BLUEMED

Activity 5.1

Roadmap and guide for transferring project results

Deliverable 5.1.1

Roadmap for transfer/capitalization/replicability of project results

January 2020

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UNICAL, OC-UCY, FUERM support

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Abbreviations

MoU	Memorandum of Understanding
KAC	Knowledge Awareness Center
DP	Diving Park
MPA	Marine Protected Area
UCH	Underwater Cultural Heritage

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1. INTRODUCTION

The roadmap for the transfer, replicability and capitalization of the BLUEMED project is based on the experience gained and the lessons learnt throughout the implementation period of the project, which comes to a completion by January 2020.

The project aims to provide a coherent strategy in order this integrated model to be applicable to coastal areas and islands in the Mediterranean with similar underwater natural and cultural assets and be sustainable in the long-term. The suggested roadmap will 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.

Capitalization of tangible results is a key aspect of sustainability for a project. Most particularly, this means to exploit all assets of the project and any gained experience in order any other future initiatives to benefit from its outputs. The idea is to design a content and a dissemination strategy in a way that the project can be replicable and adopted in other regions or countries with similar features or needs.

As a result, not only does this potential enhance the continuation of a successful idea but also capitalizes any fruitful outcome of the project. What is more, a *transferring* strategy is necessary in order to facilitate the replication of the results of the project. The transferring process is not identified with the dissemination practices of a project; indeed, it is based on the communication channels with stakeholders that were developed on the course of it. In this context, a strong network is built through a wide range of interested parties that ensures the possibilities of its replicability.

All in all, the investment on transferring and capitalization strategies is crucial to the sustainability of the results of a project. What is more, transferring the project's successful results to appropriate decision-makers on a local, regional, national or European level may derive benefits out of the project's implementation, which can expand further with multiplication.

In line with the emphasis on the importance of replicability in MED projects, the objective of this deliverable is to develop and describe the replication framework and necessary toolkit to transfer

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results and knowledge to follow-up underwater cultural and natural heritage sites in the Mediterranean or internationally.

This report has a strong connection and interdependency to other activities within the project. The development of the roadmap is based on the outputs and the results of the Work Packages 2, 3 and 4 which regard the design, testing and implementation/evaluation of all the activities, technologies, services and methodologies designed and developed in the framework of the BLUEMED project.

Moreover, it directly connects to activities related to establishing a transnational network as well as designing dissemination and transferring strategies (Work Package 5) in order to transfer the project results to the intended target groups and capitalize on the final product of the project. The roadmap was developed by Atlantis Consulting S.A. with the contribution of UNICAL and the support of FUERM and OC-UCY. Moreover, the external company INNOVA Srl has been involved by UNICAL in this activity through a public tender (RDO n.1832634, CIG ZD1217E693).

After this introduction, *Section 1* describes the goals and objectives of the BLUEMED project and the elements for transfer, capitalization and replicability of project results. *Section 2* includes the definition of the target groups addressed through the roadmap and defines the tools and channels to use in order to reach the intended audience.

Sections 3 and 4 develop in detail the action plan and describe the steps towards its implementation. The roadmap focuses on fundamental issues to take into consideration, these being:

a) the site features and selection criteria;

b) the prospects for sustainable tourism development;

c) the stakeholders involved and the cooperation framework;

d) the establishment of the Knowledge Awareness Centers;

e) the management and operational issues.

Beyond the general guidelines suggested though, a follow-up site can adopt a differentiated action plan adjusted to its specific needs and highlighting any special feature.

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1.1. Roadmap Scope and Criteria

1.1.1. A Roadmap for transfer and replicability of project results

A roadmap is a plan that matches goals with solutions considering any potential risks and obstacles, which may cause the need for 'rerouting'. It therefore aims to provide the guidelines on several implementation or management issues that often miss from an implementation team due to lack of experience and helps develop the necessary skills not only to generate a new planning but also to cope with any difficulties. Challenges may concern limited funding, lack of support due to legacy systems or even communication issues among stakeholders from the private sector and public authorities, on a local, regional or national level. Oftentimes, the greatest challenge to meet with is to communicate the information on innovative developments to the wider public. Nonetheless, a replicability plan should adapt to the needs or requirements of any follow-up site. In other words, a roadmap should take into consideration the cultural and socio-economic context of the implementation area and any particularities or interrelated issues.

In general, a roadmap should define a clear vision and mission, identify best practices, as well as set concrete goals or objectives. The roadmap intends to communicate the proposed model and describe the steps to get there and the parties that should be involved in this process. After all, the success of a roadmap depends on the engagement and collaboration of diverse stakeholders in a common course of action. What is more, the roadmap should be updated along the way; therefore, indicators set in the roadmap shall allow regular monitoring of progress towards the ultimate objectives.

1.1.2. Identifying the Best Practice

In order to define the Best Practice[1] as well as the criteria needed to implement a roadmap a methodology is necessary. Candidates for Best Practice may either be at an early stage of development, fully mature, or somewhere in-between. In this context, practices can be classified against the following evolutionary scale:

[1] Sytel Reply UK www.reply.com

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1. *Developing* - A program, activity or strategy that is in concept or development and shows potential to become a Best Practice. Its relevancy, effectiveness and potential for replication among other organizations is not yet proven.
2. *Promising* - A program, activity or strategy that has worked within one organization and shows promise during its early stages for becoming a Best Practice with long term sustainable impact. A promising practice must have some objective basis for claiming effectiveness and must have the potential for replication among other organizations.
3. *Good* – A program, activity or strategy that meets most of the following criteria: leads to an actual change, has an impact on the policy environment, demonstrates an innovative or replicable approach, and demonstrates sustainability.
4. *Best* - Those methods or techniques that have consistently shown results superior to those achieved with other means in each situation and that could be adapted for other situations. This

must be shown to work effectively and produce successful outcomes by the evidence provided by subjective and objective data sources.

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Evolution to a higher classification is achieved by meeting additional criteria as improvements are made. In general, this necessitates rigorous evaluation, demonstrated success and impact and capacity for replication. The criteria suggested by this methodology are exploited in the following matrix that provides a framework for ranking a Practice against the criteria required to classify it or identify where the Practice is in the evolutionary scale. Positioning a Practice on the matrix provides an indication of the potential for that Practice to be classified as Best Practice. Practices placed in the lower left of the matrix are those that have a lower ranking, whereas those placed in the upper right of the matrix are those that are ranked highest. The resulting Ranking will indicate where a given Practice is placed on the evolutionary scale.

VERTICAL AXIS

The Criteria listed here are not hard-and-fast and can be adapted to more closely fit the needs of the project. Those suggested here are:

Figure 1: Best Practice Matrix

Criteria	Related questions
Innovative	Is this a unique idea, does it break new ground, does it significantly enhance an existing Practice?
Sustainable	Does it require more effort than it is worth, is it dependent on an individual, does it have sponsorship, is it funded?
Repeatable	Is it restricted for any local reasons, can it be easily replicated elsewhere?
Standards Compliant	does it comply with local and/or industry standards?
Deemed Essential	Can the business do without it, has it become embedded in the business operations?

HORIZONTAL AXIS

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The Criteria for this axis are:

Criteria	Related questions
Benefits Identified	What does it deliver, how is this unique, who/what does it benefit?
Process Defined	Are the processes well defined?
Fully Documented	Is it well documented, is the documentation complete and up-to-date?
Mature	How long has it been in operation, how stable is it, is it well integrated?
Value Proven	Is it expensive to implement and operate, does it require a lot of attention, what benefits has it delivered, can the benefits be financially quantified?

Classification of a Practice is incremental across both axis of the model. This means that all prior requirements must be met to achieve a level, i.e. it is accumulative and dependent on the criteria preceding it being fulfilled. A Practice is classified at the lowest cumulative level it has achieved. A scoring matrix to determine the degree of achievement of criteria, such as the following, can also assist in the classification of a Practice:

Criteria	Benefits Identified	Processes Defined	Fully Documented	Mature	Value Proven
Deemed Essential	6	7	8	9	10
Standards Compliant	5	6	7	8	9
Repeatable	4	5	6	7	8
Sustainable	3	4	5	6	7
Innovative	2	3	4	5	6

By and large, identification and replication of Best Practices will provide great benefit to any project and assist it to achieve its goals of replication, standardization and efficiency.

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2. ROADMAP DEVELOPMENT

2.1. Vision & Goals of the BLUEMED Project

The BLUEMED project has designed and developed methodologies in order to help preserve and protect underwater cultural resources in situ and minimize impact to the surrounding marine ecosystem. More particularly, the main objectives of the project are:

a) defining a process scheme for supplying local or regional authorities with a multi-disciplinary plan (management models, innovative technologies) for accessible Underwater Cultural and Natural Sites, Diving Parks and Knowledge Awareness Centres to be developed in Capo Rizzuto, Baiae bay, Western Pagasitikos/Sporades and Cavtat sites (policy recommendations, management practices, networking and promotion)

b) promoting innovation in the diving industry and improving divers experience through innovative diving services and technologies

c) attracting an important part of the increasing number of people who choose diving tourism

d) introducing the wider public to underwater cultural heritage by means of 3D immersive visualization in museum exhibitions and KACs

e) setting up 'Underwater Natural and Cultural Routes in the Mediterranean' web-based platform for a unified tourism promotion and networking of Med underwater natural and cultural heritage sites

f) producing diversified and competitive tourism products with distinct local characteristics by adopting a 'place-based' approach.

The project is based on some strong implementation features, with main outputs being the operation of accessible underwater natural and cultural sites and the establishment of Knowledge Awareness Centres (KACs). It has also developed a rich digital content including an Augmented Diving System to advance the diving experience at the underwater sites, as well as a Virtual Reality environment of both cultural and natural content, as a means to attract a wider audience and include non-divers. Knowledge Awareness Centres and a web-based platform[2] support the primary goal of broad

[2] www.meddiveinthepast.eu

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inclusion and accessibility as well and they promote the tangible results of the project in the long-term.

One of the main objectives of the project is to protect and preserve in a unified manner the underwater natural and cultural heritage of selected locations of the Mediterranean as well as raise public awareness and enhance responsible accessibility through innovative technology. Overall, the project aims to support competent government authorities in developing strategies, plans and policies for local coastal and island economies of the Mediterranean region, while adopting a sustainable blue model for the tourism development.

More specifically, the project aims at the continuous operation of the selected accessible UCH sites and the Knowledge Awareness Centers beyond the lifecycle of the project, being the stepping-stones of this effort and a reference point for both the local diving industry and the general public. Most importantly, the goal is the provision of a much-needed framework for facilitating the protection and valorization of underwater cultural and natural heritage in accordance with the UNESCO 2001 Convention[3].

According to the application, the *overall objective* of BLUEMED is to align/integrate regional development policies, plans and management practices for underwater museums and diving parks for a tourism valorization of underwater natural and cultural heritage in accordance with principles of sustainable, responsible and blue growth. BLUEMED aims to produce diversified and competitive tourism products with distinct local characteristics by adopting a 'place-based' approach.

BLUEMED has foreseen sustainability measures with KPIs measurements and the design of common methodologies that address priorities of the European Strategy for more Growth and Jobs in Coastal and Maritime tourism. It aims to integrate the principles of the EU Protocol on the Integrated Coastal Zone Management (ICZM), the Maritime Spatial Planning (MSP) Directive, the Green infrastructure (GI), and the Plan Bleu strategies for all planning activities. It also aims to help preserve and protect underwater cultural resources in situ by supporting the UNESCO 2001 Convention, to assist the Biodiversity and Adaptation EU strategies in minimizing impact to marine ecosystem and help the selected sites adapt to the climate change.

[3] http://www.unesco.org/new/en/culture/themes/underwater-cultural-heritage/2001-convention/

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Overall, BLUEMED aims to fill the existing gap in policies developed for tourism valorisation of underwater cultural and natural heritage, management practices of existing accessible underwater cultural and natural sites, and the lack of new technologies applied to improve diving experience. By extension, the objectives of the BLUEMED roadmap could be described as follows:

• transfer BLUEMED results to locations with underwater cultural assets in the Mediterranean for uptake and streamlining
• exchange of knowledge generated by BLUEMED project among key stakeholders
• overcome technical or policy barriers to implement BLUEMED results

2.2. Intended Impact of the Roadmap

The roadmap aims at ensuring that the BLUEMED integrated model can be successfully replicated elsewhere in the Mediterranean, in Europe and internationally. The goal is to transfer the results of the project in areas with similar characteristics beyond the pilot sites and even beyond the associate and consortium countries of the project. Additionally, it aims to provide the guidelines on deploying the BLUEMED model towards enhancing the development of sustainable responsible tourism across the region. As a result, the roadmap focuses on the involvement of competent government authorities, management authorities of operating (or under establishment) accessible underwater cultural and natural sites and local economic operators in tourism and diving/maritime industries.

According to the application form, "*The roadmap will include guidelines and a white paper on deploying BLUEMED and operating KACs, steps and preconditions for take-up, technical/operational/policy requirements and skills for human resources, non-technical barriers to overcome and lessons learned. It will provide a comprehensive guide for other MED/EU regions with cultural and natural heritage on how to explore BLUEMED towards sustainable and responsible tourism development*". This approach is based on the key enabling technologies, services and models produced that are described as main outputs in Work Package 4 of the project (Testing). To ensure strong cooperation and an added value for the entire Med area, BLUEMED has paid special attention to the networking of sites and stakeholders. Moreover, the Roadmap will be included in the content of the web-based platform of BLUEMED as a means to recognize the most suitable candidate

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locations with similar characteristics as follow-up sites and encourage building a network among them.

2.3. Definition of Target Groups of the Roadmap

The roadmap is focused on the transferring of the project's main outputs to locations with underwater cultural and natural assets in the Mediterranean. The roadmap implementation will enable the exchange of knowledge among key stakeholders, organization members and local, regional or national authorities towards overcoming technical or policy barriers to uptake and implement project results. For instance, the organization of training workshops at the project's pilot sites is a key practice adopted to transfer the knowledge gained. In these events, trainers and representatives from similar areas can participate and be trained in order to adopt the innovative services and technologies in other locations.

To ensure a viable take-up of the BLUEMED results, there is a variety of activities suggested, in which different stakeholders may participate and can "be trained" in order to ensure that BLUEMED tackles local or regional challenges. The stakeholders can be local, regional or at a national level, representatives of Ministries of Culture/Environment/Tourism, Municipalities, Regional Governments/Authorities, Academic Institutions, local cultural clubs or economic operators from the diving, maritime and tourism sector. Here follows a list of stakeholders related to BLUEMED good practices and purposes that may or need to be involved to replicate and transfer project results:

a) *Local public authority*: Local public authorities and development agencies from the Med area;
b) *Regional public authority*: Regional public authorities and development agencies from the Med area;
c) *National public authority*: Competent governmental bodies (Ministries and Agencies of Tourism, Development, Culture, Environment);
d) *International organizations*: UNESCO underwater cultural heritage sector;
e) *Higher education and research*: Universities and research institutions specializing in sustainable tourism development, underwater research, engineering, archaeology, maritime

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and nautical archaeology, environmental sciences and other relevant fields to the BLUEMED outputs;

f) *Interest groups*: Local/regional civil societies and competent Non-Governmental Organizations; Museums; Marine Protected Areas; accessible underwater cultural sites;

g) *General public*: Local/regional communities, civil societies, visitors attending training activities at KACs;

h) *SMEs*: Local/regional small-medium enterprises and other economic actors offering products and services in tourism, diving and cultural industries; including also similar actors in pilot locations and BLUEMED partnership countries;

i) *Enterprise, except SMEs*: Large-sized enterprises offering products and services in tourism, diving, and cultural industries;

j) *Education/ training centers and schools*: Targeted audience for visits to Knowledge Awareness Centers and raise public awareness;

k) *Business support organization*: Technological Parks, incubators, accelerators hosting, mentoring, supporting start-ups and new SMEs from tourism, diving or culture sectors.

2.4. Steps, Tools & Channels to Reach Target Groups

2.4.1. The tools to reach target groups

In order to raise awareness of the social value, the competitive advantage and the particularities of the underwater natural and cultural heritage amongst stakeholders (including local communities and public authorities), there are diverse actions and tools to use in order to reach the target groups. The proposed tools used in the framework of BLUEMED include:

- **Organization of regional/national conferences at pilot sites** in which training can be conducted by local stakeholders and address to the local communities. At the events, representatives of most important target groups should be invited to ensure uptake, transfer and replicability of project results and the creation of synergies for further capitalization.

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- **Arrangement of roundtables and meetings with policy makers**.
- **Organization of a synergetic conference** between projects with similar thematic to facilitate transferring of project results. The goal is to create synergies for the exchange of knowledge and know-how among projects within the same thematic community, key stakeholders, and local, urban and regional authorities of MED regions in order to transfer project outputs and results after the end of the project lifecycle. For this purpose, an international synergetic workshop should be organized in cities with as wide participation as possible from competent public authorities, underwater natural and cultural heritage experts, underwater engineers, tourism and other identified stakeholders.
- **Participation to scientific and relevant conferences and workshops** to present the results. The target should be underwater archaeology/engineering/robotics interregional conferences and workshops or tourism/diving industry related events.
- **Participation in international exhibitions**. Creation and promotion of dissemination materials and exhibition of the project in museums to address all citizens who are interested in getting to know with the underwater cultural heritage of the Mediterranean. Moreover, systematic promotion and projection of the diving destination to the world's market through the participation in large related exhibitions such as DEMA, BOOT, LIDS and others.
- **Operation of Knowledge Awareness Centers** for visitors. Organizing raising awareness and information activities (distribution of material, events etc.) and educating the visitors are key activities. In this context, the Management Structure (in collaboration with the relevant responsible Ministry) may organize training programs as well as conferences, workshops and other information events to promote goals and achievements.
- Design and development of the 'Underwater natural and Cultural Routes in the Mediterranean' web-platform (www.meddiveinthepast.eu). The continuing update and enrichment of content of the web-platform builds a strong network of exchange of information and knowledge among diverse stakeholders thus supporting actors of the diving community and tourism sector to reach a wider audience. It consequently facilitates the up taking of the BLUEMED model and raises public awareness broadly.

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2.4.2. The signing of MoUs

Signing of Memoranda of Understanding (MOUs) is also an effective tool that will not only support strong community building and cooperation between relevant stakeholders and the project but also facilitate the transferability and dissemination of this initiative long term. MoUs can be signed with different categories of stakeholders, such as municipalities or local unions, as described in the previous section. So far, and while this report is being written, 85 MoUs have been signed in the framework of the BLUEMED project with different categories of stakeholders from several countries across the Mediterranean. More particularly, 6 lists of different categories of stakeholders concern: municipalities, local unions, diving centers, tourist & travel agencies, universities & research institutions, responsible bodies for the protection of Marine Protected Areas & Underwater Cultural Heritage.

2.4.3. An example of replicability of the BLUEMED model

BLUEMED was presented during the Meeting of the Ministers in charge of Culture of the Organization of the Black Sea Economic Cooperation (BSEC) that was held on 14th June 2019 in Plovdiv, Bulgaria. As a general conclusion, it was agreed to enhance collaboration in the field of protection and promotion of cultural heritage and work on the exchange of good practices in order to raise public awareness and foster and expand cooperation networks with UNESCO and other international organizations on cultural heritage issues.

In this framework, the good practices and models developed by BLUEMED were presented and met a warm welcome. A fruitful outcome of the meeting was the initiative for further cooperation between the BLUEMED project and the BSEC Organization. As a first step, it was agreed to share the BLUEMED roadmap and examine the guidelines, preconditions and steps in order to uptake the BLUEMED good practices by adjusting it to the characteristics and particularities of the Black Sea region.

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3. ACTION PLAN: GENERAL GUIDELINES & DETAILED STEPS OF THE ROADMAP

3.1. General Guidelines

In order to replicate the know-how of a project, a concrete and detailed Action Plan needs to be developed that can be adjusted to the conditions of any follow-up site. In general, an action plan structure may include:

- Definition of the suggested actions;
- Currently running activities, including their actors and potential results;
- Suggested solutions (innovations, education, coordination, measures) and impact of their outputs;
- Potential partners and stakeholders (public institutions, private sector) and other key actors;
- Estimated costs and financing sources;
- A monitoring methodology, including indicators;
- Time plan, including milestone.

Nonetheless, not all areas may be able to adopt and implement an innovation model. There are factors both internal and external that could affect positively or negatively this goal. The following table summarizes these factors regarding innovation features:

Table 1: Illustration of the most important innovation drivers and barriers

Type of factor	Drivers for innovation	Barriers to innovation
Internal	- **Management capabilities** - **Technological capacities** - **Specialist knowledge and skills** - **Capacity for building relationships with external partners**	- **Resources available for testing new ideas** - **Organizational structures** - **Intellectual property management**

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External	- **Stakeholder involvement in innovation activities** - **International partnerships** - **Cooperation with research and technology organizations** - **"Competitiveness" with other nearby sites**	- **Lack of legislative framework** - **Access to top-level human resources** - **Lack of funding**

Based on this premise, the transferring process should take into consideration the lessons learnt and identify the critical success factors across regions, management authorities and local communities. Additionally, the key drivers and obstacles to success should be analyzed, too.

3.2. Issues to consider

For any initiative to adopt the BLUEMED model and benefit from the tangible benefits it has already started to generate, there are some crucial and fundamental issues to take into consideration. These are incorporated into the Roadmap and they are presented below in more detail:

3.2.1. Adaptation to local conditions

Some key attributes should be tailored to the local socioeconomic surroundings, such as:

- The geographical area;
- Accessibility and mobility of visitors (e.g. transportation facilities and services, road network);
- Compliance with environmental and other procedures under EU law;
- Analysis of the needs (i.e. expected demand for urban assets/services) to which the proposed solution should respond;
- Analysis of socio-economic objectives and impacts;
- Funding structures that ensures implementation and long-term financial sustainability;
- Local stakeholders engagement;
- Satisfaction of the economic, social, environmental and financial requirements.

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3.2.2. Guidelines on Deploying and Operating the KACs

As far as the establishment and operation of the Knowledge Awareness Centers are concerned, there are several issues to consider. These regard the land planning and the space settings of the selected building (for example, finding an existing building or building a new one to host the exhibitions and fulfil necessary requirements related to facilities, equipment, etc.) as well as the design and content of the exhibition. More specifically, the best technical solutions and storytelling strategies should be decided, based on the available material and the technical specifications of the 3D visualization system developed.

3.2.3. Assessment of Legislative & Policy Framework

The assessment of existing strategies and policies related to national legal frameworks (including for example national strategies and RIS3 - Research and Innovation Strategies for Smart Specialization-regional plans) and the corresponding tourism strategies will help propose policy recommendations to enhance protection of UCH and broad inclusion. The development of methodologies will set the guidelines for the protection and preservation actions and will define the practices of responsible accessibility and promotion of the selected sites, taking also into consideration impacts on biodiversity and marine ecosystems. In addition, they will provide the baseline for a policy able to examine the feasibility and sustainability of operational models.

3.2.4. Direction of approach

When initiating an effort that identifies to the BLUEMED goals, it is important to set clear whether the approach is to develop on a top-down basis, or it is a bottom-up approach. This is crucial as it determines not only the dissemination plan and the target groups of stakeholders but also the selection of sites procedure. In the long term, it defines the design and implementation of the operation model.

In the case of *a top-down approach,*

- Contacts should be primarily with the Local, Regional and National public authorities, for example the Ministry of Culture.

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- There is easier access to the sites, since the authorities responsible for the control and managing of the sites support this effort.
- An extra step is to detect and select the sites to be included in the proposed model.

On *a bottom-up initiative,*

- First contacts should involve the individual local stakeholders, for example representatives of local cultural and environmental clubs, or local economic actors. These exploratory meetings will prepare the ground for building synergies and form a partnership.
- The advantage in this case is that the site(s) to promote is/are located within the region and stakeholders are directly aware of its/their importance and potential benefit for the local community.
- Therefore, what is mainly required is the planning and coordination of actions (action plan).

3.2.5. Potential risks to account for

- Technological (high vulnerability-security problems, low technological support);
- Economic (feasibility of new/existing technology and its supporting systems, changing regulations/law, global financial conditions);
- Environmental issues and restrictions on the interventions;
- Sociotechnical (low public acceptance, unrealistic expectations, insufficient accessibility).

3.2.6. The selection of sites

One of the first steps is to set the criteria for choosing the sites to be included in the intervention project.

- The site location and accessibility.
- Based on site accessibility, what are the methods to be developed concerning the physical access to the site or the application of dry dive techniques.
- The selection of sites will define the mapping for potential stakeholders not only during the design of the project but also later during the implementation phase.

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3.2.7. The composition of the implementation team

A key issue is the cooperation among diverse partners who on one hand can offer state-of-the-art solutions and on the other hand can be the technology or service provider.

3.2.8. Development of an integrated plan

To develop an integrated plan, what comes first is to decide on the implementation and communication strategy as well as to coordinate both the planned activities and the communication methods with stakeholders. After the intervention phase, what follows is the monitoring and evaluation of the short, medium and long-term strategies and the performance of solutions. During the operational phase, it is important to assess the impact of the intervention as well as develop maintenance plans and, most importantly, user training. The overall idea is to provide specific and replicable solutions for other follow-up sites and offer benefits to the local community.

3.2.9. Setting of Evaluation Criteria

In order for the adopted model to be a “competitive product” in the diving and coastal and island tourism industries, and therefore generate sustainable sociocultural and economic growth for a region, evaluation criteria should also be set. These may concern:

- The creation of a strong collaboration network; especially, when broadened on an international level, it is an added value of long-term sustainability.
- Social, economic and environmental key indicators should also be considered.

3.2.10. Budget & Time frame

A timetable for the implementation stages of the project will describe the successive or overlapping phases of its development. This will help partners keep track of the projects progress and facilitate their communication and collaboration. Most importantly, it is crucial to seek and secure funding in order to implement the designed action plan.

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3.2.11. The definition and approach of key stakeholders

In order to determine the synergies to be developed within the project, the target groups of stakeholders to reach must be defined at an early stage. There are different categories of stakeholders to address, from both the public and the private sector. Indicatively, stakeholders can be the Local, Regional and National public authorities, or infrastructure service providers. Other targets can be NGOs, SMEs, National or International Tourism organizations. In addition, local or regional economic actors and cultural or environmental clubs and research Institutions on marine research or underwater archaeology can be considered. The various interest groups may include Marine Protected Areas, accessible Underwater Cultural Sites or Diving Parks, as well as Culture/Maritime/Underwater Archaeology Museums.

The aim is first to identify and then reach the target groups, which can be different categories of interested parties. More particularly, in reference to the BLUEMED project characteristics, these groups may regard:

1. **National Public Authorities** and particularly competent governmental bodies such as Ministries and Agencies of Tourism, Development, Culture, Environment etc.;
2. **Local/regional public authorities and development agencies;**
3. **Local/regional civil societies** and relative NGOs;
4. **Organizations such as Museums, MPAs, DPs;**
5. **Education or training centers and schools**: the role of Knowledge Awareness Centers is fundamental in this case;
6. **Private sector:** local or regional economic actors, particularly diving and tourism industries;
7. **Scientific research organizations and academic institutions.**

An integrated approach creates a support system and develops connections and cooperation with local stakeholders; in turn, this network of communication and collaboration enhances their support towards the implementation of the plan. Therefore, the participation in such a versatile and multidimensional character is crucial to the sustainability of any effort.

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3.3. Action Lines

The following action lines are the pillars of the BLUEMED project, on which differentiated and targeted activities and interventions have been designed and developed – these will be described in detail below and form the base of the proposed roadmap.

1. Development of innovative financial mechanisms for the operation of accessible UCH sites to ensure continuing and adequate funding for their long-term sustainable management.
2. Management models aiming at the sustainability of the operation of the UCH sites.
3. Development of innovative regional and local territorial development strategies, and implementation of existing legal frameworks.
4. Establishment of KACs as information points for the general public, points of departure or arrival of any diving excursion at the nearby accessible underwater site and exhibition centers of both physical and digital content related to underwater cultural and natural heritage.
5. Minimizing the environmental footprint to the ecosystem and impact measurement with KPIs.
6. Effective networking and coordination between the managing authority and active stakeholders, in order to involve local and regional policy makers, museum authorities, Ministries of tourism or environment/development during roundtables and meetings.
7. Organization of workshops and conferences for the exchange of knowledge, transfer of know-how between less advanced and advanced sites and for sharing of experiences among other Med countries, on a municipality and regional level.
8. Development and application of advanced innovative technologies

   i) 3D digitization of natural and cultural content to create virtual material will be exhibited in KACs and museums for non-divers

   ii) Augmented Diving services for divers based on acoustic localization and inertial navigation
9. A unified promotion of UCH sites through a web platform as a thematic itinerary will bring important added value for tourism sector, governments and local societies in the entire Med area.
10. KPIs development for measuring sustainability in all dimensions of the project (environmental, cultural, financial).

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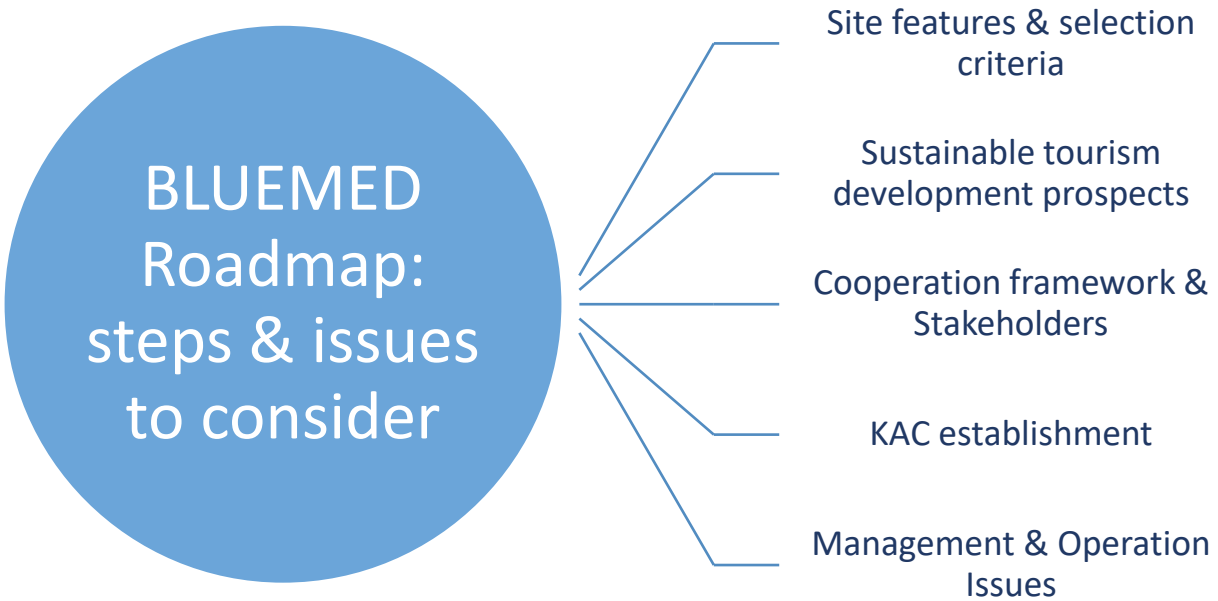
3.4. Design & Development of the Roadmap

The development of a detailed and integrated action plan will set the order of steps to follow for the different actions to be implemented at the site(s), throughout the project lifecycle. The roadmap is developed at several overlapping or successive phases, including the **preparation, design, implementation/assessment stages**. During the project development diverse studies, methodologies and interventions are proposed to be developed.

What follows is the design of the milestones of the roadmap in a detailed and comprehensive development. The roadmap focuses on fundamental issues to take into consideration, these being a) the site features and selection criteria b) the prospects for sustainable tourism development c) the stakeholders involved and the cooperation framework d) the establishment of the Knowledge Awareness Centers and e) management and operational issues. Beyond the general guidelines suggested though, a follow-up site can adopt a differentiated action plan adjusted to its specific needs and highlighting any special feature.

4. BLUEMED ROADMAP: Steps & issues to consider



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4.1. Site features & selection criteria

Mapping for sites in the area

- There should be one or more UCH sites in the area
- These could be either ancient or of modern times
- In order to find out, reach out to the competent authority [Municipality, Region, Ministry]

Examine the Legislative framework

- Examine the current national legal framework for the protection and promotion of UCH
- Is it a declared underwater archaeological/cultural site?
- Is it declared (according to national law) as an accessible underwater archaeological site?
- Check for special circumstances, e.g. is it located within a marine protected area?

Condition of site

- What is the level of study and documentation of the site(s)?
- Examine the preservation condition of the site(s) and the abundance of remains in situ
- Study the marine natural environment condition and features to protect or highlight

Physical Accessibility Considerations

- Usual prevailing weather conditions at the site(s)
- Distance from access point & easiness of access e.g. proximity to a bay or a nautical crossing
- Need for a special approach when the site(s) is adjacent to aquaculture or within a Marine Protected Area
- The depth of the site(s) defines accessibility of divers

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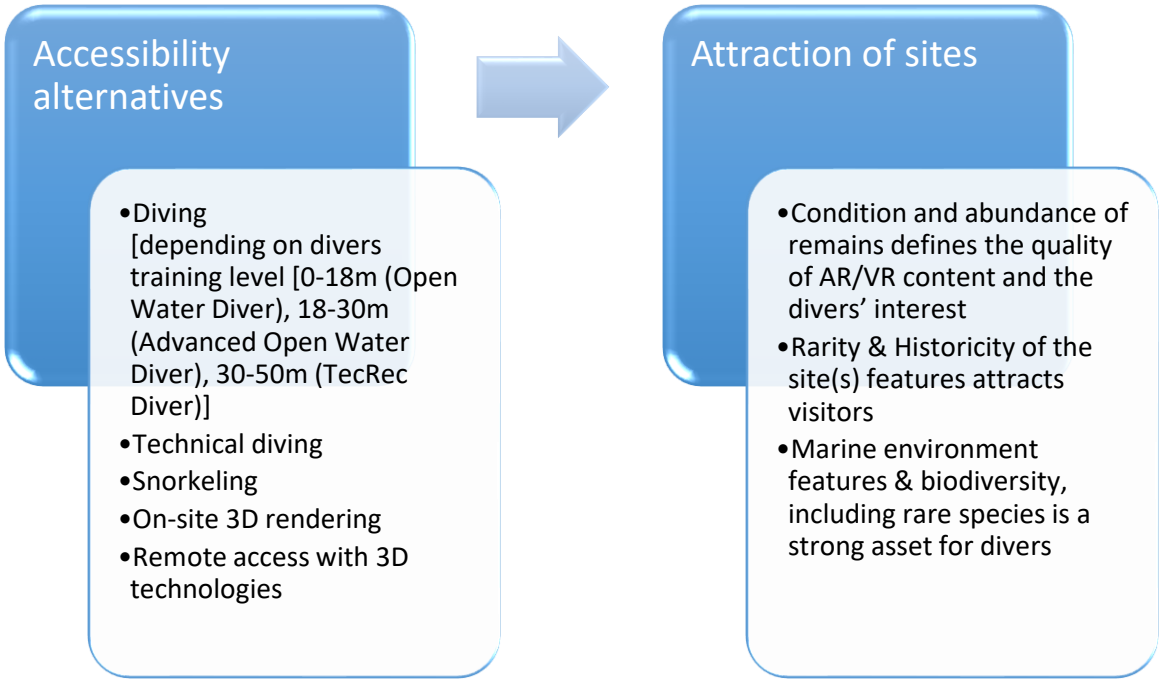
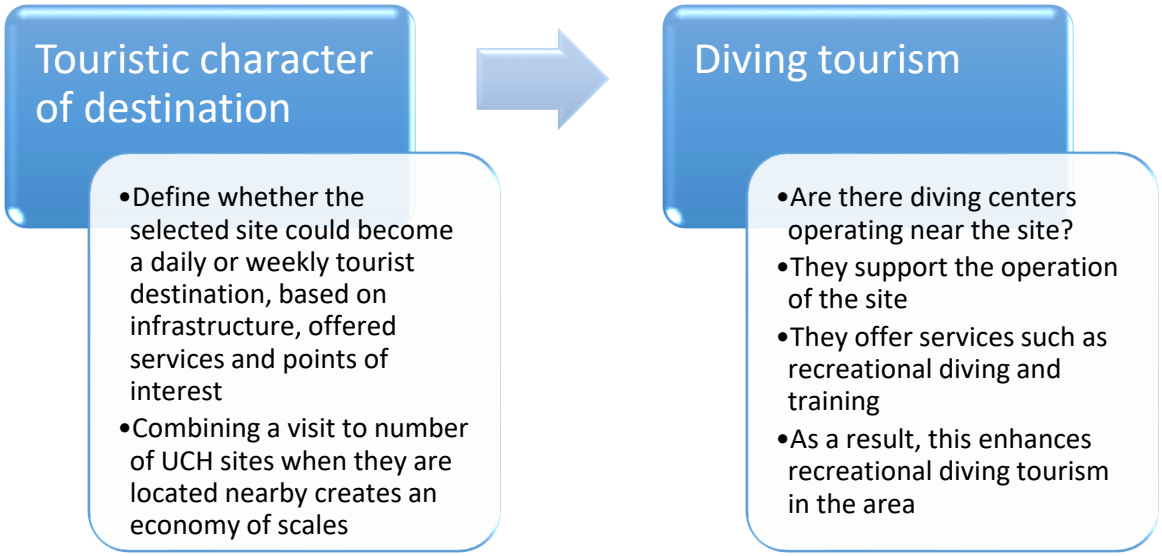


4.2. Sustainable tourism development prospects



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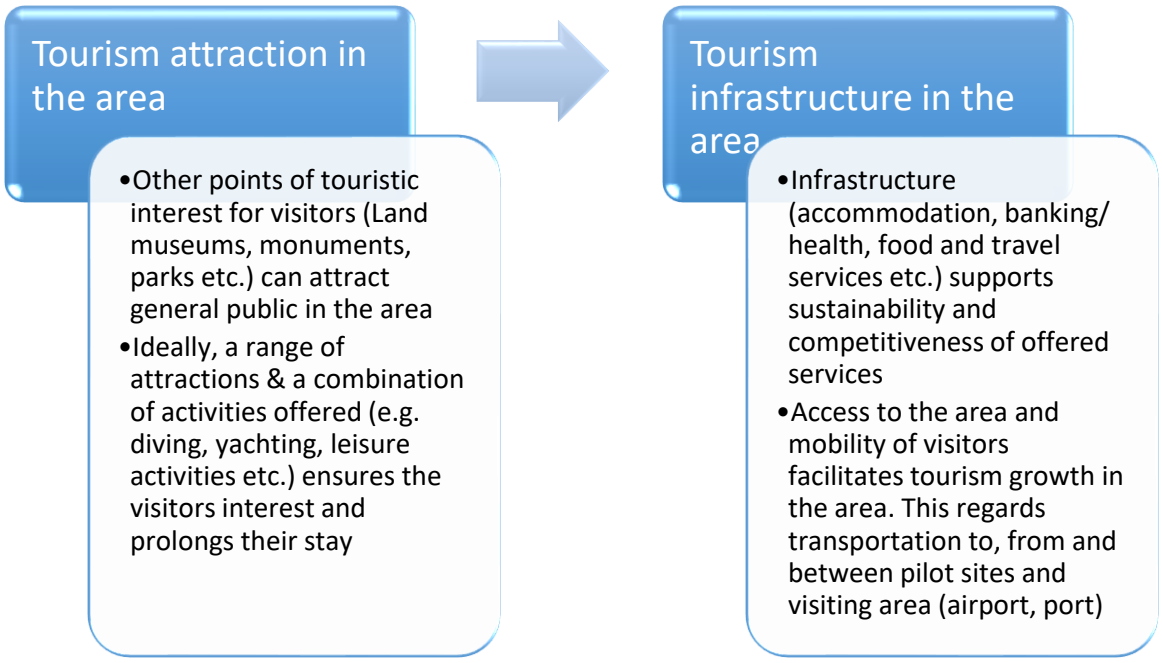
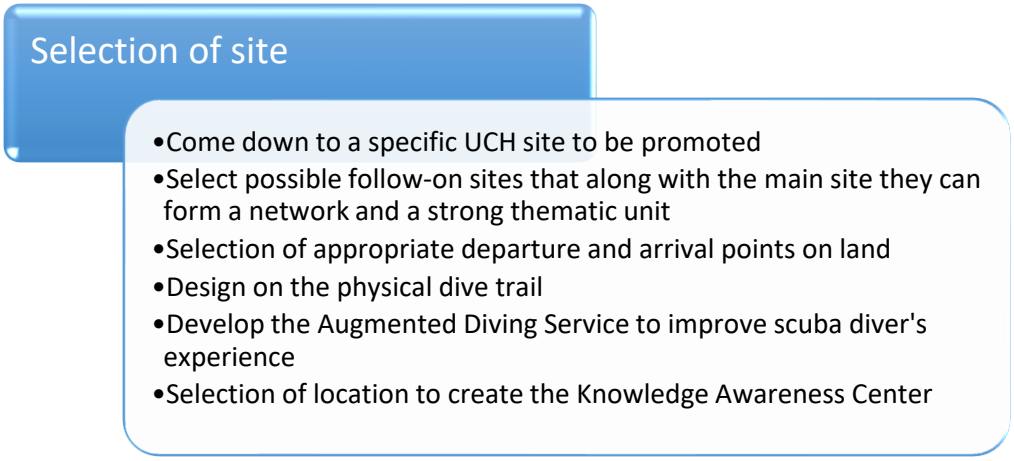


4.3. Selection of site



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4.4. Strategy

Decide on the direction of approach

- **a bottom-up initiative**
- Exploratory meetings for building synergies with local stakeholders (e.g. cultural, diving and environmental clubs and local economic actors
- **a top-down approach**
- Contacts primarily with the Local, Regional and National competent authorities (e.g. Ministry of Culture) to detect the candidate sites

Strategies

- **Define the team**: partners can offer state-of-the-art solutions or provide technology services
- Set up a team of professionals to plan and implement every step of the process e.g archaeologists, museologists, environmentalists, ICT experts, consultant services.

4.5. Planning

Potential risks to account for

- Technological (high vulnerability-security problems, low technological support)
- Economic (feasibility of new/existing technology and its supporting systems, changing regulations/law, global financial conditions)
- Environmental issues
- Sociotechnical (low public acceptance, unrealistic expectations, insufficient accessibility)

Set Sustainability criteria

- Evaluation of the short, medium and long-term strategies by developing operation and financial sustainability plans and end-user training
- Strong collaboration network
- Social,economic and environmental key indicators

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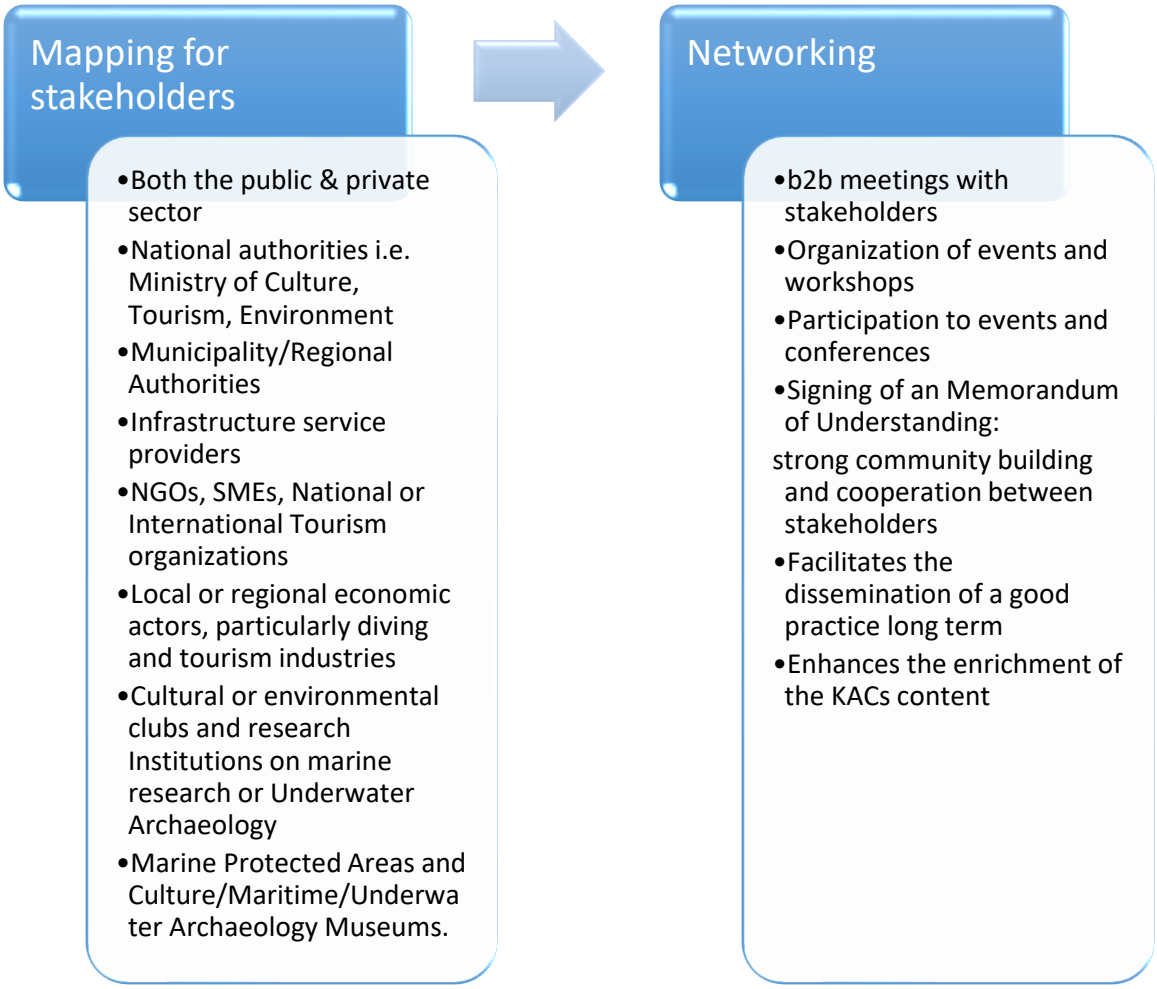
4.6. Cooperation Framework



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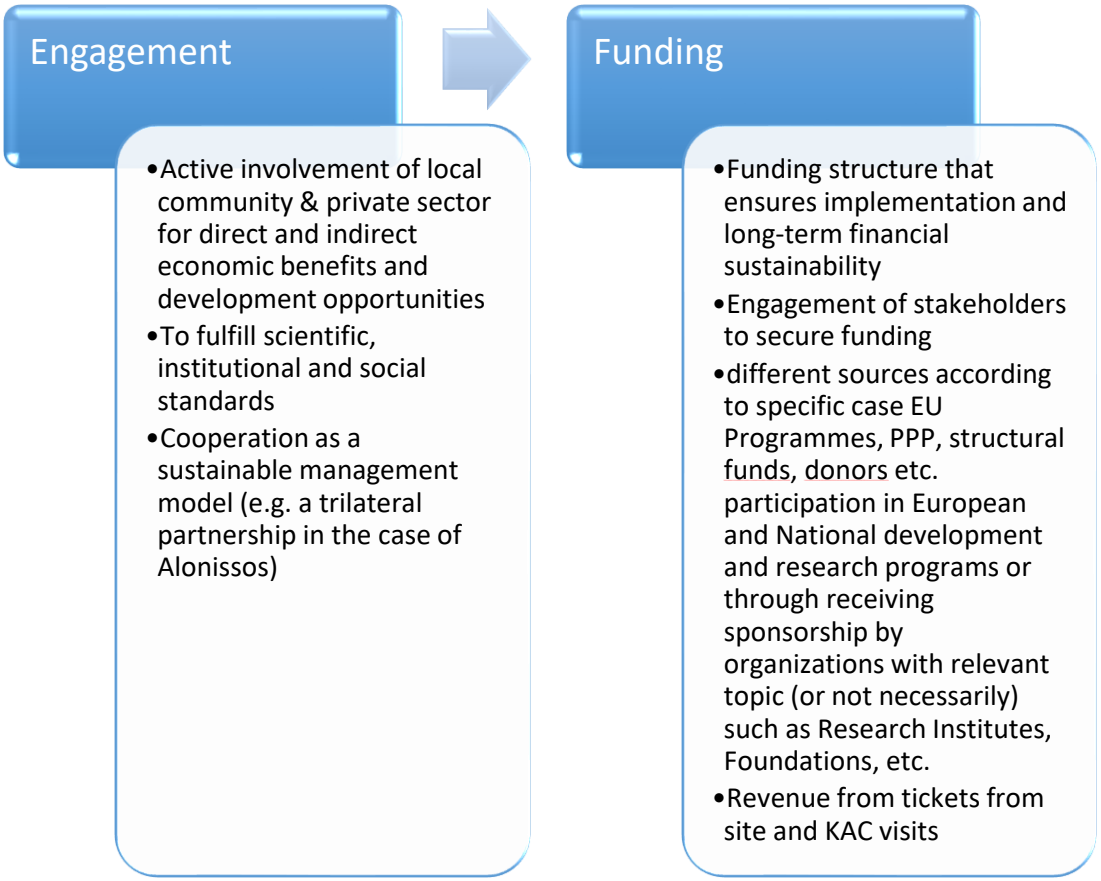

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4.7. Management

Goals of Management Structure

One suggested management framework could be a **multilateral partnership**, involving the local Municipality/-ies, the Region and the competent Ministry of Culture

- The goal is to develop an intervention plan taking into account the ecological, cultural, legislative and socioeconomic parameters of the area of interest
- The objective of the Management Structure should be to support and not replace the role of existing bodies (e.g. Coast Guard), and should seek cooperation with competent authorities and relevant organizations

Cooperation Framework

- A **Programmatic Agreement** is proposed among the members of the Management Structure

The Management Structure can be composed of public bodies depending on the legislative framework of each country and it will cooperate with competent institutions.

- The agreement will set the terms, preconditions and specifications regarding the establishment, operation and management of the site (and KAC)
- The agreement is to define the role and responsibilities of all parties

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4.8. Operational framework

Role & Responsibilities of Management Structure

- Each party should have defined and differentiated responsibilities, regarding operational issues. Regarding the case of **Alonissos** in Greece, these indicatively should be as follow:
- Ministry of Culture: the control of visits and activities in the marine area, the protection, preservation and scientifically correct public presentation of the underwater antiquities
- Municipalities: the land-based operation issues [e.g. housing of the guarding staff and the reception - entry - exit areas] and the organization of visits to the site
- Regional Authority: the financing, monitoring, surveying and assessing the operation of both the site and the KAC

Operational Regulation

- Respectively for each structure (site/KAC), the Regulation defines staff duties, operating period, specifications for the development of dive trails and the organization of visits etc.
- Define the role of diving centers
- Selection, provision and supervision of necessary equipment and infrastructure works at the site and KAC

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Dissemination & Capitalization

- Operation of KACs
- Marketing & communication plan
- Produce/issue informational material
- Training and education of local community (organization of events such as conferences, workshops, training sessions etc.)
- Participation to events i.e. conferences

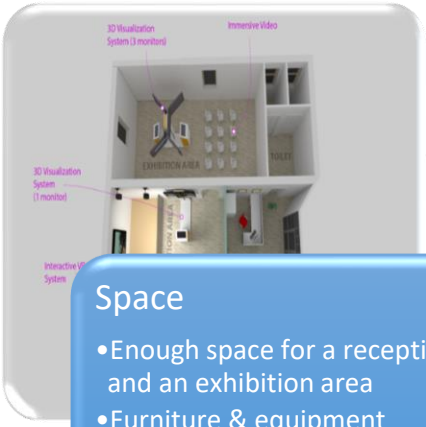
Financial issues

- To determine the pricing policy for the visits at the site and at the KAC
- Study of technical and non technical issues to estimate budget for different interventions at the site and on-land

4.9. Knowledge Awareness Centers/KAC[4]

Land planning

- Selection of the location and the building (new or existing, high tourist visibility and accessibility criteria)
- Space requirements (facilities, size, adequate facilities etc.)



Space

- Enough space for a reception and an exhibition area
- Furniture & equipment selection
- Human/technological resources
- Estimation of cost based on technical requirements & available budget

[4] ©Photos UNICAL

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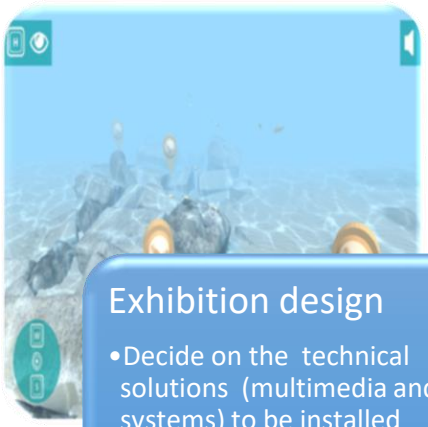
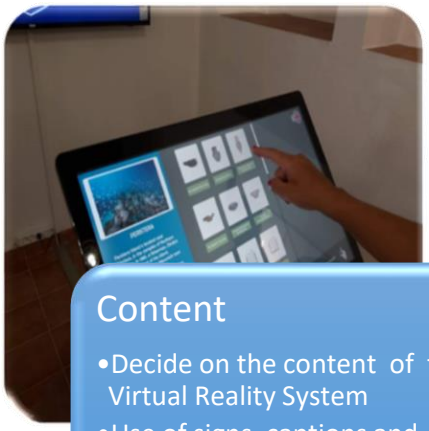


Exhibition design

- Decide on the technical solutions (multimedia and VR systems) to be installed
- Develop exhibition design according to selected material and desired storytelling and other considerations (visitor flow, type of exhibits etc.)



Content

- Decide on the content of the Virtual Reality System
- Use of signs, captions and boards for information communication and comprehension
- Dioramas: a 3D handmade or printed scale model of the site
- Display cases for selected exhibits

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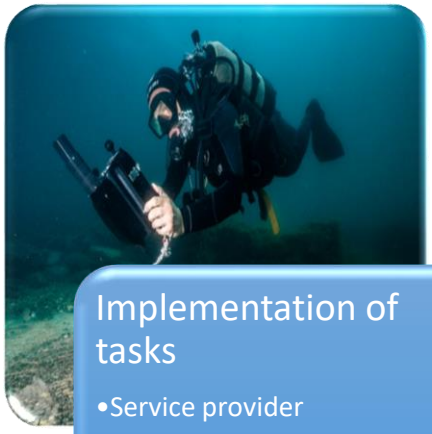
3D Visualization System

- A console and monitor(s)
- A head mounted display
- 360 video for a panoramic view
- Interactive TV/ touch screen (console, table, screen wall)
- Software to reproduce the 3D model



Implementation of tasks

- Service provider
- Service requirements
- Design, testing, installation, costs
- Infrastructure or restoration and maintenance works

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5. CONCLUSIONS

The Deliverable 5.1.1 is a report that develops a roadmap for the transfer, replicability and capitalization of the BLUEMED project. It provides the guidelines with milestones and detailed steps to follow and addresses any coastal regions and islands across the Mediterranean or internationally where one or more underwater cultural or natural sites with similar characteristics are located.

The goal is to transfer and capitalize the experience, know-how and results of the BLUEMED project and contribute in the long run to the development of sustainable coastal and island tourism development. The roadmap sets the pre-conditions for take-up and defines any technical, operational and policy requirements in order to cope with implementation or management issues. It particularly provides guidelines on deploying the BLUEMED management, operational and financial models and the Knowledge Awareness Centers.

The BLUEMED roadmap focuses on general objectives such as economic and operational sustainability of the accessible sites and of the established KACs, environmental impact and cultural impact. Most importantly, it supports the fruitful involvement and cooperation of stakeholders and helps build a network of cooperation whether it is a bottom-up initiative or a top-down approach.

Overall, it is a tool for competent national, regional or local authorities and management bodies of the sites to work on the sustainable operation, monitoring and protection of the cultural and natural assets of accessible underwater sites. In addition, it coordinates the efforts to promote and upgrade the sites, by offering advanced diving services and attracting the diving community, thus including the general public through the operation of KACs.

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