Fostering public capacity to plan, finance and manage integrated urban REGeneration for sustainable energy uptake

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Executive summary

FosterREG aims to build the capacity of public institutions to incorporate energy efficiency measures in the planning, management and financing of integrated urban regeneration. To achieve this objective improvement of horizontal integration between the different departments of the public administrations, as well as multilevel coordination, is needed. The project is developed in The Netherlands, Croatia and Spain.

Work Package 4 “Capacity building” focuses on the planning and deploying of the appropriate training activities, as well as on the creation of the necessary materials. The most relevant target audiences at national and European levels were identified as a result of the previous tasks, a training plan was developed, and specific materials and modules were developed for them to address the previously identified barriers, as well as to take advantage of the most promising opportunities, through improvements in multilevel coordination, regulation, management and financing.

Work Package 3 “Collaborative Analysis and Proposals” was conducted in each country according to the expertise of national clusters, which had the discretion of choosing different ways to conduct the process, given the specific differences of each of the countries. Due to these differences, as well as general differences in cultural, economic and social factors in each country, the WP 4 will also be conducted in the most appropriate way for each country.

Results of WP3 are delivered through reports D3.2 – D3.4. Through those reports, an overview was given on how the collaborative analysis approach (CAA) was conducted in each country. The CAA was a successful bottom-up approach which enabled the FosterREG consortium to gain a lot of information from stakeholders involved in energy efficiency (EE) and urban regeneration (UR) projects. The result of the process was comprehensive overview of the barriers to the integration of EE in UR projects and the stakeholders view on new proposed paradigm of integral EE in UR projects on the level of a city district.

Solutions which stakeholders were able to identify and the strategies created in CAA proposed to foster the implementation of those solutions were the starting point for identification of the key issues common to all clusters. These key issues are:

- Awareness and improving the capacities of public officers
- Enhancing funding schemes and financial instruments
- Developing and fine-tuning legislation
- Improving integration and coordination

At European level, as a result of the common workshop, the consortium validated their bottom-up analysis findings, discussed the key issues with the broader community and presented their recommendations through report D3.5.

In this deliverable, all training activities from all national clusters are described and analysed. It is an overview of the whole WP4, with feedback from the stakeholders involved in activities and detailed coverage of the approach taken by each national cluster to deal with the specific environment in their countries and to still provide replicable way of engaging the relevant stakeholders in discussion and capacity building towards the new and challenging steps in building sustainable urban society. Lessons learned are elaborated at the end for each country and the overall process.
1 Introduction

Following the completion of the Collaborative Process, carried out through a series of national as well as EU wide workshops, strategies in each project country were derived as the result of WP3.

Next task was the capacity building, the core of FosterREG project, in which the aim was to provide targeted stakeholders with new knowledge and understanding, fostering their capacity for planning, financing and implementation of energy efficiency measures integration into urban regeneration on the scale of city district.

General concept guiding the national clusters in their training activities is elaborated in chapter 2. These concepts arose from the WP3, where CAA was conducted.

Each national cluster conducted their training activities and reports in detail, providing the analysis of events. In these analyses, the aim of each event is elaborated, attendance and relevance of attending stakeholders is explained, dynamics of the event are described and the feedback from the stakeholders, given through discussions, tools and surveys, is analysed and provided in the chapter 3 of this document.

In chapter 4, the final conference of the project, as the training and dissemination event with largest impact, is described in short, since more detailed descriptions are given in separate report, D5.6 Final conference report.

In chapter 5, final concluding remarks and lessons learned from each cluster separately and for the consortium as a whole are given.

In the annex chapter, the list of attached documents is given.

2 General concept of training activities in each country

In this chapter, the approach to the training process chosen by the national cluster is elaborated, taking into account the specific needs of each country.

2.1 Spain

FosterREG Spanish cluster partners designed a capacity building plan based on the CAA conclusions focused on prioritized issues such as increasing awareness, enhancing funding schemes and financial instruments and improving integration and coordination of local administration departments in the implementation of energy efficiency measures in urban regeneration projects.

Working methodology of the capacity building activities was adapted to different approaches but in general they are based on a series of good practices presentations by the key actors and a practical session in which the participants were trained according to the topic.

Specific target groups to participate in Spanish capacity building plan activities are based on the national, regional and local networks developed on the CAA workshops of WP3 with national cluster. This FosterREG network will be expanded by adding new professional profiles participation according to the issue to be address in each workshop or event of planned activities.
2.2 The Netherlands

For the Netherland, the original idea for Capacity Building was partly based on the continuation of the strategy sessions from the collaborative approach of WP 3. To help the participants in these strategy groups with formulating actual implementation plans. But for a number of reasons, the commitment of the participants turned down, alternatively their attention was drawn to the establishment of a national green deal, embracing the challenge to decarbonize the domestic heating system to the future; and to promote natural gas free districts, and disconnecting houses from the gas infrastructure in the upcoming years. As the latter is turned into a real national point on the agenda, in line with promoting the Paris climate goals, we have decided to transform the FosterREG capacity building activities in line with the actions announced in the design of this green deal.

TNO and the city of Utrecht have put their political and strategic pressures on the conceptual design and practical implementing of this green deal, where we have managed the inclusion of FosterREG project objectives and actions in line with the role out of a knowledge management programme in this green deal. More details on depth and actual capacity building activities executed, can be found in chapter 3.

As the green deal natural gas free districts was in March 2017, with more than 30 municipalities having actually signed the deal, and a similar number of local authorities next to regional and national authorities, business and societal organization, joining in on the lessons learned, the establishment of this green deal is basically just a start of a nation-wide programme to experiment, pilot, learn and share over the experience of how to disconnect existing domestic districts from the gas infrastructure, now and in the future. As with the Netherlands, over 98 % of all households are connected to the natural gas district currently, stating that by 2050 domestic heating should be carbon free, this puts a huge challenge forward for the coming decades.

With the help of FosterREG and the collaborative effort of TNO and the city of Utrecht, we make an significant effort in building the necessary capacity at the local authorities, to make the transition towards sustainable energy systems possible.

Even though the FosterREG project comes to an end, we have been able to embed part of the challenge that FosterREG has worked on, within the green deal. The Green deal will continue to work on its objectives and activities in sharing knowledge and putting capacity building on the political agenda, for making the transition into a real sustainable energy / heating system in the future work.

For the case study, the city of Utrecht works on the Energy plan Utrecht, in which the strategy to transform existing districts in gas free districts also is adopted in. Next to the participations in the green deal, by developing an infographic of the process plan until now, for wider dissemination and sharing the organisational experience; the city is working on the establishment of internal commitment, by developing a road show to inform various city departments internally as well as external stakeholders involved when it comes to the planning of gas free districts in the near future.

2.3 Croatia

Topics for training sessions are based on the D3.2 considerations. Deliverable D3.2 proposed the following strategies, developed in the CAA:

1. Introduction of mandatory professional training of new concepts for the planning and implementation of urban regeneration for public officials
2. Defining subsidies for integrated projects (immediate action for defining the new support measure and the procedure for its allocation by the Ministry and other involved stakeholders such as Environment Protection and Energy Efficiency Fund (EPEEF), Agency for legal transfer and mediation in immovable properties (APN) and Center for Monitoring Business Activities in the Energy Sector and Investments (CEI). This action can be the result of capacity and skills training activities in the FosterREG project).

3. Adoption of comprehensive interdisciplinary strategies and plans that all political and interest groups are obliged to respect and execute

To implement the strategies, actions must be taken first in raising the awareness and facilitating discussions between all levels of government and the relevant private stakeholders, which were identified.

In Croatian case, the attention was given to developing materials for experts in engineering, with the attention given to the spatial planning themes and urban planning processes, which is the kind of capacity which was not included in their education curriculum and is rarely presented to this group of stakeholders.

On the other hand, urban planners, conservators and architects, as well as other experts working as public officials in urbanism and spatial planning can hardly follow the new concepts in energy supply, demand side management and new design processes.

Therefore, in training activities, discussion was facilitated between most relevant stakeholders from each level of government and the experienced stakeholders from private sector, aiming for the best practice examples and trying to aim the discussions towards the future developments in planning the projects on the level of city district.

Aims of the training activities were divided into stages, constantly aiming also to increase the multi-level coordination:

- **Stage 1 – national level** - To familiarize the key national level stakeholders with the new concepts of planning the energy supply of the city district and with the problems identified on the local level, concerning the integrated energy efficiency in urban regeneration on the city district level.
- **Stage 2 – regional level** - To increase the capacities of the regional level stakeholders to follow the national programs of regeneration, sources for funding and to collaboratively model the typical buildings which will be elements in the future projects.
- **Stage 3 – local level** - To bring the local stakeholders in contact with the most relevant information from the national level and to propose changes to the local strategic documents, which would foster the EE in UR projects

### 3 Conducted training activities report

#### 3.1 Spain

##### 3.1.1 Event 1_ Training social workers on how to send the energy efficiency message to residents

**3.1.1.1 Introduction and objective of the capacity building event**

As it was concluded from the collaborative analysis and reported in Spain compiled in the D3.4 Integrated Report, there is a need for increasing awareness and improving capacities of social workers on energy efficiency issues.

The workshop named **TRAINING SOCIAL WORKERS ON HOW TO SEND THE ENERGY EFFICIENCY MESSAGE TO RESIDENTS** carried out by the Spanish cluster was organized to comply with this need.
Energy sector related technicians have the knowledge about the benefits of EE but the social workers are the ones how have direct contact with residents. Bringing those two professional profiles together to find the opportunities to send the message was the aim of this workshop. The workshop objective is to provide tools to municipal technicians, more specifically social workers, on how to raise awareness to residents in relation to energy efficiency. The workshop targeted social workers who work daily in areas with low income residents. The buildings in which these residents live lack of thermal comfort but residents cannot afford the retrofitting to provide a good thermal insulation to the envelope or other type of energy efficiency actions.

The workshop was held in developed in two different parts. First part’s objective is to make visible good practices in raising awareness about energy saving and improving energy efficiency in housing. The second part of the workshop involved a roundtable open to dialogue between the participants.

Table 1 Spanish cluster event 1 agenda

| Place: TECNALIA Research & Innovation. Parque Tecnológico de Bizkaia. C/ Geldo, Edificio 700, E-48160 Derio – Bizkaia |
|**Date:** 30th of November 2016 |
| 10:00 | Registration of participants. |
| 10:15 | Opening. FosterReg project Presentation |
| 10:30 | Local experiences presentations: |
| - Energy Ambassadors (Sestaoberri– Iraide Pérez, economic technician) |
| - Energy savings in Debabarrena (Debegesa – Aitziber Cortazar) |
| - Lourdes Renove (Nasuvinas – Isabel Izcue, architect) |
| 12:00 | Coffee break |
| 12:30 | Round table |
| 13:30 | Question |
| 14:00 | Closure |

3.1.1.2 Participants

Participants of this workshop as stated previously were workers of local social services who deal with most underprivileged residents. Taking advantage of these workers’ good communication skills and capacities, participants will learn about problems and solutions related to raising awareness on energy efficiency issues to this type of residents which have other priorities.

Assistants to the workshop come from local administrations located in the Basque Country and Navarra, neighbour region. Many of these organizations are involved in urban regeneration processes management. Here are the organizations that assisted:

- Beruala S.A.
- Bidebi Basauri S.A
- Debejesa
- Durango Eraikitzen
- Ensanche 21 Zabalguneea
- EVE
- Ingurubide
- Nasuvinsa
- Oarsoaldea
- Servicios sociales de Portugalete
A total of 21 assistants were distributed in 3 different groups for the roundtables part of the workshops to facilitate and stimulate dialogue between different organizations.

3.1.1.3 Event dynamic
The workshop opened by a short presentation of the FosterREG project which included the information related to its objective, cluster structure of the consortium, working structure, conclusions of the collaborative analysis and the capacity building plan to be carry out by the Spanish cluster.

Following this presentation and having framed the objective of the workshop, identified good practices and innovative experiences in social awareness on energy efficiency were presented by the organizations involved in their development.

**Good practices and innovative experiences:**
Representatives of involved organizations explained the origin and development of the experiences as well lessons learned both negative and positive ones.

**Energy Ambassadors by Sestao Berri.**

Iraide Pérez, economic technician from Sestao Berri, presented the TRIME Project in which they participated with Social housing Rental Societies from different European cities in the UK, France, the Netherlands and Belgium. The project aims to help social housing residents to develop behavioural changes that allow them to save energy and therefore money, while at the same time manage to increase comfort in the home. Through a collaborative learning model, the so-called ambassador figure is formed in the energy bill, in the efficient use of appliances, with methods and tips to conserve energy in the consumption of supplies. The ambassador will then train other interested neighbours. Energy consumption is monitored and the results are analysed in order to continue adapting the behaviour to the objectives that each tenant wishes to reach.

Iraide explained how some of the project assumptions had to be replaced in Sestao Berri: There cannot be energy savings when there is no energy consumption due to poverty and vulnerability situations. Energy efficiency is not within the residents priorities. Nevertheless, the adaptation of the information to the living conditions of each of the neighbours could improve their comfort without increasing the expenditure.

The recruitment of ambassadors was adapted to the socio-economic situation of Sestao Berri. The residents’ training though a collaborative learning model was also individually adapted according to each situation.

**Energy savings in Debabarrena by Debejesa.**

Aitziber Cortazar is responsible for the Department of Sustainable Development of Debejesa, the Economic Development Society of Debabarrena (a group of 8 municipalities located in Gipuzkoa). Within the framework of the Debabarrena Energy Strategy, an awareness raising program was developed named "DEBABARRENAN ENERGIA AURREZTUZ". This program’s lines of action were:
- Info-points on energy in all municipalities directed to the citizens were offered to make consultations about the habits of energy consumption, electric contracts (type of rates, type of contract, etc.).
- Energy Diagnosis for food shops in the municipalities.
- Energy Diagnosis in Industrial Activities. Lighting and air conditioning energy diagnosis were performed. Training was also provided.
- Training of municipal technicians and political leaders. Two training sessions were held related to the energy legislation.
- The Housing Rehabilitation Service of Debegesa provided information about different solutions related to saving and energy efficiency to those residents who were interested in doing rehabilitation works in their homes or buildings.

Questions most consulted were:
- Changes in the energy and gas meters.
- Concepts of the invoice. Adequacy of contract to the needs
- Contrast with average consumption.
- Saving instructions.
- Efficiency of technologies: Led

**Lourdes Renove by Nasuvinsa**

Isabel Izcue is the Director of the Area of Urban Planning, Rehabilitation and Urban Regeneration of NASUVINSA, the Public Society of the Government of Navarra which coordinates the advisory office of Urbanistic affairs.

The project "Lourdes Renove" stands out among all the projects developed by Nasuvinsa. This project is a good practice example of changing the role of the administration to a facilitating role by supporting and accompanying the residents throughout the process. Nasuvinsa opened an office in the neighbourhood, which facilitated the management of the process. The office acted as a one-stop shop from where all the procedures related to the works dealing with social, technical, legal, economic and financial were attended.

The administration carried out a dynamization Plan with the objective of informing the neighbours about the project and encouraging them to participate in it.

Rehabilitation interventions included the renovation of facade and roofs, envelopes, general facilities (water supply, electricity and sanitation network) and improvement of the accessibility by the installation of elevators.

The City Council of Tudela organized a project competition for the interventions. Once it was solved, as an impulse to the decision-making of the communities, the City Council of Tudela assumed the cost of the project of the first communities to apply for the construction license. The participation of the neighbours and the possibility of arriving at agreements which made viable the actions was one of the keys of the success of this model.

**Round table discussions:**

The second part of the workshop was dedicated to establishing a dialogue between the participants involved in urban rehabilitation processes, in order to share experiences and good practices related to the sensitization processes on efficiency and energy saving. Participants were divided in 6-7 people groups so that the discussion could be more fluid.
The following question was the thread for the dialogue:

*Based in your experience in relation to making residents aware of Energy Efficiency within Integrated Urban Rehabilitation plans and programs how do you transmit the benefits or possibilities of Energy Efficiency among residents? How? Which actions were carried out? Who is essential in this communication? When? Which moment of the process is key for communicating?*

Raising these issues gave the participants the chance to go deeper into how to overcome main barriers and develop solutions and strategies.

### 3.1.1.4 Conclusion and evaluation

The participants concluded there is not a generic way to face the communication about EE. How, who and when depends on each neighbourhood or community's reality: its economic resources, responsiveness, etc. Therefore having a complete diagnosis of the physical and social reality of the neighbourhoods is a key.

In many cases, the figure "community" does not even exist so the main challenge is to form the community.

**HOW?**

Public administration is at the service of the citizens and communication strategies need to be adapted according to their needs.

Most vulnerable districts include unregulated residents; aversion to authority, etc., the approach needed in these cases is probably door-to-door, to generate trust, performed by social services.

Less extreme cases make it possible to install neighborhood offices, one-stop shop. This type of offices provide a meeting point and facilitate interaction with neighbors, and the detection and involvement of potential neighbors as "neighborhood leaders" may be a good option, combined with continued meetings with neighbors and communities.

**WHO?**

Multidisciplinary teams are needed. Each social context will required more or less presence of certain technical profiles such as social services. In these cases technical and management becomes a secondary consideration.
In area of less vulnerability, management bodies which include the coordination between different government levels facilitate the definition of technical, management, and social educational roles.

**WHEN?**

Regeneration areas should be approach calmly, seeking the trust of the resident and their participation on how to approach the projects. The process should be facilitated by the administration but it should be designed and guided by the residents.

**Evaluation in numbers:**

About 85% of the participants evaluated the event by means of filling out a printed questionnaire, with both multiple choice questions and a few open questions. Results are as follows:

1. Quality of information shared on the event was evaluated satisfactory (3, 8 out of 5).
2. The match between the speakers (if any) and key subjects of the event was evaluated satisfactory (3, 96 out of 5).
3. Financial issue was the most named issue participants would like to hear about in the next capacity building events.
4. Answers to which stakeholders can change EE awareness and communication in UR were mostly related to multidisciplinary teams but also a new professional figures of social workers, such as social educators.

**3.1.2 Event 2. FosterREG project implementation in the rehabilitation area of Irala in Bilbao**

**3.1.2.1 Introduction and objective of the capacity building event**

Irala is a suburb of the city of Bilbao (District 7), located at the southern end of the city between the access to Bilbao and the neighbourhoods of Amezola and Recaldeberri.

![Location of Irala in Bilbao and the area of Iralabarri](image)

Due to its orography the area has significant accessibility problems and also pedestrian communication problems with Amezola and Recaldeberri which have greater commercial and services infrastructures. The area includes 57 buildings built in 1955 as affordable housing near the railway station located in Amezola. They all have same characteristics and form a homogeneous building complex (high of 5 floors, 67.00- 62.00 m2 of floor area, 2-3 dwellings per floor).

Surbisa as the Urban Planning body for Rehabilitation in Bilbao, partner of FosterREG in the Spanish cluster, included the area of Iralabarri in the "Study for locating settings and areas of preferential rehabilitation in Bilbao" with the objective of setting rehabilitation strategies set by the Department of Housing, Public Works and Transport of the Basque Government.
Surbisa started the process of declaring Iralabarri a “Degraded Area” due to the unemployment rate, low income levels, risk of social, economic and urban vulnerability, and the existence of serious problems in the conservation of buildings. The structural stability of the buildings is good but they have severe thermal gaps. The area has problems regarding accessibility, both at urban level as well as internally. Only one of the buildings has elevator. Urban qualification as “Degraded Area”, issue by Basque Government Housing Department, will allow residents to access public funding to undertake rehabilitation works with EE criteria.

Raising awareness on Energy Efficiency to Iralabarri’s residents is been identified as an opportunity to apply the capacity building activities and disseminate the lessons learned so far within the FosterREG project.

Planned activities by Surbisa in the frame of the FosterREG project include a presentation of the rehabilitation strategies to be implemented and a site visit to the area of Iralabarri. Rehabilitation strategies applied in this area will include EE criteria and there is a need to give value to the proposed solutions when this is not a priority of the residents

The objective of these activities is to increasing awareness on local and regional technicians on good practice communication strategies with residents. They also aim to increase awareness on Energy Efficiency to Iralabarri’s residents.

The event is planned and coordinated with local residents associations and other stakeholders located in the area of Irala.

3.1.2.2 Participants

Participants included local residents, neighbourhood associations as well as public sector technicians from local and regional government. The presentation on 17th of January was attended by more than 30 residents. Other participants came from different organizations. The visit took place on 27th of January and 21 assistant participated both residents and technicians, from local and regional administration, energy and urban planning sectors. The resident’s number varied along the visit.

Some of the organizations that assisted are:

- Residents from the Neighbourhood Association of Irala
- Irala Retired Association
- Bidebi Basauri S.A
- Durango Eraikitzen
- EVE
- Ingrubide
- Oarsoaldea
- Bilbao City Council
- Basque Institute of Public Administration
- Surbisa
- Tecnalia
- Visesa

3.1.2.3 Event dynamic

On January 17th, in the framework of the commemoration of the 100 years of Irala, a conference was held in which the FosterREG project was presented to the residents of this area. This presentation aims to raise the awareness of residents about the need and opportunity to undertake energy rehabilitation actions in their neighbourhood, not only for economic reasons of energy saving, but from the comfort and health perspective as well as for the improvement of the neighbourhood.
Surbisa, in charge of the rehabilitation management, presented the actions to be carried out in the buildings which cover the expansion blocks of the historic Irala. As explained by Jose Urriolabeitia, technical responsible of Surbisa, once this area is declared Rehabilitation Area, rehabilitation works will be include not only rehabilitation of buildings but also the urban environment.

Following the conference, on 27th of January, Surbisa together with local residents associations organized a visit to the neighbour. The aim of the visit is to promote the implementation of the FosterREG project in this rehabilitation area of Bilbao, through dialogue and exchange between rehabilitation agents and affected residents of the area, seeking to sensitize residents in relation to energy efficient rehabilitation.
The visit ended with a brief meeting between residents and technicians to gather the conclusions of the visit.
3.1.2.4 Conclusion and evaluation

Conclusions of this activity are summarized below:

- The neighbourhood rehabilitation process is off to a good start as it is based on a neighbourhood initiative. Residents approached to Surbisa with the proposal and willingness to rehabilitate the areas. Surbisa's role in this process is to mediate and link administrations and residents. Rehabilitation processes as complicated to manage and long.

- All rehabilitation solutions from the planning phase to the building scale need to be integrated, looking for unity in the solutions, so that the neighbourhood does not lose its identity.
- In terms of solutions, it is proposed to act in several buildings at once and standardize the solutions as an opportunity to incorporate energy efficiency in buildings, improve comfort and save energy consumption, achieving economies of scale through these actions.

- Solutions, on the other hand, cannot be prescribed from a single guideline. Different scenarios should be defined according to historical, cultural, sociological, economic, etc. to achieve sustainable and energy efficient rehabilitation.

- Although the decision is owned by the Building Community of Owners, the buildings are inhabited by individuals whose situations and problems must be considered from the reality from the analysis to the solutions' proposals.

No survey was issued in these activities.

3.1.3 Event 3 - Socioeconomic criteria in the segmentation of rehabilitation funds

3.1.3.1 Introduction and objective of the capacity building event

The socioeconomic and urban reality of the areas involved in urban regeneration processes is complex; diverse and dynamic (varies over time). Urban rehabilitation policies and funds, especially those aimed to Energy Efficiency, require tools (protocols, criteria, messages, etc.) that are adapted to the reality of the residents and their urban context.

The workshop aims to present and discuss about the existing criteria in different administration levels for energy efficiency rehabilitation and the possible coordination and segmentation of these funds considering new criteria and indicators.

3.1.3.2 Participants

34 people attended this workshop. Participants of this workshop were key agents in the design and definition of rehabilitation and urban regeneration funds schemes from different
levels of the administration, from local to regional and from the energy sector as well as urban and housing departments. The organizations that assisted are:

- Office of Ombudsman
- Donosti- San Sebastian city council
- Vitoria- Gasteiz city council
- Pamplona city council
- BIDEBI BASAURI S.A
- Durango Eraikiten
- EVE
- Navarra Goverment_Housing department
- Basque Goverment_Housing department
- Ingurubide
- Nasuvinsa
- Oarsoaldea
- Universidad Libre Bruselas
- Surbisa
- Tecnalia
- Visesa

3.1.3.3 Event dynamic

VISESA’s new director, Carlos Quindos, welcomed the participant and the workshop opened followed by a brief presentation of the FosterREG project including information related to the capacity building plan activities to be carry out by the Spanish cluster. The workshop was developed in two parts throughout one morning. Following FosterREG presentation and having framed the objective of the workshop, during the first part of the morning representatives of the Basque and Navarre Government, as well as the City Council of Vitoria-Gasteiz and the EVE (Basque Energy Agency) presented their existing public funds related to energy rehabilitation.

Figure 8 Panel of speakers and Phd. Maruxa Touceda (right)
This session was completed by Phd. Maruxa Touceda, researcher in the Free University of Brussels, presentation: Methodology to evaluate socioeconomic impacts of rehabilitation. Through her presentation Ms. Touceda explored the possibility of quantifying some of the socioeconomic impacts (household health, poverty risk Energy, contribution to economic development) associated with rehabilitation. The analysis of "life cycle sustainability" allows considering environmental and socioeconomic benefits to guide a potential adaptation of policies and incentives to rehabilitation depending on certain scenarios of housing typology and conditions or the vulnerability of the homes and their inhabitants.

In the second part, a working session was developed with all participants. Participants were divided in 4 groups (8-9 people) so that the discussion could be more fluid.

Round table discussions:
The objective of this activity is to analyse from the socioeconomic perspective the different public fund programs for energy rehabilitation, considering their adaptation to the social and urban reality of the residents and not only the income criteria. Throughout the discussion the following aspects were addressed in order to go further into the main barriers to overcome and strategies and solutions to be developed.

- **Key Issues**: Some of the key issues that could be taken into account for fund segmentation are the relationship between well-being and health with environmental quality inside housing, employment and job creation, aspects related to the circular economy that could be included in rehabilitation operations, share of public - private funding, energy poverty.
- **Need of a Diagnosis**: In order to design plans and programs for rehabilitation funds, it seems reasonable to have a good diagnosis of the socioeconomic and socio-urban reality of the residents, as well as the characteristics of the building stock.
- **Funds Design**: Criteria and objectives of different sectors vary. The integration of all different administration levels and departments (social, economic, environment...) would facilitate the execution of more complex projects in addition to guaranteeing the continuity of the funds.
- **Management / Implementation**: The budgetary and political times generate public funds which are not guarantee the continuity and sustainability of the financing.

**3.1.3.4 Conclusion and evaluation**

Conclusions of the workshop are summarized as follows:

- **Key Issues in the design of public funds depend on the political trend of the administration. They may be more oriented towards industrial or economic**
development, or may have a more social or environmental focus depending on the government priorities.

- Aspects such as the relationships between health comfort and air quality, as well as fuel poverty, should be part of the analysis for designing funds and in general for building and urban regeneration policies.

- It has been proved that public funds for building rehabilitation achieve a great economic impact in the local administration economy (through taxes, construction works licenses, employment opportunities ...). Demonstrating positive socioeconomic impacts of energy efficient urban regeneration processes, is considered a key issue as it has in many cases a large weight on policy decision making.

- The benefits of these processes for the residents should also be better evaluated and explained.

- Integration of environmental issues is of relative less importance, and is not generally a factor worth considering, particularly where there are difficult socioeconomic situations.

- Public funds criteria could be set according to the family income levels, but prioritizing different objectives for the different income levels. While for building owners with higher incomes, access to public funds could be subject for example to additional environmental criteria, this might not be applicable to those with lower incomes, who may be evaluated according solely to socioeconomic criteria. Public funds should be in general scalable according to the family incomes.

- Adequate diagnosis of the different districts within cities should be an starting point for the design of funds. It is agreed that rehabilitation of buildings should be performed in an integrated way, but also acknowledging that these integral rehabilitation processes are expensive and very long, which in many cases discourages residents.

- Public funds should be adapted to rehabilitation works programs which would allow performing integrated rehabilitation little by little, in different phases, but ensuring that these phases are part of an integrated plan and have an overall EE objective and are not perform with a partial vision.

- The complexity and paperwork of the fund application form should be reduce and simplified so they are more dynamic and accessible to residents.

Evaluation in numbers:
About 75% of the participants evaluated the event by means of filling out a printed questionnaire, with the following results:

1. Quality of information shared on the event was evaluated satisfactory (3, 8 out of 5).
2. The match between the speakers (if any) and key subjects of the event was evaluated satisfactory (3,79 out of 5)

3.1.4 Event 4 - Covenant of Mayors for climate & energy in coordination with urban planning projects

3.1.4.1 Introduction and objective of the capacity building event

EVE (the Basque Energy Agency), partner of the FosterREG Spanish cluster, promotes energy efficiency, savings and the use of renewable resources at the local level identifying improvement measures which allow the definition of adequate municipal energy planning.
The improvement measures are very diverse and EVE participates in different projects to identify experiences for its implementation.

In the framework of the FosterREG project, EVE organized the Second Municipal Meeting: "Covenant of Mayors" and "Walking towards the Covenant" to share different energy efficiency municipal rehabilitation projects and urban regeneration experiences in the aim of making aware and involve the political class on this approach. Financing rehabilitation and urban regeneration projects is a complex issue for municipalities. Therefore some presentations on economic knowledge were shared. This event took place 4th of April, 2017 in Bilbao.

3.1.4.2 Participants

70 participants were present during the event. More than 30 municipalities were represented in the event and other organizations at regional level.

3.1.4.3 Event dynamic

Participants to the event were welcome by the General Manager of EVE, Iñigo Ansola. The event followed with a presentation of the FosterREG project which included the information related to its objective, cluster structure of the consortium, working structure, conclusions of the collaborative analysis and the capacity building plan carried out by the Spanish cluster.

Following this presentation and having framed the objective of the event, Mr. Juan Alario, ex director of BIE, presented the European financial tool to support EE. Mr. Oscar Puche, Technician from EVE, presented how projects can by financed by ESES.

The second session of the event was dedicated to the presentation of different municipal experiences by the technical responsible.

Figure 10 Photographs of different moments of the event
3.1.4.4 Conclusion and evaluation

The event was a successful follow up of the Covenant of Mayors in the Basque Country regarding raising the awareness of the political class in implementing EE measures in urban regeneration processes.

Issues related to financing were raised by municipal technicians on how to success on engaging the residents in integrated rehabilitation processes. The success is assured if residents are concerned and willing to take part in the improvement of the area where they live. They will be successful if there is trust build up between residents and the administration.

Evaluation in numbers:
About 51% of the participants evaluated the event by means of filling out a printed questionnaire, with both multiple choice questions and a few open questions. Results are as follows:

1. Quality of information shared on the event was evaluated satisfactory (3, 8 out of 5).
2. The match between the speakers and key subjects of the event was evaluated satisfactory (3, 9 out of 5).
3. How can small size municipalities approach these type of EE/UR processes was questioned regarding what the participant would like to hear about in the next capacity building events.
4. Public-Private Collaboration and Financing were the most named key issues to encourage EE rehabilitation.

3.1.5 Event 5 - Mechanisms of coordination to progress on integrated policies

3.1.5.1 Introduction and objective of the capacity building event

There are a number of factors (transversality of policies, loss of sense of the identification of a competition with an institution, processes of decentralization, blurring of the phases of the policy cycle ...) which have accelerated and have made public policy processes more complex and interdependent. To address this complexity there is a need to improve the coordination mechanisms of the actions of the different agents that take part in the public policies, and especially of the different components of the Public Administration.

The workshop Mechanisms of coordination to progress on integrated policies aimed to establish mechanisms to improve the integration of work processes of the different departments of the administration (different areas of municipal government, regional, ..), especially those related to the FosterREG to incorporate energy efficiency measures into the planning, management and financing of integrated urban regeneration.

This workshop was planned, first time, for the 16th of March 201 but due to lack of assistance it was suspended. A second call was announced in the 2nd Municipal Meeting: "Covenant of Mayors" and "Walking towards the Covenant" organized by EVE to encourage participation of municipal representatives. Once again the event was suspended due to lack assistance.

3.1.5.2 Participants

The workshop was address to the representatives of the different departments of the local as well as regional administration, both political and high level technicians, but there was not response from either of these two groups.

Among others more than 100 municipalities were contacted and send the invitation.
3.1.5.3 Event dynamic

The workshop would be developed in two parts throughout the morning. In the first part of the morning, different mechanisms and coordination instruments would be presented, while the second part would be dedicated to creating a dialogue forum between the different participants in order to share experiences and advance in the practice of implementing these mechanisms in urban regeneration processes.

3.1.5.4 Conclusion and evaluation

Lack of integration of different departments in the urban regeneration processes was one of the most recurrent issues raised among participants in the Collaborative Analysis workshops held in Spain. As mentioned above the workshop was not held due to lack of participation of the target group which included both political and high level technicians of the different departments of the administration.

However, it is really difficult to engage this level of representatives for a single workshop if there is not a demand claimed by them. Involvement of the responsible of departments willing to improve the processes will have to be address from a different approach.

3.2 The Netherlands

3.2.1 Event 1 - FosterREG Community of Practice Workshop Netherlands – Further Development of Strategies

3.2.1.1 Introduction and objective of the capacity building event

On the 4th July a follow-up workshop was held in the town hall of Utrecht. Main goal of this meeting was to develop a collaborative process plan for the implementation of each of the strategies, more over to share experiences and ideas around these strategies and to identify support questions/actions towards the FosterREG consortium.

Both new and acquainted FosterREG participant from municipalities, NGO’s, national government, energy/citizen cooperations and companies came together. During the half-a-day, all participants worked on the further development of the three joint strategies as developed in the Collaborative Analysis process of FosterREG: ‘Renovation Energy Service Company (RESCO)’, Customer oriented approaches and ‘Using the warmth of the district / gas free districts’ earlier.

3.2.1.2 Participants

New and acquainted FosterREG participants from WP3 from municipalities, NGO’s, national government, energy/citizen cooperation and companies

3.2.1.3 Event dynamic

After a general introduction and explanation of the implementation process to follow, the participants formed three groups on which they worked on the strategies in WP3. The implementation process plan for each of the strategies focus on certain aspects, knowledge, stakeholders and steps that are considered essential for further realization of the strategies. Groups of participants worked on their joint strategy and finally presented their progress to the other groups.
3.2.1.4 Conclusion and evaluation

The participants concluded that their strategies are not ready yet, therefore the need for a follow-up meeting was expressed by the participants. This follow up meeting was also planned and prepared for. But because around that same time, the first ideas of establishing a national green deal were becoming public, and that the participants of the strategy sessions were extremely diverse and fragmented (representing multi levels of authorities or stakeholders, various domains (energy, planning, construction, residents, legal, finance, etc) and different geographical directions); as a result the commitment became too fragile, and we had to cancel the follow up meeting due to a large number of participants declined the gathering.

No WP4 evaluation was conducted after this meeting because no FosterREG WP 4 evaluation form or process was available within the FosterREG consortium at that time.

3.2.2 Event 2 – Kick-off Green deal Gasfree district

3.2.2.1 Introduction and objective of the capacity building event

On the 14th of March the Kick-off event of the Green Deal Gasfree district had place in the city of Utrecht. The event was organized by the ministry of Economic affairs and their executing agency (RVO), TNO and the NGO HIER klimaatbureau together.

Objectives of the kick-off event were to update the participants of the Green Deal on the activities and plans of various national ministries that are related to, and can facilitate this Green Deal as such. Most of them were related to new legislation, policies and research trajectories coming up or currently under vote. Secondly, to provide insights on the structure and planned activities of the knowledge sharing program of the Green Deal and to present the first results of the intake interviews. Thirdly, to match knowledge supply and demand by pitches and networking. Last but not least, in order to have the first knowledge sharing sessions between partners of the Green Deal on dedicated topics. The topics for this first session where: (1) Residents communication and involvement (2) Process: How do you get a gas-free neighbourhood (3) Use of data/models and experiences from municipalities.

3.2.2.2 Participants

At least 80 participants were present during the event. The vast majority were policy officers from the over 30 partner municipalities, next to policy makers of national ministries and
other governmental agencies. Other participants came from NGO’s, semi-government, umbrella organizations and a small set of private companies.

3.2.2.3 Event dynamic

The event took about four hours (10.00 – 14.00), after which an additional special session was planned to discuss the first results of a national heat assessment framework (not being part of the Green Deal, nor from the FosterREG capacity building activities).

The first hour included an introduction and presentations from the Ministry of Economic Affairs, and their executing agency RVO, next to some time for discussion and questions. After that, an informal matchmaking was planned, for 14 suppliers of a dedicated knowledge or process tool (institutes, governmental agencies, NGO’s, umbrella organizations and companies) to pitch their ideas and market-solutions.

After lunch, the three knowledge sharing sessions were each organized in a different and unique way. The resident’s communication and involvement session was chaired and facilitated by an NGO (HIER Klimaatbureau) with expertise and experiences on this topic. During this session (possible) residential questions were gathered and strategies were developed in subgroups.

The session on the process of realizing a gas-free neighbourhood was facilitated and chaired by TNO. After a short introduction presentation by TNO, two municipalities (Utrecht and Wageningen) presented their process approach, pilot(s), experiences and lessons learned so far. They touched upon questions like ‘How do you organize cooperation with local stakeholders? How to develop effective and efficient strategies? How to organize the development of support at administrative level, within the municipal organization and externally?’ How is the approach in the neighbourhood? How to select a neighbourhood, which criteria to use? Etc. After the presentation there was time for discussion and questions. At the end of the session we collectively concluded by choosing a topic for the next follow-up session.

The third parallel session on data and models was chaired by RVO in which three municipalities (Zaanstad, The Hague and Groningen) presented their experiences with various energy models and mapping tools. Next to that, overviews of available energy models were presented.

3.2.2.4 Conclusion and evaluation

The event was a successful kick-off of the Green Deal which inspires and generates an emerging consciousness for the need to shift towards sustainable heating of residential
neighbourhoods. The event had multiple objectives on which we were able to be successful: knowledge was shared, novel connections were established and eagerness for a continuation was triggered. Follow-up events are organized, in order to provide more in-depth sessions on specific topics.

An overall shared result was already the comprehension that we are just standing at the beginning of something which will have a major impact on the Dutch society in various ways, which we cannot totally oversee yet. There is a lot unknown and many unanswered questions, therefore sharing experiences and knowledge is essential. So far, most of the questions and issues raised by municipalities and relevant stakeholders are not focused on technical alternatives for sustainable heating, but rather dealing with the process plan, communication about, and how to shape the institutional context. Finally, the conclusion was drawn that it is essential to bundle the many questions, demands and recommendations for shaping further research, new legislation and policy necessary to make this transition happen. This is an important objective of the Green Deal.

**Evaluation in numbers:**
About 25% of the participants evaluated the event by means of filling out a printed questionnaire, with both multiple choice questions and a few open questions. The overall score was 3,4 (out of 5) – good.

More specific:

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**3.2.3 Event 3 – Knowledge session ‘No more Natural gas, what's in the pipeline’**

**3.2.3.1 Introduction and objective of the capacity building event**

On the 22th of May an integral knowledge session was organised on gasfree district and alternatives for natural gas, in the city of Utrecht. The event was organized by the city of Utrecht and TNO together.

Main objective of the event was to share knowledge and insights among the policy makers of various local authority domains of the city of Utrecht, among others about alternatives for natural gas in new and existing built environment. Besides, the session was dedicated to provide further insight into the climate challenge cities are facing and the effect on everyday’s and everyone’s work. Last but not least, was the intention of this session also to gain an understanding of what policy makers need in terms of laws and regulations, what they need in terms of organisation, in adaptation of work processes or what they need from other colleagues to make the necessary transition work.

**3.2.3.2 Participants**

45 public officers and managers from various domains (urban regeneration, energy efficiency, social district management and local neighbourhood managers) all from the city of Utrecht attended the event.
3.2.3.3 Event dynamic

The event existed of two parts, as shown in the programme (see annex), first round of lectures (from the city authority, and a dedicated session by DWA, a technical consultant), which took about 1.5 hour (15:00 – 16:30). The first half hour included a presentation dealing with the necessary transition path towards a sustainable energy supply (system) without natural gas; whereas the objective here was to provide insights on the local (Utrecht) approach and the new local and national coalitions with partners involved. Second part of the presentation was provided by DWA in order to shed some light on current experience and insights on the existing alternatives for domestic natural gas heating.

In the final time slot of the knowledge event, time was reserved for organizing an integral discussion and question part, which could be summarized into the following categories: (1) technical questions, like “what will happen with the gas pipes that are not used anymore?”, “do we know enough about the heat balance in the underground when a couple of ground-coupled heat exchanger will function in a certain area?”; (2) organisational questions, like “how can we stimulate citizens to make their houses climate neutral even if their houses already have a good insulation?”, “how do we tackle the legal issue around geothermal heat and the impact on property development in their neighbourhood?”, “is there a good way to connect to and communicate with the tenants in a certain district?”, “how do we connect investors and developers to the transition process and their institutions (like the Regietafel)?”; (3) strategic questions like “how do we properly find a good balance between those who pay the costs and those who have the benefits?”, “Does Utrecht want to build on existing heat grids and how to make those grids more open?”, “what does Utrecht want in relation to the revision of Dutch national laws, in this case the Heat Law?”, “Are national triggers not better to stimulate this transition? Like a higher price of natural gas?” and (4) more political questions like “what is the role of the Council in the energy transition? And of the citizens?”

One of the results here was the collective understanding that we are currently standing for a large scale transition, and that many more of these knowledge session events will be necessary to reach out to all municipal departments, in order to realize and actually work on sharing the knowledge of how to make the cities of tomorrow natural gas free.

3.2.3.4 Conclusion and evaluation

The event was considered very meaningful, by means of strengthening connections between various domains and colleagues (this transition crosses through many departments and effects multi domains). Knowledge was shared and the sense of urgency increased for the participants.
Six concluding points have been identified, that also require further elaboration and interaction with the other pilot cities in the Green Deal:

1. A generic need for being able to share, trade and deal energy between and among residents is identified. Possible infrastructure for this might be optical fibre. This issue will be further elaborated in the future Light House Smart City Project, the city of Utrecht is coordinating.

2. How to deal with the boundaries of ownership, related to ATES systems for domestic heating. Aqua sources go beyond the existing plot boundaries, and have impact on the (possible) development on neighbouring plots of land. This is currently a legal no-mans land.

3. Next to new emerging regulations for heat distribution and infrastructure, similar attention should go to cold and its distribution too. Primarily on the regulations of setting tariffs.

4. City of Utrecht has a relative large share of district heating, unfortunately, this way of domestic heating is quite expensive, a single supplier (monopoly) and doesn’t seem to offer a suitable alternative for the transition towards sustainable energy systems.

5. Some of the large (institutional) investors and real estate developers seem to are interested in the developments related to phasing out natural gas for domestic heating, besides, they can offer new financial / contract concepts, that are able to finance the alternative sources of heating too. Why are these market partners not invited for these knowledge sessions?

6. Important message from the participants is to ensure the end users (inhabitants, individual home owners) are considered in the planning. Don’t let them be confronted with all types of organisational, financial and legal issues to be dealt with. Destress them as much as possible.

All participants of the session agreed, that this transition to a sustainable energy system for domestic heating will effect each and everyone’s work (public officers), on a day to day basis, sooner or later.

_Evaluation in numbers:

About 12% of the participants evaluated the event by means of sending an email replay and filling out a printed questionnaire, with 5 multiple choice questions. The overall score was 3,2 (out of 5) – good.

More specific:

**Average score**

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<tr>
<td>Applicable in own</td>
<td>3,4</td>
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</table>

**3.2.4 Event 4 – Case study: Roadmap to a gas free district**

As many cities on their own are struggling with the issue of phasing out natural gas for domestic heating, the city of Utrecht have formulated a roadmap for visualisation of the trajectory the local authority is been working on this issue from scratch. In the end, the form of an infographic is been embraced to illustrate the lessons learned and show the main qualities to deal with, on the way to climate neutral heating system. Interviews have been gathered, and based on the materials from literature and interview scripts, this infographic has been designed. It shows the main topics, successes as well as questions, those involved in the process of phasing out natural gas for domestic heating are dealing with up-till now. It was developed by a team of young professionals, still in their trajectory of learning about working (as a trainee) for the city of Utrecht.
Please find herewith the result of the infographic, which is available both in the Dutch language and in English (also available on line: www.fosterreg.eu):

**Figure 14 Infographic for the city of Utrecht**
A new day, a new start

Figure 15 Visualization of lessons learned in Utrecht
Figure 16 Visualization of current challenges for the city of Utrecht towards carbon neutral energy system.
3.3 Croatia

3.3.1 Event 1 – National level workshop "How to plan, finance and manage the projects with integrated energy efficiency measures in urban regeneration"

The workshop "How to plan, finance and manage the projects with integrated energy efficiency measures in urban regeneration", was held in Zagreb, 15/02/2017 in Hotel International.

3.3.1.1 Introduction and objective of the capacity building event

Over 80 representatives of public authorities at national, regional and local level and civil society, professional and academic communities attended. Academic community and representatives of cities gave presentations about new approaches to the energy efficient urban regeneration, problems and possible solutions to the ministries and other stakeholders at the national level.

Table 2 Agenda of the workshop in Zagreb 15/02/2017

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>9:00 – 9:30</td>
<td>Registration of participants</td>
</tr>
<tr>
<td>9:30 – 9:40</td>
<td>Tomislav Pukšec, PhD (SDEWES): Project FosterREG – presenting the experience of FosterREG CAA</td>
</tr>
<tr>
<td>9:40 – 10:00</td>
<td>Irena Križ Šelendić – Ministry of Construction and Physical Planning (MGIPU): Legislative framework, national strategic documents and programmes for energy efficient regeneration according to the obligations pursuant to the EED</td>
</tr>
<tr>
<td>10:00 – 10:20</td>
<td>Ines Androić Brajčić (MGIPU) – results of previous programmes of sufinsancing the regeneration of housing stock and public buildings in Croatia</td>
</tr>
<tr>
<td>10:20 – 10:40</td>
<td>Prof. Neven Duić, PhD (UNIZG FSB): Renewable energy sources integration and the use of district heating systems on the city district level</td>
</tr>
<tr>
<td>10:40 – 10:50</td>
<td>Tomislav Novosel (UNIZG FSB): Role of mapping the heat demand in the energy planning of city districts – project Heat Roadmap Europe (HRE)</td>
</tr>
<tr>
<td>10:50 – 11:10</td>
<td>Asst. Prof. Goran Krajačić, PhD (UNIZG FSB): Smart cities and the integration of solar PV systems</td>
</tr>
<tr>
<td>11:10 – 11:30</td>
<td>Coffee break</td>
</tr>
<tr>
<td>11:30 – 11:50</td>
<td>Prof. Tihomir Jukić, PhD (UNIZG- Faculty of Architecture): Sustainable methods of urban planning and the energy efficiency measures integration</td>
</tr>
<tr>
<td>11:50 – 12:10</td>
<td>Sonja Kovač (City of Osijek): Needs and issues on the local level in the implementation of projects with integrated energy efficiency measures</td>
</tr>
<tr>
<td>12:10 – 12:30</td>
<td>Nives Mornar (City of Zagreb): Urban learning – integrated energy planning</td>
</tr>
</tbody>
</table>
12:30 – 12:50 Ana Markuz – Ministry of Rural Development and the EU funds (MRRFEU): Implementation of the energy efficiency measures in the horizontal rural development

13:00 – 14:00 Lunch and networking

The workshop was organized as the ACTION 1 type of event, by the APN and SDEWES Centre with the support of the City of Osijek. Main idea was to connect the national stakeholders such as Ministry of Construction and Physical Planning (MGIPU), Ministry of Economy (MINGO) and Ministry of Rural Development and the EU Funds (MRRFEU), national agencies and institutes, as well as other industry with the stakeholders from the local levels and present the new ways of thinking among the academia.

Connection to the Regional and Local level is achieved also through invitation of speakers from different levels of government and the Office for Urban planning, construction, communal services and transport of the City of Zagreb and the City of Osijek.

Materials that were used on the workshop:
- Subject presentations (prepared by the speakers)
- Project presentation
- FosterREG booklet in the national language (Croatian edition)
- Satisfaction survey prepared via the Google Docs

3.3.1.2 Participants

Overall 86 representatives of public authorities at national, regional and local level and civil society, professional and academic communities attended the workshop.
From the perspective of the workshop goals, national public officers and majority of the industry were the stakeholder group for which this event was tailored for. These groups constituted the 45% of all attendees.

Key stakeholders present at the workshop were at the same time the national bodies for the implementation of the EU's Operational programme for competitiveness and cohesion 2014-2020, with MRRFEU being the governing body (UT), MGIPU is the the mediatory body of the first level (cro. Posredničko tijelo – PT 1) and EPEEF is the mediatory body of the second level (cro. PT2) for Croatia.

Also, relevant stakeholders participating at the workshop were the APN, CEI and MINGO. Other attendees were numerous representatives of the local and regional government, the academia, NGOs and national companies interested in energy efficient urban regeneration.

3.3.1.3 Event dynamic

The event was focused on building the capacity of national stakeholders by providing them with novel scientific and expert approaches to energy planning at the city district level and the feedback from the regional and local level, which was gathered through the CAA and also facilitated at the workshop.

![Figure 18 MGIPU representative in discussion with local stakeholders and NGOs and MRRFEU representative demonstrating the visibility of projects co-funded by the Ministry](image)

Technical part of discussion presented the national, regional and local stakeholders with new views on energy planning on the city district level, options for energy supply and the vision of Smart Cities, with integrated urban planning.
Also, local stakeholders presented their issues to the national stakeholders: legislative framework problems, lack of funds and local lack of awareness and knowledge about the importance of energy efficient urban regeneration and the opportunities it provides for the development of communities.

3.3.1.4 Conclusion and evaluation

During the workshop, important messages were exchanged between the levels of government, but also on the horizontal level. Technical presentations helped to raise the capacity of national stakeholders; in particular the information was presented to them on how to approach and which developments to include in future planning of large urban regeneration projects. The MGIPU agreed that district level of energy efficient urban regeneration is the future way of handling the urban regeneration and FosterREG training activities proved to be the valuable venue for discussion and coordination towards this end.
Also, networking was improved through contact of multiple H2020 projects. FosterREG consortium started the talks with the aim of cooperation and strengthening of professional groups provided by *Urban learning* project and *BUILD UPON* project. This cooperation will ensure the continuing efforts for sustainable urban regeneration in Croatia and secure the legacy of all three projects through the common build-up of initiative and work group for EE in UR.

The results of the satisfaction survey indicate the high level of acceptance. Overall, 41 participant filled the online survey, performed via the Google Docs format, due to the large number of participants, which is 48% of all participants.

The survey was composed from six questions:
1. Please estimate the quality of the content presented at the workshop (rates from 1 - unsatisfactory to 5 excellent information)
2. Please estimate how suitable the choice of speakers was in the relation to the workshop subjects (rates from 1 - there is no connection to 5 – excellent match)
3. Which subject would you like to hear more about in the following FosterREG events?
4. Which stakeholders should intensify their involvement in order to facilitate the projects presented by the FosterREG project?
5. Can you suggest a measure for the improvement in quality of implementation of the integrated urban regeneration projects?
6. Please choose the type of institution you come from:
   - Academy
   - National government body
   - Local/regional government body
   - Industry
   - Agency / NGO

The results of these questions are, as follows:
1.)

![Diagram 1]

2.)

![Diagram 2]
3) Themes that the attendees would like to hear more about encompass themes already covered in FosterREG materials and discussions: Strategic documents in urban planning, best practice examples, solutions for financing, answers to questions why some projects work in one local government unit, but not in some other; integration of RES on the neighbourhood level, Integrating urban planning, modernization of architectural solutions of the current situation of urban communities based on sustainable development, specific methods that have been taken at successfully implemented projects, possibilities of using EU funds to improve energy efficiency for reconstruction of existing and construction of new buildings. Also, how to prepare projects to be eligible for EU financing, cost-benefit analysis of energy regeneration and similar.

4) Stakeholders which should intensify their involvement in order to facilitate the projects, in the opinion of the attendees, are:

- First public administration at all levels, through changes in the legislation, then entrepreneurs with business models, financial institutions should monitor these developments.
- Local government
- Ministry
- Funding institutions, the relevant ministries, local government authorities and neighbourhood councils
- Urban planners, architects, local government, Ministry of Construction, regional development and environmental protection

It is often mentioned the problem of ownership as one of the main obstacles or bureaucratic and lengthy procedures - it is necessary to activate stakeholders to work on resolving the issue.

Governing bodies that issue permits (location, construction ...), legislative bodies and professional practice must find common ground, necessarily synergistic mode of action.

5) Suggestions for the improvement of implementation of integrated energy regeneration projects:

- Harmonization of legislation, the introduction of the definition of EE at the Board level Neighbourhood, defining the legal personality of the building.
- Integration of all levels.
- Popularization of activities in direct contact with citizens / residents of urban neighbourhoods.
- Strengthens the connection of future plans and economy to achieve the goal.
- Extension of measures to encourage large-scale renewal in the tax policy
- Cooperation with local communities in the field.
Connect all stakeholders in defining the baseline and target points and determination of the activities and measures to achieve the defined objectives.

Incentives for construction sector to keep working on renovations in Croatia.

Intensify the communication with the citizens, since the main obstacle is very often the lack of funds for reconstruction and no awareness about the options. In addition, speed up administrative procedures.

Develop a series of B2B meetings with end-users; the presidents of city boards, building managers, representatives of tenants.

Add the option of regeneration on the neighbourhood level in the national programs of reconstruction - start a pilot project for a smaller portion of the block.

Bringing together a team of experts in individual cities, to develop a strategy to make people understand what they are getting with energy renewal and take action.

6) Participation in the survey

![Figure 21 Participation of the stakeholders from Event 1 in the survey](image)

**Figure 21 Participation of the stakeholders from Event 1 in the survey**

### 3.3.2 Event 2 Regional level workshop "How to plan, finance and manage the projects with integrated energy efficiency measures in urban regeneration – perspective of the cities"

The workshop "How to plan, finance and manage the projects with integrated energy efficiency measures in urban regeneration – perspective of the cities", was held in Osijek, 03/03/2017 at the Faculty of Civil Engineering, Josip Juraj Strossmayer University of Osijek.

**3.3.2.1 Introduction and objective of the capacity building event**

Over 60 representatives of public authorities at national, regional and local level, civil society, professional and academic communities attended.

Representatives of ministries and national bodies for implementation of integrated energy efficiency in urban regeneration projects presented their programmes to the local and regional stakeholders, to facilitate the collaborative work on addressing the key questions in financing and implementing projects on the city district level.

**Table 3 Workshop agenda - Osijek 03/03/2017**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 – 9:30</td>
<td>Registration of participants</td>
</tr>
</tbody>
</table>
9:30 – 9:40 **Tomislav Pukšec**, PhD (SDEWES): Project FosterREG – presenting the experience of FosterREG CAA

9:40 – 10:00 Ministry of Rural Development and the EU funds (MRRFEU): Implementation of the energy efficiency measures in the horizontal rural development – presented by the organizers in short version

10:00 – 10:20 **Ines Androić Brajčić** - Ministry of Construction and Physical Planning (MGIPU): results of previous programmes of co-financing the regeneration of housing stock and public buildings in Croatia

10:20 – 10:40 **Irena Križ Šelendić** – (MGIPU): Legislative framework, national strategic documents and programmes for energy efficient regeneration according to the obligations pursuant to the EED

10:40 – 11:00 Coffee break

11:00 – 11:20 **Željka Hrs Boroković** (SAEPTUM) – Best practice examples in energy efficient regeneration of apartment buildings

11:20 – 11:40 **Lorella Limoncin Toth** (Ministry of Culture, Conservation Department in Pula for the area of the Istra County): Issues in urban regeneration and protection of urban cultural heritage

11:40 – 12:00 **Ivan Šerić** (Enereff): Programme for regeneration of buildings in public sector 2016-2020

12:00 – 12:20 Coffee break

12:20 – 13:00 **Damir Vuletić** (APN): Applications to the call for co-financing the regeneration of the public sector buildings – perspective on the future planning on the city district level

13:00 – 13:40 **Mladen Ilijević** (EPEEF): Applications to the call for co-financing the regeneration of the apartment buildings – perspective on the future planning on the city district level

13:45 Lunch and networking

The objective of the workshop was to deliver the information about the present state of energy efficient regeneration projects in Croatia, application and approval procedures to the local and regional stakeholders. The key national stakeholders were invited to present the recent results of the application of projects to the established co-funding schemes. After this introductory capacity and information transfer, the collaborative work on the models of typical components of the district level projects was organized with the use of FosterREG tools and moderated by the key national bodies for project approval - APN and EPEEF.

Materials that were used on the workshop:
- Subject presentations (prepared by the speakers)
- Project presentation
- FosterREG booklet in the national language (Croatian edition)
- FosterREG tool “Regeneration project plan” in the hard copy form
- Satisfaction survey in the hard copy form

### 3.3.2.2 Participants

The workshop was aimed at local and regional stakeholders, for whom the informative presentations of the national level stakeholders were prepared. Ministry of Construction and Physical Planning (MGIPU), Ministry of Regional Development and EU Funds, Ministry of Culture, APN, Environment Protection and Energy Efficiency Fund (EPEEF), experienced project managers and experts for legislative framework design were invited to transfer the information and knowledge to the local and regional stakeholders.

Overall attendance was very good (60) and is presented in Figure 22.
Regional and local stakeholders, including the local academia and regional agencies, participated actively in the workshop, composing 65% of all participants. Further local influence was achieved through participation of local industry, composing 22% of overall participants.

**3.3.2.3 Event dynamic**

The first part of the workshop included the reports from the Ministry of Construction and Physical Planning on the recent results of applications for co-funding schemes and issues with the energy regeneration projects. The available programmes for co-funding from the Ministry of Regional Development and EU Funds were also presented.

The objective was to inform the attendees about the opportunities and recent developments in already established funding schemes, which were very successful in the recent years (Consult the presentations from MGIPU in the Annex 6.1.2.3.).
The next section of talks was about the examples of good practice in energy regeneration of buildings in Croatia (SAEPTUM), recent changes in application, monitoring and evaluation procedures (Enereff) and the issues of cultural heritage in urban areas (Ministry of Culture) and the ways to perform urban regeneration in cooperation with the conservation offices.

![Figure 24 Session 2: Stakeholders present best practice examples, conservation issues and changes in monitoring procedures](image)

The last sections were moderated by the APN and EPEEF, as the national bodies for energy regeneration projects approval. The objective of this section was to use the information from the first sections as an input and the spreadsheets from the FosterREG tools as a vector for the collaborative work on the model of typical public use building and apartment building, which would be the components of the future district level project.
During the last session, a debate arose in the Q&A part, with local stakeholders asking questions for MGIPU, EPEEF and the organizers to answer, about the overcoming of the barriers and the overall usefulness of the approach. In this debate, the need for additional education and awareness raising activities was underlined, as many local stakeholders don't have the opportunity to “get on the same page” with the national stakeholders and the academia. In such an environment, numerous ideas can be wrongly interpreted and the need for additional materials, explaining the procedures and components of the new project approaches are needed.

Using FosterREG tools to create a “model” buildings

Buildings for public use: FosterREG Tool was used to discuss the changes needed in the applications procedures in order to apply a single, model building as a part of a large, district scale project. This session was moderated by the APN, which conducts the process of review and contracting of the energy regeneration of public buildings projects.

Main barriers and solutions for the creation of the model identified are given in the Figure 26.
Regeneration of the apartment buildings: FosterREG Tool was used to analyse and create a model of apartment building as a component in the district level integrated urban regeneration project. As the national body in charge of reviewing and approval of such project applications, EPEEF was moderating this session.

Suggestions and notes in this tool are given in Figure 27.

Overall, the conclusion can be reached that the major issue will be in the ownership problems and awareness of the end-users. Other issues, which are easier to solve, are problems in monitoring and minor details in contracting procedures.

3.3.2.4 Conclusion and evaluation

The workshop successfully gathered large numbers of local and regional stakeholders and offered them the most recent information on the national level, regarding the project
application and results of the review procedure. This information was provided by the most relevant national stakeholders – the same institutions performing the whole co-financing procedure.

After the review of this state-of-the-art of today’s energy efficiency project procedures in Croatia, the participants were engaged in collaborative tasks – they were asked to suggest changes in the procedures in order to allow for a creation of the model buildings as the components of the future projects on the city district level.

To verify the quality of the workshop, a survey was conducted and filled-in by 25 participants (42%), as presented in the Figure 28.

![Attendees filling the survey](image)

**Figure 28 Composition of stakeholders who filled-in the survey**

Answers to the first two questions, regarding the quality of material (Figure 29) and the appropriate choice of invited stakeholders (Figure 30) is given below.

![Quality of the content presented at the workshop](image)

**Figure 29 Stakeholders review of the quality of the content**
Other questions in the survey are as follows:

3) Which funding sources you became acquainted with for the first time at the workshop?

The answers mostly addressed the new programs from MRRFEU, EU framework for funding, public-private partnership (PPP), ESCO model, energy service contracting and rural development.

4) Do you believe that fine tuning the current application procedures can suffice for the future projects of on the city district level?

The answers from the local and regional stakeholders were very agreeable on this topic (100% "yes"), while national level stakeholders suggested that the serious legislative change is needed for the implementation of future district level projects.

5) Which positive changes do you expect from the planning on the city district level?

Various answers were given, mostly focusing on the increase in quality of life, reduction of the specific cost of regeneration, increase in the rate of regeneration on the national level (yearly), visual improvements as a consequence of the coordinated urban regeneration of the similar buildings and the stakeholders hoped for simplification of procedures and better opportunities for the integration of renewable energy sources in the new projects.

3.3.3 Event 3 - Local level workshop "How to plan, finance and manage the projects with integrated energy efficiency measures in urban regeneration – changes in local strategic documents"

3.3.3.1 Introduction and objective of the capacity building event

The workshop "How to plan, finance and manage the projects with integrated energy efficiency measures in urban regeneration – changes in the local strategic documents", was held in Osijek, 11/04/2017 at the BIOS Entrepreneurship incubator, J.J.
This event was tailor made for the local government representatives, development agencies and building managers (as they are identified as the most relevant private stakeholders for the project implementation so far).

The objective of the workshop was to review the current state in the strategic documents on local level, review the recommendations from the regional and national level, brought to the workshop by stakeholders which followed the FosterREG training actions performed so far, and finally, to form the proposals for the changes in documents which are needed to facilitate the EE in UR projects on the level of city district.

Table 4 The workshop agenda - Osijek 11/04/2017

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00</td>
<td>Registration</td>
</tr>
<tr>
<td>9:30</td>
<td>Danijela Lovoković (Head of Physical planning and environment protection department of the Osijek-Baranja County): Review of the current relevant strategic documents and connection with energy efficiency measures</td>
</tr>
<tr>
<td>9:40</td>
<td>Antun Pfeifer (SDEWES Centre): Project FosterREG – The FosterREG collaborative analysis process and lessons learned</td>
</tr>
<tr>
<td>9:55</td>
<td>Irena Križ Šelendić (MGIPU): National programme of building regeneration and Croatian national obligations regarding the energy efficiency in buildings sector – connecting the programmes for apartment buildings, households and public use buildings</td>
</tr>
<tr>
<td>10:10</td>
<td>Ines Androić Brajčić (MGIPU): Energy regeneration of buildings based on the Framework programme for competitiveness and cohesion with the focus on urban regeneration</td>
</tr>
<tr>
<td>10:25</td>
<td>Jozo Bevanda (SPECULUM): Practitioners view on removing the barriers for the city district level regeneration – examples from recent practice</td>
</tr>
<tr>
<td>10:40</td>
<td>Coffee break</td>
</tr>
<tr>
<td>11:00</td>
<td>Maja Božičević Vrhovčak, PhD (DOOR, Zagreb) – section moderator. Interactive section of the workshop, with discussion about the presented state-of-the-art of strategic documents and their relevance for urban regeneration. Participants collaboratively produce proposals for changes in order to enable the implementation of projects on the city district level with the use of appropriate tool.</td>
</tr>
<tr>
<td>12:30</td>
<td>Lunch and networking</td>
</tr>
</tbody>
</table>

Materials that were used on the workshop:
- Subject presentations (prepared by the speakers)
- Project presentation
- FosterREG booklet in the national language (Croatian edition)
- FosterREG tool “Neighbourhood regeneration project planner” in the hard copy form – in field decision to omit the tool, as the results would not be relevant and in line with the objective of the workshop
- Satisfaction survey in the hard copy form
3.3.3.2 Participants

The event was tailor made for the local level, in particular for the public officers from the cities. Apart from this group, concrete stakeholders from national level and from private sector were invited to transfer the important information and ideas.

Key stakeholders present at the workshop were: County of Osijek-Baranja, Regional development agency of Slavonia and Baranja, City of Osijek, City of Belišće, City of Vukovar, City of Beli Manastir, MGIPU, DOOR, Zavod za stanovanje (building managers). Overall attendance is presented in Figure 31.

![Workshop attendance](image)

**Figure 31 Attendance on workshop in Osijek, 11/04/2017**

Local public officers from the city of Osijek and other cities nearby were very active in the discussion, as well as the experts representing the local building management professional.

3.3.3.3 Event dynamic

The workshop was divided into two main sessions. First session was dedicated to the capacity building in terms of familiarizing all stakeholders with the strategic documents and the role of energy efficiency in these documents, the way that the language of the document perceives the energy efficiency measures.

Key presentations were given by the representative of Osijek-Baranja County, regarding the urban planning documents, by representatives of Ministry of construction and physical planning, who gave their view on the role of EE in UR in strategic documents and legislation and the key factors they see as important. At the end of this section, an engineer from practice gave an example from his experience in trying to implement a project of integrated energy efficient urban regeneration of the city district.
Second session was more interactive, moderated by the head of The Croatian Society for the Formation of Sustainable Development. Discussion was induced about the presented state-of-the-art of strategic documents and their relevance for urban regeneration. Participants collaboratively produced proposals for changes in order to enable the implementation of projects on the city district level with the use of appropriate tool.

PROPOSING THE CHANGES IN LOCAL STRATEGIC DOCUMENTS

On the case study of ad-hoc chosen neighbourhood in Osijek – Sjenjak, the participants were rethinking the process of urban regeneration as known to them from the previous projects and aimed to offer the suggestions for the changes that would be needed if a city or other governing body wishes to implement an integral, energy efficient urban regeneration project. For such a project, it would be necessary to understand from where the initiative is coming from and which existing bodies could deliver the project proposal or mediate between the levels of government in order to enable for the local stakeholders to deliver such a proposal.

Important notes for changes in strategic documents:

- Defining the URBAN REGENERATION PROGRAMME – project activities in stages, cost-benefit analysis included
- Urban Physical Plan is a relevant document which needs to include the energy supply of the neighbourhood
- Neighbourhood council is the body which mediates between the bottom-up initiative by the end-users and the City
- When searching for funding, the Integral Territorial Investments should be addressed (detailed explanation was given in the presentation given by Ines Androić Brajčić - MGIPU)
Comments on this notes were that the regeneration needs to be conducted taking into account the models\(^1\) of buildings. For the moment, Operative Programme for Competitiveness and Cohesion is implemented above the expectations in Croatia. Therefore, similar way of implementation needs to be conducted as a component of a larger \textit{Programme for the city district}. Each step of regeneration is a project activity of such a Programme.

There is a need to establish a \textit{Strategy of Urban Development}, which will be supported by the best practice examples. \textbf{Cost-benefit analysis} should be introduced as an addition to the current procedure of project applications. Previously, there was no sufficient data in Croatia to have a reliable analysis, but last years of implementing programs for buildings of public use, apartment buildings and private family houses provided a lot of data. Central information system, operated by the APN (ISGE) also provides a lot of data on consumption in buildings for public use. For this reason, future calls for energy regeneration projects can include cost-benefit analyses. This step will contribute to \textit{gradual transition from grant to financial instruments} (green loans and other).

Further discussion, relevant to the Croatian case, dealt with the question if the neighbourhood and city district are the same. Depending on the structure of the organization of the city (district, neighbourhoods, different units...), a single governing units can be identified, which will have the capacity to govern the regeneration of a city district. In such complex development, legal experts also need to be included, although technical experts need to deliver and elaborate the ideas.

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\(^1\) For example, such as developed during the first workshop in Osijek, 03/03/2017
Taking into account the typical architecture of city government in Croatian cities, it was proposed that the Neighbourhood council would be appropriate governing unit to mediate between the bottom-up initiatives for regeneration and the City council as the major governing unit\(^2\).

Document of key importance might be the *Urbanistic design plan*, which needs to be changed in order to define the energy supply of a neighbourhood as one of the important defining factors. Such changes will go through the public debate in order to receive the general support and consensus. Previously, decisions were made on the City council, applying the top-down approach, which was the wrong direction. *Therefore, the new proposed bottom-up approach is illustrated on Figure 35.*

![Figure 35 Proposed flow and actors in bottom-up city district regeneration initiatives](image)

The end-users are usually slow to react to changes in the strategic documents (only when they start to pose a barrier to their interests). So far, the bottom-up initiatives took long time to reach the Urban design plan. In the future, more preparatory actions (such as FosterREG project) and awareness raising activities are needed.

### 3.3.3.4 Conclusion and evaluation

Overall 10 participants have filled the satisfaction survey at the end of event.

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\(^2\) The governing units are defined by the Law on local and regional self-government (OG No. 33/01, 60/01, 129/05, 109/07, 125/08, 36/09, 36/09, 150/11, 144/12, 19/13, 137/15)
Key questions that were set, apart from rating the satisfaction and the institution of origin of the participant, were:

1) Which further clarifications are needed to better understand the solutions to barriers in transition to the level of the city district?

Responses dealt with the ways of funding, need to create simple educational materials, better define the terms (district, urban regeneration and the end users). Also, focusing more to communicate the potential gains was emphasized as well as dealing with the legal obstacles and non-functioning administration.

2) Which methods would you use to increase the knowledge about the benefits which larger projects offer to end-users?

Participants stipulated that more engaging media campaign should be prepared (Public TV, newspapers, campaign in schools). Also, more showing the best practice examples is necessary. Savings can also be expressed in currency rather than in energy units.

3) Will it be possible to implement the proposed measures in shorter or longer period and which additional measures you deem necessary?

Majority of the stakeholders believes that the measures can be implemented in the long term, focusing on 2021-2027, with thorough preparatory actions, multi-level coordination and setting the issues in focus of the decision makers.

3.3.4 Group of events: APN educational workshops for energy counsellors

3.3.4.1 Introduction and objective of the capacity building event

Capacity building workshops were organized by the APN, starting from November 2016. This capacity workshops were designed for the broad public, which includes the representatives of regional and local stakeholders (counties, cities), which are educated to monitor and report consumption of buildings owned by the regional and local governments.

Each event was educating the employees of institutions which use the buildings for public use in terms of reporting the energy consumption and recognizing the potential measures of energy efficiency. They were also given the introduction to the FosterREG project and the ideas shared previously in the CAA in Croatia.

MATERIAL:
- Presentations (project and subject)
VERIFICATION:
• Questionnaires/surveys
• Sign in sheets
• Dissemination on websites and in the media

3.3.4.2 Participants

Educational workshops organized by the APN gathered over 225 employees from the buildings of public use, schools, kindergartens, public health facilities and local government units. Only 10% of the attendees are from the relevant group of stakeholders for the FosterREG project, but workshops were held in 5 cities in different parts of Croatia, to raise the awareness about EE in UR.

3.3.4.3 Event dynamic

In all of the workshops, the general overview of the CAA was given to the participants. Ideas of FosterREG were disseminated and important questions of further engagement of stakeholders for energy efficient urban regeneration were discussed.

3.3.4.4 Conclusion and evaluation

The participants were giving their feedback through the survey about the key issues they were familiarized with in these educational events.

Key questions were:
1) Which energy efficiency measures can be more successfully implemented on the city district level compared to a single building level?
2) How to inform and include their institution in the EE in UR project.
3) Which stakeholders need to be included in the decision making process when dealing with EE in UR projects?
4) How to overcome the barriers such as lack of funds for energy regeneration?
5) Are the owners and tenants sufficiently informed about the possibility of energy efficiency measures implementation? Which measures would you suggest to your institution?

Since the attendance was very diverse, most of the responses deal with concrete energy efficiency measures useful for their institutions, but it is also visible that the concepts of large scale projects and consequential reduction of cost was accepted, as well as the need
for awareness raising activities. Majority of the participants identified local government units as relevant for EE in UR action.

4 The training activities on the EU level – Final conference and the webinar

4.1 Objective and content of the final conference

The Final conference was broadcast in live streaming to offer viewers from all EU to participate in the sessions. It was divided into sessions: first session was focused on giving the EU wide view on urban regeneration and energy efficiency initiatives, sources of funding, on novel engineering and energy planning perspective and vision for the future. Stakeholders were given the opportunity to find out what will be funded and how it will be facilitated in the next period. Second session was dedicated to the experience of the FosterREG consortium in organizing and carrying the training activities in their countries and two sister projects which are currently in progress. After each session, a round table with all presenters gave the opportunity to ask questions and participate in creating the common conclusions, inspiring for the future actions. The Final conference was recorded and the video is available for capacity building purposes.

4.2 Event logistics and organization

The final conference was held in Hotel International, Zagreb, Croatia, on 11th of May, 2017. After a few months of looking for the best location and unsuccessful attempt to organize the final conference in Stuttgart (Germany), the event was in Croatia, where stakeholders has participated in FosterREG activities with great enthusiasm.

![Zagreb energy week](image)

The conference was included in the largest national event dealing with the subject of energy efficiency, Zagreb energy week, in cooperation with a sister project, Urban learning.

Agenda of the conference is shown in Table 5.

**Figure 38 FosterREG final conference in program of the Zagreb energy week**
### Table 5 Agenda of the final conference

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:45 – 09:30</td>
<td>Registration</td>
</tr>
<tr>
<td>09:30 – 09:45</td>
<td><strong>Opening statement</strong> / Vladimir Ham – Deputy Mayor of City of Osijek</td>
</tr>
<tr>
<td></td>
<td>Goran Bradić – Director, Agency for Transactions and Mediation in Immovable Properties (APN)</td>
</tr>
<tr>
<td>09:45 – 10:00</td>
<td><strong>Fosterreg project overview</strong> / Francisco Rodriguez - Tecnalia</td>
</tr>
<tr>
<td>10:00 – 10:20</td>
<td><strong>EU support for energy efficient urban regeneration</strong> / Philippe Moseley – European Commission, Executive Agency for SMEs</td>
</tr>
<tr>
<td>10:20 – 10:35</td>
<td><strong>Urban agenda</strong> / Željka Zgaga – European Commission DG REGIO</td>
</tr>
<tr>
<td>10:35 – 10:50</td>
<td><strong>Proposals for the energy transition of cities and towns</strong> / Kristina Dely – Energy cities</td>
</tr>
<tr>
<td>10:50 – 11:05</td>
<td><strong>Urban regeneration: a different view</strong> / doc.dr.sc. Tea Žakula – special advisor to the Croatian Minister of environment protection and energy</td>
</tr>
<tr>
<td>11:05 – 11:30</td>
<td><strong>Round table with the panelists</strong> – chaired by doc.dr.sc. Tomislav Veliki - University North</td>
</tr>
<tr>
<td>11:30 – 12:00</td>
<td><strong>Coffee break</strong></td>
</tr>
<tr>
<td>12:00 – 13:30</td>
<td><strong>Lessons learn from the Fosterreg National clusters</strong> – chaired by Francisco Rodriguez – Tecnalia</td>
</tr>
<tr>
<td></td>
<td>• Croatian national cluster / Antun Pfeifer – SDEWES and Sonja Kovač – City of Osijek</td>
</tr>
<tr>
<td></td>
<td>• Spanish cluster / Olatz Nicolas – Tecnalia and Patxi Hernandez - Visesa</td>
</tr>
<tr>
<td></td>
<td>• Dutch cluster / Jasper Donker – TNO and Marion Overberg – City of Utrecht</td>
</tr>
<tr>
<td>13:45 – 14:00</td>
<td><strong>Empowering local public authorities to build integrated sustainable energy strategies (EMPOWERING – Horizon 2020)</strong> / Ramona Tanasa – North-East Regional Development Agency</td>
</tr>
<tr>
<td>14:00 – 14:30</td>
<td><strong>Round table with the panelists</strong> – chaired by Francisco Rodriguez – Tecnalia</td>
</tr>
<tr>
<td></td>
<td>Overall Fosterreg wrap up and conclusions</td>
</tr>
<tr>
<td>14:30</td>
<td><strong>Lunch and networking</strong></td>
</tr>
</tbody>
</table>
4.3 Participation and event dynamics

Although some important events were taking place in Croatia at the same time of the Final Conference attendance of the event was satisfactory: An overall of 156 participants from all levels of government, representatives of non-government organisations, experts, engineers and academic community, guests from the European Commission and sister projects from the EU participated at the event. Detailed attendance profile is given in Figure 39.

![Attendance at the final conference](image)

**Figure 39 Attendance at FC in percentages**

Many stakeholders from the industry were present at the conference, which shows that the new concepts presented by FosterREG attract attention and are in serious considerations of energy suppliers, architects, engineers, consulting companies and other industry stakeholders.

In the first panel discussion, moderated by Asst. Prof. Tomislav Veliki from the University North (Croatia), the discussion was focused on the progress that the EU is making in the field of energy and climate. Initiatives and funding schemes were discussed by the presenters, among which Željka Zgaga from European Commissions Directorate General for Regional Development, Philippe Moseley from the Executive Agency for Small and Medium Enterprise and Kristina Dely from Energy cities.

The experts for planning and implementation were represented by Asst. Prof. Tea Žakula from University of Zagreb, Faculty of Mechanical Engineering and Naval Architecture and Francisco Rodriguez, FosterREG project manager from Tecnalia, Spain.

Second panel was moderated by Francisco Rodriguez, with all representatives of national clusters discussing the results of the project and lessons learned. They were joined by the presenters of sister projects, SIMPLA, represented by Stefano Alessandrini and Ramona Tanasa, representing EMPOWERING project. Representatives of FosterREG national clusters were Olatz Nicolas and Patxi Hernandez for Spain, Jasper Donker and Marion Overberg for The Netherlands and Sonja Kovač for Croatia.

As mentioned before, the final conference was broadcast live streaming and recorded as an online webinar. The created videos are available at the project website, as well as the project video which was also included in the webinar during the breaks. For the audience at the
premises, simultaneous translation was organized in order to secure comfortable participation in the conference.

The online coverage, provided through BUILD-UP portal and the FosterREG project website, allowed to post questions. 98 people viewed the event from all around the EU.

The dynamic atmosphere during the round tables, with questions from the audience in the room and also online audience was moderated by Tomislav Veliki (UNIN) and Francisco Rodriguez (Tecnalia).
More details about the final conference can be found in D5.6 Final conference report, available at the FosterREG project website.

Videos created for the training events and the final conference, including the FosterREG project video, full length video of the conference and videos of each presentation and round tables are available at the FosterREG YouTube channel.
5 Conclusions and lessons learned

Spanish lessons learned & conclusions

Many issues have been dicussed along the FosterREG project so summarizing is not easy, but the Spanish Cluster will like to point out the following three:

1. **IMPORTANCE OF HORIZONTAL / VERTICAL COLLABORATION:**

Public processes are becoming everyday more complex and interdependent and this requires multidisciplinary work to acheive integrated working plan.

The Collaborative Analysis conducted by FosterREG project partners with public stakeholders from urban planning and energy efficiency disciplines showed that there is still a critical lack of coordination among departments which creates barriers in the implementation phase of integrated plans and strategies. Horizontal integration between different disciplines, areas or departments is complex and nowadays depends of the political approach of each department and personal relationships among them. At local level limited resources was pointed as one of the reasons. Political level and high management engagement and support are needed to improve and implement coordination mechanisms.

FosterREG project partners in Spain have noted it is easy to engage technical level and good relationships have been established involving public administration technicians in the capacity building activities but lack of engagement of political level has been one of the weaknesses of the project.

In terms of vertical collaboration we would like to stress the importance of the Municipal level as an appropriate scale or dimension for the urban reality knowledge and therefore this administration level may need to be empowered to engage in the necessary measures for integrated working plans.

TECNALIA will continue supporting Basque Government and different city councils to further improve relationships between departments working on urban regenerations and energy efficiency.

2. **IMPORTANCE OF AWARENESS, PARTICIPATION & DETAILED DIAGNOSIS:**

There is not a generic way to face the communication about Energy Efficiency with residents who have other priorities before energy savings, environmental awareness; energy is probably on the last priorities. How, who and when depends on each neighbourhood or community’s reality.

Social workers were included as relevant stakeholders in the Spanish cluster activities since they can play a key role in the EE benefits communication to residents. Training Social workers on energy efficiency is a good approach.

Only by having citizens interested and engaged can a project succeed and this can take a long time. A detailed diagnosis is essential, not only regarding technical aspects but also of the socio-economic environment of area subject to urban regeneration.

A good example of how to approach a community is Irala case study in Bilba by SURBISA (Bilbao City Council Urban Regeneration Body). SURBISA responded to neighbourhood initiative and their role in this process is to mediate and link administrations and residents, making them understand the process will be long. Irala faces accessibility problems in the urban area but also in the buildings so energy efficiency is not one of their priorities. SURBISA established a participatory process from the beging and a very efficient communication plan holding general meetings, thematic sections and training. Proposed refurbishment solutions will be coordinated in order to:

- Preserve neighbourhood identity.
- Standardize and group projects to achieve economy of scale
- Take the opportunity to incorporate energy efficiency measures. Not requested by the residents but it is a good opportunity to integrate in the refurbishment.
- Considering both community and individual owners situation

3. NEED FOR A COMMON APPROACH TO FUNDING ENERGY EFFICIENCY & URBAN REGENERATION

It has been proved that public funds for building rehabilitation achieve a great economic impact in the local administration economy (through taxes, construction works licenses, employment opportunities ...). Demonstrating positive socioeconomic impacts of energy efficient urban regeneration processes, is considered a key issue as it has in many cases a large weight on policy decision making. However, limited funding is available to public authorities, so use of the funds needs to be very efficient, and should reach to those who really needed it. It is acknowledged that current funding schemes, in many cases, do not adequately reach targets, both in terms of the subject (what) of funding, and in terms of recipients of funding (who it reach to)

Funding criteria for different schemes have different priorities (eg. Social, industrial, environmental) and is not well coordinated

Funding schemes should better integrate socioeconomic criteria to optimize social, economic, and environmental impact. Building owners with higher incomes could be subject to additional environmental criteria, while those with lower incomes may be evaluated according solely to socioeconomic criteria.

Aspects such as the relationships between health comfort and air quality, as well as fuel poverty should be part of the analysis for designing funds and in general for building and urban regeneration policies.

Adequate diagnosis of the different districts within cities should be a starting point for the design of funds. Rehabilitation of buildings should be performed in an integrated way, but also acknowledging that these integral rehabilitation processes are expensive and very long, which in many cases discourages residents. Public funds should be adapted to rehabilitation programs which would allow performing integrated rehabilitation in small steps and different phases, but ensuring that these phases are part of an integrated plan and have an overall EE objective.

The complexity and paperwork of the fund application form should be reduced and simplified so they are more dynamic and accessible to residents.

Croatian lessons learned & conclusions – “Through multi-level coordination and continuous collaborative efforts, we will bring positive changes”

In Croatia, ideas and the way of implementing the activities in FosterREG project awoke a significant interest. Multi-level coordination, but also horizontal coordination is very important for energy efficiency projects and urban regeneration in Croatia. So far it was missed and training activities provided new information and the platform to exchange experiences and opinions. Because of this important factor, over 170 stakeholders and at least 120 different stakeholders participated in the training process at the Action 1 and 2 workshops in Zagreb and Osijek. Also 225 attendees at the Energy councillor/associate workshops in Action 3, organized by the APN, in various towns in Croatia.

During the process, key national stakeholders, such as Ministry of Construction and Physical Planning, EPEEF, APN, Ministry of Culture, Ministry of Regional Development and EU funds, have been continuously present at the events and in discussion with the other levels of government, in particular with representatives of Counties, such as Osijek-Baranja County, Sisak-Moslavina County and numerous cities and towns. Also, large interest of stakeholders from the industry and implementation of the projects was very important, as a sign of recognition for the opportunities which the future development of EE in UR projects on the city district level brings. In this aspects, stakeholders representing end-users (tenants associations), energy supply and building management were very important and creative.
collaborators. Local level stakeholders used the opportunity to offer the valuable information about the problems at their level.

Further relevant impact was achieved on the horizontal level, where different experts met and exchanged ideas, fortifying the resolve to continue working together with improved understanding of how they can create synergies in implementation of large scale projects. Through cooperation with other projects, foundation for sustained work in the national networks was established, both on local and national level (cooperation with projects such as “Urban learning” and “BUILD UPON”).

**Dutch lessons learned & conclusions - ‘We know we have to act, we don’t know how. But we will find out by doing it together’**

Within the Dutch Cluster the main topic of capacity building was related to Gas-free districts. Although this seems at first a totally new topic it includes a lot of the challenges on urban regeneration and energy efficiency within the build environment, we have for some time. The gas-free districts provides a new perspective, goals, urgency and drive that this topic needed. For example, the perspective goes from dwellings towards an integrated district approach, mainly because of the energy infrastructure component. Because of the district perspective and awareness of the consequences of gas-free more social elements next to a broader set of technical (other infrastructure elements) and financial (co-benefits) elements are included in approaches. This results in more integral approaches from municipalities, who entered the stage with a new role and are placed at the centre of this transition.

We can conclude that there does not exist one approach, as local circumstances, initiatives and preferences dictates this transition. Although, different approaches emerge within municipalities or regions, similar questions are raised, experiences gained, lessons learned and knowledge and capacities needed. An important element in all of this, is the search towards a new balance between public and private by planning, financing, development and managing of these energy systems.

The biggest achievement and result of FosterREG has been to embed part of the challenge that FosterREG has worked on, within the green deal. The Green deal will continue to work on its objectives and activities in sharing knowledge and putting capacity building on the political agenda, for making the transition into a real sustainable energy / heating system in the future work.

**General conclusion of the training activities in FosterREG project**

The FosterREG project consortium was geographically and culturally well placed to collect experiences from the whole Europe, many common conclusions were drawn, both from the collaborative analysis approach and from the training activities. New ways of funding the integrated energy efficiency in urban regeneration projects are very important for all areas, in particular in the south of EU, while in the north it is important to give even more emphasis to the gains in the quality of life as the consequence of EE in UR project. Also, in the south, a major problem was the lack of multi-level coordination between the levels of government, but also lack of horizontal coordination between the departments of the same ministries. This becomes much greater issue when the project moves from one building to the whole city district, since large scale projects also demand interdisciplinary approach. This is evident, not only between the various kinds of engineering expertise, but also between very different kind of experts, such as legal experts, social workers and urban planners. Legal barriers (in particular, ownership issues) require a lot of efforts from the local governments, but also from the end-users. On the national and local level, continuous cooperation is vital to overcome legal framework barriers through the implementation of new strategies, identified in FosterREG project.

In FosterREG projects, the spark has been lit in many areas of this communication channels and also in dissemination and awareness raising, aiming for the end-users. Future efforts
need to be concentrated on keeping the channels, which are in Croatia visible also from the profile of participants on the final conference, open. Collaboration on creating the best practice examples and pilot projects will be the most successful way to keep the cohesion between the levels.
6 Annexes

The list of annexes which are provided as an attachment to the deliverable. Note: materials regarding the Final conference and webinar are attached to the deliverable D5.6 Final conference report.

6.1 Croatia

6.1.1 Event 1
Presentations (pdf.):
6.1.1.1. Zagreb_Puksec
6.1.1.2. Zagreb_Kriz_Selendic
6.1.1.3. Zagreb_Androic_Brajcic
6.1.1.4. Zagreb_Duic
6.1.1.5. Zagreb_Novosel
6.1.1.6. Zagreb_Krajacic
6.1.1.7. Zagreb_Jukic
6.1.1.8. Zagreb_Kovac
6.1.1.9. Zagreb_Mornar
6.1.1.10. Zagreb_Markuz
6.1.1.11. Zagreb 15022017 sign-in sheets (scanned, pdf.)
Survey performed in Google docs format

6.1.2 Event 2
Presentations (pdf.):
6.1.2.1. Osijek_Puksec
6.1.2.2. Osijek_MRRFEU
6.1.2.3. Osijek_Androic_Brajcic
6.1.2.4. Osijek_Kriz_Selendic
6.1.2.5. Osijek_Hrs_Borkovic
6.1.2.6. Osijek_Limoncin_Toth
6.1.2.7. Osijek_Seric
6.1.2.8. Osijek_Iljiveic
6.1.2.9. Osijek 03032017 sign-in sheet (scanned, pdf.)
6.1.2.10. Osijek 03032017 Surveys (scanned, pdf.)
6.1.2.11. Osijek tool 1 FosterREG tool1 sheets filled-in by stakeholders (scanned, pdf.)
6.1.2.12. Osijek tool 2 FosterREG tool2 sheets filled-in by stakeholders (scanned, pdf.)

6.1.3 Event 3
Presentations (pdf.):
6.1.3.1. DL_Prostorno planiranje i EnU
6.1.3.2. AP_Uvod u FosterREG
6.1.3.3. IKS_Povezivanje programa energetske obnove
6.1.3.4. IAB EO zgrada i urbana regeneracija
6.1.3.5. JB_Projekti energetske obnove na razini gc
6.1.3.6. Osijek 11042017 sign-in sheets (scanned, pdf.)
6.1.3.7. Osijek 11042017 survey (scanned, pdf.)

6.1.4 Group of events (APN educational workshops)
6.1.4.1. Zagreb 04/11/2016 Sign-in sheets (scanned, pdf.)
6.1.4.2. Zagreb 04/11/2016 Surveys (scanned, pdf.)
6.1.4.3. Poreč 30/11/2016 Sign-in sheets (scanned, pdf.)
6.1.4.4. Poreč 30/11/2016 Surveys (scanned, pdf.)
6.1.4.5. Zagreb 09/12/2016 Sign-in sheets and surveys (scanned, pdf.)
6.1.4.6. Osijek 20/12/2016 Sign-in sheets (scanned, pdf.)
6.1.4.7. Zagreb 04/05/2017 Sign-in sheets and surveys (scanned, pdf.)
6.2 Spain

6.2.1 Event 1 – 30/11/2016
Presentations (pdf.):
6.2.1.1. Debegeesa_20161130
6.2.1.2. Nasuvinsa_20161130
6.2.1.3. Presentacion FosterREG
6.2.1.4. Sestao Berri_TRIME_20161130
6.2.1.5. Programa_Taller concienciación EE_final (agenda, pdf.)

6.2.2 Event 2 – visit to the city district

6.2.3 Event 3 – 14/02/2017
Presentations (pdf.):
6.2.3.1. EVE
6.2.3.2. GNavarra_Javier Etayo
6.2.3.3. GV_Mario Yoldi
6.2.3.4. MaruxaTouceda
6.2.3.5. Mesa redonda
6.2.3.6. Presentacion FosterREG
6.2.3.7. FosterREG_Taller segmentacion Ayudas_Programa (agenda, pdf.)

6.2.4 Event 4 – 04/04/2017
Presentations (pdf.):
6.2.4.1. Presentacion Proyecto_4042017
6.2.4.2. JUAN ALARIO_Presentación
6.2.4.3. EVE_ESEs_Jornada_Fostereg
6.2.4.4. BALMASEDA_Presentación
6.2.4.5. EIBAR_2017-04-04 MOGEL
6.2.4.6. DURANGO_Presentación
6.2.4.7. VISESA_Presentación
6.2.4.8. SURBISA_Presentación
6.2.4.9. II UDAL_Programa_Program (agenda, pdf.)

6.2.5 Event 5 – 27/04/2017
6.2.5.1._20170427_Integracion_Programa+invitación

6.3 The Netherlands
6.3.1. Dutch cluster capacity building materials (presentations from all events in pdf.)
6.3.2. Dutch cluster sign-in sheets (attached in a single pdf. file)