

MEDNICE

MED programme Network for an Innovative Cooperation Energy Efficiency

D. 4.3.1 Technical paper and lessons learned report – MED Training methodologies and capacity gaps



EFFICIENT BUILDINGS

**IMPROVING ENERGY EFFICIENCY
CAPACITIES IN PUBLIC BUILDINGS**

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Disclaimer

This report considers a survey implemented to the Modular Projects and the Modular Projects' deliverables available on-line up to June 2019.

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List of Abbreviations

EB Community – Efficient Building Community
EE – Energy Efficiency
EED – Energy Efficiency Directive
EPBD – Energy Performance of Buildings Directive
ESCO – Energy Service Company
FE – Final Energy
MP – Modular Project
PA – Public Administration
PB – Public Building
SEAP – Sustainable Energy Action Plan

Executive Summary

Several European research and cooperation projects generate results aiming at supporting, implementing and boosting Energy Efficiency (EE) projects in Public Buildings (PBs). This generated knowledge has to be transferred to the interested parts, mainly Public Administration (PA) but also other stakeholders. Therefore most of the projects use to include training activities to ensure the transfer and capitalization of this knowledge.

In the context of the MED Programme and within the 10 Modular Projects (MPs) on the topic of EE in PBs, this report analyzes the addressed targets groups, the covered topics, the used methodologies and materials, highlights main outcomes and aims at giving an overview of possible capacity gaps of the stakeholders for future activities.

Chapter 1 has been focused on the different target groups which are addressed in the different training activities. Here, the analysis shows a methodology to map the existing stakeholders, which consists in the following phases: i) stakeholders identification, ii) analysis of stakeholders' interests and iii) interrelation and prioritization of stakeholders.

The methodology allows to list different stakeholders for EE projects, which is crucial to identify and address the different training activities. From this list, the report remarks that the MPs' training activities have been mainly addressed to PA (including Local, Regional and National authorities and energy agencies, and Covenant of Mayors Coordinators), as well as professional associations, universities and research centers and single experts (e.g. energy advisors). On this regard, the report also highlights the need of training for other stakeholders beyond the PA, like it has been already done in school projects with students and teachers and other actors of the private sector (e.g. ESCOs).

Concerning the way of addressing the different target groups, it is proposed 5 key steps in order to adapt the training activity in each case: i) mapping of knowledge and skills, ii) process, iii) interdisciplinary approach, iv) scope action and v) description of phases.

Besides, it is emphasized the need of attract the targets by motivating, engaging and listening them.

In chapter 2, the different addressed topics, methodologies and training materials are analyzed. Here, it is noticed that most of the training activities have been focused on the tools, methodologies and indicators produced by the own projects, as well as on financing information and best practices of EE projects.

Face-to-face events are predominant among the MPs, supported in some cases by on-line training sessions, which can help on the flexibility, usability and personalization requested by some stakeholders.

Among the own produced results used in the training sessions, it has been noticed

that these results are not covering all the buildings stages of an EE project. Particular the stages “design tendering”, “procurement”, “implementation” and “commissioning” are not covered.

In chapter 3, training activities’ outcomes are reported like the participation of more than 1.600 people in more than 123 training sessions. Besides, it is highlighted the need of implementing questionnaires after the training sessions in order to improve future activities. These could include the following aspects: i) definition of objective, ii) relevance of topic, iii) level of knowledge at the beginning and end of training, iv) usefulness of material, v) adequacy of timings and knowledge of trainer, vi) recommendable for other participants and vii) overall rate of the training.

In the conclusions, it is underlined the need for future training activities covering new targets and topics, and using innovative and flexible tools in order to reach better the targets.

Introduction

Nearly 40% of Final Energy (FE) consumption in Europe is in houses, offices, shops and other buildings, therefore buildings are a priority for Energy Efficiency (EE) policy. Moreover, there are also important co-benefits from making buildings more efficient, including job creation, fuel poverty alleviation, health improvements, improved energy security and better industrial competitiveness.

While the Energy Performance of Buildings Directive (EPBD) [1] sets minimum energy performance requirements for all buildings that undergo major renovation, Article 5 of the Energy Efficiency Directive (EED) [2] sets a binding renovation target for public buildings (PBs) and imposes related obligations. It also stresses that governments shall undertake an exemplary role in the energy retrofit of their countries' building stock. Moreover, it has been mentioned in several occasions that lack of knowledge is one of the main barriers for the uptake of EE projects. This is considered a general issue, but it becomes especially relevant for the Public Administration (PA), which has to be seen as a referent for the society.

In this context, the MED Efficient Buildings Community [3] (EB Community), established by MEDNICE Project within the Interreg MED programme framework [4], was created precisely to support this transformation in PBs and for PA, who define EE policies and strategies, specifically in the Mediterranean region. The community has defined and implemented several training activities aiming at sharing the required knowledge, improving capacities and increasing awareness of key stakeholders.

The Activity 4.3 *“Convergence of EEB MED outputs through technical papers and lessons learned reports”* (Analysis and harmonization) of MEDNICE Project aims to systematize knowledge from the ten Modular Projects (MPs) (Figure 1) and to help find technical answers to common identified cross-cutting priority issues.

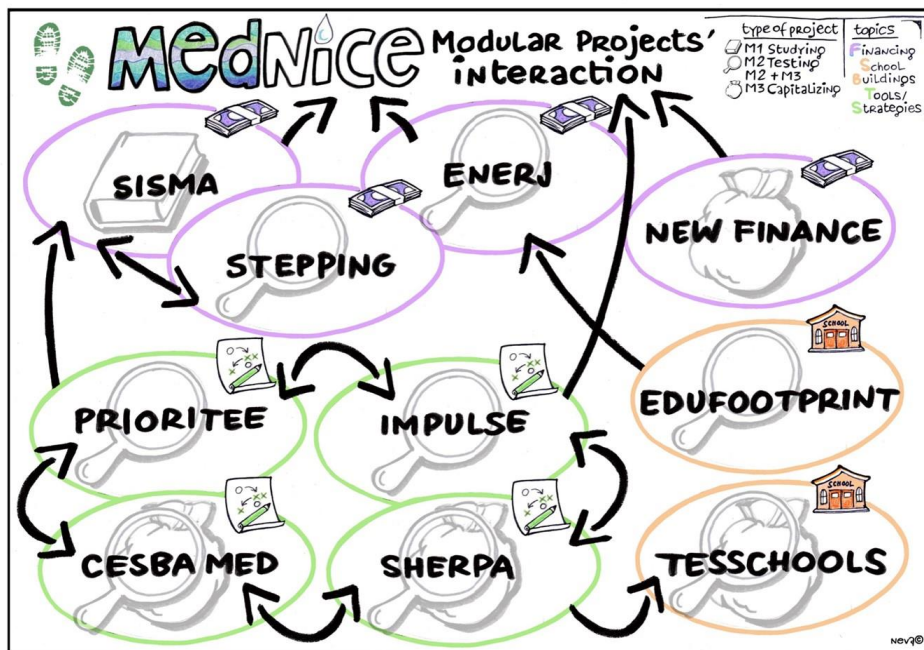


Figure 1. MPs under the umbrella of MEDNICE Project (Source: MEDNICE Project)

In order to achieve the objectives of the Activity 4.3, it is foreseen the elaboration of several reports which will collect EE challenges and obstacles in the Mediterranean PBs and will provide solutions and identified gaps.

The present report (D. 4.3.1. Technical paper – MED Training methodologies and capacity gaps) is focused on the different training methodologies used by the MPs to reach the target groups and on the still existing capacity gaps of stakeholders in the field of EE, in particular Public Administration (PA) in Mediterranean area. For its realization, it has been considered the results of a survey on training activities answered by the MPs (Annex I) and MPs deliverables (training material in Annex II).

1. MED training target groups

Most of the European projects use to implement training activities in order to increase the abilities, capabilities, competences and skills of the key stakeholders in a specific field, to teach the functioning of projects' outcomes like tools or methodologies, to learn from other successful experiences and, summarizing, to transfer the generated knowledge to overcome its lack. Secondly, training activities also allows for creating networking and synergies among the participants [5].

In order to reach these main goals, one of the first key steps is to identify the different target groups to address the training activities. Besides, it is crucial not only to involve them in the activities but also to recognize their specific needs, lacks and objectives within an EE project.

As starting point, and to map the existing stakeholders for EE projects in PBs, three phases could be implemented [6]:

- Identifying: listing relevant groups, organizations and people.
- Analyzing: understanding stakeholders' perspective and interests.
- Mapping and Prioritizing: visualizing stakeholders' relationships with the project objectives and other stakeholders & ranking stakeholders' relevance for identified issues.

As a result of this mapping analysis for EE projects in PA [7], the target groups could be classified in six main categories, as shown in Table 1. Here, the different stakeholders have their own objectives in EE projects according to the introduced four main topics (Economic, Environmental, Social and Political).

Table 1. Category, Stakeholders and Objectives of stakeholders. (Source: ENERJ and FASUDIR Projects)

Category	Stakeholder	Objectives			
		Economic	Environmental	Social	Political
Energy Policy makers and authorities	-Local/Regional/National authorities -Covenant of Mayors Coordinators -Local/Regional/National Energy Agencies	-Stimulate and promote economy. -Optimize consumption and maximize economic benefit.	-Sustainability, CO ₂ reduction, energy security, safeguard of environmental components.	-Increase social welfare, social cohesion and service to citizens.	-Transposition of EU, and national policies and regulations -Formulation of national/local programs and strategic action plans.
Suppliers of energy-related services	-ESCO -Energy management authorities -Trade associations	-Access to coverage of financing. -Minimize amortization. -Innovative energy business models. -Quality of data -Management of big data open standard technology.	-Efficient use of resources.	-Improve quality of life. -Increase awareness of final user and citizen.	-Higher level of transparency. -Data exchange. -Smart data infrastructure.
Energy users	-Large energy users -Associations of condominium managers -Small and Medium Enterprises	-Reduce energy costs.	-Improve environmental conditions. -Sustainable energy.	-Increase welfare and social cohesion. -New services to citizens. -Answers to expectations.	-Coverage of services to the territory.
Experts	-Professional associations and grouping professionals -Universities and Research Centers -Single experts	-Stimulate and promote economy. -Energy simulations. -Economic analysis.	-Experimentation and scientific support.	-Increase welfare and social cohesion. -Third mission. -Promotion of Urban Living Labs.	-Coverage of services to the territory. -Redaction of strategic action plans for the environment and sustainable energy.
Civil society organizations	-Environmental associations -Local interest groups -NGOs -Citizens associations.	-Reduce energy costs.	-Improve environmental conditions. -Sustainable energy.	-Increase welfare and social cohesion. -New services to citizens. -Answers to expectations.	-Coverage of services to the territory.
Citizens	-Owners -Tenants -Condominiums -Buildings users.	-Reduce energy costs.	-Improve environmental conditions. -Sustainable energy.	-Increase welfare and social cohesion. -New services to citizens. -Answers to expectations.	-Coverage of services to the territory.

The list of stakeholders could be even more detailed, like in the case of PA at local level (with different sizes), where multiple technicians can be involved in the development of an EE project (from architects and urban planners, to energy managers and environmental departments).

Within the MEDNICE EB Community, the 10 MPs have established various key target groups and implemented several training activities involving different stakeholders, as shown in Table 2:

Table 2. Stakeholders involved in MPs' training activities (source: survey implemented by MEDNICE and MPs' deliverables)

Category	Stakeholder	Tools and strategies				School buildings		Financing			
		CESBA MED	IMPULSE	PrioritEE	SHERPA	EduFootPrint	TEESCHOOLS	ENERJ	NEW FINANCE	SISMA	STEPPING
Energy Policy makers and authorities	Local/Regional/National authorities										
	Covenant of Mayors Coordinators										
	Local/Regional/National Energy Agencies										
Suppliers of Energy related services	ESCO										
	Energy management authorities										
	Trade associations										
Energy users	Large energy users (PB owners...)										
	Associations of condominium managers										
	Small and Medium Enterprises										
Experts (e.g. Associations, Research...)	Professional associations										
	Universities and Research Centers										
	Single experts (energy advisors...)										
Civil society organizations	Environmental associations										
	Local interest groups										
	NGOs										
	Citizens associations.										
Citizens	Owners										
	Tenants										
	Condominiums										
	Buildings users (teachers in schools...)										
Other	Project Partners										
	Investment banks and investors										
	Decision-makers										

As it could be foreseen according to the character of the MED Programme, the training activities have been mainly addressed to the category of Energy Policy makers and authorities (mainly local and regional), since the main objective of the 10 MPs is to increase capacity for better management of energy in PBs. Besides, professional associations, universities, research centers and single experts have been highly involved in the different training activities, contributing in this way with a more technical point of view. Despite not being directly involved in public EE

projects, these institutions are always willing to participate in these events to gather knowledge, being updated on new tools or methodologies, creating networking with actors of the sector, or even contributing with their knowledge in the improvement of the projects' results.

Although the clear target on PA, the involvement of other stakeholders can provide a valuable different perspective, also due to necessary collaboration of the private sectors in implementing EE projects (e.g. tendering, architectural competition, external services...). Nonetheless, it can be noticed a lack of participation of some stakeholders. In particular, the participation of civil society organizations seems to be almost nonexistent. Moreover, it is also remarkable the lack of addressed training (or involvement) for trade associations, energy users like associations of condominium managers, environmental associations, citizens associations and other citizenships' stakeholders such as building owners and tenants. This lack of training for the rest of stakeholders could represent a barrier for the energy transformation in the whole society.

The mentioned relevance of considering targets groups beyond the PA can be found in two examples for school buildings (EDUFOOTPRINT, PrioritEE), where the teachers and the students of several schools were involved in the training sessions, thus allowing an increase of users' awareness and spreading the spirit of sustainability from the children to the parents.

Due to the different nature of the actors, an orientation of the training activities is needed in each case. Some MPs [8] [9] [10] show in their deliverables how they tailored their training activities by the identification of the target groups, the description of their role and their needs. These analysis also include the scale of their role (urban and building). Besides, the adaptation of the training sessions have been done according to experience of the stakeholders attending the events [5]. Considering these aspects, the adaptation to the specific targets could be done by implementing a proposed methodology [10] with following key steps:

- Mapping of knowledge & mapping of skills: to evaluate the existing experience and needs.
- Process: to select participants, to analyze specific training needs in each region, to prepare training contents, to select trainers and to develop the courses.
- Multidisciplinary approach: to balance between deepness and comprehensiveness, specific and general contents, due to multidisciplinary groups of participants.
- Scope action: to find the most important knowledge and skill gaps among the target groups.
 - Transnational training: to consider the diversity, due to the different territories and profiles of the participants.
 - Regional training: to consider the schemes "learning by doing", which are useful to develop pilot actions.

- Description of phases.

Lastly, in addition to the adaptation of the training to the targets needs and experiences, it is important also to make the training activities attractive to the target groups. On this regard and in order to ensure the active participation in the training activities; a three-pronged approach is suggested [11]:

- Motivate: to focus on aspects that may attract the attention of the target group,
- Engage: to get the actor to speak by asking appropriate questions for all the issues to be addressed in the activity.
- Listen: to pay attention to what may be the barriers of the project objectives.

The attraction of targets and the achievement of the expectations of the MPs' training activities have to be supported by appropriate selection of the topics and the use of suitable methodologies and pertinent materials, as described in the chapter 2.

2. MED training topics, methodologies and material

The 10 MPs of the EB Community are basically classified in 3 main topics (Tools and strategies, Financing and School buildings). Nevertheless, the project topics are somehow interconnected, thus we can find for instance projects in the topic of school buildings implementing training activities on financing. Besides, there are subtopics which may be transversal, like the case of policy recommendations, which use to be a recurrent activity in almost all MPs.

In the Table 3, it can be observed the addressed topics within the training activities:

Table 3. Topics of MPs' training activities (source: survey implemented by MEDNICE and MPs' deliverables)

Training topic	Tools and strategies				School buildings		Financing			
	CESBA MED	IMPULSE	PrioritEE	SHERPA	EduFootPrint	TEESCHOOLS	ENERJ	NEW FINANCE	SISMA	STEPPING
Financing: Barriers for financing EE projects, existing financing schemes and models, stakeholders, best practices...										
Tools, methodologies and indicators: Building typologies, Energy Audit tools, CO ₂ calculators, GIS, funding tools, KPI...										
Best practices of EE projects: Demonstration of success examples, case studies, visits to reference buildings...										
EE barriers in PA: Identification of structural, technical, financial, knowledge and other barriers...										
Stakeholders' involvement: Identification of needs and engagement of stakeholders to implement EE projects...										
Policy Recommendations: Events with relevant stakeholders to identify legal barriers and propose policy recommendations...										
Web platform: Use of platforms to share knowledge, experiences and best practices of EE projects...										
Sustainable Energy Action Plans (SEAP): Actions to be included in SEAPS, methodologies for easily implement them...										
Legal context and public procurement rules: Recommendations and models to launch public tenders, train on legal framework...										

It can be noticed that the presentation of developed tools, methodologies and indicators has been a recurrent topic in the training activities, as well as the dissemination of best practices of EE projects, financing schemes and strategies to engage stakeholders. In the case of tools, methodologies and indicators developed by the MPs, these can be referred at the same time to other topics, i.e. a tool can be used to finance EE projects or to improve the management of a SEAP. Besides, it can also be highlighted that the utilization of existing cases and best practices is always a good way of learning. In this case, successes and failures are analyzed, and motivations for better replications can arise.

When implementing the different training activities, all MPs projects opted for face-to-face events. Moreover, half of the projects complemented their face-to-face events with other on-line training sessions.

In the case of face-to-face events, these could have different duration (half-day, full-day or more than a day) according to the density of the material and expectations, and they can also be continued in different sessions and days.

Different channels and formats can either be simple projection of presentations or more collaborative sessions, where it is required the interaction and contribution of participants (e.g. Sprint Workshops [12] and co-creation workshops [13]).

On the other hand, the online sessions made use of existing e-learning platforms based on existing e-learning services or webinar tools [8] [14] [15], which in some cases were also video recorded. Furthermore, it can be adopted a modular approach in order to ensure maximum flexibility, usability and personalization of the training.

The different communication channels used in these events and sessions are listed in Table 4.

Table 4. Communication channels of MPs' training activities (source: survey implemented by MEDNICE and MPs' deliverables)

Communication channel	Tools and strategies				School buildings		Financing			
	CESBA MED	IMPULSE	PrioritEE	SHERPA	EduFootPrint	TEESCHOOLS	ENERJ	NEW FINANCE	SISMA	STEPPING
Projection of presentations and slides										
Handout										
Webinar tool										
Learning Content Management										
Recorded webinar / videos										
Round table discussion										
World Café										
Local Living Labs										

In many cases, the different MPs utilized their own produced results as a training topic and training material. Some of these results were already analyzed in a MEDNICE technical paper [16], where they were presented and organized according the different building stages of an EE project, as shown in Figure 2.

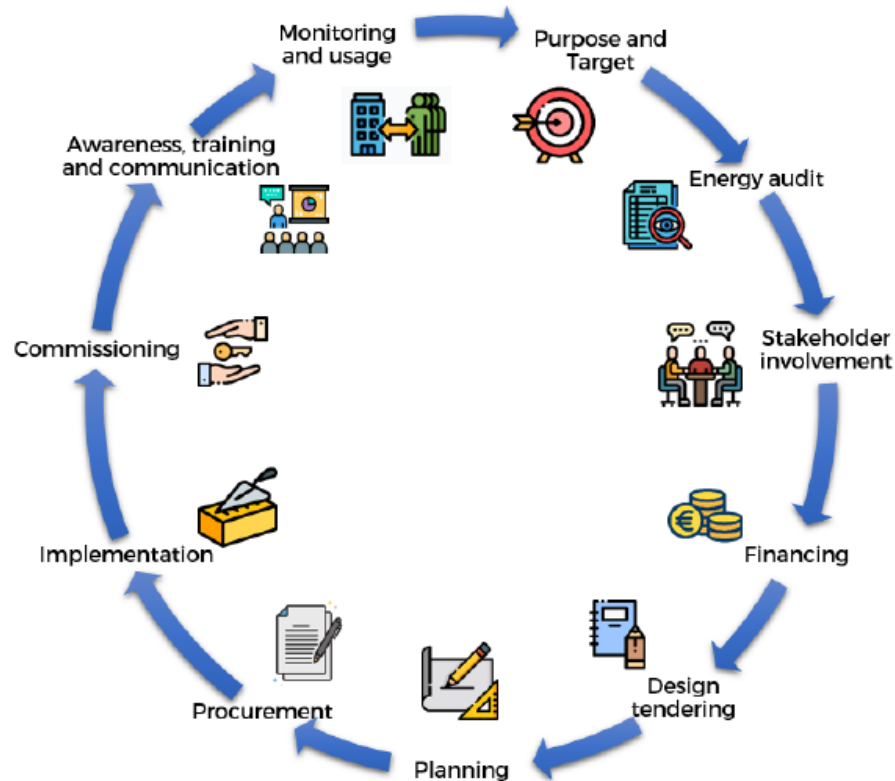


Figure 2. Stages of a building project (source: MEDNICE)

As indicated in the technical paper, the 11 stages have their own importance for the whole building life in a holistic approach and are defined as follows:

1. Purpose and Target, to define the building project and the energy targets of the building project.
2. Energy audit, to establish the current conditions and the best refurbishment options.
3. Stakeholder involvement, to detect main stakeholders and ensure participation to gather information, increase support and reduce resistance.
4. Financing, to find and adapt available sources, funds or models for financing EE measures.
5. Design tendering, to clearly define the framework conditions of the call.
6. Planning, to define the future EE project and minimize defects during the construction and usage phase.
7. Procurement, to find and agree the terms of services, goods or works under national, regional and/or local regulations.
8. Implementation, to ensure the proper construction of the sustainable requirements described in the planning.
9. Commissioning, to prepare the building or interventions for a correct operation and ensure the defined goals accomplishment.

10. Awareness, training and communication, to prepare and teach actors involved in the building life cycle, from technicians and politicians to users.

11. Monitoring and Usage, to ensure a correct user behavior and to detect malfunctioning systems reducing the efficiency of the building.

The MPs' results used for the training activities of the MPs cover 7 out of the 11 buildings stages of EE projects, as indicated in Table 5.

Table 5. Training material of MPs' training activities (source: survey implemented by MEDNICE and MPs' deliverables)

Training material	Tools and strategies					Financing			Other
	PrioritEE Guidelines for case study exchange visit	PrioritEE Toolbox	PrioritEE Guidelines for Local Living Labs	SHERPA Information System	SHERPA Funding tool	ENERJ Web Platform of Energy data of PB	STEPPING EPC Simulation tool	SISMA SET tool	Good practices presentation or visit case study
Purpose & Target									
Energy audit									
Stakeholders' involvement									
Financing									
Design tendering									
Planning									
Procurement									
Implementation									
Commissioning									
Awareness, Training & Communication									
Monitoring & Usage									

As it can be noticed, there are stages where no training material has been developed, in particular in "design tendering", "procurement", "implementation" and "commissioning". On this regard, some MPs' results were already analyzed in the above mentioned technical paper [16], where the lack of tools, methodologies and indicators for some stages was already remarked.

Concerning the adequacy of the training material to the specific target, it has to be underlined that before the implementation of the training activity, it is recommended the translation of training material into national languages in order to better engage the public. Besides, supporting material like training guidelines would facilitate the preparation of the sessions for the trainers [17]. These could include an introduction to the issue, the main material and examples of existing European projects and initiatives dealing with the same topic, as well as conclusions and references. These guidelines would homogenize the quality of the training, in

case that this is implemented in different regions, taking always into account a territorial contextualization and participants' profiles. In addition, it could be suggested to send in advance the preparatory work of the activity to the participants [11].

3. MED training implementation and outcomes

The 10 MPs of the MEDNICE EB Community have implemented several training activities, demonstrating its importance. At the time of writing this document, more than 127 training sessions were reported with more than 1.800 participants, as showed in Table 6.

Table 6. Number of MPs' training events and participants (source: survey implemented by MEDNICE and MPs' deliverables)

	Tools and strategies				School buildings		Financing				TOTAL
	CESBA MED	IMPULSE	PrioriEE	SHERPA	EduFootPrint	TEESCHOOLS	ENERJ	NEW FINANCE	SISMA	STEPPING	
Number of Events	17	6	17	41	4	8	30h	19	6	>9	>127
Number of Participants	275	270	235	203	170	160	N.A.	272	126	>116	>1.827
Avg. participant per event	16.2	45	13.8	5	42.5	20	N.A.	14.3	21	12.9	14.4

These training sessions have been implemented along the whole project, which in some cases can last more than two years. This continuous process requires also a continuous improvement. Therefore, after implementing a training activity, it is important to assess and identify what are the outcomes for the participants. On this regard, it could be provided information on the obtained learning outcomes related to the different training target groups, according to 3 learning dimensions [8]:

- Knowledge and understanding,
- Skills and competencies, and
- Judgement and approach.

On the other hand, questionnaires to participants would help to understand if the initial objective and expectations were achieved after the training activity implementation, thus next training events can be improved [9] [10]. On this regards, the questionnaires could include questions on the following aspects [5]:

- Clear definition of objective;
- Topic relevant to the participant institution;
- Level of knowledge at the beginning of the training;
- Level of knowledge at the end of the training;
- Usefulness of the training material;
- Adequacy of the timing allocated for the presentation of the topics;
- Adequacy of the knowledge of the trainer;
- Adequacy of the timing allocated for questions and discussions;
- Recommendable for other potential participants;
- Overall rate of the training.

Nevertheless, the training results need to be interpreted, especially when the same training course is implemented in different countries and contexts with different levels of expectations and different knowledges of the participants [5].

Besides to the satisfaction survey, the questionnaire could include a test and a self-assessment [18], which will allow to review the treated topics.

Conclusions

Training activities are commonly implemented in European projects, these activities mainly aim at overcoming the lack of knowledge of the different stakeholders by transferring the generated knowledge. On this regard, the 10 MPs of the MEDNICE EB Community have not been an exception, thus several training activities like workshops or webinars have been implemented along the MED area on the topic of EE in PBs.

In order to achieve this main goal, the definition of the target groups is considered a key step within the training activities. Supporting this purpose, it has been developed a methodology which helps to identify, analyze, map and prioritize the different actors [6] in EE projects.

Despite the large number of stakeholders in the field of EE projects, the analyzed training activities show a clear principal focus on PAs, which is somehow expected due to the characteristics of the MED Programme, although other stakeholders have also been involved in these activities like ESCOs, professional associations, universities or building users. Nonetheless, it could be considered a greater involvement of other target groups like civil society organizations and citizens, in order to broaden the bases for the needed transformation to a more sustainable society at all levels and, at the same time, to connect and approximate the PAs activities to the citizenship.

A recurrent issue in the organization of training activities is the difficulty to recruit participants. On this regard, the organization of joint training events of different projects is in many cases useful to gather larger audience (e.g. STEPPING & Prospect Projects in Piedmont Region) and it could also be very beneficial to provoke synergies among the different projects addressing common topics, thus creating a positive snowball effect. Besides, mixed targets and experts, also from different countries, could bring out interesting exchanges of challenges and different ways to face them. Nevertheless, it has also been pointed out that some decision-makers would prefer to take part at “dedicated meetings” to tackle more specific and concrete issues (CESBA MED), which could be considered more as an “ad hoc advisory support” event than a training activity.

In some cases, the topics addressed by the MPs are going beyond the 3 main topics in which they were initially classified (Financing, Tools and Strategies and school buildings), since these could also be transversal, i.e. school buildings would also need financing mechanisms or tools to improve their EE. In any case, most of the MPs focused their training activities on their own generated tools, methodologies and indicators, on the presentation of best practices and on financing issues (e.g. mechanisms, barriers, models...), i.e. results which sometimes are also very linked and similar between them.

Related to the training and dissemination methodologies, the face-to-face event continues to be the most common way of implementing training activities, but in

half of the cases MPs complemented them with on-line training activities. Despite not having enough data to support this conclusion, more flexibility, usability and personalization of the training would be needed to better reach the targets, and for this, specific on-line tools, recorded videos, interactive events and modular approaches could be very useful.

One of the main objectives of this activity and report was to identify the capacity gaps of the involved stakeholders, but more detailed information is necessary to draw more precise conclusions. Nevertheless, some basic considerations can be done.

As mentioned, the generated results have been used by the MPs as training material. In this regard and taking as a reference an analysis of the different building stages of an EE project [16], it can be noticed that there are 4 out of 11 stages which are not covered by the training activities, in particular “design tendering”, “procurement”, “implementation” and “commissioning”.

It has been observed that the implemented training activities have some predominant targets and topics, and from them, it could be deduced that further training activities could be needed for some other targets like “suppliers of energy related services”. Moreover and consequently, further training topics could also be needed, like supporting private actors in procedures and legal information. The characteristics and requirements to implement EE projects in PBs make the participation of the private sector almost mandatory. Moreover, it has been mentioned in other occasions that some stakeholders within the PA have lack of knowledge and capacities to implement properly these kind of projects, thus it is needed further training for PA otherwise it will be needed the participation of external experts, mainly in small PA. Moreover, and as already mentioned in the corresponding chapter, the participation of civil society and citizens in training activities is crucial to boost the transformation and to understand and disseminate the efforts done by some PAs on environmental issues.

From the survey implemented to MPs on their training activities, some further comments appeared concerning the lack of training and capacities. Some training participants mentioned the need for increasing knowledge on how to use tools (CESBA MED, IMPULSE, PrioritEE and SHERPA), learning from good practices (PrioritEE), obtaining information on EPC procedures and using financing schemes (STEPPING and TEESCHOOLS). Moreover, it has been also noticed the difficulties in capturing training participants, thus internal training could be needed in order to learn how to involve stakeholders.

For the correct implementation of the training activities some MPs have elaborated methodologies and internal guidelines, and they also have implemented questionnaires to the participants after the training sessions. These are very important to assess if they are achieving the expected results or if they need to adapt the future training activities.

To conclude, from the internal MEDNICE survey results, it can be observed that the feedback of the participants is in general satisfactory, even if it is required longer duration of courses. Although it has to be mentioned that training activities implemented within European projects use to be free of charge for the participants, thus the expected level of demand could be lower than in other training courses.

In future training activities, it would be expected to cover new targets and new topics, to promote and provoke synergies between the different projects by joint events, to use new, innovative and flexible tools to reach better the desired target, and to involve other actors of the society.

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Annex I – Training Survey for Modular Projects



Survey - Training Activities in the Modular Projects:

Please fill in the following questionnaire with information of your training activities. Fill in one questionnaire per each different training session, but only one questionnaire if you implemented the same training in different occasions.

- a) Please indicate the title of the training activity: _____
- b) What kind of training is your Modular Project (MP) implementing? Please mark with an "x" one option and add information if needed.

<input type="checkbox"/>	Face-to-face training (e.g. workshops, seminars, number of sessions per training...): _____
<input type="checkbox"/>	On-line training (e.g. webinars...): _____
<input type="checkbox"/>	Both, face-to-face and on-line training: _____
<input type="checkbox"/>	Other kind of training. Please indicate: _____
<input type="checkbox"/>	The MP is not implementing any training

- c) What are the topics addressed in the training activities. Please mark with an "x" one or more options and add information if needed.

<input type="checkbox"/>	Financing (e.g. available financing schemes, financing best practices...). Please indicate more detailed information: _____
<input type="checkbox"/>	Tools, Methodologies and Indicators for implementing EE projects. Please indicate more detailed information: _____
<input type="checkbox"/>	Best practices implementing EE projects. Please indicate more detailed information: _____
<input type="checkbox"/>	EE barriers in Public Administration. Please indicate more detailed information: _____
<input type="checkbox"/>	Stakeholders' involvement. Please indicate more detailed information: _____
<input type="checkbox"/>	Policy recommendations. Please indicate more detailed information: _____
<input type="checkbox"/>	Other topics. Please indicate: _____



- d) What kind of tools/materials have your MP used to implement the training?
- e) Please indicate the link to the training material, if it is available on-line?
- f) What is the target of your training? Please mark with an "x" one or more options and add information if needed.

	Energy Policy Makers. Please indicate level (local, regional or national): _____
	Public Authorities. Please indicate position: _____
	Suppliers of Energy related services
	Energy users
	Experts (e.g. Associations, Research...)
	Civil society organizations
	Citizens
	Other. Please indicate: _____

- g) Please indicate the number of trainings and the total number of attendants.
- h) Did you receive feedback from attendants? Please indicate if information is available.
- i) Have you developed any deliverable on training. If is the case, please indicate the link.
- j) Conclusions of the trainings. Please write a few words as general conclusions of the implemented training (e.g. Impressions, best practices on training, capacity gaps of stakeholders, interest of participants, participants needs or requests...).



Annex II – Training Material of Modular Projects

ENERJ

Not available yet (July 2019).

CESBA MED

- Regional events:

https://cesba-med.interreg-med.eu/results/deliverables/detail/?tx_elibrary_pi1%5Blivable%5D=7489&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=ba155613126176d8ff2cacf2f1816978

- Co-creation workshops:

https://cesba-med.interreg-med.eu/results/deliverables/detail/?tx_elibrary_pi1%5Blivable%5D=5913&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=d4ab9366b933dc48e277feb04ba0cbcf

- CESBA Sprint Workshop:

https://cesba-med.interreg-med.eu/results/deliverables/detail/?tx_elibrary_pi1%5Blivable%5D=4232&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=f8c8a891cc9353ece639eee2f5447851

https://cesba-med.interreg-med.eu/results/deliverables/detail/?tx_elibrary_pi1%5Blivable%5D=5943&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=248960626eb3033d80d6696811be16c0

EduFootprint

- Local and regional transferring:

https://edufootprint.interreg-med.eu/what-we-achieve/deliverables/detail/?tx_elibrary_pi1%5Blivable%5D=6105&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=6958993118008a3b2db09a051fc3fa1b

- Training course materials:

https://edufootprint.interreg-med.eu/what-we-achieve/deliverables/detail/?tx_elibrary_pi1%5Blivable%5D=3190&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=6dfaa0d57dbbecdaff4f47eb6da7cf38

- Local training course materials:

https://edufootprint.interreg-med.eu/what-we-achieve/deliverables/detail/?tx_elibrary_pi1%5Blivable%5D=3144&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=5bfca9c3768140d78d46259b2ca0f8e9

https://edufootprint.interreg-med.eu/what-we-achieve/deliverables/detail/?tx_elibrary_pi1%5Blivable%5D=3145&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=c1f1f750fb0c394681d90e0692b679bb

https://edufootprint.interreg-med.eu/what-we-achieve/deliverables/detail/?tx_elibrary_pi1%5Blivable%5D=3147&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=0db2ff1c131b0e22ce8689f50a3a9187

https://edufootprint.interreg-med.eu/what-we-achieve/deliverables/detail/?tx_elibrary_pi1%5Blivable%5D=3148&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=4cac3794a8742ea25e92eef657bbc50b

https://edufootprint.interreg-med.eu/what-we-achieve/deliverables/detail/?tx_elibrary_pi1%5Blivable%5D=3153&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=858255731df951dcd4e2e18a34ff3993

https://edufootprint.interreg-med.eu/what-we-achieve/deliverables/detail/?tx_elibrary_pi1%5Blivable%5D=3155&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=ab563be7531d496f0585b90a9e2103b4

IMPULSE

- Video of webinar:

<https://www.youtube.com/watch?v=W2s8milM35c&t=2995s>

https://impulse.interreg-med.eu/what-we-achieve/deliverable-database/detail/?tx_elibrary_pi1%5Blivable%5D=6411&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=390da1b7afdd63f01ca888dfa8259d1c

- Training material of seminar in Greece:

<https://impulse.interreg-med.eu/news-events/events/detail/actualites/training-seminar-in-heraklion/>

https://impulse.interreg-med.eu/what-we-achieve/deliverable-database/detail/?tx_elibrary_pi1%5Blivable%5D=6400&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=650df71c0267860096d364528fc44787

NEW FINANCE

- Training material:

https://new-finance.interreg-med.eu/what-we-achieve/deliverable-library/detail/?tx_elibrary_pi1%5Blivable%5D=5208&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=5a1f4f2b7e14fc0997111329e509db39

https://new-finance.interreg-med.eu/what-we-achieve/deliverable-library/detail/?tx_elibrary_pi1%5Blivable%5D=3419&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=b99685f418fdf2277dde9a622c21ae2b

PrioritEE

- Virtual Forum:

https://prioritee.interreg-med.eu/what-we-achieve/deliverables-database/detail/?tx_elibrary_pi1%5Blivable%5D=4858&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=6b8cd55f8db31536bd607823cade7a7f

- Training course:

https://prioritee.interreg-med.eu/what-we-achieve/deliverables-database/detail/?tx_elibrary_pi1%5Blivable%5D=4686&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=0a4eacd90439c0a33def1e375faed524

- Workshops in pilots:

https://prioritee.interreg-med.eu/what-we-achieve/deliverables-database/detail/?tx_elibrary_pi1%5Blivable%5D=458&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=60d6ae09dbb377c31deffa7739755971

https://prioritee.interreg-med.eu/what-we-achieve/deliverables-database/detail/?tx_elibrary_pi1%5Blivable%5D=4384&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=922635797ad6f2ebcc0471e74f66b3da

https://prioritee.interreg-med.eu/what-we-achieve/deliverables-database/detail/?tx_elibrary_pi1%5Blivable%5D=7331&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=d3285a0a0f82bdda79ef25d7164baa47

- Case study exchange visits:

https://prioritee.interreg-med.eu/what-we-achieve/deliverables-database/detail/?tx_elibrary_pi1%5Blivable%5D=3878&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=097d229696a3f898324512ac3a40edd6

https://prioritee.interreg-med.eu/what-we-achieve/deliverables-database/detail/?tx_elibrary_pi1%5Blivable%5D=5253&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=4e031a105ac5680201f9a5314705fe49

- Local Living Lab (LLL):

- o 1st LLL:

https://prioritee.interreg-med.eu/what-we-achieve/deliverables-database/detail/?tx_elibrary_pi1%5Blivable%5D=2658&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=16ee4c2e610f105d44c8bdb6d4b6823f

https://prioritee.interreg-med.eu/what-we-achieve/deliverables-database/detail/?tx_elibrary_pi1%5Blivable%5D=2657&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=3aba80b066ca6ea0848b1f398748bafc

https://prioritee.interreg-med.eu/what-we-achieve/deliverables-database/detail/?tx_elibrary_pi1%5Blivable%5D=2659&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=83573e745f17f3b1333a19af4e47dcd9

https://prioritee.interreg-med.eu/what-we-achieve/deliverables-database/detail/?tx_elibrary_pi1%5Blivable%5D=2661&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=36cbe5ada7479cebb25f612c57009b95

https://prioritee.interreg-med.eu/what-we-achieve/deliverables-database/detail/?tx_elibrary_pi1%5Blivable%5D=2660&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=9ae329e17529b9b0e14e83d89d47cc39

- o 2nd LLL:

https://prioritee.interreg-med.eu/what-we-achieve/deliverables-database/detail/?tx_elibrary_pi1%5Blivable%5D=4478&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=37c3a467333dale0261fe3b790aec1fe

https://prioritee.interreg-med.eu/what-we-achieve/deliverables-database/detail/?tx_elibrary_pi1%5Blivable%5D=4191&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=d842f112bb2c23191e71eb7399aca8ca

https://prioritee.interreg-med.eu/what-we-achieve/deliverables-database/detail/?tx_elibrary_pi1%5Blivable%5D=4139&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=7600ef91d9c79b9c472976c2370f16c7

https://prioritee.interreg-med.eu/what-we-achieve/deliverables-database/detail/?tx_elibrary_pi1%5Blivable%5D=4138&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=7600ef91d9c79b9c472976c2370f16c7

[5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivvable&cHash=a9b677ba8303563e4443e0559bb31e02](https://prioritee.interreg-med.eu/what-we-achieve/deliverables-database/detail/?tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivvable&cHash=a9b677ba8303563e4443e0559bb31e02)

https://prioritee.interreg-med.eu/what-we-achieve/deliverables-database/detail/?tx_elibrary_pi1%5Blivvable%5D=4137&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivvable&cHash=2399fc16f1acf3dca316155443ff9496

- 3rd LLL:

https://prioritee.interreg-med.eu/what-we-achieve/deliverables-database/detail/?tx_elibrary_pi1%5Blivvable%5D=7463&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivvable&cHash=a43dca5967a7789533e0c38a915cb5

https://prioritee.interreg-med.eu/what-we-achieve/deliverables-database/detail/?tx_elibrary_pi1%5Blivvable%5D=7420&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivvable&cHash=f7e5d8cbc73872da14b33157273794e4

https://prioritee.interreg-med.eu/what-we-achieve/deliverables-database/detail/?tx_elibrary_pi1%5Blivvable%5D=7419&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivvable&cHash=03007b6778b1caf37aea688ee661aa04

https://prioritee.interreg-med.eu/what-we-achieve/deliverables-database/detail/?tx_elibrary_pi1%5Blivvable%5D=7418&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivvable&cHash=1d7e213e2500a42005274e9574e15488

SHERPA

- Training material (user name and password needed):

<http://www.five.es/aulavirtual/enrol/index.php?id=41>

- Training activity report:

https://sherpa.interreg-med.eu/what-we-achieve/deliverables-database/detail/?tx_elibrary_pi1%5Blivvable%5D=5798&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivvable&cHash=2d99e916b98c206017f948dbc4cdabcb

SISMA

- Workshops' report:

https://sisma.interreg-med.eu/what-we-achieve/deliverable-library/detail/?tx_elibrary_pi1%5Blivvable%5D=5168&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivvable&cHash=202622ec9626da879f1fc98eebf2fece

- Training material:

https://sisma.interreg-med.eu/what-we-achieve/deliverable-library/detail/?tx_elibrary_pi1%5Blivvable%5D=5169&tx_elibrary_pi1%5Baction%5D

[=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivvable&cHash=8b2942ea9f5ee3a54779b9c3e0c42885](#)

https://sisma.interreg-med.eu/what-we-achieve/deliverable-library/detail/?tx_elibrary_pi1%5Blivvable%5D=5170&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivvable&cHash=e3a465cd508118cc1e23f6142e9b9d55

https://sisma.interreg-med.eu/what-we-achieve/deliverable-library/detail/?tx_elibrary_pi1%5Blivvable%5D=5171&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivvable&cHash=38ee51b28c9d0904330f15bc4f77e856

https://sisma.interreg-med.eu/what-we-achieve/deliverable-library/detail/?tx_elibrary_pi1%5Blivvable%5D=5172&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivvable&cHash=2cb27bb3af548b5a81e508d6201619ff

https://sisma.interreg-med.eu/what-we-achieve/deliverable-library/detail/?tx_elibrary_pi1%5Blivvable%5D=5173&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivvable&cHash=aff823cb5712a14e113bb9c0c22469ef

https://sisma.interreg-med.eu/what-we-achieve/deliverable-library/detail/?tx_elibrary_pi1%5Blivvable%5D=5174&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivvable&cHash=6c2d1573561a8b6014dc5d243ab82371

STEPPING

- Videos of training activities:

https://stepping.interreg-med.eu/deliverable-library/detail/?tx_elibrary_pi1%5Blivvable%5D=3853&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivvable&cHash=5090bfbec5a5b05eb5fe24e278a836e1

- Platform:

<http://steppingplatform.com/get-trained/>

- Tools used in the training:

<http://steppingplatform.com/get-trained/>

- Best practices:

https://stepping.interreg-med.eu/deliverable-library/detail/?tx_elibrary_pi1%5Blivvable%5D=600&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivvable&cHash=81f50ecb4fd622bd550899677ae5775d

- Training material:

https://stepping.interreg-med.eu/deliverable-library/detail/?tx_elibrary_pi1%5Blivable%5D=7548&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=3c46c9f362b6fa95263d58443e29ac0d

https://stepping.interreg-med.eu/deliverable-library/detail/?tx_elibrary_pi1%5Blivable%5D=7549&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=6e5565acb292ae9d326433f9c722d845

https://stepping.interreg-med.eu/deliverable-library/detail/?tx_elibrary_pi1%5Blivable%5D=6037&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=f61e0c240317807195440fb3b714f98e

TEESCHOOLS

- External training course:

https://teeschools.interreg-med.eu/what-we-achieve/deliverable-database/detail/?tx_elibrary_pi1%5Blivable%5D=6849&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=233e3528afce0084af46512a9d4e5fb8

- Internal training course:

https://teeschools.interreg-med.eu/what-we-achieve/deliverable-database/detail/?tx_elibrary_pi1%5Blivable%5D=6848&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=68a47ed2dc32c4500d57ecb4cd695e39

- World café:

https://teeschools.interreg-med.eu/what-we-achieve/deliverable-database/detail/?tx_elibrary_pi1%5Blivable%5D=6850&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=e27ea09a2e72bd3b1136a69ff87f788f

- Training seminars:

https://teeschools.interreg-med.eu/what-we-achieve/deliverable-database/detail/?tx_elibrary_pi1%5Blivable%5D=2917&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=41c4ef82a67b6c00b793553745c45102

- Training on the job

https://teeschools.interreg-med.eu/what-we-achieve/deliverable-database/detail/?tx_elibrary_pi1%5Blivable%5D=7227&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=4c88e6ae52989dd5a176ba8ad0a26458