

GRASPINNO

Transnational model, strategies and decision support for innovative clusters and business networks towards green growth, focusing on green e-procurement in EE/RES for energy refurbishment of public buildings.

Deliverable: 4.4.1 Report on GRASPINNO Living Lab

**RISE PUBLIC – Energetic refurbishment of public
buildings, Veneto region - Italy**

**RISE PUBLIC -Ristrutturazione energetica di edifici
pubblici**

Prepared by

Veneto Region with the contribution of Unioncamere del Veneto

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1 EXECUTIVE SUMMARY

GRASPINNO project aims to support and strengthen innovative clusters and network for increasing their capacity and competence in green growth and eco-innovation, especially in innovative energy refurbishment and green public procurement. It addresses the challenge of developing effective energy management solutions by improving the capacity of both public and private sector on eco-innovation solutions by adopting Living Lab methodology. Indeed, the Living Lab (LL) presents a specific trend in open innovation approaches that enables co-creation of novel user-oriented solutions. Its role is likewise deployed within GRASPINNO project to change the stance of actors and civil society toward green sustainable growth. The GRASPINNO Living Labs integrate R&I processes and create a user-oriented open innovation ecosystem that will strengthen transnational cooperation and networking among existing clusters and networks of green energy market eco-innovation. The main goal of GRASPINNO LLs is to transfer the knowledge obtained within the project's pilot actions and to exchange experiences or concerns for green growth, especially including end-users, and so setting the base for further actions.

The main goal of RISE PUBLIC Living Lab in Italy, is to establish a Living Lab network of complementary stakeholders (SMEs, Local Authorities, Associations, University) addressing the common problem of the refurbishment of public building for seismic safety and energy efficiency as an opportunity for providing sustainable approaches and implementations, in line with the principle of the circular economy. The RISE PUBLIC Living lab consist of different actors, such as SME's, innovative companies, Public Authorities, decision and policy makers, etc..., and:

- actively involve them in the process of green public procurement, public building refurbishment, eco-innovation, funding and mentoring, policy recommendation;
- establish an interaction among them;
- transfer to actors and other interest's stakeholders GRASPINNO knowledge and pilot results in field of green energy

Various benefits arise for stakeholders participating in the RISE PUBLIC Living Lab. The SMEs and professionals receive training on new tenders for renovation of public buildings in the light of the introduction of CAM and will be able to better access new business opportunities as the introduction of CAM requires new knowledge and skills

from companies and organisations in the construction sector. Local authorities are able to study in depth the main aspects for the correct application of CAM in public tenders and subsequent contracts and works management. In this way they improve their skills which will be useful in the preparation of future tenders.

The RISE PUBLIC LL tries to make a contribution in bridging the information gap between legislation and knowledge and application at the level of local authorities, professional firms and SMEs in the building sector, especially in field of energetic refurbishment of public buildings.

2 INTRODUCTION

The Deliverable 4.4.1 Report on GRASPINNO Living lab ("RISE PUBLIC - Energetic refurbishment of public buildings", Italy) consist on two main parts, part I and II. The first part of document presents a short introduction to concept of Living labs and the GRASPINNO methodology to be used in setting up the Living lab, while the second part presents an overview of actual setting up a eGPP Living Lab Italy, more precisely in Veneto region.

In the part I, the general understanding of Living Lab concept is established by providing general description and definition of Living Lab. Following general understanding on LL, the detailed approach on setting up GRASPINNO Living Lab is presented. The set-up of GRASPINNO Living Lab includes six phases each following several steps, whereas the sequence of this steps within the phases can differ based on the demand or environment of the Living Lab. The deliverable concludes with short but valuable experience of setting up the Living Lab and some valuable conclusion to encourage other interested stakeholders to use and adopt this innovative approach in the field of green energy processes.

In the part II, the setup of RISE PUBLIC - Energetic refurbishment of public buildings" Living Lab in Italy following the GRASPINNO Living lab methodology is presented. This report will be a standalone report and will be feed together with other GRASPINNO Living Labs into a report D4.4.2 Findings from Living labs, whereas the main conclusions and recommendations deriving from all living labs will provide valuable insights for suitability of living labs.

3 PART I: INTRODUCTION TO LIVING LABS

3.1 GENERAL DESCRIPTION AND DEFINITIONS

Living Labs present a specific trend in open innovation approaches. In Living Lab approach, external ideas are resources in innovation process. The aim of the Living Lab approach is to support innovation process with a usable product or service as a result of the innovation process. Different stakeholders are involved in the Living Lab, from researchers, developers and end-users with the goal is to co-create innovative products and services in a real-world environment. The Living Lab concept is based on a systematic user co-creation approach integrating research and innovation processes (bringing together users, R&D institutions, producers, service providers and all relevant stakeholders in focused and integrated development process). These are integrated through the co-creation, exploration, experimentation and evaluation of innovative ideas, scenarios, concepts and related technological artefacts in real life use cases. Such use cases involve user communities, not only as observed subjects but also as a source of creation. This approach allows all involved stakeholders to concurrently consider both the global performance of a product or service and its potential adoption by users. This consideration may be made at the earlier stage of research and development and through all elements of the product life-cycle, from design up to recycling.

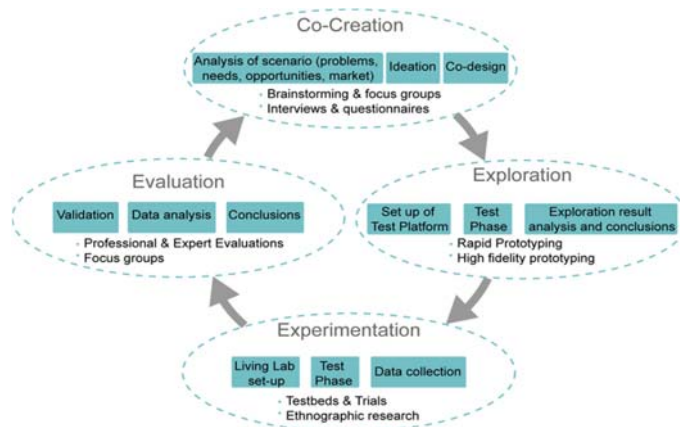


Figure 1: A visual representation of the Living Lab process (Vicini, Bellini, Sanna, SMART 2012)

Living Labs usually exploit opportunities of modern ICT and can be seen as “a large, broadly conceptualized laboratory”. Cooperation of all stakeholders (from users, to companies, ICT providers, developers, government organizations, universities and other involved institutions) is sought.

3.2 GRASPINNO LIVING LABS METHODOLOGY

The GRASPINNO Living Lab methodology will apply in each participating country and will consist on 6 phases i.e. Connect, Educate and train, Implement, Improve, Evaluate and Disseminate, as seen from Figure 2.

Through Living Lab approach stakeholders (public sector, SMEs as well as other interested participants) need to be involved not only as observed subjects but active contributors and as a source of creation. Namely, innovations (including new approaches and tools) generally face resistances from the users especially if users are not sure about benefits to be gained - this might be especially true for the public sector. Experiential learning is one of the most powerful teaching and learning tools to overcome this reluctance and to facilitate change of people behaviours. Experiential learning involves: (i) a “reflective learning phase”; (ii) a learning phase coming from the experimentation; and (iii) a learning phase coming from feedback. These phases well aligned with the phase Educate and train, Implement and Improve of the iterative GRASPINNO Living Lab approach.

Two main types of stakeholders in particular are to be targeted – namely public sector and product providers (especially SMEs). Beside mentioned, also mentoring/financing experts will be involved to share their expertise in funding/mentoring opportunities to invent/produce/use eco-innovative solutions in eGPP/building refurbishment. Additionally, the LL will also involve policy stakeholders with power to design public policies for eco-innovation, action plans for energy refurbishment of public buildings, framework of models, strategies, methods, database and tools to support the green energy MED policies.

In order to implement the Living Lab approach in GRASPINNO an informal “Living lab forum” or “cluster” of stakeholders (mainly organisations from public sector however SMEs, R&Ds, policy makers and other interested stakeholders) are to be organized.

This “Living Lab forum” will take over the role of Living Lab implementing activities without formalisation in terms of legal commitments, formalisation of procedures and management. The informal establishment of Living Lab, not requiring establishment of new legal entity but only formal commitment to participation (Declaration of Participation or similar) should ease the involvement of stakeholders. Nevertheless, the work in “Living Lab forum” is structured and led by project partners following joint methodological approach. One “Living Lab forum” per partner country is mobilized bringing together organisations actively involved in GRASPINNO implementation as well as other organisations who interested to observe but not to actively participate. The activities of “Living Labs forum(s)” follow the phases of Living Lab as shown below. Some activities above are open to all participants while other activities (individual consultations and individual support with implementation) are given only to organisations actively participating in GRASPINNO activities.

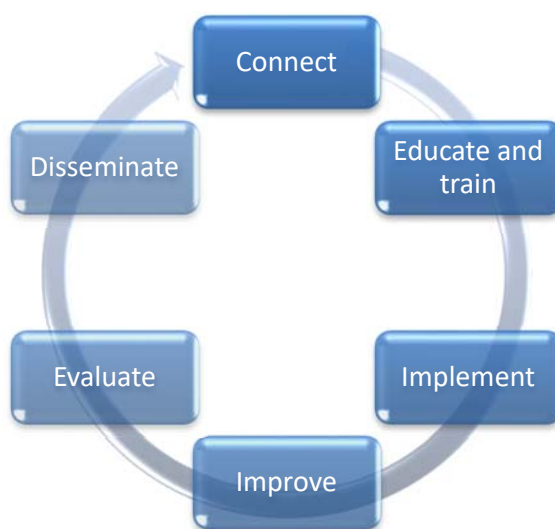


Figure 2: GRASPINNO Living Lab approach

The national “Living Lab forums” will work together following the same methodology and exchanging experiences. Still the final methodology for Living Lab implementation will remain open in order to adapt to national/regional specifics.

4 PART II: SETTING UP RISE PUBLIC LIVING LAB in Veneto region – Italy

4.1 Connect

4.1.1 The leader of RISE PUBLIC Living lab in Veneto region - Italy

The leader of “RISE PUBLIC” Living labs – Energetic refurbishment of public buildings is the Veneto Region supported by Unioncamere Veneto. The Veneto Region deals with various cross-cutting issues in the field of energy and is responsible for various regional structures. Specifically, the Region is responsible for the planning of the regional energy system, encourages the rational use of energy and the use of renewable sources, promotes the reduction of energy consumption, manages EU and state resources for the energy sector, coordinates the rationalization and development of infrastructure and energy networks in the territory, promotes sustainable mobility, deals with light pollution, promoting the reduction of the same and energy consumption resulting from it. Whereas the leader of the LL is Giuliano Vendrame, two initiators were identified: Angelo Mason and Luisa Memo, supported by UCV Team. The initiators were leading the set up and operation activities of Living Lab and are responsible to motivate stakeholders to actively engage in LL activities, to arrange meetings/workshops/training courses, corresponding to stakeholder needs or requirements, preparation of LL plan, DoP, reports (with assistance of UCV and all stakeholders), to ensure that activities are carried out according to the time plan etc...

Table 1: List of contact persons

Contact Person	Contact Details
Giuliano Vendrame	Director of the Energy Unit of the Veneto Region Email: giuliano.vendrame@regione.veneto.it
Angelo Mason	Veneto Region senior officer Tel: +39412795751 Email: angelo.mason@regione.veneto.it
Luisa Memo	Veneto Region senior officer Tel: +039412794147 Email: luisa.memo@regione.veneto.it

4.1.2 Potential RISE PUBLIC Living Lab stakeholders

Several potential stakeholders for RISE PUBLIC LL has been identified choosing the most virtuous municipalities and the most equipped contracting authorities, in order to understand the real needs of knowledge and implementation tools, which they need, to achieve the expected sustainability objectives. At the same time, suppliers of products and services for sustainable building renovations was identified through the activities already carried out under the GRASPINNO project (Pilot activities) and new research on the local market. Mainly the representatives of business sector, such as Association of Constructors (ANCE) and the companies certifying products and processes for the building industry, were identified. To identify the list of potential stakeholders several internal meetings has been carried out:

- On 4th December 2017 a meeting with UCV took place in Venice to draw up a list of stakeholders to be involved. In that occasion Veneto Region (VR) and UCV decided to contact the Municipalities of San Donà, San Michele al Tagliamento, Musile, the Province of Treviso, Metropolitan City of Venice and CESQUA ICMQ IUAV , ANCI , the Order of Architects in order to verify their interest in being involved in LL .
- On the 10th of January 2018 a second internal meeting with partner UCV took place. The aim of the meeting was to continue the coordination process for the realization of the Living Lab in Veneto region. With regard to the "connect" phase, it was decided to convene a "Stakeholder meeting" with the two "Pilot" Municipalities of S. Lucia di Piave and Valdobbiadene and 2 Contracting Stations (Province of Treviso and Metropolitan City of Venice) to know from the Contracting Stations which are the "virtuous" Municipalities that have already set up GPP calls for tenders in order to include them among the stakeholders already identified.
- On the 26th January 2018 additional meeting was organized, where VR and UCV asked the participants to join the Living Lab and to suggest potential Local Authorities interested in joining the "Rise Public" LL .
- On 5th February 2018 last meeting was organized with a request to indicate entities, companies and professional firms potentially interested in joining the LL.

The identified potential stakeholders are presented in table below.

Table 2: RISE PUBLIC Living Lab Potential Stakeholders

Nr.	Stakeholder	Type of organisation
1	Valdobbiadene	Municipality
2	Unioncamere	Association
3	Veneto Region	Local Authority
4	Santa Lucia di Piave	Municipality
5	San Donà di Piave	Municipality
6	San Michele al Tagliamento	Municipality
7	Professionals from Valdobbiadene (ing. Luca Toffoli)	SMEs
8	Professionals from Santa Lucia di Piave (arch. Susanna Maset and ing. Fiorenzo Carniel)	SMEs
9	ANCI	Association
10	Province of Treviso	Local Authority
11	Metropolitan City of Venice	Local Authority
12	CESQUA	Association
13	Comunità Montana Feltrina	Local Authority
14	ICMQ	Association
15	University of Venice IUAV	University
16	Venice Architect's association	Association

4.1.3 The RISE PUBLIC - Energetic Refurbishment of Public Buildings scope

The complexity of the legislation that constitutes the legal basis for the Minimum Environmental Criteria (in public supply contracts and service contracts within the categories set out in the National Action Plan for the environmental sustainability of consumption in the public administration sector), **makes it difficult to apply the provisions** contained both **for local authorities** that have to apply them when they issue a tenders, and **for companies** that win contracts without having a real perception of the implications that the application of CAM involves in the construction phase of the works contracted and for architects or engineering firms.

In particular, the provision inserts Article “68 bis” into the Code of Contracts and provides for an obligation for public administrations, including central purchasing bodies, to contribute to the achievement of environmental objectives. This entails the obligation to apply the technical specifications and contractual clauses contained in the ministerial decrees relating to CAMs, for the entire value of the contracts (paragraph 1) or for 50% of the same value (paragraph 2).

The purpose of RISE PUBLIC - Energetic Refurbishment of Public Buildings is to motivate Municipalities and the Contracting Authorities in Veneto Region to be more involved in the implementation of GPP (and improved version of eGPP) in the energy and seismic refurbishment of public building, with an offer by SMEs adequate to the public sector request.

The RISE PUBLIC LL tries to make a contribution in bridging the information gap between legislation and knowledge and application at the level of local authorities, professional firms and SMEs in the building sector.

4.1.4 RISE PUBLIC - Energetic Refurbishment of Public Buildings Living Lab plan

4.1.4.1 LL objectives

The main goal of RISE PUBLIC Living Lab in Italy, is to establish a Living Lab network of complementary stakeholders (SMEs, Local Authorities, Associations, University) addressing the common problem of the refurbishment of public building for seismic safety and energy efficiency as an opportunity for providing sustainable approaches and implementations, in line with the principle of the circular economy.

4.1.4.2 RISE PUBLIC LL activities

- To raise awareness of current state of new Green Procurement Regulation (GPP) and CAM application in Veneto region by means of seminars and training courses.
- Collect good practices on green procurement, public buildings green refurbishment and public policies for eco-innovation from involved Local Authorities.
- Promotion of eGPP as a meeting point where private and public sector can cooperate in the field of green public procurement, public buildings green refurbishment and eco-innovation.
- Implementation and improvement of tools for green public procurement such as eGPP tool
- Create new business opportunities for SMEs and engineering firms in participating to GPP tenders

4.1.4.3 Stakeholders role and responsibilities

The role of stakeholders will be to cooperate in the LL activities, such as meeting attendance, eGPP tool testing, problem suggestions, questions, etc. Leader of the LL will be the Veneto region, adequately supported by Unioncamere, who will organize the meetings and provide solutions to other stakeholders.

The RISE PUBLIC Living lab stakeholders are presented in table below.

Table 3: RISE PUBLIC Living Lab Stakeholders

Nr	Stakeholder	Government/ SMEs/ Organisation	Role/Capacity
1	Veneto Region	Government	Leader of the RISE PUBLIC LL
2	Municipality of Valdobbiadene	Government	stakeholder
3	S. Lucia di Piave	Government	stakeholder
4	Professionals from Valdobbiadene	SME	stakeholder
5	Professionals from Santa Lucia di Piave	SME	stakeholder
6	CM Feltrina	Government	stakeholder
7	Unioncamere	Organization	Co-Leader of the RISE PUBLIC LL

4.1.4.4 *Special agreements*

For more formal collaboration, each stakeholder will sign a Declaration of Participation on the basis of the format provided by University of Maribor to define the purpose and obligation of such collaboration. The stakeholders involved respect the minimum number (at least 5 stakeholders/organisations coming from various sectors (Pas, SMEs, energy experts, policy makers etc...) recommended by UoM guidelines.

As regards disclosing information outside the group, no special agreement are envisaged. Meetings will be convened at the offices of Veneto Region or Unioncamere.

4.1.4.5 *Cost issues*

Any costs for RISE PUBLIC LL organization and in particular of the Training activities (cost of premises, external experts, tools to be used...etc..) will be borne by the GRASPINNO budget made available to Veneto Region and Unioncamere del Veneto.

4.1.4.6 Profit issues

No profit (a service, a product to be sold...) are expected to derive from RISE PUBLIC LL activities.

4.1.4.7 Risk issues

So far, the main problem in the establishment of the LL is given by the short deadlines that are not compatible with the time required for the action of a large public organization such as the Veneto Region, whose procedures are calibrated on time and methods long and rigid. The same problem concerns all the Municipalities involved and in general all the Italian public authorities (local and not) involved.

Another problem in organizing the Living Lab is the involvement of SMEs of the building sector, which in their function as subcontractors of the largest companies, that win public tenders, are not yet sufficiently informed and aware of the application of CAM.

Major risks are above all related to the active participation and involvement of stakeholders so as to avoid that the training activities are not attended by LL stakeholders. In such a case in order to mitigate the risk, non-financial incentives (credits) will be envisaged.

4.1.4.8 Time plan

Table 4: Time frame of the RISE PUBLIC Living Lab set up

CONNECT	Start: 4/12/2017
	End: 27/3/2018
EDUCATE AND TRAIN	Start: 28/3/2018
	End: 12/04/2018
IMPLEMENT	Start: 13/4/2018
	End: 31/5/2018
IMPROVE	Start: 1/6/2018
	End: 15/6/2018
EVALUATE	Start: 16/6/2018
	End: 30/6/2018
DISSEMINATE	Start: 1/8/2018
	End: 31/10/2018

4.1.5 Declaration of participation

The declaration of participation (DoP) in RISE PUBLIC Living Lab was signed by 7 stakeholders:

1. **Veneto Region.** One of the 20 Italian Regional Authority with political, administrative and legislative autonomy. Situated in north east of Italy with 5 MLN inhabitants. Capital Venice.
2. **Municipality of Valdobbiadene** situated in the province of Treviso and located in a hilly area with a flourishing agri-food economy; ten thousand inhabitants.
3. **Municipality of S. Lucia di Piave.** SLP is village with a strong agricultural, artisan and entrepreneurial tradition, famous for the presence of a thousand-year-old Fair. Nine thousand inhabitants.
4. **Professionals from Valdobbiadene.** **Ing. Toffoli** is a construction engineering studio involved in the implementation of the GRASPINNO project Pilot "Angelo Codello School".
5. **Professionals from Santa Lucia di Piave.** **Arch. Maset and ing Carniel** is an associated construction engineering studio involved in the implementation of the GRASPINNO project Pilot "Lancilotto Palace".
6. **MU Feltrina** is a Venetian Mountain Union based in the Municipality of Feltre. It groups a total of thirteen Municipalities, twelve of which are located in the province of Belluno, in the "Feltrino", and one, Segusino, in the province of Treviso.
7. **The Regional Union of the Chambers of Commerce of Veneto (Unioncamere Veneto)** is the structure that associates all the Chambers of Commerce of the Veneto region, providing support and promotion of the economy, coordinating relations with the Veneto Region and the representatives of local authorities.

The signed Declaration of Participation are in the Appendix.

4.1.6 Key Performance Indicators

In order to measure overall performance and effectiveness of LL and proposed solutions/opportunities assorted Key Performance indicators (KPIs) have been specified (presented in **Error! Reference source not found.**below). These KPIs have been measured on the level of Living Lab coordinator while different set of indicators have been used on level of LL participants.

Table 5: Living Lab Key Performance Indicators (KPI)

Area	No.	Performance indicator name	Metric	Description of performance indicator
Potential stakeholders (identification phase)	1	Number of potential PAs	No.	The indicator measures the number of potential PAs contacted by LL initiator to be involved in LL activities.
	2	Number of potential SMEs	No.	The indicator measures the number of potential SMEs contacted by LL initiator to be involved in LL activities.
	3	Number of potential higher education and research organizations	No.	The indicator measures the number of potential higher education and research organizations contacted by LL initiator to be involved in LL activities.
	4	Number of potential business support organisations	No.	The indicator measures the number of potential business support organizations contacted by LL initiator to be involved in LL activities.
	5	Number of potential other organizations	No	The indicator measures the number of potential other organizations contacted by LL initiator to be involved in LL activities.
Participating stakeholders (connect phase)	6	Number of PAs	No.	The indicator measures the number of PAs involved in Living lab activities by signing the DoP.
	7	Number of SMEs	No.	The indicator measures the number of SMEs involved in Living lab activities by signing the DoP.
	8	Number of higher education and research organizations	No.	The indicator measures the number of higher education and research organizations involved in Living lab activities by signing the DoP.
	9	Number of business support organisations	No.	The indicator measures the number of business support organizations involved in Living lab activities by signing the DoP.
	10	Number of other organizations	No.	The indicator measures the number of other organizations involved in Living lab activities by signing the DoP.

Area	No.	Performance indicator name	Metric	Description of performance indicator
LL meetings	11	Number of individual meetings	No.	The indicator measures the number of individual/one-on-one meetings (for example between LL coordinator and other stakeholders, or between two stakeholders).
	12	Number of joint LL meetings	No.	The indicator measures the number of joint LL meetings (meetings held among all or almost all stakeholders).
	13	Number of participants on joint LL meetings	No.	The indicator measures the average number of participants per joint meetings.
	14	Number of meetings between LL coordinators	No.	The indicator measures the number of meetings organized between LL coordinators in case where more LL coordinators have been identified.
	15	Number of unique participants	No.	The indicator measures the number of unique (distinct, individual) participant (individual participant participating in two meetings is only counted once).
	16	Average duration of joint meetings	min	The indicator measures the average duration of joint meetings (in minutes).
Themes presented	17	Number of best practices	No.	The indicator measures the number of best practices (funding, procurement, energy savings, energy efficiency, building refurbishment etc...) presented within LL activities by LL coordinator or participants.
	18	Number of tools	No.	The indicator measures the number of tools (funding, procurement, energy savings, energy efficiency, building refurbishment etc...) presented within LL activities by LL coordinator or participants.
	19	Number of funding possibilities for green investments	No.	The indicator measures the number of funding possibilities for green investments presented within LL activities.

Area	No.	Performance indicator name	Metric	Description of performance indicator
Benefits gained	20	Co-creation of novel user-oriented solutions	Likert scale	The indicator measures if LL enables co-creation of novel user-oriented solutions.
	21	Strengthen the cooperation and trust between public and economic operators	Likert scale	The indicator measures if LL strengthen the cooperation and trust between public and economic operators.
	22	Strengthen cooperation among LL stakeholders	Likert scale	The indicator measures if LL support and strengthen cooperation among LL stakeholders.
	23	Strengthen stakeholders transnational cooperation and networking	Likert scale	The indicator measures if LL strengthen stakeholder's transnational cooperation and networking with other organizations (PA's, SME's, clusters etc...).
	24	Exchange experiences or concerns for green growth	Likert scale	The indicator measures if LL enables to exchange experiences or concerns for green growth among LL stakeholders.
	25	More positive attitude towards green sustainable growth	Likert scale	The indicator measures if LL enables more positive attitude towards green sustainable growth among LL stakeholders.
	26	Development and promotion of innovative products	Likert scale	The indicator measures if participation in GRASPINNO LL has enabled SMEs to better develop and promote innovative products.
	27	Improving knowledge and implementation of effective measures for energy management	Likert scale	The indicator measures if PA's, with participation in GRASPINNO LL, can improve their knowledge/understanding of energy management and can develop/implement effective measures.
	28	Partnerships in the field of green refurbishment of buildings and green public procurement	Likert scale	The indicator measures if PA's can benefit from different types of partnerships in the field of green refurbishment of their buildings and green public procurement.
	29	Effective policy recommendations for green energy innovation, green public procurement and energy refurbishment	Likert scale	The indicator measures if Policy makers, with participating in GRASPINNO LL, feel more competent in field of effective policy recommendations for green energy innovation, green public procurement and energy refurbishment.

Area	No.	Performance indicator name	Metric	Description of performance indicator
Knowledge	30	Knowledge on green policies (EU, national, local)	Likert scale	The indicator measures level of knowledge of LL stakeholder on EU, national and local green policies for eco-innovations and energy refurbishment of buildings before and after participating in GRASPINNO living lab activities.
	31	Knowledge on available mentoring mechanisms	Likert scale	The indicator measures level of knowledge of LL stakeholder on mentoring mechanisms for eco-innovations and energy refurbishment of buildings before and after participating in GRASPINNO living lab activities.
	32	Knowledge on funding possibilities for green investments	Likert scale	The indicator measures level of knowledge of LL stakeholder on funding possibilities for green investments, eco innovations and energy refurbishment of buildings before and after participating in GRASPINNO living lab activities.
	33	Knowledge on green public procurement (competence, skills)	Likert scale	The indicator measures level of knowledge of LL stakeholder on green public procurement before and after participating in GRASPINNO living lab activities.
	34	Knowledge on best practices	Likert scale	The indicator measures level of knowledge of LL stakeholder on best practices on funding, procurement, energy savings, energy efficiency, building refurbishment before and after participating in GRASPINNO living lab activities.
	35	Knowledge on GRASPINNO Living Lab concept	Likert scale	The indicator measures level of knowledge of LL stakeholder on GRASPINNO Living lab concept before and after participating in GRASPINNO living lab activities.
	36	Knowledge on GRASPINNO pilots actions in field of green energy	Likert scale	The indicator measures level of knowledge of LL stakeholder on pilot's actions in field of green energy before and after participating in GRASPINNO living lab activities.
	37	Knowledge on GRASPINNO eGPP tool (public procurement)	Likert scale	The indicator measures level of knowledge of LL stakeholder on GRASPINNO eGPP tool (public procurement) before and after participating in GRASPINNO living lab activities.

Area	No.	Performance indicator name	Metric	Description of performance indicator
GREEN FUNDING AND/OR MENTORING	38	New European funding mechanism	Likert scale	The indicator measures if any new proposals or suggestions were developed for new funding mechanisms for eco-innovations and energy refurbishment of buildings while participating in GRASPINNO living lab activities.
	39	New European mentoring mechanism	Likert scale	The indicator measures if any new proposals or suggestions were developed by stakeholders for new mentoring mechanisms for eco-innovations and energy refurbishment of buildings while participating in GRASPINNO living lab activities.
	40	Mentoring and funding services	Likert scale	The indicator measures if appropriate funding and mentoring services were provided by stakeholders to stimulate them for eco-innovation and energy refurbishment.
	41	New funding practices	Likert scale	The indicator measures how did the LL activities effect on stakeholders to create new funding practices (such as internal reporting in case of Greece etc...).
	42	Number of good practices on funding	No.	The indicator measures the number of existing good practices on funding with which LL stakeholder got familiar with during LL activities.

4.2 Educate and train

Not enough is being done to promote and capitalise on change in people's behaviour. The behavioural dimension is important, both in these and in other transformation processes involving people as actors and beneficiaries of change. In terms of energy efficiency, there are many examples of good practice that combine the human factor with technology. Therefore, The Living lab "Rise Public" aims to educate and train stakeholders.

In the first phase, it is planned to communicate to a wider audience, the state of the art of energy saving in public buildings and its possible regulatory and policy implications. In this context, it is strategic to make designers and energy managers interact with local authorities. It will encourage the presence of GRASPINNO testimonials in contexts where people meet who, in various ways (with research, teaching, professional, entrepreneurial objectives), are reflecting on issues related to behavioural change and its impact to reduce the costs of efficiency gains in various energy uses.

In the second phase, training-workshop sessions will be organised to share experiences and knowledge among LL members, experts of the GRASPINNO project and stakeholders in the public construction sector.

The target audience are divided into two categories:

- Public administrations (mainly local authorities);
- SMEs in the construction sector (products, plant, construction) with their associations, certification companies, professional firms, etc;

In the course of training both the Graspinnno platform and the tools developed in the project have been presented.

4.2.1 Educate stakeholders

Three education sessions were held in the framework of the European project GRASPINNO and living lab activities. Two events were reserved for local authorities and one for SMEs in the construction sector and professionals (architects, engineers, professionals).

1. ***Education session: " Introduction to the application of Minimum Environmental Criteria (CAMs) in building construction***, was organized on 28th March 2018 at Palazzo Grandi Stazioni" in Venice.

The event was intended to give a general introduction to the application of CAM - Minimum Environmental Criteria- for building constructions. The Italian Contract Code (Legislative Decree no. 50/2016) introduced the mandatory nature of CAM in Italy. CAM are Ministerial Decrees, adopted in a differentiated manner according to the categories, which provide for the application of environmental protection standards in the Public Procurement procedures for the purchase of works, services and supplies by contracting authorities. CAMs are technical indications to help the PA to acquire, identifying products, services and works that produce a lower environmental impact. These are "minimum" environmental criteria in the sense that they require a level that should be able to ensure both an adequate market response and meet the environmental objectives that the PA intends to achieve through public procurement. In particular, the legal basis of CAM in the building category (for PP of new construction, renovation and maintenance of public buildings), is constituted by the Ministerial Decree 11-10-2017 of the Ministry of the Environment. This event was primarily addressed to Local Authorities (Municipalities and Provinces) and to Contracting Authorities.



Figure 3: Education session: " Introduction to the application of Minimum Environmental Criteria (CAMs) in building construction, 28.3.2018 at Palazzo Grandi Stazioni" in Venice

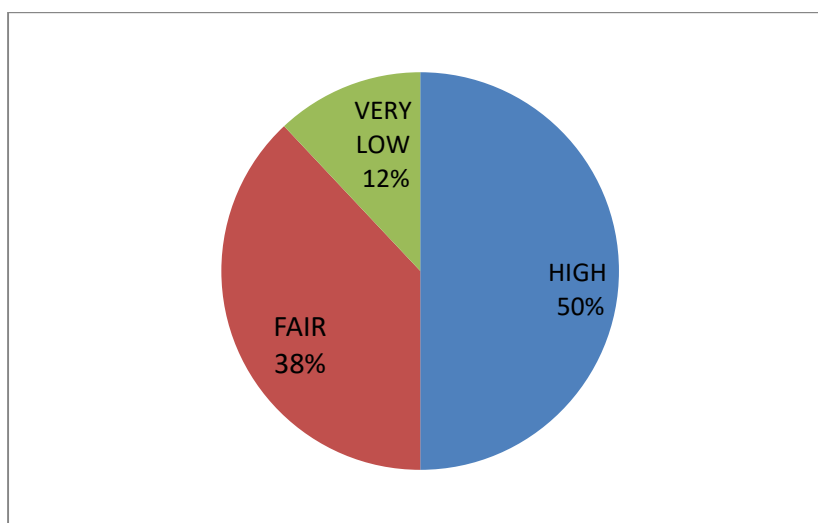


Figure 4: Overall satisfaction of participants at Education session: " Introduction to the application of Minimum Environmental Criteria (CAMs) in building construction, 28.3.2018 at Palazzo Grandi Stazioni" in Venice

2. Education session: “New calls for tenders for the renovation of public buildings in the light of the introduction of CAM” was organized on 10th April and was focused on two issues of the application of Minimum Environmental Criteria (CAMs) in public procurements in Veneto Region:

1) Deepening on the impact of the Ministerial Decree of 11 October 2017 which sets out the Minimum Environmental Criteria (CAMs) to be followed in the award of project and works services for the construction, renovation and maintenance of public buildings. The impact of the regulations was examined both with regard to the fulfilments of the Contracting Authorities during the execution of the tender, awards, award criteria, etc., and with regards to professionals/studios and SMEs and therefore the impact on the structuring of the building site and the provision of products and services that meet the CAMs.

2) Introducing participants into the functionalities of the unified platform of the GRASPINNO project, with special regards to the LCC (Life Cycle Cost) tool, that can help professionals, companies and Municipalities to understand how to correctly evaluate the results of a "green" contract from an economic point of view, carrying out specific evaluations of the different products.



Figure 5: Education session: “New calls for tenders for the renovation of public buildings in the light of the introduction of CAM, 10.4. 2018 at Palazzo Grandi Stazioni” in Venice

3. **Education session: “The application of CAM in public construction procurement”** was organized on 11th April 2018 and was focused in three very important issues of the application of Minimum Environmental Criteria (CAMs) in public procurements:

1) How public buildings can be financed with funds by the 2014-2020 Veneto ERDF ROP.

2) Deepening on the impact of the Ministerial Decree of 11 October 2017 which sets out the Minimum Environmental Criteria (CAMs) to be followed in the award of project and works services for the construction, renovation and maintenance of public buildings. The impact of the regulations are examined both with regard to the fulfillments of the Contracting Authorities during the execution of the tender, awards, award criteria, etc., and with regard to professionals/studios and SMEs and therefore the impact on the structuring of the building site and the provision of products and services that meet the CAMs.

3) Introduce the functionalities of the unified platform of the GRASPINNO project and of the LCC (Life Cycle Cost) tool that can help Municipalities to understand how to correctly interpret the results of a “green” contract from an economic point of view, carrying out specific evaluations of the different products.

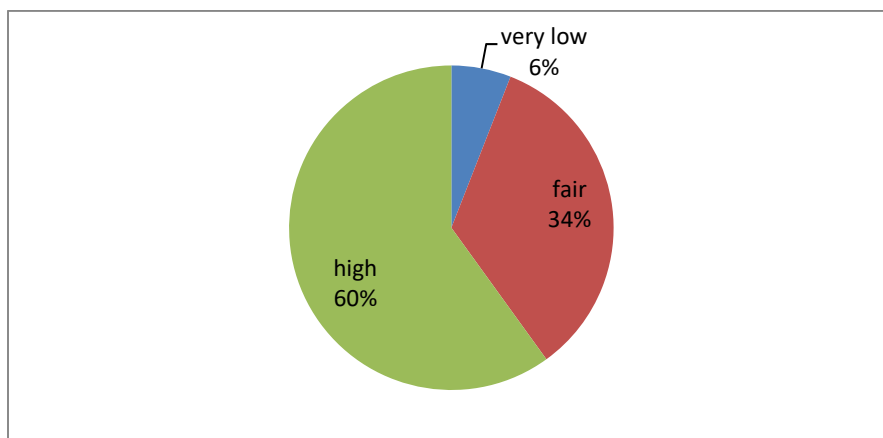


Figure 6: Overall satisfaction of the participants at *Education session: “The application of CAM in public construction procurement”, 11.4.2018 at Palazzo Grandi Stazioni* in Venice



Figure 7: Education session: “The application of CAM in public construction procurement”, 11.4.2018 at Palazzo Grandi Stazioni” in Venice

The following learning points and conclusions may be reported from education sessions:

- The CAM is of great interest for Local Authority and Contracting Authorities;
- The subject needs a lot of work to disseminate to small municipalities. It will be necessary in the future to organize meetings to deepen the legal and operational aspects of the issue and especially organize meetings with virtuous municipalities that have already applied CAM.
- It would be interesting to hear the point of view of businesses and professionals as well.
- SMEs and professionals in the Constructions and Building Sector need more training at local level and more answers from Regional Administrations and Ministry of Environment about GPP requirements;
- Training should be very practical and not just theory teaching;
- There is a strong need of an ecosystem of companies and professionals able to provide components and systems for the renovation of buildings, including energy, and fully able to be applied to tenders issued by public administrations;

- The market for green products need to be boosted by a wider and deeper awareness on the new rules on GPP and by the existence of a sanctioning system, if the case.
- Municipalities and Public managers need more training and information from the Region;
- Local authorities need access to the good practices of other public authorities in this sector.

4.2.2 Train stakeholders

After the education sessions the Veneto Region and Unioncamere decided to choose the unified platform of the GRASPINNO project and of the LCC (Life Cycle Cost) to train Pilot Municipalities and professionals for correct application of the Minimum Environmental Criteria (CAM) in public buildings. The related tools were chosen because:

- the application of CAM - when fully operational - will have a leverage effect on the market, forcing contractors to adapt to the new needs of the public administration. It should be considered that the entry into force of the CAM (made possible by Legislative Decree 50/2016 "Code of Procurement") have made it mandatory for all contracting authorities to apply it. Mandatory public procurement, as required by law, will make it possible to 1) promote more sustainable, "circular" production and consumption patterns and 2) spread "green" employment. In addition to the enhancement of environmental quality and compliance with social criteria, the application of Minimum Environmental Criteria also responds to the need of the Public Administration to rationalize its consumption, reducing its expenditure where possible.
- The unified platform of the GRASPINNO project and of the LCC (Life Cycle Cost) tool can help Local Authorities to understand how to correctly interpret the results of a "green" contract from an economic point of view, carrying out specific evaluations of the different products.

The tool of the LCC platform (Life Cycle Cost) is a software of the GRASPINNO project that has features that can help Municipalities to understand how to correctly interpret the results of a "green" contract from an economic point of view, carrying out specific

evaluations of different products. The LCC tool for calculating the life cycle cost within the unified platform of the GRASPINNO project, was developed in accordance with the requirements of EU Directive 24/2014 on the implementation of the life cycle perspective in public procurement according to the criteria of interest of organizations and different administrative levels (local/regional/national).

To do this, two training sessions were organized in agreement with two experienced technicians from the project partner Terre di Siena Lab and with joining activities of two Italian living labs.

Training session at Municipality of Santa Lucia di Piave on 24 April 2018 was organized to test the LCC tool to a procurement already awarded by calculating the value of the LCC in order to assess the applicability - ex post - of the tool to the specific case of the refurbishment of Palazzo Ancilotto.

The test focused on the cost of heat pumps, the cost of insulating the roof of the building and the cost of windows replacement. A technical difficulty was the aspect of thermal energy saving as the current boiler will be replaced in the project by heat pumps so that the supply of the methane will be replaced by the electrical energy needed to run the pump. The test also had to take into consideration the regulatory constraints to which the refurbishment of Palazzo Ancilotto is subject.

In order to carry out the analysis, the experts of Terre di Siena Lab modified the software available online. The change was necessary to include in the calculation heat pumps that had not been provided for in the file calculation elements (only boilers were provided for). The software has been adapted to allow a comparison between an ex ante situation, represented by a hypothetical boiler, and an ex post situation, where the boiler has been replaced with 2 heat pumps. In fact, the boiler (and the entire building) had not been in use for several years.

The test conducted on the Pilot "Palazzo Ancilotto", has been successful, although characterized by basic simplifying hypotheses that limited its relevance. However, the method - if further perfected - could be useful to give helpful guidance to Local Authorities. We recommend further improvements to the software both in the layout and in the structure.

Training session at Municipality of Valdobbiadene on 24 April 2018 and was focused on the application of the LCC tool, developed by the Terre di Siena partner, to the pilot project for energy restructuring and the seismic safety of the “Angelo Codello” School in Valdobbiadene.

The path followed was that of analysing the initial state of the Codello School, concerning energy and structural status and subsequently analysing the energy saving measures suggested by the external designer of the thermal systems, to be applied for improving the energy efficiency of the school building Angelo Codello. Subsequently Terre di Siena proceeded to insert the data and to provide the elaborations by the LCC instrument. The activities were, besides being a first opportunity to test the applicability of the LCC tool developed by Terre di Siena, an opportunity to talk about LCC with the public administrations of Municipality of Valdobbiadene and the professionals connected to it. Starting from the objectives of the target scenario (transition from class E to class B) and the type of interventions envisaged to achieve these objectives and the economic assessments (expenditure-savings-payback period), in collaboration with the Partner Terre di Siena and with the administration of the Municipality of Valdobbiadene and the related external design TEAM, it was decided to operate LCC assessments on the energy intervention foreseen for the Angelo Codello school, using the LCC tool developed by the partner Terre di Siena itself.

4.3 Implement

4.3.1 Process of implementing the Rise Public LL

In Veneto region, two pilot actions have been identified: the first in Valdobbiadene and concerns the energy and seismic renovation of the "Angelo Codello" primary school, the second in the Treviso municipality of Santa Lucia di Piave and concerns the restoration of a 19th century historic building, subject to monumental constraints: "Palazzo Ancilotto". The stakeholders involved in the Living Lab (and in particular those connected to the two pilot projects Valdobbiadene and Santa Lucia di Piave) have made use of the tools, developed by the project GRASPINNO (unified platform and LCC tool), in the real environment using in this way the "implementation guide" as a working document available to them. This "implementation guide" provides the cognitive elements, the technical and procedural tools, the methods that, if properly implemented, should be used to seize the opportunities offered by the GRASPINNO project and its "Living Lab"; in other words, improve the capacities of Public Administrations in the definition of policies oriented towards green procurement and increase awareness and skills regarding the energy renovation of public buildings with particular reference to the application of CAM.

In support of the implementation phase, an important role was played by the two "on-site" meetings held on 24 April 2018, which guided stakeholders in applying the Life Cycle Cost (LCC) calculation method. During the meetings, the project experts tested the applicability of the information platform for calculating the LCC to the cases of Palazzo Ancilotto and the Angelo Codello primary school. Finally, the Veneto Living Lab "RISE PUBLIC" has integrated the tools developed with the GRASPINNO project also with the simultaneous presence of other tools developed by organizations representing the world of the supply of products and products for building construction. In particular, two guides have been developed in Italian language.

The first guide with title "CRITERI AMBIENTALI MINIMI PER L'AGGIUDICAZIONE DEL SERVIZIO DI PROGETTAZIONE PER LA NUOVA COSTRUZIONE, RISTRUTTURAZIONE E MANUTENZIONE DI EDIFICI E PER LA PROGETTAZIONE E GESTIONE DEI CANTIERI DELLA PUBBLICA AMMINISTRAZIONE" (ANDIL ICMQ Guide), addresses minimum environmental criteria for the award of design services for new construction,

renovation and maintenance of buildings and for the design and operation of public administration construction works.

The second guide with the title: "I CRITERI AMBIENTALI MINIMI PER L'EDILIZIA. IDENTIFICAZIONE DEI SERVIZI A SUPPORTO DELLA FILIERA DEL CALCESTRUZZO PRECONFEZIONATO PRODOTTO CON METODO INDUSTRIALIZZATO" (ATECAP ICMQ Guide), addresses with inimum environmental criteria for construction for identification of the services supporting the chain of ready-mixed concrete produced with industrialized method.

The "implementation guide", in some of its contents, has represented an easy tool to deepen the environmental labelling and the methods to ascertain the environmental characteristics object of supplies in response to green calls for public buildings. To this end, even a specific guide on "eco-labels", published by the Ancona Chamber of Commerce, was attached. The Implementation Guide was presented during an event held in Venice on May 25, 2018 in the presence of Living Lab participants and other interested local authorities.



Figure 8: Presentation of "Implementation Guide", 25.5. 2017 Venice, Italy

4.3.2 Measurement of Key performance indicators

At the very beginning, during the “Identification” phase, 12 PAs and 4 SMEs were identified as potential stakeholders. Later, during the “Connect” phase, 5 PAs and 2 SMEs (engineering/architecture firms) joined the Living Lab by signing the Declaration of Participation (7 in total), although a lot of organizations (both PAs and private bodies) participated in the activities of the Living Lab without signing a DoP.

Many meetings were held with the stakeholders, more precisely 7 overall. There were 2 individual meetings between LL coordinator and stakeholders and 5 joint LL meetings held among all or almost all stakeholders. Average number of participants on joint LL meetings was 9 and number of meetings between LL coordinator were 20. The average duration of joint LL meetings was 240 minutes. There were 3 presented/discussed themes. 2 of them were about tools in the field of energy efficiency, building refurbishment etc. and 1 theme about funding possibilities for green investments.

Regarding the **benefits** that stakeholders gained by participating in LL, we can notice few of them. Among strengthen the cooperation with other stakeholders, participating in co-creation of user-oriented solutions, developing effective measures for energy management also many others, presented in the table below.

Table 6: Benefits gained by participating in RISE PUBLIC Living lab

BENEFITS	Agree	Strongly agree
LL enables co-creation of novel user-oriented solutions		<input checked="" type="checkbox"/>
LL strengthen the cooperation and trust between public and economic operators		<input checked="" type="checkbox"/>
LL support and strengthen cooperation among LL stakeholders	<input checked="" type="checkbox"/>	
SME's with participating GRASPINNO LL can better develop and promote innovative products	<input checked="" type="checkbox"/>	
PA's can improve their knowledge/understanding of energy management and can develop/implement effective measures		<input checked="" type="checkbox"/>

Regarding the **knowledge** that stakeholders gained by participating in LL, we have noticed that **before** the Living Lab, all stakeholders had poor knowledge in all thematic (presented in table below). **After** participating in Living Lab, they improved their knowledge to fair knowledge about funding possibilities for green investments, green public procurement and GRASPINNO eGPP tool. The improvement from poor knowledge to good knowledge was in Living Lab concept and GRASPINNO pilot actions in field of GRASPINNO pilots. There was no improvement at all in the remaining fields. Knowledge gained by participating in Living Lab are shown in the following Table.

Table 7: Knowledge gained by participating in RISE PUBLIC Living lab

KNOWLEDGE	BEFORE	AFTER
Funding possibilities for green investments	poor	fair
Green public procurement (competence, skills)	poor	fair
GRASPINNO eGPP tool (public procurement)	poor	fair
Living Lab concept	poor	good
Knowledge on GRASPINNO pilots actions in field of green energy	poor	good
Green policies (EU, national, local)	poor	poor
Available mentoring mechanisms	poor	poor
Best practices (funding, procurement, energy savings, energy efficiency, building refurbishment ...)	poor	poor

While using GPP tool, 2 public tenders were processed. 1 PAs got registered in eGPP platform. Participation in the LL is potentially useful for the Municipalities concerned and for the public administration in general. The LL Rise Public is an instrument that, if properly used, can allow fine tuning operations around public policies in the field of eGPP.

4.4 Improve

4.4.1 Generation of potential improvements of Rise Public LL

On stakeholders meeting, held in Venice on 25th May 2018 the problem of how to improve the tools and implementation guide implemented so far in the LL Rise public, were discussed. The improvements were formed based on:

- interesting conclusions that were drawn from the meeting on Friday 25 May and from the questionnaires filled in by the participants during the training that took place on 28/3/2018, 10/4/2018 and 11/4/2018.
- concrete requests that emerged from the stakeholders during the meeting of 25th of May. It consisted in improving the content of the implementation guide with well proven best practices in public sustainable buildings and at the same time in increasing the use of the guide by the stakeholders of the public buildings refurbishments sector.
- On realisation of a training meeting on 29/6 in Venice in which the actors of our pilots would be assisted by external experts already with previous experiences in the sustainable building and in the drafting of green calls (in the case of the third hypothesis, the stakeholders would be able to talk directly with these external operators).

No awarding system has been specifically planned for the improvement phase because the Veneto Region has already set up two awards in September 2017 (the "PREMIO STAZIONI APPALTANTI" award and the "PREMIO IMPRESE" award).

4.4.2 Implementation of Rise Public LL improvements

Following the debriefing hold on 25th of May, stakeholders envisaged an improvement of the implementation guide, in order to make it a real working document for all the entities involved in the public building energy refurbishments. In fact, the working version of Implementation guide presented to stakeholders has been integrated in the annexes with significant examples of CAM application in public buildings. In fact, the guide was the subject of an improvement process involving all stakeholders of LL RISE PUBLIC in various ways. Special attention was given to understand the strengths, the possible criticalities and priorities for an efficient improvement of the implementation guide. On the basis of the feedback of the stakeholders involved, and in particular of the LL Rise Public partners (both EELL representatives and professionals), it has emerged the need to deepen facts and figures with some practical examples of the application of Minimum Environmental Requirement (CAM in Italy) in interventions of energy refurbishment of public buildings. To do this, we considered the projects carried out by the Local Health Units and by the Regions for the renewal of hospital locations, inspired by criteria of environmental, economic and social sustainability. Among the Regions that particularly distinguish themselves in this area, are the Emilia Romagna Region, the Lombardy Region and the Piedmont Region. We then thought to consider also the best practices by local authorities in Veneto and it seemed natural to promote the impressive results achieved in the two pilots of the GRASPINNO project in Veneto, respectively the refurbishing of the Codello school of the Municipality of Valdobbiadene and of the historic building Ancilotto of the municipality of Santa Lucia di Piave.

For this reason, the final version of the implemenation guide has been integrated and enriched in the annexes with:

- a) A technical document on the Minimum Environmental Criteria of the new emergency structure of the hospital of Bentivoglio in Emilia Romagna.
- b) Special terms of reference on the minimum environmental criteria of the tender, for the renovation of the Angelo Codello school in the Municipality of Valdobbiadene.
- c) Special terms of reference (1st excerpt) relating to the restoration and refurbishment of Palazzo Ancilotto in the Municipality of Santa Lucia di Piave (TV).

The implementation guide, thus enriched, has already been booked by the Province of Treviso and the metropolitan city of Venice to make it available as a working document to the Municipalities of the respective territories, which have adopted a SEAP. Also the University of Ca Foscari of Venice, awarded by the Veneto Region during the "green prize" of 21th June 2018, for its environmental and social sustainability policies in the construction of the new University Campus in Mestre Venice, looks with interest at the Graspino initiatives and it will be invited by the Veneto Region to be part of the stakeholders of the LL RISE PUBLIC.



Figure 9: Generation of potential improvements of Rise Public LL, 25.5.2017, Venice, Italy

4.5 Evaluate

4.5.1 Evaluation of used GRASPINNO tools and RISE UP implementation guide

The solution found with the PUBLIC RISE LL is to be circumscribed in the field of green public procurement although the questionnaire filled out by the business support organization focused the solution in Green funding/or mentoring and the questionnaire filled out by a PA focused the solution in Green Policy. The assessment of the solution that emerges from the analysis of the questionnaires filled in by the stakeholders who participated in the LL is certainly positive.

Considering the eGPP level of knowledge on some specific topic, the analysis of the fulfilled questionnaires gave the following results

In general, the majority of stakeholders had poor knowledge in almost all the fields considered with the exception of "environmental questions considering green procurement". The stakeholder's knowledge was particularly poor in the area of "green best practices for green procurement" and "implementation of ER of public buildings as shown in the figure below.

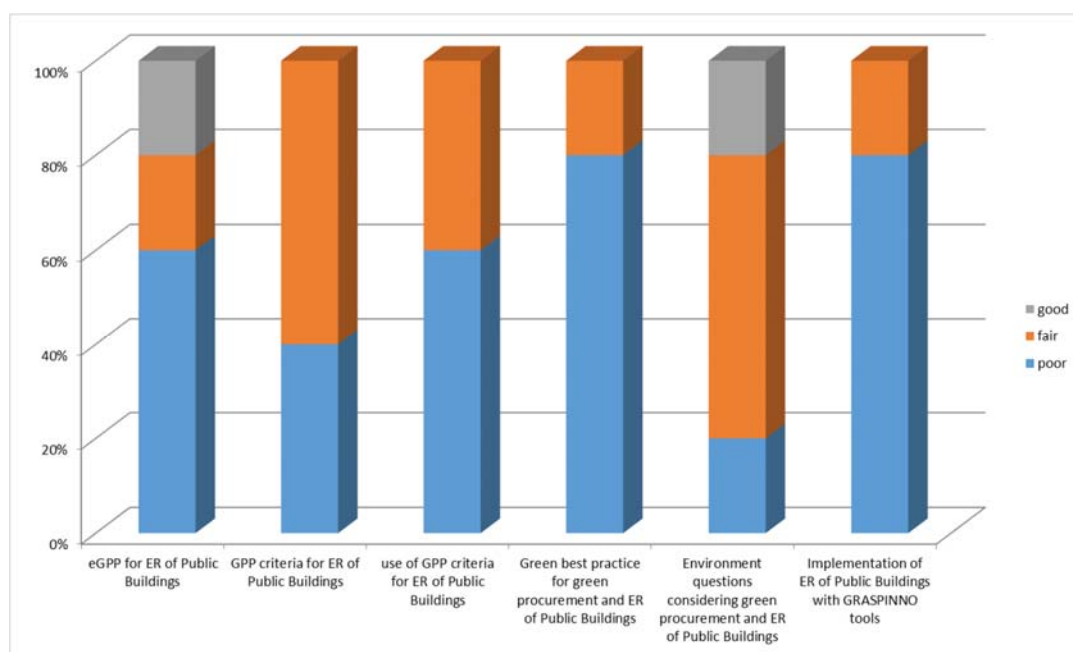


Figure 10: Knowledge about eGPP before participating in LL

But after participating in PUBLIC RISE LL, knowledge about the GPP criteria for ER of public buildings and use of GPP criteria for ER of public buildings has increased significantly to good. The figure below also shows that in the field of green best practices the influence of LL participation did not lead to significant results. Analysis was made according to average answers given in the online questionnaires.

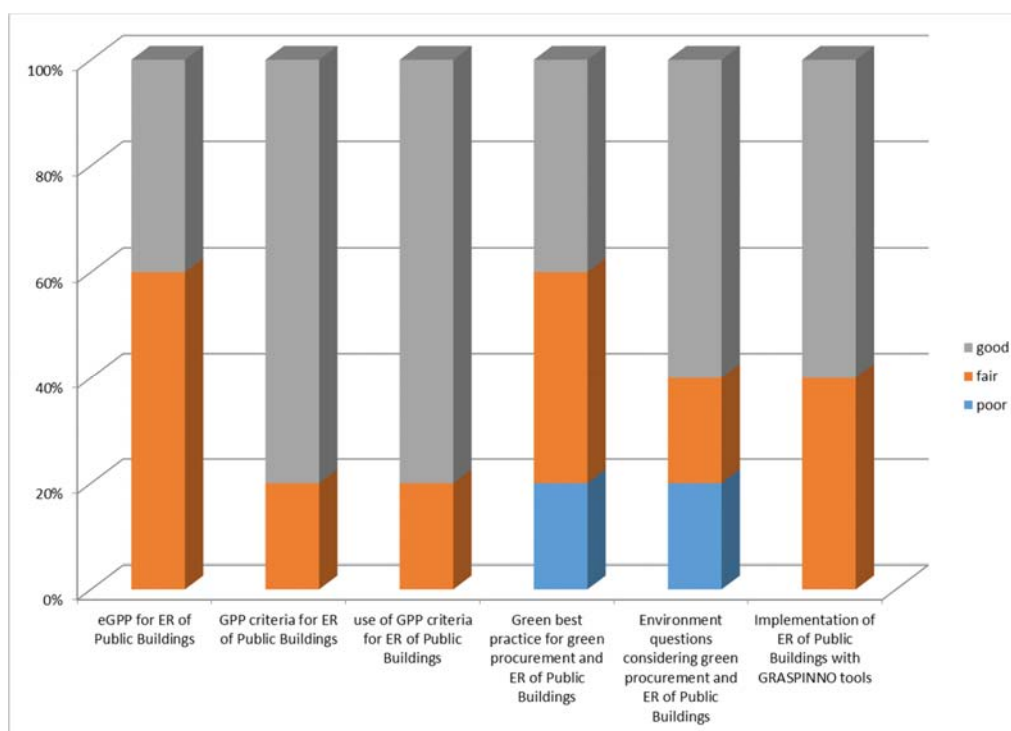


Figure 11: Knowledge about eGPP after participating in LL

4.5.2 LL evaluation

With regard to the overall assessment of the Living Lab "RISE PUBLIC", the results of the analysis of the submitted questionnaires are as follows:

Stakeholders were equally represented: 4 public administrations, a chamber of commerce, an engineering firm and a business support organization. The participation of the private sector was attentive (4-6), while 3 public administrations participated in the two main meetings and one in all 6.

The opinion on the organisation of the meetings was on the whole very positive in 6/7 questionnaires, as was the evaluation of the content of the meetings (very or extremely satisfied (5/7). Stakeholders expressed moderate satisfaction with the relevance of the topics dealt with (4/7). It is important to evaluate the opinion on the usefulness of the topics dealt with: in 4 questionnaires the subjects declared themselves to be very or extremely satisfied, while in the remaining 3 questionnaires they declared themselves to be moderately satisfied. This overall satisfaction depended on the quality of the speakers being very or extremely satisfactory for 5/7. The results are very or extremely satisfactory for 5/7. Conversely, discordant opinions were recorded on the duration of the meetings, which reflects the personal point of view on the level of attention during the meetings.

As regards the benefits of participation, there is general agreement that the LL "enables co-creation of novel user-oriented solutions" and almost everyone (6/7) believes that the LL can strengthen cooperation and trust between public and economic operators. Everyone agrees that the LL strengthens cooperation between stakeholders, whereas there are no precise opinions on transnational cooperation, since the LL's activity has been local. Very different views are expressed on the possibility of exchanging experiences on "green growth", while more than half of the stakeholders agree on the LL's ability to create a positive attitude on sustainable green growth. On the benefits of SME participation in the LL, 4/7 consider that they can develop and promote innovative products. All agree on the possibility for PAs to improve their knowledge of energy management as well as the possibility for PAs to benefit from different types of partnerships in the field of green refurbishment of their buildings and GPP. 5/7 agree on positive influence for policy makers as well.

As regards the level of knowledge (as seen from Figure 11 and Figure 12) in the individual fields covered by the LL (funding possibilities, GPP, best practices, LL concept, e GPP tool etc.), there was an increase of knowledge due to participation in the LL. The quality of this increase is not comparable given the specificity of the basic knowledge. However, there was a great leap in knowledge of EGPP issues and knowledge of the themes of the GRASPINNO project.

It is interesting to note that everyone (and for various reasons) is enthusiastic about being able to be involved again in the LL, and everyone is willing to suggest (to PAs or municipalities or more generally to stakeholders) to others to cooperate in an LL.

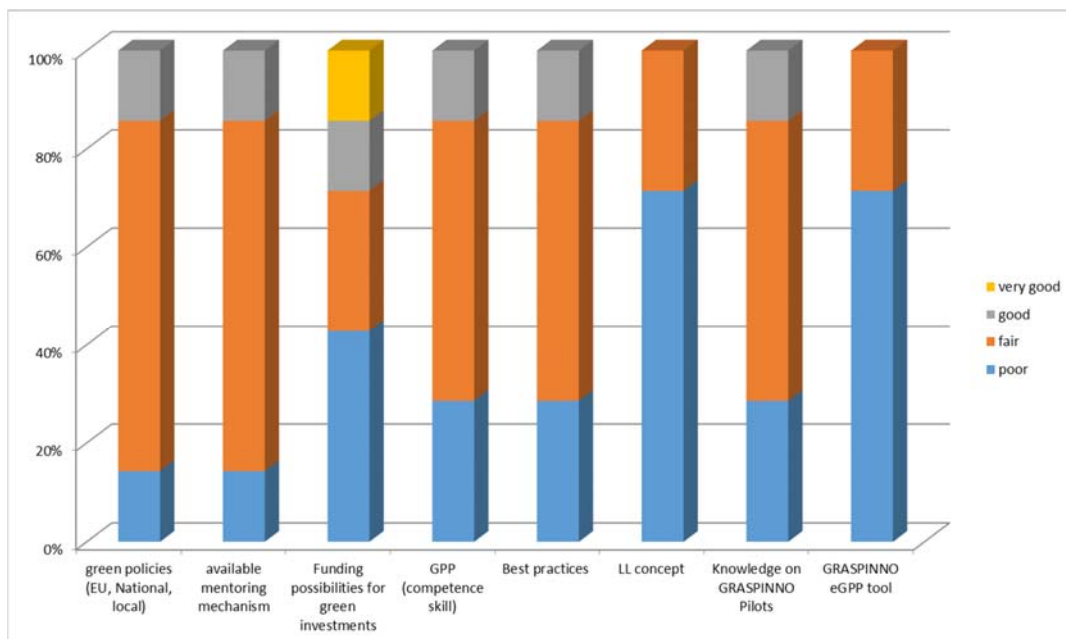


Figure 12: Knowledge of stakeholders before participating in LL

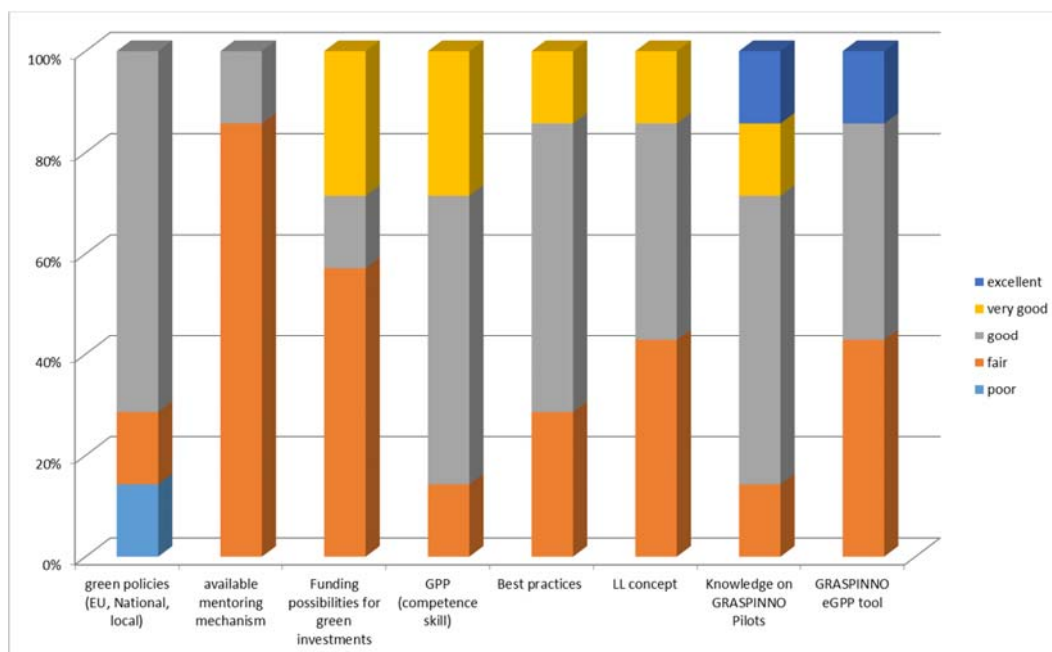


Figure 13: Knowledge of stakeholders after participating in LL

4.5.3 Guidelines and recommendations

The following recommendations emerge from the experience of PUBLIC RISE:

- 1) A serious assessment of the time needed for the individual steps is necessary in order to avoid compressing activities into times that are not compatible with the needs of the stakeholders so that to be able to meet the project deadlines.
- 2) A group of stakeholders interested in actively cooperating with the LL should be identified immediately. To this end, it is important to be able to present the potential benefits of participation to potential stakeholders.
- (3) The subject of the LL should be highly topical for both the public and the private sector. This is clearly linked to innovative issues (products or services) that need to be tested in a real environment before they are standardised.
- (4) The organisation of an LL requires dedicated staff who are technically highly trained and, above all, capable of motivating stakeholders in the individual phases of the LL's life.
- (5) The organisers should have an overview of the LL's activities right from the start in order to avoid conflicts and overlaps during the LL's lifetime.
- 6) Regarding the number of stakeholders to be involved: it is better to have a few stakeholders but very well motivated than formal adhesions from individuals who do not participate in the activities of the LL, because not really interested.

4.6 Disseminate

With regard to the DISSEMINATE phase, a plan for future dissemination activities has been drawn up and will be integrated into the Capitalization Plan. The activities that have been identified are the following:

- a. Deepening with concrete experiences of good practices or at least with reference cases of difficulties and solutions around the implementation of calls for tenders for public buildings for energy renovation by applying CAM. To this end, a workshop will be planned for September 2018 (originally scheduled for June but included in the IMPROVE phase) to be included in the capitalisation plan, entitled "in-depth analysis of the application of CAM to public building through the narration of significant experiences" with the participation of a consultant from Casa Clima and the RUP of the Municipality of Bentivoglio in Emilia. The workshop could be hosted by the Veneto Region at the Venice headquarters or, subordinately, in one of the interested pilot municipalities (Santa Lucia at the fair, for example).
- b. A specific dissemination activity of the solution found and applied in the implementation phase (and improved in the next phase) to the experts is foreseen in order to broaden the LL Rise Public participation to other stakeholders. Potential stakeholders will be invited to the September workshop.
- c. Meeting between the Region and other stakeholders to set up a permanent operational committee to ensure the sustainability (beyond the dissemination phase) of the LL.
- d. Transnational dissemination activities in cooperation with other partners.

5 CONCLUSIONS

RISE PUBLIC Living Lab in Veneto region focuses on eGPP, more precisely to address the common problem of the refurbishment of public building for seismic safety and energy efficiency as an opportunity for providing sustainable approaches and implementations, in line with the principle of the circular economy. In total 7 stakeholders, of which 5 PAs and 2 SMEs (engineering/architecture firms), joined RISE PUBLIC by signing the Declaration of Participation. Although it is worth of mentioning that a lot of organizations (both PAs and private bodies) participated in the activities of the Living Lab without signing a DoP.

The RISE PUBLIC living lab stakeholders have made use of the tools, developed by the project GRASPINNO, in the real environment using in this way the "Implementation guide" which was precisely a working document available to them. The "Implementation Guide" provides the core elements, the technical and procedural tools, the methods that, if properly implemented, should be used to seize the opportunities offered by the GRASPINNO project and its "Living Lab"; in other words, improve the capacities of Public Administrations in the definition of policies oriented towards green procurement and increase awareness and skills regarding the energy renovation of public buildings with particular reference to the application of CAM. All this will also serve to create an ecosystem of companies and professionals able to supply components and systems for the renovation of buildings, including at the energy level, able to participate fully in calls issued by public administrations, ultimately encouraging the entry of SMEs in the green energy market.

The "Implementation guide" was improved in order to make it a real working document for all the entities involved in the public building energy refurbishments. In fact, the guide was the object of an improvement process involving all stakeholders of RISE PUBLIC in various ways. Special attention was given to understand the strengths, the possible criticalities and priorities for an efficient improvement of the working document. On the basis of the feedback of the stakeholders involved, and in particular of the LL partners (both PA representatives and professionals), it has emerged the need to deepen facts and figures with some practical examples of the application of Minimum Environmental Criteria (CAM in Italy) in interventions of energy refurbishment of public buildings. For this reason, the current version of the Implementation guide has been enriched with several new

topics, identified by stakeholder as necessary to more effectively in energy refurbishment.

However, there was a great leap in knowledge of EGPP issues and knowledge of the themes of the GRASPINNO project, the assessment has shown that through participation in Living Lab, all stakeholders improved their knowledge about funding possibilities for green investments, green public procurement and GRASPINNO eGPP tool. The improvement was good in Living Lab concept and GRASPINNO pilot actions in field of green energy. In general, participation in the LL was potentially useful for the Municipalities concerned and for the public administration in general. The LL RISE PUBLIC is an instrument that, if properly used, can allow fine tuning operations around public policies in the field of eGPP. Therefore, it is important to spread the knowledge gained in RISE PUBLIC LL and to disseminate its results. Various dissemination activities have been identified, and as one of the most important one, to deepen the Implementation guide with concrete experiences of good practices or reference cases of difficulties and solutions around the implementation of tenders for public buildings for energy renovation by applying CAM. RISE PUBLIC living lab will therefore be further disseminated on future project and non-project workshops.

It is interesting to note that everyone (and for various reasons) is enthusiastic about being able to be involved again in the LL, and everyone is willing to suggest (to PAS or municipalities or more generally to stakeholders) to others to cooperate in an LL. To ensure the sustainability beyond the dissemination phase of RISE PUBLIC, a meeting between the Region UCV and other stakeholders will be planned to set up a permanent operational committee.

6 APPENDIX - STAKEHOLDERS DECLARATION OF PARTICIPATION (7 DoP)

Dichiarazione di partecipazione Nelle attività del Living Lab Veneto del progetto GRASPINNO

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che mira a coinvolgere maggiormente i Comuni e le stazioni appaltanti nell'attuazione del "GPP" (e della versione migliorata dell' eGPP) nella ristrutturazione energetica e sismica degli edifici pubblici, con un' offerta da parte delle PMI adeguata alle richieste del settore pubblico.

Con la firma di questa Dichiarazione di Partecipazione, il firmatario aderisce al Living **"Lab RISE PUBLIC - Sustainable renovation of public buildings."** e nomina la seguente persona di contatto:

Unioncamere Veneto – Via delle Industrie 19/D, 30175 Venezia Marghera (VE) - Italy

(nome e indirizzo dell'organizzazione)

Presidente Mario Pozza

(nome e cognome del legale rappresentante)

(firma del legale rappresentante)

Roberta Marciante

tel. +39 041 0999311

email: roberta.marciante@ven.camcom.it

(nome e cognome della persona di contatto e telefono e mail)

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buildings.

(Living Lab)

Dr. Giuliano Vendrame

(Living Lab regional
representative)

IL DIRETTORE
Dott. Giuliano Vendrame
(signature)
UNITA' ORGANIZZATIVA ENERGIA



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23 MAG. 2018

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STUDIO TOFFOLI - via Papa Giovanni XXIII 73 A S. VINCENZO D.
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ING. LUCA TOFFOLI
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ING. LUCA TOFFOLI - 0438.816088/338.5353318 - L. TOFFOLI@LTOFFOLI.IT
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S. VINCENZO D. S. VINCENZO D. S. VINCENZO D.
(Luogo e firma)

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Dichiarazione di partecipazione

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Con la firma di questa Dichiarazione di Partecipazione, il firmatario aderisce al Living "Lab **RISE PUBLIC - Sustainable renovation of public buildings.**" e nomina la seguente persona di contatto:

STUDIO ASSOCIATO DI ARCHITETTURA CARNIEL E MARET
(nome e indirizzo dell'organizzazione)

SUSANNA MARET / FIORENZO CARNIEL

(nome e cognome del legale rappresentante)

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Dr. Giuliano Vendrame

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(signature)

Venezia, 13 marzo 2018
(Luogo e firma)

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COMUNE DI SANTA LUCIA DI PIAVE - PIAZZA 28 OTTOBRE 1918, N. 1 - 31025
(nome e indirizzo dell'organizzazione)

RICCARDO SZUMSKI - SINDACO

(nome e cognome del legale rappresentante)

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Dr. Giuliano Vendrame
(signature)



(Luogo e firma)

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Regione del Veneto – U.O- Energia

(nome e indirizzo dell'organizzazione)

Giuliano Vendrame

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Luisa Memo

(firma del legale rappresentante)

(nome e cognome della persona di contatto e telefono e mail)

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(Living Lab)

Venezia, 12 febbraio, 2018

(Luogo e firma)

Dr. Giuliano Vendrame

(Living Lab regional
representative)

(signature)

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COMUNITA MONTANA FELTRINA

(nome e indirizzo dell'organizzazione)

ARTURO PAVAN

(nome e cognome del legale rappresentante)

(firma del legale rappresentante)



(nome e cognome della persona di contatto e telefono e mail)

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COMUNE DI VALDOBBIADENE - Provincia di Treviso -
(nome e indirizzo dell'organizzazione)
MADDALOSSO GIOVANNA CARLA
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Valdobbiadene, 03 aprile 2018
(Luogo e firma)

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