to gain visibility
- Increased citizen satisfaction with the urban space

Similar to the art composition in Tartu, the *Wall of Energy* was implemented in the framework of **Italia in Classe A**. That 130 square meter street artwork is on the wall of Milan's Bovisa train station to tell a story about energy efficiency, including children's dreams about the theme of energy sustainability, with symbolic values to break poverty energy.



4.4 OTHER PROJECT EXPERIENCES

4.4.1 BHSL

The *Basilicata Heritage Smart Lab* project is co-financed by the Basilicata Region, aiming to enhance the cultural heritage of the region through synergistic actions between the territory and the cultural and creative industry through 20 SMARTLABs to be implemented on many pilot sites for the co-design of solutions and prototypes in the field of conservation of material assets and management of cultural ecosystems.

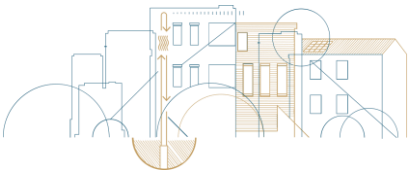
4.4.2 COMEPOS

The COMEPOS project consists of the construction throughout the national territory of around twenty positive energy individual houses in order to evaluate their performance scientifically and in situ. An important part of the project is to involve building users in the understanding and proper management of innovative systems integrated into homes. The results of this study should serve as a reference for the authorities and thus contribute to the development of regulations for the sector.

This project is part of future investments and in particular, of using carbon-free energies. The project is led by ADEME (French Environment and Energy Management Agency), coordinated by CEA (Atomic Energy Commission) and INES (National Institute for Solar Energy). It relies on three academic partners for the Metrology-evaluation part: The CNRS (National Center for Scientific Research), the CSTB (Scientific and Technical Center for Building) and ARMINES (Ecole des Mines de Paris).

4.4.3 ELIHMED

The *Energy Efficiency in Low Income Housing in the Mediterranean* is an initiative coordinated by ENEA, specifically targeted at getting much more comfortable and energy-efficient dwellings for low-income families living in six Mediterranean countries – Cyprus, France, Greece, Italy, Malta and Spain. This project represented an innovation for energy efficiency policies, as it focused on bottom-up strategies aiming at getting lower consumption and providing a substantial contribution to meet the needs of energy-poor households.



4.4.4 ENPOR

Project on Energy poverty in the private rented sector aiming to test energy efficiency support schemes to address and increase the effectiveness of policies at a local or regional level, an alignment with structural measures is needed. Dedicated actions are needed that actively contribute to alleviating energy poverty in the private rented sector by identifying energy-poor tenants (and respective homeowners) as well as understanding and addressing their needs.

4.4.5 RETROFITHUB

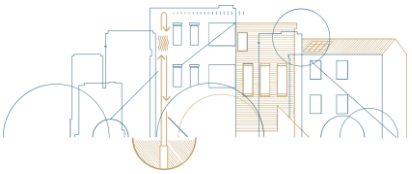
The objective of the project is for stakeholders in energy renovations of residential buildings – residents, facility operators, local authorities, market experts and the civil sector – to get to know and learn how to put the renovation initiatives' methodologies into practice, to be aware of the application and implementation processes and procedures, documentation and quality control of the renovation.

Series of lectures is offered, where the presenters deal with the different renovation options in the case of different architectural technologies, such as traditional structures built before WWII and after WWII, and focus on buildings built with industrial technology.

A unique website is provided to help energy efficiency renovations, and looking forward to hearing from professional partners, organisations, companies and municipalities to guide more people through the energy renovation process, making the whole process understandable and predictable, ensuring the best quality results and actual energy savings.

A communication & marketing strategy serves the success of the online platform with highlighted campaign proposals, identified content production, search engine optimization and guidelines for synchronization of the online and offline channels.

A user guide is intended to help homeowners to implement professional and complex energy renovations by understanding and choosing the materials and equipment needed to make energy efficiency investments (insulation, windows, heating systems). The contained guidelines are established, which the renovator can use practically and help to think through possible solutions.



5 CONCLUSION

As the determined aim of the REHOUSE is to apply the TEPSIE method of social innovation, this presents a unique challenge to the project members. The method is novel, and it was not even a decade since it had been created. As a result, a few experience is available to the public. The document highlights the academic background of the TEPSIE method emphasizing the phases of social innovation and the possible associated activities and paying particular attention to the methods used in the interactive workshops.

The best practices of the social innovation activities for retrofitting projects were analysed based on the knowledge of the expected method. The existing experiences of the project members are more relevant to participation in the technical implementation of previous projects and less typical in shaping social awareness. In order to increase the knowledge based on the TEPSIE methodology in the process of social innovation as a structure or in the applicable methods of social innovation, the demo site responsible project members involving the experts through the Social Task Forces together should work out a potential process of social engagement activities tailored to the local contexts.

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