

BLUEMED

Activity 5.2

Activities for transferring project results to target groups and
Local community

Deliverable 5.2.2

D5.2.2 Final report of BLUEMED process scheme developed for
replicability purposes

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Contents

1. The overall concept and objective of BLUEMED transferring activities	3
2. Main Objective & Purpose/Intended Impact of the Knowledge Transfer	5
2.1 Importance & Impact of Knowledge Transfer	5
2.2 Knowledge Sharing process	7
2.3 Factors influencing Knowledge Transfer	7
2.3.1. <i>Social and Culture Values</i>	8
2.3.2 <i>Technology</i>	8
2.3.3 <i>Language</i>	9
3. Challenges on the BLUEMED process scheme for knowledge transfer	10
3.1 Nature of Knowledge	10
3.2 Continuous Relationship	11
3.3 Individual Capacity	11
4. Process Scheme on developing UMs, DPs, KACs for replicability purposes	12
4.1 Transferring roadmap	13
4.2 Transferring events & open discussions	17
4.3 International Conference	19
4.4 Living Labs	20
4.4.1 <i>Living labs and open innovation for SMEs</i>	21
4.4.2 <i>Classification of knowledge transfer models and practices in living labs</i>	22
4.4.3 <i>User experience and knowledge flows in living labs</i>	22
5. CONCLUSION	24

1. The overall concept and objective of BLUEMED transferring activities

According to BLUEMED's project proposal, WP5 is focused on the transferring of the project's main outputs and results to other areas with underwater cultural assets in the Mediterranean for uptake and streamlining. A Final report on assessing transfer activities is prepared with input by all partners that organized transfer events for local stakeholders at the pilot sites. Combined with the organization of the transferring events, the organization of exhibitions, seminars, workshops, and other events for facilitating transfer of BLUEMED main outputs were conducted during the last year of the project lifecycle. The largest event was decided to be a synergetic event, organized in a selected MED location by BLUEMED to invite all Interreg Med projects on the same thematic of natural/cultural valorization for tourism development, with the aim to exchange experiences, knowledge and know-how gained throughout the project lifespan.

The aim of the activity **Activity 5.2 “Activities for transferring project results to target groups and local community”** is to ensure the transfer of BLUEMED tested processes, models, tools and methods used to specific target groups and local communities. To present the results of the project and to raise awareness about the importance of transferring them to other stakeholders and deliver them to the community, 4 regional/national conferences at pilot sites were organized in which training was conducted by local stakeholders to the local communities.

Deliverable 5.2.2 “Final report of BLUEMED process scheme developed for replicability purposes” includes the final report of BLUEMED process scheme with multi-disciplinary plan (management models, innovative technologies) for Underwater Museums, Diving Parks, Knowledge Awareness Centres (UMs, DPs, KACs) developed for replicability purposes. Input by all Project Partners (PPs) that participated in pilot activities. WP5 Leader University of Patras is responsible for the deliverable.

The overall communication objective of BLUEMED is to ensure visibility, transferability and replicability of project results throughout the project life-cycle. Project's transferring activities aim at promoting the project's best practices and results to target groups, to reach specific objectives:

1. Make and deliver policy recommendations for Sustainable & Responsible (S&R) tourism development plans/strategies through the valorization of underwater natural & cultural heritage to local/regional/national policy-makers.
2. Deliver process scheme to target local/regional authorities including legislative, planning, management, financial and coordination models and best practices for UMs, DPs and KACs. Raise awareness to the competitive advantage of S&R tourism development with promotion & protection of natural & cultural assets to local communities/civil society/economic actors
3. Contribute to the Programme result indicators and policies with KPIs results that measure sustainability in tourism development, environmental and social impact.
4. Set up participatory procedures to include local stakeholders in testing activities. Develop network of regional/local/managing authorities of project partners and associates and active stakeholders of UMs and DPs across the Mediterranean and globally, transfer of know-how and experience of existing successful implementations to/from pilots.
5. Stimulate the diving industry development and capacity building.
6. Set forth an 'Underwater Natural and Cultural Routes in the Mediterranean' campaign for increasing visibility of organised UMs, MPAs and DPs in the Mediterranean.
7. Deliver to national/local/regional policy-makers and UMs, MPAs, DPs management authorities and stakeholders, policy papers/business plans that highlight: European Strategy for more Growth and Jobs in Coastal and Maritime tourism, Integrated Coastal Zone Management (ICZM), Maritime Spatial Planning (MSP), Plan Bleu Sustainable development strategy for the Mediterranean, Accessible Tourism for all, leverage implementation of UNESCO 2001 Convention, Biodiversity and Adaptation EU strategies.
8. Demonstrate innovative technologies and techniques in preservation of underwater cultural heritage in situ, guided diving and underwater recording to local diving industry.

BLUEMED objectives, such as the one presented above, are supported by the current deliverable

5.2.2 "Final report of BLUEMED process scheme developed for replicability purposes".

2. Main Objective & Purpose/Intended Impact of the Knowledge Transfer

Knowledge Transfer (KT) has introduced a new way of sharing resources and experience of all the people; in fact, it has created a framework of concrete preserve tacit and explicit knowledge that emphasizes the value of ideas and experiences. Knowledge management approach has been used much in various industries including education, business, social and technology. The term has been used with interchangeable represent the involvement of information and knowledge in plays major roles of civilization. Knowledge transfer derived from the application of knowledge management activities which has emerged as one of the strategic resource of an organisation (Narteh, 2008).

Martinkenaite (2010) has stated through the transfer of knowledge, an organisation has been described as an efficient generator, a repository of knowledge to contribute to revenue and maintain a competitive advantage. This is clearly seen through the transfer of knowledge in which it plays an important role in organizational management strategy to compete with other life changing. In terms of knowledge sharing and transfer of knowledge has been used immediately, rapidly and interchangeably, both terms denote different main activities of the organization and the impact on the business environment. This means in terms of knowledge sharing and transfer of knowledge is always going to change from time to time in accordance with the organization's activities. Most organizations are moving towards knowledge and information management practices to better regulate and protect the assets of the organization in which they believe tacit knowledge embedded in people's minds will be the most valuable asset that needs to encode before the people to withdraw from the organization.

2.1 Importance & Impact of Knowledge Transfer

Knowledge transfer is regarded as an increasingly important process of knowledge management due to its ability to help the governing body to benefit from private knowledge. Knowledge transfer is defined as a process through which knowledge moves between a root and a recipient and where knowledge is given and practiced. In fact, knowledge can be transferred

among people between levels in the hierarchy of the organization and between units and departments and different organizations too (Nguyen and Burgess, 2014).

Such is knowledge management, knowledge transfer, which aims to organize, create, capture or distribute knowledge and ensure its availability for future users. Blumenberg, Wagner and Beimborn, (2009) stated that knowledge transfer is dedicated to the transfer of explicit knowledge. Knowledge transfer also defined as a process where the knowledge recite in people being captured, acquired and processed between outsourcers and providers. In fact, they described the knowledge transfer as the process of content transfer in order to provide clear definition between sender and receiver in the context of IT resourcing. Blumberg, Wagner and Beimborn, discussed on the different view of authors in defining knowledge transfer when it comes to the application in service provision which related to IT service and outsourcing.

Parent, Macdonald and Goulet (2014) say that knowledge may be understood by as experiences; contextual comprehension, value-added information or insights based on the frameworks of understanding that reside in the minds of individuals or groups and has to be managed by itself in present in the form of tacit or explicit knowledge. The integration of the activities including knowledge creation, transfer, application, storage, identification and acquisition is seen as more beneficial to the organization than each separate activity conducted. Furthermore, knowledge transfer has been related to the other term widely used in a business environment where the term being integrated with exchanged and become Knowledge Transfer and Exchange (KTE) and represent the complete process of delivering and sharing knowledge among organization (Gera, 2012). In addition, the author implied knowledge transfer is about **identifying the knowledge that already exist, acquiring it** and subsequently **applying this knowledge to develop a new idea or enhance the existing idea to make a process faster, better or safer** than they would have otherwise been while effective knowledge transfer promotes **better understanding in organizational and reduces uncertainty among stakeholders**.

2.2 Knowledge Sharing process

Knowledge Sharing has been recognized as the most important factor in the success of transferring. Knowledge sharing means the exchange of knowledge, skills, and experiences. It ensures that the knowledge within an organization and from one organization to another is available for stakeholders whenever they need it, and its benefits include retaining intellectual assets and improving productivity. Previous studies have identified three elements that have a critical impact on knowledge sharing: a knowledge-sharing culture, information technology (IT), and employee motivation (Jones et al., 2006). Knowledge residing in the minds of people has no value until it is utilized and shared among other organizations, as Davenport et al. (1998) rightly stressed that “knowledge is created invisibly in the human brain and only right organizational climate can persuade people to create, reveal, share and use it.” Organizations and their authorities can provide a natural and friendly environment that may encourage to share ideas and knowledge. IT capability is a necessary foundation for knowledge sharing too.

Factor	Description of KS techniques
Initiator for KS	Pull techniques – initiated by knowledge owner Push techniques – initiated by knowledge perceiver
Focus on knowledge exchange	Active techniques – efforts to externalize knowledge Passive techniques – efforts to internalize knowledge
Process of KS	Primary techniques – designed for sharing knowledge Secondary techniques – resulting as consequence in KS
Purpose of KS	Individual – increase individual knowledge Organizational – increase organizational knowledge

Table 1: Factors for identification of Knowledge Sharing soft techniques

2.3 Factors influencing Knowledge Transfer

The knowledge transfer process can be influenced by many factors which contributed to its implementation as highlighted as below:

2.3.1. Social and Culture Values

Most organizations are aware of the role of knowledge considered as long-term assets.

But on the other hand there are some important things that need to be emphasized to promote the transformation of a better knowledge of the organization, especially among individuals. Organizations need to examine the social values and culture, motivation and willingness to share knowledge through stakeholders is important to facilitate trust and partnership. Liyanage, et al., (2009) agreed that the main factors contributed to knowledge transfer practices such as culture, skills together with the dimensions of capabilities, management styles, organization politics and also technology that supported the aligned strategy of knowledge transfer. In detail, they also divided the factors into two elements which are intrinsic where derived from the individual and also extrinsic factor which influenced by the environment as mentioned earlier. Both categories lead to different perception of positive or negative knowledge transfer that should be occurred in society or organization.

Knowledge transfer also influenced by the culture possessed by the individual and organization environment created to promote knowledge transfer where it becomes a part of organizational system (Nicolopoulou, 2011). A well versed experience will affect the organization employees to converse their gained input to the apprentice

2.3.2 Technology

Knowledge transfer also influenced by established communication tools or channel that has being set up by the organization in order to enhanced the better practice of it beside, the individual intention to deliver input to third party with the objective of adding strategic value of work process (Martinkenaite, 2012). As technology evolves, so does the process of knowledge transfer that takes place in which he became one of the key factors in building practices. The use of communication and media tools such as e-mail, cloud storage system, short messaging system, phone and network infrastructure is seen as a support system for the transfer of knowledge, especially in the organization.

Narteh (2008) agreed that it would be alternative methods that can be implemented in promoting the knowledge transfer among organizations including technology or non- technology based methods. Various methods can be adopted but their effectiveness may vary depending on the type of knowledge transferred. The transferor may choose from simple **on-the-job-training** within its organization and other methods such as technology sharing in order to transfer the knowledge based on the effectiveness towards process.

Empirical findings show that many acquisitions are motivated by the need to obtain new technologies and capabilities from the target in order to compete and sustain growth (Martinkenaite, 2012). The more options of technology supporting the process, it will enhance the process within organization.

The knowledge transfer process is affected by factors which are either organization related or technology (ICT) related (Nguyen and Burgess, 2014). ICT based methods are carried out with the existence of ICT systems, varying from the simplest technology such as voice via telephone to more advanced technology such as knowledge portals or collaborative virtual workspaces.

2.3.3 Language

Language capacity among individual also being seen as a factor that affected the ***implementation of knowledge transfer especially among individual (Nguyen and Burgess, 2014).***

By having the similar language being used, it is kind of benefits the transferor and transferee in converse their message and input successfully. The language not only related to ethnicity but spatially the technical language being used by department and individual.

Through shared language possessed among individuals, it can facilitate and motivate knowledge transfer as well as create a positive social influence process (Blumenberg, Wagner and Beimborn, 2009). **Common and frequent interactions** play significant factor to the implementation of knowledge transfer process where the relationship among individual being established and reduce the limitation and barriers in transferring knowledge. Based on the author, transferring

knowledge through interaction such as face to face meeting, formal or informal conversation would be the options that promote the process in organization which is need to be complying with the policy.

The capacity to co-create a ***conceptual and operational language*** for different stakeholders involved in the process (Nicolopoulou, 2011). The capability of the organization including the employee to absorb and received knowledge transferred will be based on the conceptual understanding and language. Language difference can influence the transfer process as it should be effective and efficient as a part of communication skill (Gonzalez and Chakraborty, 2014).

Language is very important because it will make the other party feel ease or pleasant to communicate to others.

3. Challenges on the BLUEMED process scheme for knowledge transfer

In order to implement the knowledge transfer process and activities, the individual and organization who wants to follow the BLUEMED model have to face some limitations. There are few challenges that being highlighted as below according to experienced gained thourgh BLUEMED project.

3.1 Nature of Knowledge

There is a challenge in encoded the knowledge when it comes to tacit knowledge. The interpretation plays major roles of understanding and acceptance among individual within different organization (Gera, 2012). There are various methods of implementing knowledge transfer, but it relies upon the type of knowledge being transferred and the organization scale. Sometimes, the inappropriate methods might cause uncertainty and different understanding and create confusion among individuals which will results to the different perception.

Dynamic nature of knowledge can be the limitation in conducting the effective knowledge transfer as it may differ based on one's capacity and acceptance together with the applied methods (Martinkenaite, 2012). The nature of knowledge to be transferred as well as the medium

of transfer adopted could impact on the efficiency of the transfer process (Narteh, 2008). The design capability though classified under technical knowledge, is assumed to be tacit and therefore difficult to arrange the structure for transfer purposes.

3.2 Continuous Relationship

Establishing a continuous relationship between the leading organization and the following institution is crucial to sustain the continuous knowledge transfer process. It is critical to have the respective individuals involved with the receiver through feedback given and trust which enhances the effectiveness of the process. As mentioned by Nguyen and Burgess (2014), people only willing to share with people they have close relationship with. This could be the barrier that needs to be highlighted in promoting knowledge transfer for informal or formal application. Nicolopoulou (2011) mentioned on the managing knowledge retention and transfer occurred between and across projects and their people become of the barriers in order to sustain the development of the project and also the network within team. As the team need to might develop and migrate to another team or project make the knowledge transfer difficult. Narteh (2008) agreed firms with a long period of dealings are likely to obtain enough information on each other to determine trustworthiness. And encourage the knowledge transfer shows that the continuous relationship is crucial and become as challenges in initiating the transfer process. The short falls must be improved in order to have better quality of process and performance.

3.3 Individual Capacity

When it comes to the asset exist in organization there is a solid element which appointed to the employee or individual involved in the transfer process. The term of change in staffing management would be one of the main issues where it pertains to the people's loyalty and security of the knowledge gained. Martinkenaite (2012) has different perspective saying that volatility of labor market might influence the employees to withdraw based on some circumstances which this implies on the knowledge that being brought out from the organization.

Furthermore, the author believed individual competencies is the barrier of knowledge transfer where the author highlighted on the absorptive capacity of the acquirer and acquire (Martinkenaite, 2012). This challenge also agreed by Gonzalez and Chakraborty (2014) by mentioned the capacity in absorbing the knowledge might differ and would become the barrier in delivering complete and success transfer process.

Narteh (2008) mentioned on the teaching capacity would be the challenges in implementing knowledge transfer besides the employment involvement. The teaching capacity of the transferors could be affected by the age and complexity of the knowledge, the experience in transferring knowledge as well as the transfer intents of the transferor. Besides, the author also mentioned on the capacity of both parties will affect the quality of output or specifically the transferred knowledge.

Nguyen and Burgess (2014) added the difficulties related to the individual based where all the activities of knowledge transfer need to be implement on human capacity in nurturing the trust and knowledge. They added, it was up to receivers to determine if they believed in the sender and/ or the knowledge being transferred. The term of sender- receiver, transferor- transferee and acquirer- acquire has being used interchangeably. It does refer to same context of individual involved in the knowledge transfer process. The effectiveness of the whole process and output will be vary depend on the capacity of the individuals. This would be the challenges in implementing knowledge transfer as a successful process.

4. Process Scheme on developping UMs, DPs, KACs for replicability purposes

Appropriate knowledge transfer models should provide

- a) sources for innovation
- b) models for cooperation
- c) ideas for new business activities

The open innovations paradigm (Chesbrough, 2003) concentrated mainly on how large companies access and profit from external knowledge in order to improve innovations,

competitiveness and profitability. As alternative approach for individuals and decentralized SMEs, Hafkesbrink and Scholl (2010) defined the concepts of “Embedded Innovation” to propose a community-based model of sharing (pre-competitive) knowledge. They emphasized that SMEs can take part in the open innovation models while engaging in multiple relationships within communities. There are 4 different basic communities that nurture open innovations and knowledge sharing: communities of affinity (end-users and “prosumers”), community of practice (practitioners and experts), community of interest (stakeholders and other related companies) and community of science (researchers and academia) (Hafkesbrink & Scholl, 2010).

4.1 Transferring roadmap

One of the most effective management models that is suggested is the development a roadmap and the following of the set guidelines.

Regarding the BLUEMED project, in the Deliverable 5.1.1 “Roadmap for transfer/capitalisation/replicability of project results”, a roadmap for the transfer, replicability and capitalization of the BLUEMED project was developed based on the experience gained and the lessons learnt throughout the implementation period of the project. The roadmap set the preconditions for taking-up this model and will define the technical, operational and policy requirements to fulfil or other non-technical barriers to overcome. In other words, it is a comprehensive guide with milestones and steps to follow in successive or overlapping phases.

In the provided roadmap, the goals and the purpose as well as the Intended Impact of the Roadmap are described. In addition, the target groups of the Roadmap, the steps, tools & channels to reach the groups as well as the Transfer, Replicability & Capitalization Strategies that were followed during BLUEMED project are presented too.

In more details, the general guidelines, the preconditions for Take-Up and specific guidelines on Deploying and Operating UMs, DPs, KACs are provided in the BLUEMED roadmap. Finally, the Action Lines, the Detailed Steps on Design and Development of Action Plans as well as Detailed Guidelines on Implementation plans of UMs, DPs, KACs in the future are set in the roadmap.

Based on the action plan of the BLUEMED Roadmap, in order for any initiative to adopt this model and benefit from the tangible benefits it has already started to generate, there are some crucial/fundamental **issues to take into consideration**. The most important factors to be taken into consideration are listed below:

- Adaptation to local conditions
- Candidate Areas for Replicability
- Deploying and Operating KACs
- Technical/Operational/Policy Requirements
- Potential risks to account
- Selection process of sites
- Composition of the implementation team
- Setting of Evaluation Criteria
- Budget & Time frame
- Definition and approach of Key Stakeholders

In the same guide the detailed steps that must be followed are presented and analysed. In a short way, the steps are presented below:

- Action lines
- Design & Development of an Action Plan
- Steps within the phases
 1. Gather available information and assess of challenges (environmental, financial, legislative)
 2. Check for legislative framework for the operation of UCHN sites and Diving Parks, whether they are accessible by law or not
 3. Define the suitable areas of intervention and mapping of UCNH sites in the area
 4. Check how the candidate sites are physically accessible, either by snorkeling or by diving

5. Come down to which sites are not only accessible but also ideal for tourist attraction and the development of sustainable growth in the area
6. Decide on the pilot sites
7. Check for possible follow-on sites that along with pilot site can form a network of sites and create a strong thematic unit/product
8. Define the strategy on a local, regional, national strategy
9. Contact the authorities on a municipality, regional and national level. These can be the Ministries of Culture and Tourism, in order to communicate the goals and intended impact of the project and ensure support for its implementation and further dissemination
10. Support and cooperation by the Ministry of Culture is necessary in terms of setting the accessibility criteria to the sites and defining the operation and management framework of the sites
11. Reach to the diving clubs or other training centers in the area that can provide support and assistance for operational and surveillance issues of the site, in cooperation with the management authorities
12. Arrange meetings with several local stakeholders so as to form a cooperation network and inform on the benefits of such an investment for the local community
13. Define the members and the management structure of the implementation team
14. Define an integrated management plan. Development of a management model aiming at the sustainable operation of the selected sites and KACs.
15. Define the operational framework
16. Operational and sustainability model for KACs. Decide on land planning of KACs (possible locations for the establishment of KACs, including requirements, human/technological resources, regional peculiarities, infrastructural factors, etc.)
17. Decide on the development of technological solutions for KACs (e.g. Virtual Diving System (VDS), both immersive (Head Mounted Display) and semi-immersive (3D TV or projected screens) and an Android application).

18. Set the departure and arrival points from where to reach the site as well as the preconditions for the placement of the buoys
19. Design on the physical diving trail
20. Develop the Augmented Diving Service to improve visitor's experience for scuba divers
21. Select the technical team for the interventions
22. Decide on the virtual content of the site
23. Develop a methodology for a conservation plan of underwater cultural heritage (protocols based on particularities of material, seabed, climate, fauna etc.)
24. Measuring Indicators for Impacts on the Natural, Cultural and Economic Environment of the region
25. Define the financial model in order to secure funding and operation of the sites and KACs
26. Implementation of KACs, including infrastructure or restoration works
27. Activities implementation at the sites, such as training courses, conservation, maintenance of the sites
28. Development of technologies or application of existing ones
29. Reach, inform and engage stakeholders
30. Production of multimedia promotional material based on UCH at pilot sites. Implementation of a web platform
31. KPIs for measuring feasibility and sustainability of financial operation of sites and KACs and of tourism development in pilot area (end-user testing and collection of comments from users)
32. Impact evaluation
33. Operation and maintenance works

4.2 Transferring events & open discussions

During the BLUEMED project, different transferring events were held in the pilot sites as an effective tool aiming to ensure visibility, transferability and replicability of project results. Their main objective was to deliver the roadmap and the process scheme to target local/regional authorities including legislative, planning, management, financial and coordination models and best practices for UMs, DPs and KACs. In addition, the events took place in order to raise awareness to the competitive advantage of S&R tourism development with promotion & protection of natural & cultural assets to local communities/civil society/economic actors.

The first transferring event was decided to take place in Thessaloniki, as it is the most important city in the North Greece, with many interested stakeholders and target groups. The event was a European Maritime Day (EMD), called “One Sea. A Common Culture. A Great Future” and took place on 26 of June 2019 in the NOESIS Thessaloniki Science Center & Technology Museum.

The second transferring event was decided to take place in Volos, as it is the second biggest city of Thessaly, with many stakeholders and target groups showing great interest in the project. The event was titled as “Underwater Museum- Thessaly’s pioneering, innovating & developing” and took place on 26 of September 2019 in the Volos Palace, Volos, Greece.

In Italy, the inauguration of the third Knowledge Awareness Centre (KAC) for underwater museums and diving tourism took place on the 18th of December 2019, in Crotone, Italy, bringing added value and raising the level of tourism in such MED area. Crotone will improve diving tourism thanks to the innovative project BLUEMED. Before the KAC inauguration a conference was held; Prof. Fabio Bruno from UNICAL welcomed the participants together with the coordinator of the underwater activities, Dr. Salvatore Medaglia, and a special focus was put on the final results achieved by the project. In addition, a round table attended by several stakeholders and experts in underwater archaeology and cultural heritage field was held.

Finally, in Croatia, Bluemed Knowledge Awareness Center (KAC) opened on the 30st of January 2020 at the premises of the Department of Archeology of the Museums and Galleries of Konavle. Before opening of KAC archaeologists held presentations about the underwater archeological sites in the Dubrovnik-Neretva County and presented the results of works on the Croatian pilot sites during BLUEMED project.

In general, it can be stated that the processes of knowledge exchange within transferring events are pre-organized. The initiator of knowledge exchange activities is the organization and the set up of methods and models to involve end-users in the knowledge-exchange processes. Therefore, in the transferring events there are used mainly pull techniques, initiated by knowledge-perceivers.

The prevailing method of knowledge transfer is observation, or collecting information from end-users by observing them and collecting physical data about them. Even in the case of surveys, the main focus is on knowledge-internalization.

Analyzing the transferring events processes based on KS/KT model, the organizations and the stakeholders have to take part simultaneously as “knowledge owners” and “knowledge perceivers”. On first place, the speakers of the transferring events have to transfer and externalize knowledge to stakeholders, explaining, codifying and transmitting knowledge about specific problems, suggested innovations in products and services, prototypes, models etc. The model of externalizing knowledge from speakers to stakeholders, on first place suggests that stakeholders have to reconstruct, reflect and conceptualize knowledge about these complex value-chains. So in order to be competent to reflect and to contribute, stakeholders need to be active and competent knowledge “interpreters”. This means that they have to possess enough competences and motivation to acquire and reconstruct knowledge received from speakers in order to give back valuable comments and contribution.

In the perspective of transferring events, stakeholders are the main “knowledge owners” or sources of information about the value-creation processes (because value is created by them). So they have to externalize and communicate to organizations their knowledge about value-in-use (Ng & Maull,

2009) and their context of use, but this will depend largely from their previous experience and competences to externalize knowledge. This knowledge is mainly tacit, contextual, and individual. Therefore, this knowledge is much harder to be “synthesized”, collected and transmitted, and moreover, the stakeholders often lack competences how to transfer and to externalize this sticky knowledge. Therefore, speakers as part of host-organizations in transferring activities have to take care to educate and to involve stakeholders to take part in these knowledge-transformation processes.

Another problem is that once transmitted and transferred, stakeholders often don’t use it because they lack mechanisms and models to exploit sticky knowledge – or suggested by knowledge outside the predefined background. Therefore in order to develop wider knowledge-exchange flows, hosts/speakers have to recognize and allow stakeholders to share much in-depth knowledge concerning their attitude and previous experience and specific contexts of use.

So hosts/speakers have to develop mechanisms and competences to acquire knowledge from stakeholders and to embed it in the design, building and adapting better their transferring activities. Moreover, the hosts/speakers need to design knowledge transfer mechanisms that prioritize the role of stakeholders as knowledge providers in order to improve experience design and product satisfaction. That is why the transferring methods and models have to enable the both parties to adopt models and methodologies of interaction, enhancing capacity, ability, and the competences both to externalize and to internalize actively knowledge.

4.3 International Conference

During BLUEMED, the organisation of an international, synergetic conference to facilitate the transferring of project results was one of the most important and useful transferring activities. The main objective was to create synergies for the exchange of knowledge and know-how among projects within the same thematic community, key stakeholders, and local/urban/regional authorities of MED regions in order to transfer project outputs and results. For this purpose, the international synergetic conference was decided to be organised in a MED city with as wide

participation as possible from competent public authorities, underwater natural and cultural heritage experts, underwater engineers, tourism and other identified stakeholders.

The event was a great opportunity for exchanging knowledge and experiences and to have open discussions among underwater archaeologists, public organizations, local governments and authorities, universities, marine researchers, NGOs, tourist organizations, management authorities of diving parks, industry players in underwater technologies and dry dive experiences to exchange views on problems and solutions that are focused in underwater natural and cultural heritage.

4.4 Living Labs

As an innovative tool of transferring the project results, models and management methodologies, the organization and implementation of living labs is suggested. Even if during BLUEMED there were no living labs, they are proposed as a necessary tool for the successful and effective transfer of experience and knowledge.

Living labs represent a form of open innovation cooperation, based on interactions between different communities. Therefore, living labs are specific environments that enable the enhancement of participants co-creation and involvement in products and services design and testing. Moreover, the operations of living labs can be enhanced by researchers, policy-makers, other companies and end users, involving all of them in the process of knowledge creation and value formation.

Living labs can be a suitable environment for promoting knowledge transfer mechanism not only between leading and following organisations, but as well between academia and business, stakeholders and communities. Analyzing how living labs combine methodologies and specific usability tools and instruments to interact with stakeholders can lead to improve understanding of their knowledge exchange practices. That is why the research of the models of knowledge interactions between companies and end-users, researchers and other stakeholders can be of substantial interest for the operations of Living labs and open innovations mechanisms.

4.4.1 Living labs and open innovation for SMEs

Living Labs (LL) represent a form of user-driven open innovation ecosystem, based on a public-private-partnership which enables users to take an active part in the general research, development and innovation process. It can be defined as “an environment for innovation and development where users are exposed to new solutions in (semi)realistic contexts, as part of medium- or long-term studies targeting evaluation of new solutions and discovery of innovation opportunities” (Følstad, 2008). The main concept behind is that LL bring users early into the creative process in order to better discover user patterns; LL bridge the innovation gap between technology development and the uptake of new products and services; LL allow early assessment of the socio-economic implications of new technological solutions by demonstrating the validity of innovative services and business models (EC 2009).

Benefits of the LL can be discussed from various perspectives. SMEs and micro-entrepreneurs can rapidly scale-up services and products according to users/tourists’ needs, faster developing, validating and integrating new ideas. Large companies can improve the innovation process, by partnering with other companies and end-users. Users, citizens and members of the community can be empowered to influence the development of services and products which serve their real needs, and thus jointly contribute to savings and improved processes through active participation in the R&D and innovation lifecycle. Researchers, economy and society gain stimulating business-citizens government partnerships and improved technology innovation ecosystems; integrating technological and social innovation in an innovative ‘beta culture’; increasing returns on investments in R&D and innovation. LL contributes to the reduction of market risk and closes the gap between research and innovations. Almirall and Wareham (2009) studied in details 4 cases in LL and summarized that LL reduced uncertainty and risk on personal and team level, increased entrepreneurial role, created experimentation arena and finally developed initial demand.

Thus Living labs become a **test-bed for development of sustainable innovation**, as it combines simultaneously open innovation approach, end-users active involvement and distributed value co-creation. Living labs are organized on regional principle, enhancing local knowledge on specific

industry areas. The European organization of Living labs (ENoLL) highlights the opportunities for increasing collaboration effect by sharing best practices and widely disseminating LL success stories within European perspective.

4.4.2 Classification of knowledge transfer models and practices in living labs

Applying the characteristics of KS/KT model for soft techniques described in (Antonova, Csepregi, 2011), the knowledge exchange mechanisms and models can be analyzed according to main factors, influencing the knowledge transfer – KS initiator, focus, processes and purpose (Table 1).

The organization of the knowledge exchange influence who will be the main actor and initiator in the knowledge exchange. As identified in Teng (2011) the KS process can be voluntary or solicit, and can include both pull techniques (initiated by knowledge owner) and push techniques (initiated by knowledge perceiver).

The second group of factors differentiates active and passive KS techniques. Active techniques require substantial efforts to externalize knowledge, for example ability for codification and expression of knowledge. Passive techniques focus on knowledge internalization, as decoding knowledge, obtaining knowledge, learning, receiving knowledge. The third group of factors includes primary and secondary techniques for knowledge sharing. In the case of primary KS process, knowledge sharing is expected and planned and the result of the process is knowledge exchange. The secondary KS process has different primary purpose (for example teamwork). In this case the knowledge sharing is not the final outcome and result of the process.

The last factor for KS outlines the purpose of KS technique. This is determined if KS results in increasing individual or organizational knowledge base. These criteria will form the framework for evaluation of soft techniques for KS.

4.4.3 User experience and knowledge flows in living labs

In the framework of Living labs, there can be differentiated two main objectives: to improve usability or/and to focus on experiential design, involving end-users in product/service co-creation scenarios.

The activities and tests aim to collect data in order to facilitate and improve product design, leading to overall effectiveness and efficiency; to increase user comfort and satisfaction, or to increase the product easiness to use as well to identify and fix usability problems (Bevan, 2009).

Further, the experiential design process is an iterative process in Living labs that links together the four activities to be carried out whatever is the innovative scenario to be explored (Pallot, 2009):

- Co-create ideas of new concepts, arte facts and/or innovative scenarios as sessions of collective creativity involving all concerned stakeholders and especially users;
- Explore alternative scenarios in setting the scene through the use of different immersive techniques within a live environment;
- Experiment selected scenarios in prototyping concrete application/services through the use of a technological platform within a live environment;
- Evaluate the User Experience of the selected scenarios for anticipating the potential degree of adoption by user communities.

According to (Hassenzahl & Traconsky, 2006) user experience involve three main factors: user's state and previous experience, product/service/system properties and the context of use (situation). Understanding and analyzing data about the typical users and the context of use (Hassenzahl & Traconsky, 2006) will improve the design process. While companies usually have the main information about product/services/systems properties, data from users can be collected directly or indirectly, and the context of use can largely vary. Howarth et al. (2007) identify various usability evaluation methods as: cognitive walkthroughs, heuristic evaluations, remote usability evaluation methods and lab-based usability testing can collect usability problem data. However, some factors as context of the use and resource limitations can bias the data and the conclusions from it.

Pallot (2012) identify 4 main characteristics for identifying the context: social context (e.g. collaborating with others, sharing objects), physical context (e.g. in an office, on the move), goal context (e.g. coordination of tasks), or infra-structure context (e.g. broadband connection).

Figure 1 describes the both processes and context of knowledge transfer in the setting of Living labs, involving all concerning actors – end-users, companies, practitioners and different stakeholders and researchers. There are identified the main theoretical methods and models to transfer knowledge.

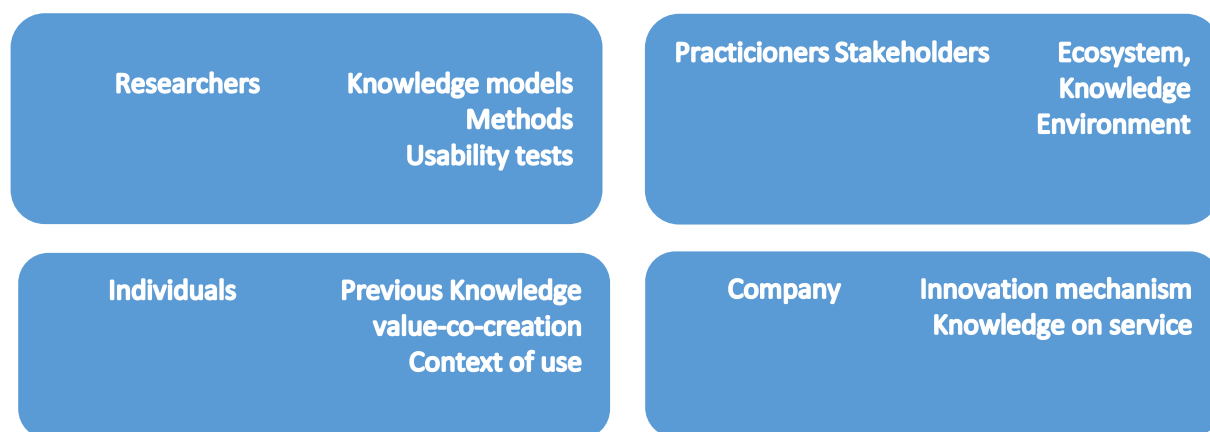


Figure 1: Knowledge transfer ecosystem in LL

5. CONCLUSION

Completion of knowledge transfer need to be done throughout the organizations as the needs rapidly change and updating knowledge and information affect the overall performance of an organization. After the initial part takes place, continuous process of knowledge transfer have to be on action in order to preserve the valuable tacit and explicit knowledge embedded in individual who is a part of organization system. Knowledge without records will be a detriment to the organization for future reference and develop a more capable individual.

Ready to do knowledge transfer throughout UMs, DPs, KACs in a rapidly evolving tourism and culture industry and update the knowledge and information which it affects the performance of

the organization. After onset, the ongoing process of knowledge transfer need to act to preserve the tacit and explicit knowledge embedded in individual securities that are part of the organization.

Furthermore the knowledge transfer activities regarded as personal initiatives were most on the process needs to be done by individual by following the organization setup in order to establish effective knowledge transfer. Besides, the significant impacts of the implementation encourage the organization to create the practices among them where they aware on volatile characteristics of employee and project knowledge existed in their system. Some UMs, DPs, KACs can create computerized system to perform knowledge transfer to ensure all the information and knowledge can be captured and preserved.

In addition, a significant effect of encouraging organizations to establish practices among those in which they recognize the characteristics of the uncertain knowledge workers and project tht exist in their system.

Last but not least, practicing knowledge transfer through basic dimension of applying it in various organization and evaluating the contributing factors and outcome of the process in different environment is suggested too.