COMMON SUSTAINABLE GOVERNANCE MODEL FOR ARCHAEOLOGICAL PARKS (DELIVERABLE T1.5.1)
31/01/2023

TABLE OF CONTENT

6.6 Methods and strategies for evaluation and review
CHAPTER 1. THE TRANSFER PROJECT

1.1   The Methodology

The general objective of the TRANSFER project is to develop a *Common Sustainable Governance Model for archaeological parks* with Guidelines towards enhancing the preservation and valorisation of archaeological heritage within the ADRION area. Initial phases of the project comprised of forming the three working groups. Each of the three working groups having worked on one thematic area that was recognized as crucial for sustainable preservation and valorisation of archaeological parks. Mentioned thematic areas of the TRANSFER project are:

- development of coordinated and integrated policies and management plans or strategies;
- identification of economic sustainable activities able to conciliate economic growth with cultural preservation;
- identification of information and communications technology (ICT) tools able to enlarge the audiences of archaeological heritage (especially of young people and disadvantaged categories) and IT systems able to better analyse features and needs of archaeological parks' visitors.

In order to have quality, concrete and comprehensive final work outcomes in the Working groups, the work in all thematic areas was separated into three main methodological steps:

1. analysis synthetic interpretation of the relationships between archaeological parks and territories
2. analysis of the reference scenarios
3. ideas and projects for a *Common Sustainable Governance Model*

Following above-said steps, each Working Group (WG) covered different topics relevant to their thematic area in order to elaborate the final reports of their work. Integrated work of the three Working Groups served as a basis for the *Guidelines* which was included in the *Common Sustainable Governance Model*. Thus, the proposed *Model* consist of a methodological part and practical guidelines on concrete steps to translate the proposed methodological approach into an executive archaeological management plan.

Representatives of in total 12 partner organizations from 7 different countries participated in the work of the Working Groups. Therefore, in order to coordinate the work and ensure the best possible communication and information transfer, 4 official meetings of the Working Group members were organized. All four WG meetings, due to restrictions caused by the COVID-19 virus pandemic, were held online via the Blackboard Collaborate application. Likewise, for the purposes of conducting project activities and coordinating the work, additional meeting were held between Working group leaders and the Lead Partner. The methodological goal was to ensure an interdisciplinary approach, quality cooperation and connection of topics covered by the three Working Groups. Thus, the results of the work of the Working Groups also sought to provide a basis for the development of a flexible Common Model that can be applied in different archaeological parks and scenarios.

1.2 The pilot-cases of the TRANSFER Project

The TRANSFER project includes 5 different countries of ADRION area, with 7 archaeological parks/sites as pilot-cases in the project, i.e., Antigonea Archaeological Park in Albania, Archaeological sites Velika Mrdakovica, Bribirska Glavica inside the network park of Šibenik City Museum, and Mirine-*Fulfinum* Archaeological Park in Croatia, Archaeological site Dodona in Greece, Archaeological Park of *Urbs Salvia* in Italy, and Archaeological site *Poetovio* in Slovenia. Mentioned localities are on a different development level regarding management, infrastructure and relationship with the community as well as of the degree of urbanization of the surrounding area. Therefore, their diversity serves as an opportunity to develop a flexible, yet common, management model that would be applicable beyond the TRANSFER project and on a wider area.
Urban parks in centers with settlement continuity were excluded. These are in fact areas with largely different planning problems

1.2.1 Archaeological Park of Urbs Salvia - Urbisaglia, Macerata (Italy)

The Archaeological Park of *Urbs Salvia* is located in the municipality of Urbisaglia on the provincial road that leads to Macerata, just at the foot of the historical centre of the modern city of Urbisalvia. It is situated in a hilly area in the valley of the Fiastra River. Due to its peculiar characteristics, the park area has an important environmental and landscape value. The fluvial system played a crucial role in the historical evolution of the territory as well as in the preservation of the biodiversity in the area. The Fiastra River shaped the valley and characterised the history of human activities. Moreover, the proximity of the Natural Reserve of Fiastra Abbey and the existence of a vegetation system between the two protected areas implement ecological interactions on a large scale. The natural heart of the Fiastra Reserve with the La Selva forest and riparian vegetation along the sides of the archaeological park, plays an important role in the diffusion of the local wildlife. This partially natural system is combined with a rich rural system that includes all cultivated areas around the park. Vast agricultural areas with farmhouses, fields geometries, ditches, shrubs, bushes and hedges of hawthorn, blackthorn and rosehip, oaks, elms together with mulberries, maples, olive trees, all define the local landscape of the Marche countryside. Climate definition is problematic, due to the lack of data and systematic analysis, however is possible to assess that the prevalent climate of the region shows milder characteristics compared to the Mediterranean one: warm and dry summers, not excessively cold and relatively wet winters. Generally speaking, the area of the Archaeological Park *Urbs Salvia c*an be ascribed to the temperate climate zone.

As mentioned, the Archaeological Park of *Urbs Salvia* is located in the hinterland of Macerata province, in a strategic position with respect to the regional territory. The city of Urbisaglia is connected with the surrounding territory by train, motorway and local bus route networks. In addition, it is relatively near the regional airport and other natural and cultural attractions and famous tourist destinations. The territory is well known for an exceptional gastronomy of an acknowledged excellent quality, which tourists can appreciate thanks to the great number of restaurants and

agritourist facilities. The area is not equipped with big hotels, however it is well served by a network of small hotels, B&Bs, country houses, etc.

Today, the park measures more than 40 ha and includes the most important monuments of the ancient city of *Urbs Salvia*. Due to literary and archaeological evidence, it is known that the origin of the settlement dates in the late republican period (2nd century BC) when a first colony, *Pollentia,* was founded in the strategic point on the road network of *Salaria Gallica*. However, the majority of archaeological finds belong to the later period of Augustan era (1st century) when the city changed its name to *Urbs Salvia*. Archaeological remains that can be seen in the park today are all part of the former Roman urban architecture that witness the everyday life of ancient *Urbs Salvia*, such as: the amphitheatre, city walls, forum and related buildings, temples, aqueduct and funerary monuments.

The archaeological park of Urbisaglia is open all year long on booking and with different hours for each season. The access requires the purchase of a ticket and includes a guided tour of the Park. The Park is also opened to schools, families and is accessible to children, elderly and people with disabilities. The Park is accessible on foot, with bikes and pushchairs; the Crypto porch temple and the Amphitheatre are also accessible by people with disabilities. All the area is provided with a wide network of dedicated paths which allows the visitors to reach every monumental building and to securely cross the state road. The archaeological park has developed visitor infrastructure with an easily accessible and visible info point, toilets, parking area and a bicycle shed. In addition, the park offers qualified tourist guides, paper information material (brochures, flyers), maps and plans of the site, digital material and 3D reconstructions of the main monuments, information panels and hypothetical reconstructions of the ancient city of *Urbs Salvia*. Materials and information are available in the main European languages.

1.2.2 Archaeological site of Dodona (Greece)

Dodona lies in the northwest of Greece, south of Ioannina. It is situated in the homonymous valley, which is defined westward by Tomaros or Olytsika Mountain and east by the hill of Agios Nikolaos-Manoliasas. The climate of the site is wet with rain, humidity and frost during winter. It is characterized as continental with features of both Mediterranean and Central European climate with frequent rainfall, especially during the winter months. The temperature varies on average per day in a range of 20˚C, and the four seasons in a year are followed by smooth temperature changes. Dominant species of vegetation in the area are holly, phrygana and oak. To the east, on the outskirts of Tomaros, is the black and rough pine, which for the most part comes from reforestation. While in the western part there are clusters of firs. The fauna consists of birds, some small mammals, a few hares and foxes. The mountain was once occupied by eagles and vultures, but unfortunately, they are now extinct in the area. One of the few bird species still found on the mountain are partridges.

The archaeological site of Dodona is located in proximity to the city of Ioannina, the capital of Epirus, and is likewise connected to local villages where visitors can find accommodation. Although there is no organised public transport, the site is

accessible by car and connected to the regional highway. In addition, Dodona is close to the international seaport.

Dodona is acclaimed by the ancient writers as the oldest oracle in ancient Greece, with researchers placing its origins as far back as the Bronze Age between 2600 and 1900 BC. By listening to the rustling of the leaves on the sacred oak tree (phegos) and observing the flight of the doves nesting in it, the prophets explained Zeus' will. The oracles were based on the murmuring of the waters from the ancient spring and on the sound produced by bronze cauldrons standing on tripods around the sacred tree. According to ancient sources, the priests of the oracle were originally only men, but priestesses, the so-called *Peleiades*, appear in later times. Dodona was originally an open-air sanctuary with various ceremonies performed around the sacred tree. Throughout the Hellenistic period Dodona developed as a sanctuary with several cults that worshiped Greek gods and demigods, i.e., Zeus, Diona, Aphrodite, Themis and Hercules. Dodona preserved its sacral character throughout Antiquity and in Early Medieval Ages it evolved in an episcopal town.

Today, the whole area is scattered with archaeological remains, including the Prytaneion, the Bouleuterion, an imposing theatre, stadium, the sanctuary and an acropolis enclosed by fortified walls, occupying an area of 16 ha. The ancient theatre of Dodona is part of a cultural route called "Ancient theatres of Epirus". Moreover, the archaeological site of Dodona is extended over an area of 15 ha defined by a 2 km long enclosure. The site is open to the public all year long, with opening hours varying according to the season. The entrance fee is: 8 euros (full) and 4 euros (reduced). There is a ticket office at the entrance of the site. Visitor infrastructure is not elaborated, but the site offers amenities such as restrooms, a parking lot, information panels and free brochures. The site is accessible to people with disabilities. There is also a gift shop of the Greek Archaeological Receipts Fund where the visitor can buy guides, cards, etc.

1.2.3 Antigonea Archaeological Park (Albania)

The Antigonea Archaeological Park is situated in the Drina River valley. The valley is sided to the west by the Mali i Gjerë mountain range and to the east by the Mt. Lunxhëri (2.156 m) - Mt. Bureto (1.763 m) ridge. They are both part of the Albanides, which together with the Dinarides, to the North, and the Hellenides, to the South, form the southern branch of the Mediterranean Alpine belt. The area is characterized by typically Mediterranean climate - progressively colder but not very significantly more humid at higher altitudes. The mountain slopes siding the valley show a scarcity of forests and vegetation, with wide rocky outcrops diffusely affected by intense slope wash and soil erosion. Furthermore, in the study area only sedimentary terrains crop out, strikingly similar to those typical of the well-known Umbria-Marche succession. The area of the Antigonea archaeological park is an important crossroads for floristic migration in the Balkan Peninsula. Its geographical position, bordering countries with a central European climate and countries with a Mediterranean climate, has determined numerous microclimates that isolate areas characterized by intense speciation processes. The vascular flora is made up to a greater extent of Mediterranean and Balkan elements. Numerous Central European and Mediterranean species have their distribution limit in this area. The vegetation consists of

Mediterranean scrub, oak groves, Mediterranean beech and fir forests or mountain pine.

The Park is situated only 15 km far from Gjirokastra City which is a provincial urban centre and an important UNESCO site. Apart from cultural attractions, Antigonea is likewise close to local natural attractions. For transport connections, Antigonea is surrounded by several international airports, harbours and other transport networks.

Antigonea represents its long history with preserved remains mainly dating from the 3rd to the 2nd century BC. Some of the best preserved are: antique main gates and fortifications, agora, *stoa*, dwellings and monumental tombs. There are several preserved churches from the Medieval Ages as well. Moreover, rich archaeological findings related to handicrafts and agriculture indicates that these sectors played an important role in the economic life of the city. Artefacts found include scythes, hooks, chisels, adzes, hammers, compasses and different vessels made of bronze. Other economic branches, such as tanning leather, carving stones, woodcraft etc. were developed in Antigonea as well. Numerous and varied examples of ceramics for daily use, artistic objects, moulds for their production, a huge bulk of tiles and *pithoi* that were found in the excavations indicate a large production of pottery. Likewise, over 500 coins were discovered in the area, which indicate close trade relations between Antigonea and other Hellenistic cities and states. Today, the largest part of the inventory of archaeological findings of Antigonea is preserved today in the National Historical Museum and in the Archaeological Museum of Tirana.

The Antigonea Archaeological Park is opened all year long and has an entrance fee. Of ALL 300. The visitor infrastructure and exhibition area is not developed in the park, but there are several information panels. The Park is accessible by foot, bike or car, however, the terrain is currently not adapted for people with disabilities.

1.2.4 Šibenik City Museum (Croatia)

The Šibenik City Museum has an important role in the management of 20 archaeological sites of the Šibenik-Knin county. Among the sites that are included within the Šibenik City Museum Bribirska Glavica and Velika Mrdakovica are highlighted as particularly important. Under the TRANSFER project, Šibenik City Museum envisages to integrate these localities into a network management model. Nonetheless, for the descriptive purposes they were analysed separately.

1.2.4.1 Archaeological site Bribirska Glavica

The Archaeological site Bribirska Glavica - ancient *Varvaria* and old Croatian Bribir is located in the village of Bribir, in the eastern part of Šibenik-Knin County. The site covers an area of about 7 ha and is located at an elevated area, approximately 300 m above sea level.

The basic relief forms that prevail in this area are the karst plateau with depressions, the valleys of the river Krka and its tributaries and the surrounding hilly and mountainous area. The vegetation in this area is dominated by sub-Mediterranean forests of oak and white hornbeam and underbrush. In the vicinity of the

archaeological site, the river Krka flows in the east, and the river Zrmanja flows in the northwest. In addition to these larger surface waters, there are a significant number of smaller surface as well as underwater watercourses. Likewise, the area is located within the ecological network Natura 2000 protecting endangered and rare species as well as natural habitats.

Near the archaeological park, there are several smaller villages and hamlets, mostly rarely populated. However, Bribirska Glavica is located in proximity to tourist macro-destinations and surrounded by various natural and cultural attractions. As for traffic connections, Bribirska Glavica is close to the national highway and Adriatic tourist road, which stretches along the entire coast of Croatia. Considering that the area of Šibenik-Knin County is excellently positioned on the central part of the Croatian Adriatic coast, the whole area is well connected by traffic, both on national and international scale.

Bribirska Glavica began its rich life in the 1st millennium BC (in the Iron Age) as a Liburnian settlement called *Varvaria*. Soon after the Roman occupied the area and founded their municipium of the same name there. At the beginning of the 7th century, Varvaria was inhabited by Croats, and since the 10th century it has been mentioned as the Croatian town of Bribir. The greatest historical importance of this locality lies in the fact that Bribir in the 13th and 14th century was the seat of the powerful Šubić family.

Considering that the location has been constantly researched in recent history, the park is marked with info boards showing all important buildings / monuments, such as the megalithic prehistoric city walls, Roman *nympehum*, forum and funerary objects, remains of medieval monasteries and churches, architectural remains of the Šubić family court and Venetian fortifications. There are also two more recent buildings on the site) that serve as storage and exhibition space for numerous excavated artefacts. There are no additional facilities and amenities in the area. Bribirska glavica is free of charge for visitors and since there is no visitor infrastructure at the moment, movement is somewhat difficult for pedestrians, while the site is inaccessible for people with disabilities. However, access to the location from the foot of the hill is possible by a gravel winding road that is partially adapted to driving a car, mountain bike or some types of motorcycle.

1.2.4.2 Archaeological site Velika Mrdakovica

Velika Mrdakovica is located in the western part of Šibenik-Knin County, in the hinterland of the town of Vodice, northwest of the county seat of Šibenik. The archaeological park is located on a hill at a height of about 100 meters above sea level. The whole site has surface of about 0.15 ha.

The environment is dominated by fields and olive trees cultivated by the inhabitants of the surrounding villages. The basic relief forms that prevail in this area are the karst plateau, karst depressions, the valleys of the river Krka and its tributaries, and the surrounding hilly and mountainous area. The vegetation in this area is dominated by sub-Mediterranean forests of oak and white hornbeam and underbrush. In addition, the area is located within the ecological network Natura 2000.

Analogous to Birbirska Glavica, the area of the archaeological park Velika Mrdakovica is situated in a well-developed tourist area, connected by various means of traffic on national and international level, however there is no organised transport to the site. Likewise, Bribirska Glavica is surrounded by rich cultural land natural heritage. In the immediate vicinity of the site there are several family farms that offer domestic agricultural products (vegetables, fruits, meat, wine, olive oil, etc.).

According to archaeological research, the area was inhabited from about the 7th century BC to the 2nd century AD. The first inhabitants were the Illyrian tribe Liburni, followed by the Romans who founded the settlement of *Arausona*, whose defensive structures can still be seen today at the site. Moreover, the remaining visible buildings e are represented by 17 residential or commercial rooms in an orthogonal network, several streets and a Roman cistern at the foot of the hill. Considering that archaeological research and conservation have been constantly carried out in the last few years, these buildings are well preserved.

The area of Velika Mrdakovica is always open and available to visitors without admission fee. The Park can be reached by a wide gravel road, which can be accessed partly by car and partly on foot or by off-road vehicle, whereas access for people with disabilities is currently not possible. Given that the site in the period 2014-2016 was the subject of research within the project HERA - "Preparatory and archaeological works at the site of Velika Mrdakovica", a panoramic coin-operated telescope, three information boards, four signposts and solar lighting were installed, however, the archaeological park Velika Mrdakovica currently has no elaborated visitor infrastructure or exhibition area.

1.2.5 Mirine – Fulfinum Archaeological Park (Croatia)

The Mirine – *Fulfinum* Archaeological Park, is located in the Sepen bay, at the foot of the Omišalj hill fort on the island of Krk. The locality extends along the entire southern surface of the Ert Peninsula. The largest surface of the site is occupied by olive groves, whereas the area adjacent to archaeological sites it is mostly overgrown with macchia, except in the area maintained covered by deciduous trees. The south-western edge of the site is a coastal sit that habitats specific vegetation protected through Natura 2000 Programme. Within the wider area of the park, land use will be directed towards the preservation of the existing pattern of combined olive growing and grazing, as a timeless Mediterranean category that links antiquity to the present day. Part of the land will also be used for the presentation of Roman vegetable gardening and horticulture.

The Area is located outside, but in proximity, to the tourist centres. Tourism in the surrounding area is well developed, with quality site promotion, information flow and considerable engagement of target stakeholders. Therefore, *Fulfinum* is located in a favourable position rich with natural and cultural attraction and connected to various means of transport, however there are no immediate organized transport lines for tourist wishing to visit the site. Moreover, the site is en route of hiking and biking trails. Visitors can likewise access the archaeological area through the seafront promenade.

The Roman city of *Fulfinum*, with all its infrastructure, was created in the first half of the 1st century AD. The remains of *Fulfinum* are hardly visible today because they are still mostly underground, and partly under the sea. The entire archaeological zone is comprised of 8 well distinguished localities marked as sectors, i.e., the church, forum, acropolis, *castrum*, thermal complex and housing sectors. The building land for the archaeological park is defined by the boundary of the archaeological area and the natural beach and includes land and sea surface. The surface of the marine area is approximately 17.45 ha whereas the terrestrial part measures around 39.20 ha.

The Mirine-*Fulfinum* Archaeological Park is seasonally open and there is currently no admission fee. Visitors can explore some parts of the ancient Roman city of *Fulfinum* and the early Christian complex of Mirine, including the necropolis. Visitor infrastructure is not elaborated, but the park has expert tourist guides, an info point and several informational panels positioned on key locations. There is also a parking area and a chemical toilet. However, presently there is no basic infrastructure and there is no internet connection. Mentioned inadequacies are to be resolved by a planned Visitor centre in the near future. Although there are no difficult conditions for people with reduced mobility and disabilities, there is a need to incorporate additional elements and arrange paths for this group of visitors to fully enable sightseeing.
Lastly, the park participates in annual cultural and gastronomy manifestation, such as "Days of Antiquity" and "Solo Positivo Film Festival".

1.2.6 Archaeological Park Poetovio in Ptuj (Slovenia)

The future Archaeological Park of Poetovio in Ptuj will encompass the area called Panorama. Panorama is an elongated foothill of the Slovenske gorice that runs northwest–southeast and has two rounded peaks. Together with the adjacent castle hill, it rises above the historical passage across the River Drava. Panorama, as its name suggests offers a wonderful panoramic view over the medieval castle, the town of Ptuj, the Drava River and its plain and over the eastern fringes of the Alps. Chance finds and small-scale excavations have revealed the existence of significant archaeological remains on Panorama. Today, the hill is an open grassland covered by meadow trees, thus a part of the park is intended for beekeeping and future planting of the park will be in line with the conservation plan. Plants with shallow roots will be selected that do no damage to the archaeological strata. The vegetation will be harmonized with the archaeological presentation, at the same time arranged as a park, suitable for relaxation and other activities.
The Archaeological Park *Poetovio* is located in the town of Ptuj which is important regional, historic, economic, education and tourist centre. The historical and cultural monuments are concentrated in Ptuj and in its immediate surroundings (archaeological sites, medieval town, castles, churches, historical memorials, ethological heritage). Therefore, Ptuj is easily accessible by all types of roads and public transport and, since tourism is one of the main economic activities, there is a well-developed system of tourist facilities.

According to archaeological research, the area of Ptuj has a continuance of occupation since Early Eneolithic times, whereas the Roman town *Poetovio* developed in the 1st century AD. During Roman times *Poetovio* rapidly developed into an important administrative centre of Upper Pannonia province, It was abandoned before the mid-5th century, together with most towns in the exposed areas along major roads crossing the eastern fringes of the Alps, in accordance to historical events at the beginning of Medieval Ages. The significance of *Poetovio* laid in its strategic location at the river crossing and en route the Amber Road that connected the northern Adriatic and the Baltics. Today, some of the most important parts of the former Roman town are located on the hill of Panorama, where archaeologists expect to find the city centre. Furthermore, the geophysical investigations have revealed the urban design with a rectilinear grid of streets and building plots. The archaeological monuments are visible only on GPR images, for instance, streets, *insulae* and fortification, the aqueduct, the main road, the cult centre and the cemetery. They seem to be in good condition; however, none of them is exposed on the surface.

With the awareness that Panorama in Ptuj is one of the most important as well as the last remaining intact district of the Roman town of *Poetovio*, the municipality of Ptuj decided to create an archaeological park The municipality commissioned extensive geophysical investigations in 2015, created temporary pathways in 2017 and commissioned a conservation plan in 2018. There is currently no developed visitor infrastructure, except information tables and several reconstructions.

1.3 The archaeological parks of the TRANSFER Project as an example for the possible and different situations existing in the Adriatic area

The archaeological parks and their surrounding territories were studied regarding to the historical and cultural features, archaeological monuments, natural and economic aspects, management plans, methods and practices in use, etc. The special interest of analysis was connected to the three thematic areas, i.e. development of coordinated and integrated policies and management plans or strategies, identification of economic sustainable activities able to conciliate economic growth with cultural preservation and valorization analyzed largely taking into account the identification of information and communications technology (ICT) tools able to enlarge the audiences of archaeological heritage (especially of young people and disadvantaged categories) and IT systems able to better analyse features and needs of archaeological parks' visitors. In addition, a SWOT analysis has been conducted for each thematic area.

The analysis was carried out on the basis of the evaluation of the:

- structuring factors: the set of components and relationships which concretely exist in the organization of local systems of each archaeological area, such as:
- characterizing factors: the components and relationships that characterize each local system giving it an identity such as distinguish it from others.
- qualifying factors: the elements or conditions that give a local system a certain quality or importance or value without changing its structure or characters.
- critical situations: the set of elements or conditions of degradation or de-qualification or alteration that can endanger the structure, the characters or the quality of the archaeological park.

Furthermore, what could have been concluded on the basis of the conducted analysis is that all archaeological parks that are participating in the project have many common features. Legislation concerning the management of archaeological parks is uniformly administered at the national level in all countries participating in the project. Thus, all archaeological parks are governed in accordance with various laws and acts that, in a broader sense, regulate attitude towards the protection and preservation of cultural heritage.

A long tradition of archaeological research is a characteristic of all studied parks, so a large amount of high-quality data has been already obtained, which enables a good presentation to the general public. Research, usually of a multidisciplinary nature, is still ongoing or its continuity is planned. Likewise, in the majority of cases the areas of the parks have not been built up in modern times, so the preservation of the heritage is quite good. The remains, visible and those still unearthed, are therefore very informative. All parks cover relatively large areas, mostly a large part or entire surface of ancient settlement.

The studied parks are situated in a naturally attractive environment, sometimes in the middle or near protected natural areas. Some of them are far from larger modern settlements, the others are in the immediate vicinity of urbanized centres. All the presented archaeological parks are located as a rule in tourist and traffic developed areas or in the areas with rich tourist potential. The regions with archaeological parks are rich in the monuments of historical and cultural importance. The examined archaeological parks/sites are well or slightly less connected to the social environment. The links are mainly visible e.g., in the organization of cultural events in park areas, the significance of which may exceed the very objectives of the parks. Thus, the parks are already or have the possibility to become an important part of the cultural network in the region or even one of its central poles. In some cases, it is possible to organize network projects within a larger territory.

On the other hand, differences among pilot-cases are most clearly visible in the development level regarding the management of the sites and built infrastructure. These discrepancies are in most cases in line with an overall context of the territory where the parks/sites are situated, their differences in the socio-economic contexts within which the examples of Parks examined are structured and level of urbanisation.

Lastly, all archaeological parks always incorporate unique archaeological sites that are at the same time historically important points - at the regional, national and European level. Thus, the parks have the possibility to open up an insight into the period of Greco-Roman antiquity, when Europe was first connected into a unified cultural space.

1.4 The contribution of good practices

A Good Practice is an exemplary initiative, practice, action, method, or a European implemented project that positively influenced the systems and which is worth transferring and exploiting in different contexts and environments by new users. The

Good Practice (GP) Report elaborated in the initial phases of the project was based on the collection of various good practices - both present in the territories of the Partnership and in the ADRION area/Europe. The aim was to add value and bring innovation from local, national and European territories from relevant practices, related to the three mentioned themes of the TRANSFER project.

As the project focuses at developing a Common Sustainable Governance Model for archaeological parks to mainly be applied at local or regional level, using bottom–up approach, it was important that selected case-studies take note of different socio-economic contexts and of the different variables previously highlighted and can be transferrable to local and regional territory.

The report provided a brief overview of the state of the art in the ADRION area and Europe regarding the level of innovation in reference to the above three thematic project areas. The selection of good practices was done after the identification of a set of criteria which included:
- innovation
- replicability and transferability
- significant contribution to mainstreaming or system development
- sustainability
- impact
- consistency
- flexibility

Good practise concerning the first thematic area, i.e., coordinated and integrated management strategies and plans, showed great examples for ways and means to have an elaborated and well-structured management and how to engage local community and all relevant stakeholders. Likewise, examples of good practise showcased the significance of the networking principle.

In the second project theme focused on developing economic sustainable activities and products, good practise highlighted the importance of the contribution of entrepreneurs and the role of the private individuals such as NGOs and companies that in cooperation with competent authorities carry out projects and initiatives. Good practices also showed the need for cooperation between scientist and involvement of other various actors in development of the projects and promotion and strategies for maximum usability of parks.

Finally, good practices regarding the third and last thematic area, that is the use of ICT tools and solutions for the valorisation of the archaeological parks, contributed in exemplary ideas and realised projects on how to present, promote, enhance and make sites more accessible using modern and innovative technology.

1.5 The dialogue with the stakeholders

The dialogue with the stakeholders was fundamental for guiding the processes that led to the definition of the Common Model. This dialogue was realised through a survey where stakeholders answered to a questionnaire related to the main issues that were under discussion within the Working groups (WGs).

The questionnaires aimed firstly at verifying whether the data that emerged during the Existing Situation Analysis (ESA) and the study of Good Practices (GPs) were shared and perceived in the same way by the community. Secondly, the responses of stakeholders made it possible to guide the analysis of the WGs and subsequently the development of the Common Model.

The stakeholders who took part in the survey were 180, most of them (53) were Higher education or research institutions, while 35 were Local public authorities.
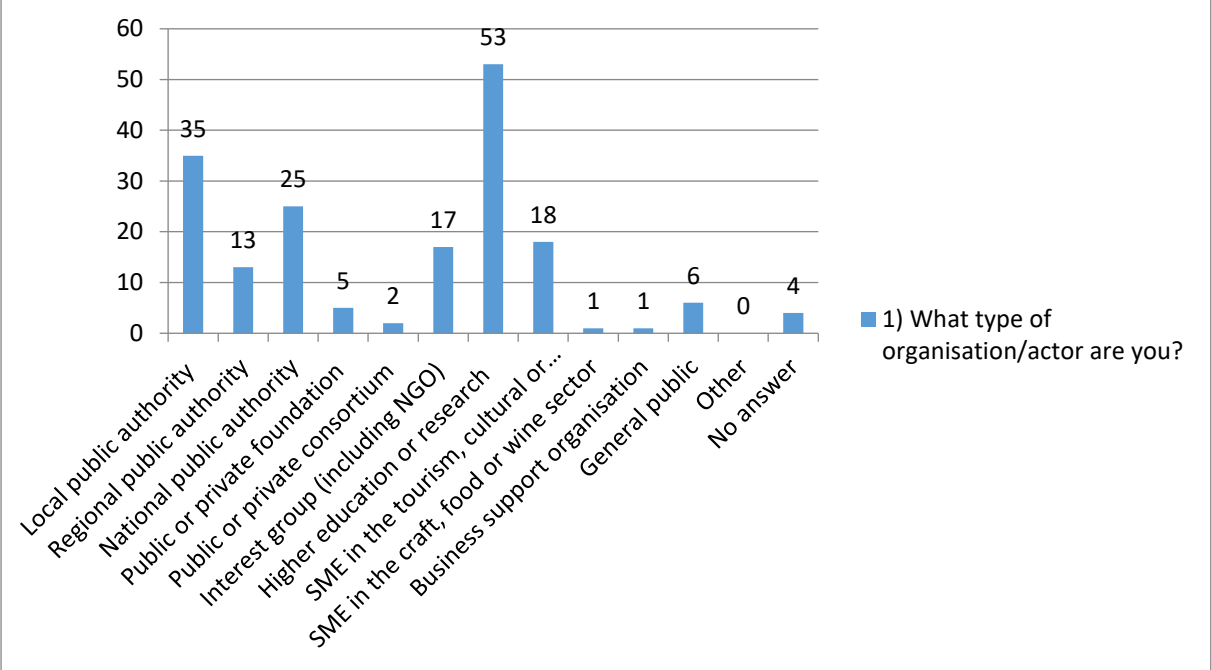
The majority came from Italy (53), followed by Croatia (43) and Slovenia (39).
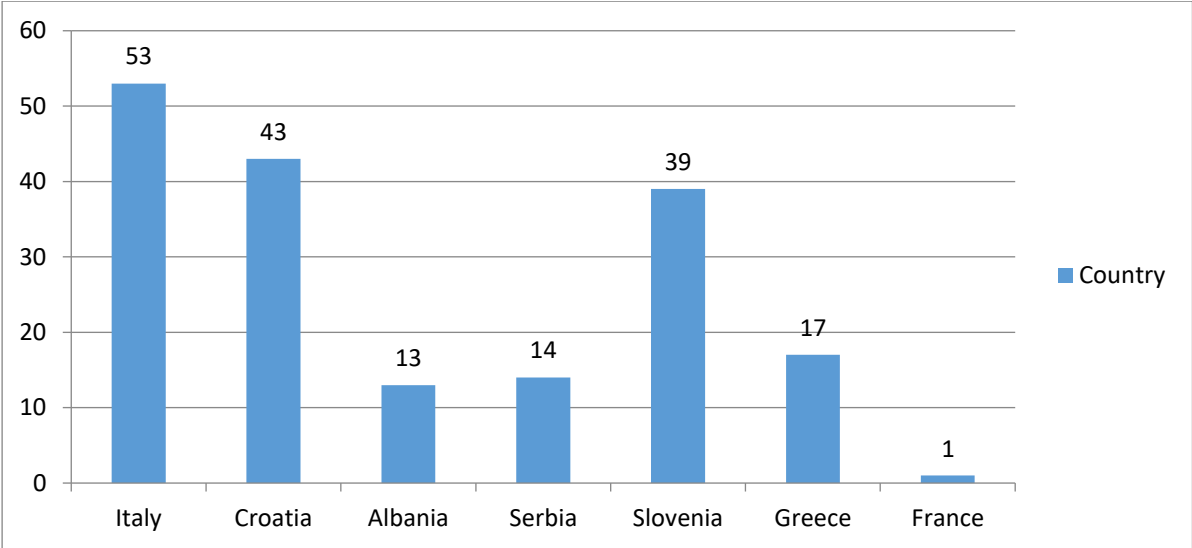
The survey also involved 18 organisations who are in charge of managing archaeological parks.

Does your organisation manage an archaeological park?

2

18

160

YES

NO

No answer
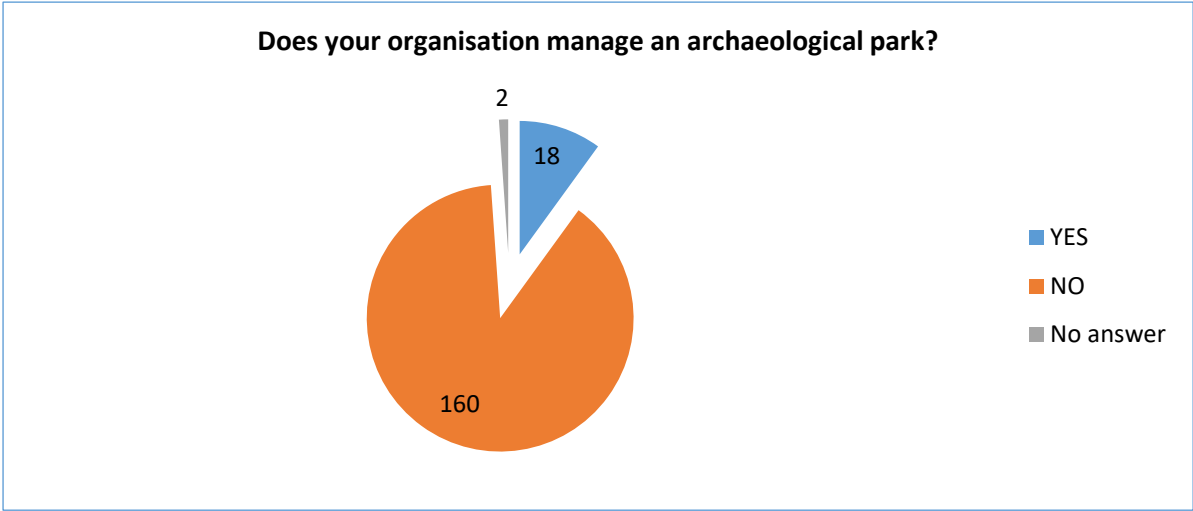
CHAPTER 2: DEVELOPMENT OF COORDINATED AND INTEGRATED POLICIES AND MANAGEMENT PLANS/STRATEGIES

2.1. Analysis and synthetic interpretation of relation and interactions between parks and territories

2.1.1 Analysis of the current legislation in relation to the management of the Archaeological Parks in the Countries participating to the TRANSFER Project

Legislation concerning the management of archaeological parks is uniformly administered at the national level in all countries participating in the project. Thus, all archaeological parks are governed in accordance with various laws and acts that, in a broader sense, regulate attitude towards the protection and preservation of cultural heritage. Those are: the *Act on the Protection and Preservation of Cultural Property* in the Croatia, the law *On the Protection of Antiquities and Cultural Heritage in General* in Greece, the *National Code for Cultural Heritage* in Italy and the *Cultural Heritage Protection Act* in the Slovenia. In addition to the above-said legislation, certain acts of a lower level in legal hierarchy likewise regulate management of the parks, such as the *Ordinance on Archaeological Research* in Croatia or the *Guidelines for the Establishment and Improvement of Archaeological Parks* in Italy. For example, Italian legislative framework allows the denotation of the so called "areas of archaeological interest" according to defined identification measures and therefore provides comprehensive protection of archaeological landscape. National acts on heritage preservation are coordinated with regional and/or local laws and policies on territorial planning and development. Among designated pilot project areas, solely Italy has a legislative instrument designed for the regional area in which the archaeological park is located (e.g., the Marche Region Act for the Marche region). In Croatia and Slovenia, local self-government bodies adopt municipal/regional acts on the protection of cultural properties of local significance. Therefore, the need for more precise definition of rules and guidelines can be seen as an opportunity to improve the valorisation, establishment, financing and management of archaeological parks.
In general, there is a difference between laws dedicated to protection and laws dedicated to management and enhancement

The competent authority for governing the management of archaeological parks on the state level are mainly ministries in charge of cultural sector, i.e., the Ministry of Culture and Media in Croatia, the Ministry of Culture and Sports in Greece, the Ministry of Culture in Italy and the Ministry of Culture in Albania and Slovenia. Within ministries there are various offices and sub-offices which administer various aspects of cultural heritage. In Greece for instance, the Ministry of Culture and Sports has established a legislative framework for the management of archaeological sites where the inclusion of the protection of archaeological and historical sites in the objectives of spatial planning is obligatory on all levels. Furthermore, in terms of sustainable, cultural and economic development, local municipalities/provinces have strategic tools which recognize potential of archaeological parks for implementing future activities regarding their protection and tourist exploitation. Majority of these strategies are implemented by the municipality without proper monitoring of planned and finalized activities and lack funding. In Croatia, Greece,

Italy and Slovenia, local and regional self-government bodies such as counties, cities and municipalities govern over archaeological sites and issue usage permits, whereas concrete management is assigned to museums. Albania on the other hand has the National Committee of Archaeological Parks as the central body controlling all important activities related to the archaeological site. Legislation on archaeological park management of the countries participating in the project generally focuses on a traditional approach to physical protection and preservation, while modern, strategic and innovative method of heritage management has not yet been developed to a larger extent. To improve the current situation, updating and modernizing the existing legislative frameworks that puts emphasize to strategic and inventive approach towards the management of the archaeological parks is proposed to be considered. In that context, it is necessary for the legislative framework to enable holistic planning and the possibility of overcoming challenges in management as well as the involvement of local community and relevant stakeholders.

Although the regulations are present, however there is a perception of the inadequacy of the regulations, adequate only for 3 of the stakeholders and partially for 107.
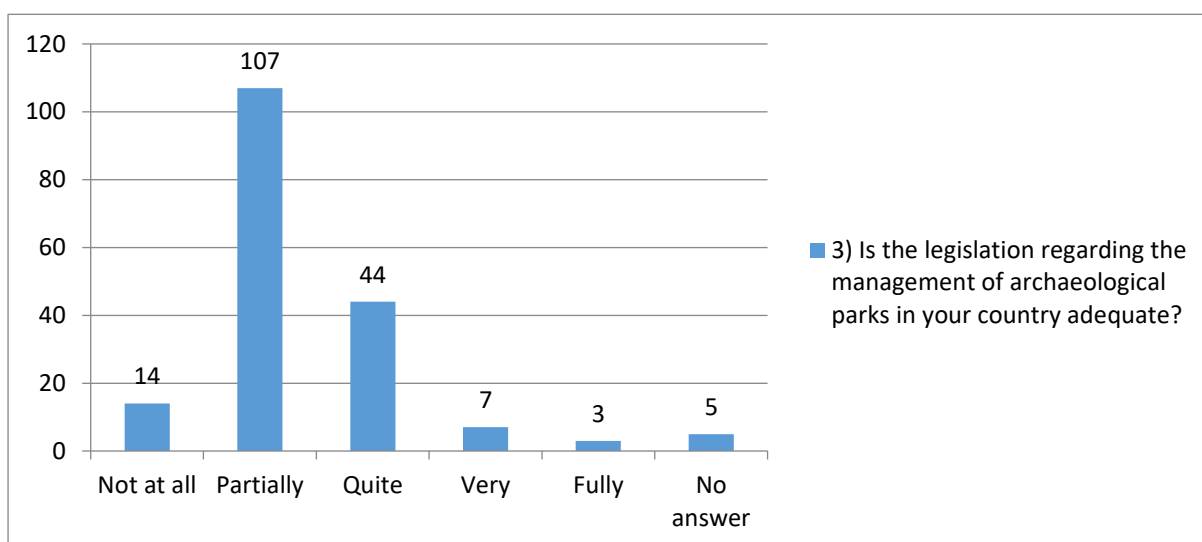
2.1.2 Interrelation between Parks' management and territorial planning

Governing bodies that are responsible for the management of archaeological parks and are aware of the broader territorial perspective and opportunities available in its surroundings. It should be underlined that all archaeological parks/sites are located in tourist, and well-developed, tourist areas or areas with rich tourist potential. However, the fact that some localities (Velika Mrdakovica, Fulfinum) are to an extent private property make territorial planning more difficult, at least in the short term.
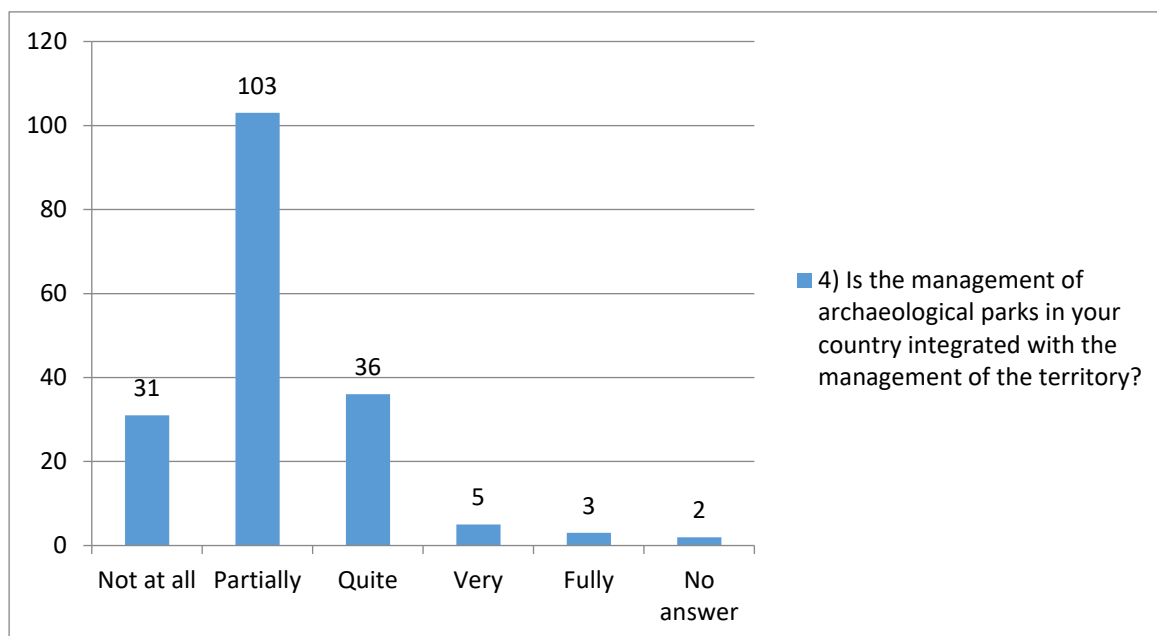
In the context of analysing the links between park management and territorial planning, it is important to pinpoint the interconnectedness of economic and tourist exploitation and the need to protect and preserve archaeological remains. Economic development inevitably has negative effects on the surrounding ecosystem and

infrastructure. Therefore, it is necessary to find a balance between the preservation of the site and its valorisation/exploitation as part of the planning and management processes of the territory.

The connection of archaeological park/site with the local community is so crucial, especially regarding the behaviour of the local people towards the site. Parks are closely related to the daily life of the locals (e.g., people visit churches and cemeteries located within the parks). Inclusion of the community in the management of archaeological parks is significant and, for this reason, scientific research must be published and presented to the public in order to enhance the promotion of heritage values and therefore create preconditions for increasing the involvement of locals in development activities related to archaeological sites. Involving and informing the local community in research can result in raised awareness about the heritage in one's micro space and contribute to the protection of archaeological sites in connection with preserving the quality of the environment, which is an important determinant of the quality of life. The future of the archaeological parks lies in effective partnership and synergy of all actors, public and private sector, communities, local stakeholders and citizens. It is important to integrate the area of archaeological parks/sites to strategic projects of a wider area on all levels and to build visitor infrastructure, access roads, pedestrian paths, car parking and other amenities in further development of the archaeological parks/sites. The improvement of visitor infrastructure in general is a significant aspect in tourist valorisation and overall development of archaeological parks/sites. Apart from accommodation and accessibility, adequate infrastructure ensures the protection and preservation of the value of the site. Increasing the visitor's safety indirectly contributes to the establishment of appropriate behaviour of visitors during sightseeing. Consequently, in addition to providing informative and other services, the visitor infrastructure also sets rules of proper behaviour, which is particularly important in the context of preservation of the archaeological sites.

It is necessary to create legal and administrative preconditions for all aforesaid aspects of territorial planning so qualitative research and protection as well as economic and tourist exploitation of the archaeological park/site can be achieved. The key factor in that process is the synergy of all actors involved, starting from local, regional and state authorities, institutions that manage archaeological parks, various interested associations and NGOs, small and medium entrepreneurs in tourism and hospitality from the local area, and ultimately the local population. In addition, the cooperation of spatial planners and heritage managers should be in dialogue with the public in order to properly disseminate information, raise awareness for heritage protection and secure buffer zones around archaeological parks (the best example of zoning is found in the Dodona in Greece).

The perception of the inadequacy of the integration between park management and territory management is high, absent for 31 of the stakeholders or partial for 103.

Chart: Bar graph showing responses to "4) Is the management of archaeological parks in your country integrated with the management of the territory?"
- Not at all: 31
- Partially: 103
- Quite: 36
- Very: 5
- Fully: 3
- No answer: 2

2.1.3 Analysis of the bodies involved in the Archaeological Parks' management in the countries participating to the TRANSFER Project

Firstly, it should be noted that there are discrepancies in management levels among archaeological parks/sites participating in the project and therefore different especially national bodies are responsible for protection and management. All sites are under the direct jurisdiction of the state government regarding protection, while operational management is entrusted to competent institutions, local authorities, museums or park administrations.

In general, these archaeological parks/sites do not have developed Management Plans in terms of formal documents issued by the bodies and institutions under whose jurisdiction they are located. Among pilot project, the Archaeological Park of *Urbs Salvia* in Italy has the most elaborated management. In cooperation with the Municipality of Urbisaglia, the University of Macerata and the Cultural Heritage Supervisor they developed the *Schema direttore* aiming for an integrated approach to park management although not formally approved and without a management body. This management plan includes harmonization of local and national legislation with specific management activities, further archaeological research, site maintenance and protection activities, cooperation with the local economy and local producers, tourism and hospitality as well as infrastructure construction for further development of the park. In *Urbs Salvia* part of the management is entrusted to the private company, which works closely with the city administration.

Local actors from public bodies and institutions are involved in other localities as well. These are local and regional self-governments, museums (Bribirska Glavica, Velika Mrdakovica), regional authorities (Dodona) and park administrators/directors (Antigonea), local scientific institutions and local public services. In *Poetovio*, cooperation between local and national authorities in archaeological park management policies is well defined and only has to be implemented. Furthermore, local private actors are in various degrees involved at the sites. Thus, in some cases

they are mostly excluded from the management process (Antigonea, Dodona) and involved to a certain level through various associations (*Poetovio, Fulfinum*) and private companies (*Urbs Salvia*) in other.

It should be underlined that almost all institutions that manage archaeological sites/parks have in their management plans the emphasis on the involvement of private actors (SMEs, associations, etc.)

Unfortunately, the judgment regarding the actual quality of the involvement is absolutely negative, which is considered not coordinated by 143 of the stakeholders.
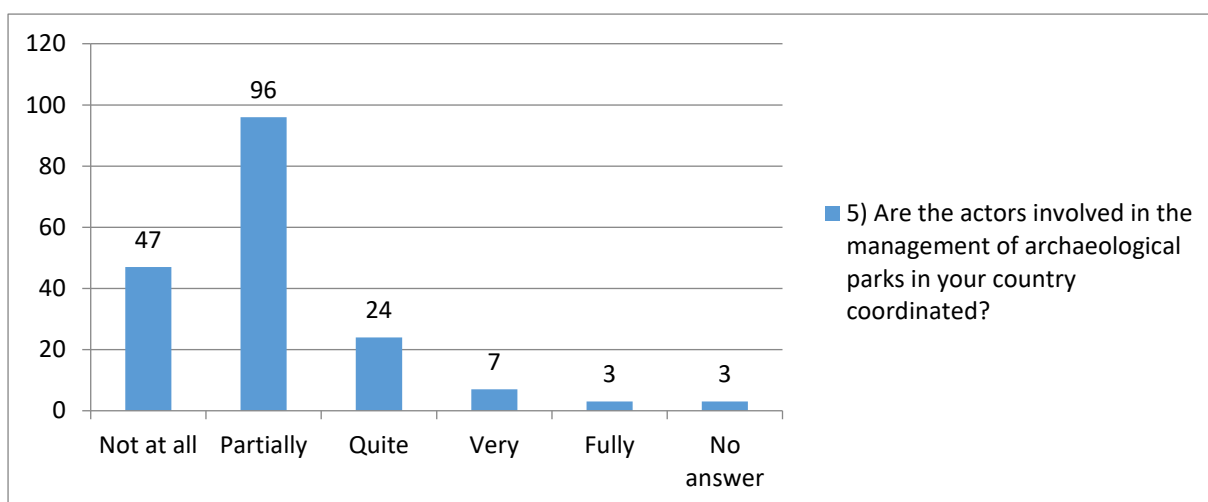
2.1.4 Interrelation system of the Archaeological Parks with the cultural heritage spread on the surrounding territory.

The importance of territory in the archaeological park/site management development is expressed in the local and regional sustainable development. Sustainable management of archaeological park implies the study on the context of the development of the archaeological park, regional and spatial planning and the state of the environment. The structure of the archaeological park, therefore, connects the cause-and-effect elements of the development of all three components: society, economy and environment.

Despite this awareness, coordination between management activities of the archaeological parks and other sites of cultural interest, is not considered adequate for 47 of the interviewees and only partially for 99.
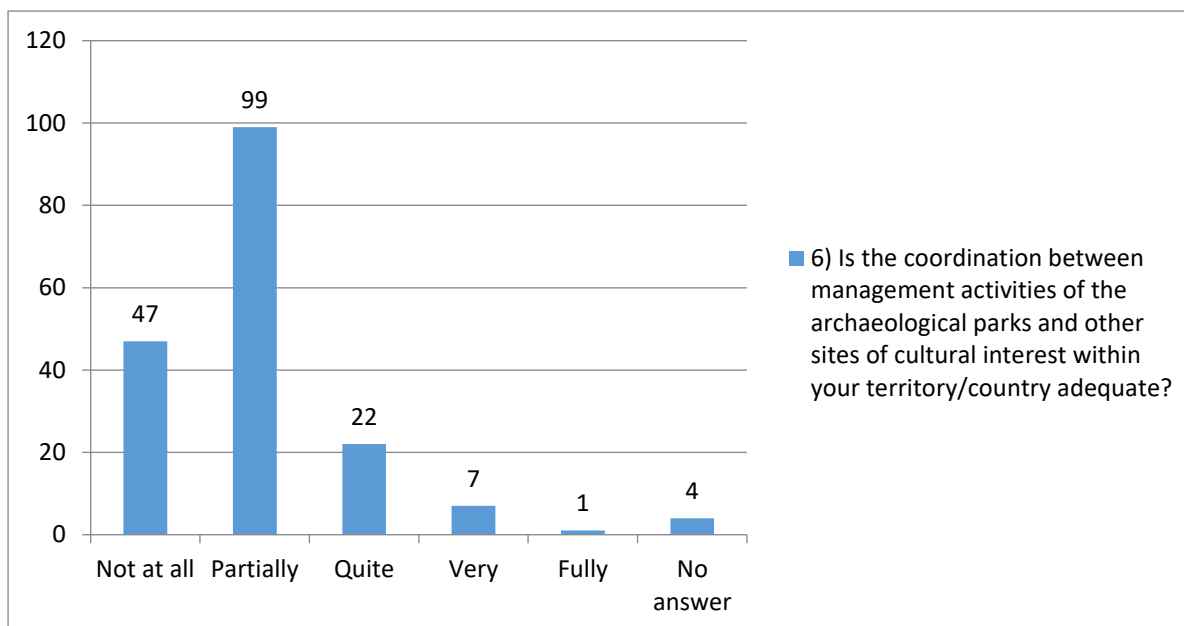
2.2. Analysis of the reference scenarios

It is crucial that the Park cease to be perceived as an obstacle to the territorial development. The local community, but more broadly, the public, needs to see the Park as a resource. It has to be thought and managed in order to achieve a smart economic and social development in contrast to a defensive view of the protection of cultural heritage and, consequently, to a management that is tied to the existing policies for the territorial management.

2.2.1 The Park's planning and the TRANSFER Project and a synthesis of the needs and concrete instruments for a better governance

More than 100 stakeholders (100 very, 28 fully) think that a coherent and organized management model for archaeological parks contribute to a better governance of the territory. Therefore, there is a high perception of the importance of the need to integrate the management of archaeological areas in the processes of territorial and urban management.

Bar chart:
- Not at all: 1
- Partially: 5
- Quite: 46
- Very: 100
- Fully: 28
- No answer: 0

Legend: 7) How much can a coherent and organized management model for archaeological parks contribute to a better governance of the territory?
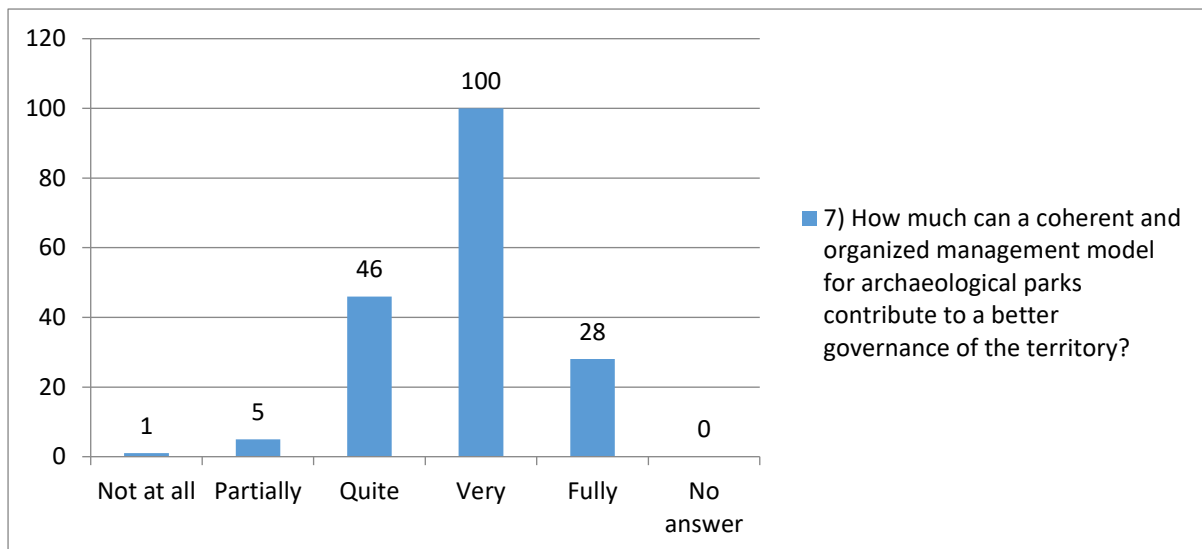
In the context of archaeological park planning, currently there is still a significant gap between the technical and administrative culture that can positively combine custody standards with those for change in terms of development that territory can actually sustain. The prerequisite for planning and establishment of an archaeological park is the presence of important archaeological evidence on an area with significant landscape and environmental values of a certain consistency (e.g., *Urbs Salvia*) that is protected and managed by an autonomous administration or shared governance between bodies and administrations. Archaeological interest of the area must manifest itself primarily in the visible goods, however, there might be an interest in potential of what is present in the subsoil, which opens the prospect of an expansion of the excavations and research, that is, of knowledge and therefore of use by the community. Planning is a means of overcoming and upgrading the policy of cultural heritage preservation, towards the establishment of strategies and measures for the management of the archaeological site and the relationship with the surrounding territory. On the other hand, the exclusive adoption of defensive strategies, of minimization (or worse of compensation) of the impact, or the risk, can hardly ensure that demand for the valorisation of the asset which can translate into active protection of local socio-economic growth anchored to transformative dynamics. Interpreting areas of natural and cultural values as areas that are not unconditionally related to the concept of passive protection, as well as those that do not lead to a reduction in the availability of goods, is the first step towards bridging the gap between the concepts of exclusive protection and planning.

Furthermore, existing challenges also need to be considered in regard to planning and development. One of the main challenges are insufficient legislative instruments that emphasize the contemporary, holistic approach towards heritage management. In Italy, the introduction of local and regional planning instrument specific plans was highlighted as a positive example of improved planning. Considering development of the archaeological parks, planning and positive impacts on the surrounding territory and significant potential for cooperation is offered on all levels (international, national, regional and local). Multi-level stakeholder cooperation is a feature of participatory cultural planning. Likewise, it is crucial to identify, in a structured way,

relevant actors in each territory and the coherent organizational flow of responsibilities and duties. This recommendation can be in a form of an official "Agreement of Cooperation" amongst managing authority and other bodies (public, private and NGOs) directly or indirectly associated with the archaeological park, with identified capacities of what certain party can provide for the development of the archaeological park. Each Agreement has to highlight bodies responsible for monitoring and evaluation of planned/implemented activities. Suggested documentation will lead to standardization of the documentation process in management and development of indicators for monitoring the success of development activities in parks.

2.2.2 Public consultation and bottom-up processes

From the social aspect, experts and citizens should be equally involved in the process during the preparation and establishment of the archaeological park. Such approach ensures the adjustment of the management system to the real needs of the residents in the wider area. After the realisation of the archaeological park, its impact on the territory will include the contribution to the cultural development, promotion and interpretation of cultural heritage as well as numerous other elements that contribute to the development of the society as a whole. Educating and informing of local population is the basis for understanding the heritage and creating positive and active attitude of citizens towards it. Hence, education is unifying and necessary element for successful and long-term community engagement, tourism development and protection. It is proposed to conduct educational activities through a range of different programs and strengthen the social component and importance of the archaeological park. Likewise, the development of educational programs represents great potential for tourism directed at school excursions, children and youth camps and families. The indications will consequently contribute towards increased visibility of archaeological parks. The local community also has an impactful role in supplementing the relationship with heritage through storytelling which can raise awareness, a sense of ownership, pride and responsibility for the archaeological heritage.

From an economic point of view, management plans consider the needs of the economic sectors, mostly those sectors related to the cultural and creative industry and visitors. An Archaeological Park is a tourist- and historical complex which primary function is to present archaeology. Nonetheless, the new role of heritage with an economic connotation facilitates the revival of dead capital that can generate funds for self-renewal under proper management. The realisation of the archaeological park generates demand for various economic products – shops, accommodation facilities, restaurants, sports offer, cultural offer, etc. The added value also affects the territory, which is manifested in encouraging the economy for new directions of development. The local community, as well as the population from the surrounding area, benefits from the above. Positive effects of economic activities in and around the archaeological park therefore are spread to the surrounding area.

With establishment of the archaeological park, potentials are likewise created for the development of new green areas (public parks, gardens) and landscape improvement. In addition, it is possible to construct new roads, pedestrian paths,

bicycle routes and to improve general communal infrastructure. All this affects the environmental quality of the area in which these actions take place, so here importance of adhering to environmental standards should be highlighted. Problem areas such as neglected and overgrown areas, landfills and others can be seen as new opportunities for revaluation in terms of developing new common areas, centres, open-air museums, public landscape places, etc. Overall, it could be said that creating new and strong links between the archaeological heritage, its surroundings and the local community as a whole through the revaluation of the historical elements of the area goes in favour of its future.

Public consultation and the bottom-up processes are undoubtedly the strongest issues of heritage management discourse in recent years. In scientific and planning circles it is recognized as extremely important for achieving positive results. The public is recognized as a relevant element to each heritage landmark and it is expected to be included in the process of parks valorisation and interpretation. Besides those who research cultural heritage (and others indirectly associated with it), the public includes: local and foreign tourists as spectators, population living near the archaeological site, heritage enthusiasts of the country, public and private bodies, NGOs, regional community and municipalities in the area and international community.

The need for public involvement is also reflected in the fact that the public can recognize different elements of value of the archaeological parks/sites, not exclusively those regarding historical and archaeological heritage, and that a very important aspect of involving the public and implementing a bottom-up approach which seeks to:
- improve the quality of the analysis of the archaeological area and its context, bringing them closer to the real needs of citizens due to their ideas and suggestions through which it is possible to achieve more complete knowledge of the places and communities;
- promote administrative innovation processes of the archaeological area and its context;
- mobilize resources and social capital present in the area, activating active citizenship processes, empowering and motivating citizens to strengthen social cohesion and a sense of belonging to the community;
- manage and reduce conflicts, strengthen trust in institutions and counter the deficit of legitimacy and consensus also through improving transparency and opening up the public administration to the outside world;
- integrate performance management into decision-making processes, truly linking evaluation to planning, improving the use of performance information both by public executives and politicians and by the citizens.

Despite this, the processes and ways of involving communities in the management of archaeological parks are not considered adequate. For 43 of the stakeholders not at all, and for 97 just partially.
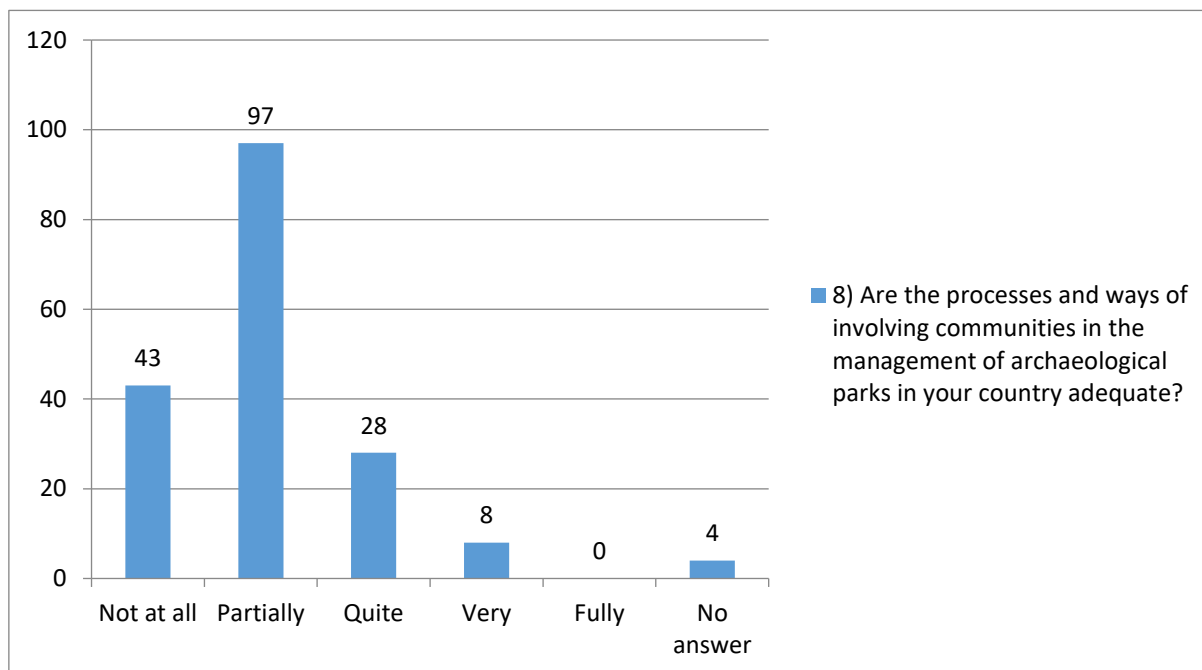
The importance of cooperation between the competent authorities in charge of the management of archaeological sites and educational institutions is emphasized for the qualitative implementation of the bottom-up approach. In general, essential aspect is raising awareness through learning about the culture as part of formal education through the organization of outdoor schools and day trips. Said approach can contribute to increasing the sensitivity of the local population for cultural heritage. Educating students about the value of heritage and involving them in development activities through school programs and organized day trips to the site, it is possible to create a basis for the long-term involvement of local people in activities related to preserving and valorising cultural heritage.

2.2.3 Administrative means for the management

The key aspects of the organization of park activities are planning and management. Planning essentially consists of scientific research including the protection and conservation of assets. Protection and conservation are vital elements of the whole management structure because they are means of understanding and communication of the archaeological context and transmission of the assets. The knowledge about the assets and their conservation must make it possible to plan interventions with a project capable of involving local management skills. Management, on the other hand, must have the objective of enhancing resources and creating economic development. In other words, the local economic fabric of the area must be involved in investing in cultural and tourist activities.

Recently, the administrative pattern of management regarding archaeological site management and cultural heritage started to change. This primarily implies the introduction of certain market principles in the management of archaeological sites, which enable better understanding of archaeological resources than the traditional approach. Therefore, it is clear that the relationship between park and socio-

economic and territorial context is important, and the complexity of certain interests and problems necessitate to be addressed. It is an imperative to get the perspective of inter-institutional co-planning, comparing custody obligations and valorisation with the life of the territory, relating to the needs of the agricultural sector and building development, a perspective which unrealistically makes a distinction between museum area and territory. Such challenge is manifested in the diversity of public and private entities that should always communicate to promote social and cultural growth of the local community.

The administration should be interdisciplinary, including experts from various fields, as well as the public, private and non-governmental sectors. The role of the administration is reflected in providing conditions for successful management of archaeological parks. Corresponding management team structure can also meet the requirements for satisfactory visibility and promotion of parks. The management of the archaeological site considers available financial resources, attendance and infrastructural equipment of the site, as well as its political and economic aspect. Moreover, the activation of local development processes in terms of the impact on the employment and gathering of local experts and stakeholders who can contribute to the development of the archaeological site should likewise be considered. Good administration is conditioned by ensuring optimal human resources. An archaeological park can therefore be a kind of generator of increasing the quality of life over time. Namely, continuous development can potentially increase the need for permanent and occasional employment of the local population. The role of the administration is also reflected in considering the impact of the archaeological site on public awareness of the heritage value through promotional and educational activities in the wider area, in connection with the elements of the nearby cultural heritage and stakeholders in culture, tourism, education, environment, etc.

It is precisely the complexity of the system and of the values at stake that makes it necessary to identify specific models for the management of archaeological parks. For 107 of the stakeholders, it is very useful and for 36 it is fully useful.
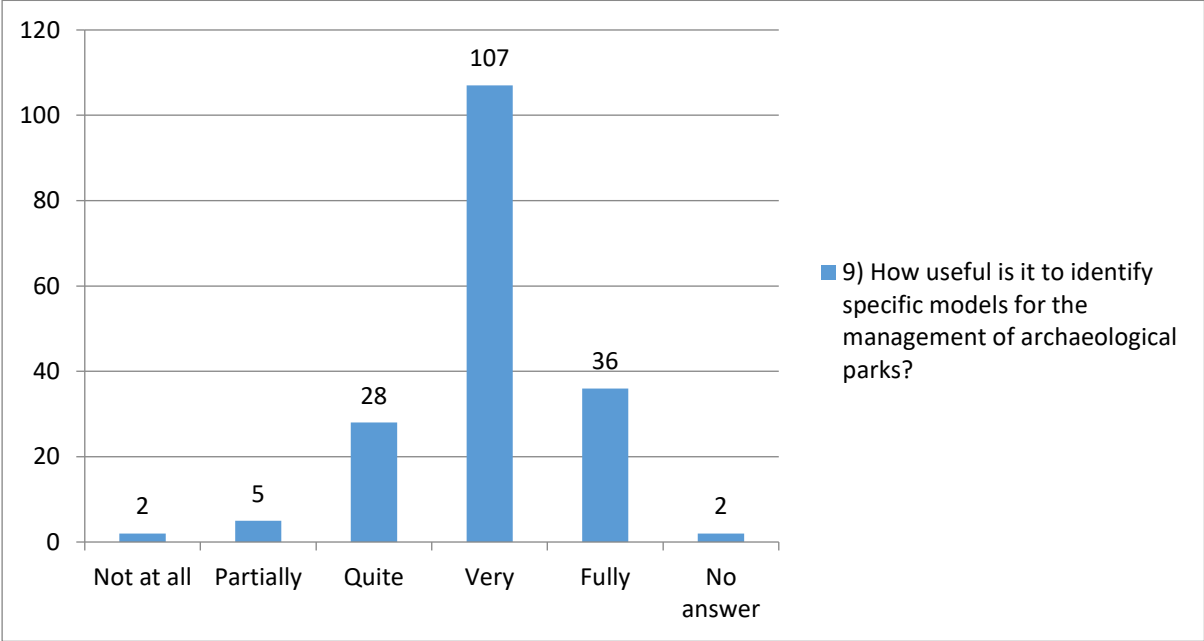
2.2.4 Networks and Systems of Archaeological Parks and Cultural Heritage

For 88 of the stakeholders, it is very appropriate to integrate the management of archaeological parks with the more general management of cultural heritage, and for 54 it is fully appropriate.
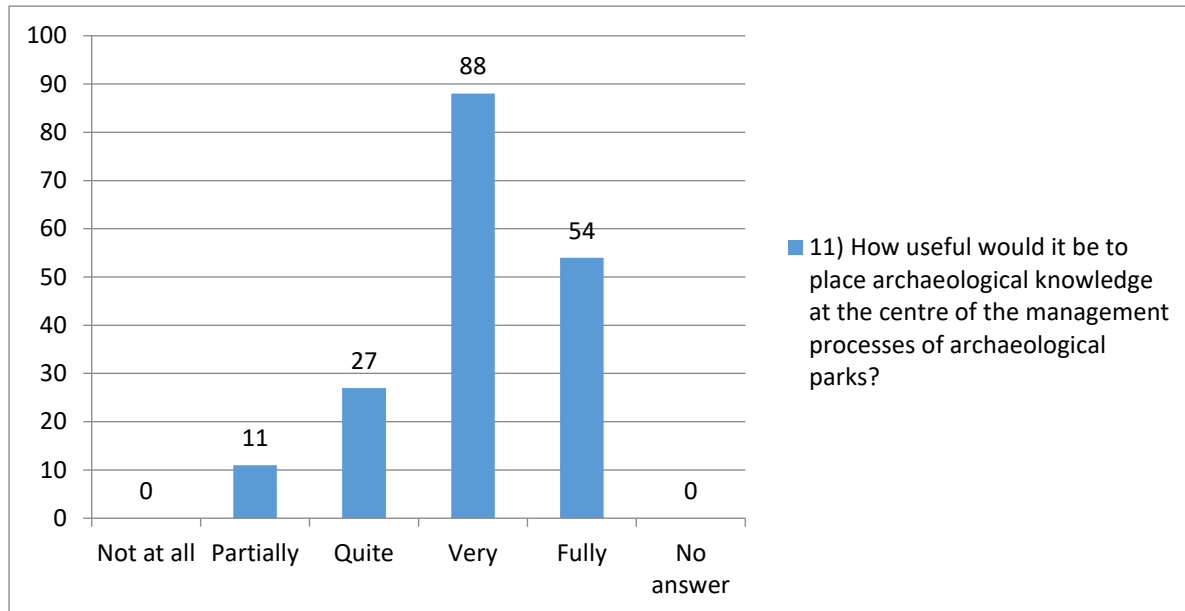
The relationships between the local system articulation and the global network system are influential to the territory development dynamics. The reticular organization also shows that even at different scales it characterizes different aspects of the new territory attitudes and creates virtuous circles so that the specific properties of a certain place are translated into social and economic advantages for the entire network and at the same time for the place itself. The archaeological areas interact with the other articulations based on this network. The knowledge and conservation of the park assets increase the value of the area generated by the park itself. The role of archaeological sites in the spatial system is therefore extraordinary, as is their value in the system. To maximize the positive effects of modern planning and reflection on the development of cultural heritage, it is often approached to network the elements of cultural heritage in certain spatial units. The vitality of the landscape lies in the multitude of components and interdependencies of different networks. Archaeological parks are fundamental components of cultural networks. Cultural networks are configured in an inclusive and complex landscape dimension as networks among other networks, taking on a role of great importance for awareness, preservation and enhancement of local heritage through "openness to change". Creating a park or network of parks contributes not only to the survival and valorisation of the values of an individual monument or archaeological site, but it also contributes towards achieving a qualitative leap in the perception of the social usefulness of archaeology and improving related disciplines within urban and landscape planning. Networking offers many advantages such as:
- improving cooperation and communication between stakeholders in archaeology and culture (transfer of ideas, information, examples of good practice, etc.);
- easier adaptation to modern challenges of archaeological site management;

- increasing the recognisability of archaeological sites;
- increase in the number of visitors;
- promotion of archaeological values and raising awareness of cultural heritage;
- positive economic effects (employment, increase in income, etc.).

2.2.5 The role of the archaeologist in the Archaeological Parks' management

Archaeologists are fundamental in the management of the archaeological parks and their role is truly challenging as they constantly maintain a balance between continuity and change. The presentation and information in archaeological parks reflect the current scope of knowledge, and it is supplemented by new knowledge. Since archaeologists possess the knowledge that underlies the presentation of archaeological heritage, each archaeological park must have archaeologists in its team to satisfactorily provide educational, entertainment, cultural and tourist functions. Archaeologists are therefore the biggest promoters of the value of archaeological heritage.

There is a widespread awareness of this importance, for as many as 88 stakeholders it is very important that the archaeological analysis is at the centre of the processes and for 54 it is fully necessary.
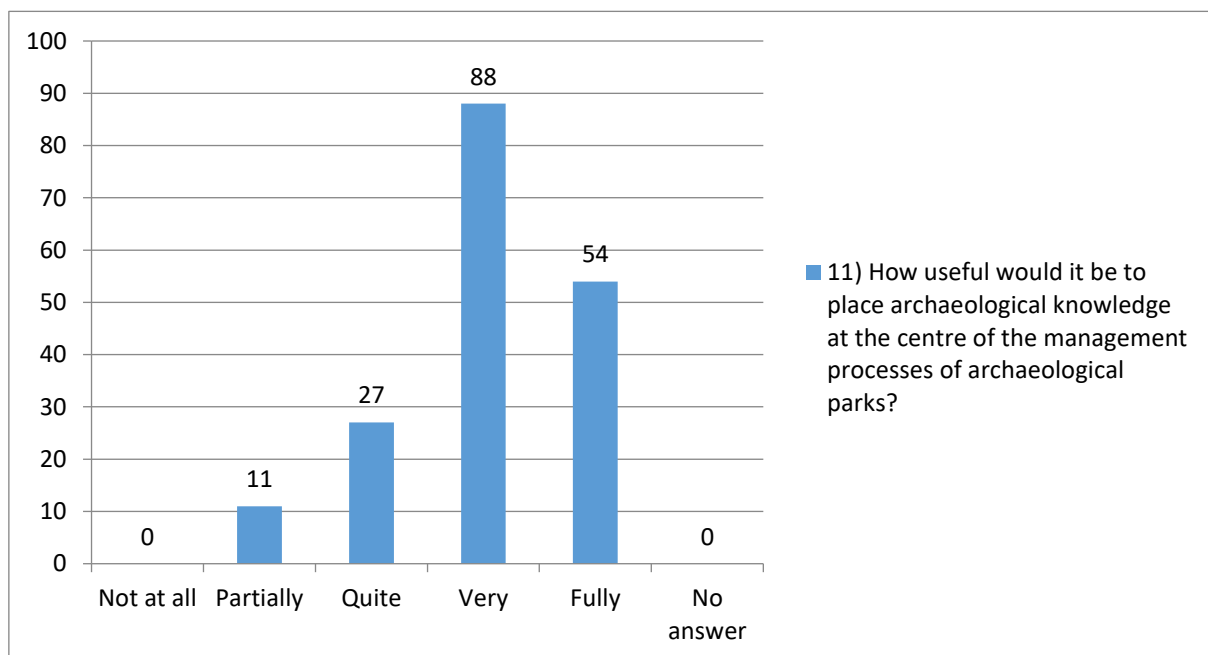
Archaeologists also conduct archaeological research and enrich knowledge about the sites. Therefore, archaeologists should also present the results of the archaeological research to the public and thus promote the values of archaeological sites. In addition, increasing public presence in archaeology can help in efforts to expand the involvement of local community in the development activities of archaeological parks. Hence, archaeologist, have an important role in raising public awareness. Public awareness is one of the main challenges in the management of archaeological parks and at the same time the most effective way to protect archaeological

heritage. Furthermore, archaeologist can contribute to the general organization of the archaeological park area by studying the archaeological reality, from the most visible to the one that still needs to be studied. Doing so, it is possible to determine different forms of use of various parts of the archaeological park and perform zoning of the archaeological park area.

Therefore, archaeologist has to face a double challenge. On the one side with the need to compare with the urban dimension of the territory, and on the other side with the realization of the "educational" and "conservative" targets that are at the base of the institution of the park itself. It is necessary to define the method through which an archaeological park could carry out this role: what it must do and how to do it and what can really be the role of the archaeologist in forenamed process. Management activities of an archaeological park should consider the need to compare with the numerous variable components that interact in a territory effectively obliging to individuate case by case the specific modalities of intervention. One should restrain from a too specific concept of "minimum standards" or from the tendency to propose "management manuals" that are valid once for all. Once certain priority needs are safeguarded, the only possibility is to activate a strict comparison among the numerous needs, subjects and values involved in the area of an archaeological park with the target to individuate a work plan which will be able to set, manage and plan the transformations of the landscape that is nowadays even more accelerated.

2.3. Ideas and projects for a Common Sustainable Governance Model

2.3.1 Functions, purpose and features of the Management Plan

Management plan is primarily an instrument that holistically assesses all aspects of development of an archaeological site and provides a concrete set of measures, tailor-designed strategies and activities that would secure efficient and timely preservation of multiple tangible and intangible values that archaeological parks hold. Because of this, it is necessary to ensure that the management plan is in line with a realistic framework and context. In order to be up-to-date and realistic, the management plan needs to be harmonized with all regulations and documents relevant to the management of cultural (and archaeological) heritage at the national and international level. This means that a management plan of an archaeological park must not conflict with the legislative framework, development policies and higher-level strategic and planning documents. The management plan is an instrument that should summarize and integrate the economic and territorial planning activities of central and local governments.

The management plan is a "living" document that corresponds to the needs and development activities that need to be carried out in an archaeological park. Therefore, a management plan must regulate the management of an archaeological park in such a way that resources are clearly available and provide guidance to managers in the form of a framework for day-to-day operations. The basic functions of the Management plan are therefore reflected in:

- defining standards for the management of archaeological parks with the basic goal of protection - appropriate rules, restrictions and regulations, the method of institutional protection;
- defining strategic guidelines for directing the overall development of the archaeological park;
- prioritization of management tasks to achieve the objectives of archaeological parks;
- coordination and direction of activities of various entities (public and private) in the area of the archaeological park;
- improving the use of financial and staff resources;
- means of communication, coordination and regulation of dialogue between various institutional entities and developing stakeholders.

A management plan can also act as a sort of public contract between the manager, local communities, and visitors on how an archaeological park will be managed and protected in the future. Therefore, a management plan can provide a way and be a kind of method by which the public can examine management decisions and through a participatory approach participate in decision-making and finally monitor the achievement of goals.

Purpose of the Management Plan

The purpose of the Archaeological Parks' management plan is to provide protection and development measures and activities for the archaeological park and to determine strategic and implementation guidelines for the comprehensive preservation of the monument. Likewise, the purpose of preparing a management plan is to prepare a short-term and long-term strategy for the management and maintenance of the archaeological park. Management plan should strike a balance between different interests and needs of the local community and the archaeological heritage and thus direct the development of the archaeological site and planning benefits for the wider area and its population. Management plan needs to define the main framework of work, operation, and development of the park; to determine who is behind the idea and supports its establishment or park design – state, local community, research, educational, museum organizations; what model and method of managing the park will have or are designed to have (financing, type of service, management method - public, private, public-private, concession).

The management plan must take into account the following important determinants of the valorisation of archaeological sites:
- cultural goods are part of the solution to the challenges related to economic development and not its obstacle, and as such contribute to sustainable development;
- archaeological heritage offers new opportunities for development and benefits for the development of the wider area and the local community and consequently raising the quality of life.

Phases of development of the Management plan

Considering the logics of development, the function and the purpose as well as the ways of ensuring the relevance and actualisation of the management plan, it is possible to define the key stages of development of the *Plan*. The process of planning and development of the management plan of the archaeological site includes several basic parts that can be grouped into three levels as follows: collecting information/data, mapping archaeological values, analysis (values, conditions and management context) and decision-making

The development of a management plan is based on the quality of the data collected. In this context, the best emphasis is placed on conducting a combination of office and field research. The preferred method is to map archaeological evidence and relevant spatial elements in the area of the site and the surrounding area such as land cover and social and business facilities and others. It is desirable that the mapped contents entered into a spatial database (GIS). The created database can then be constantly updated and used for various purposes (e.g. in the processes of making other planning documents, making archaeological maps, making maps for visitors, systematizing data, use for scientific purposes, etc.). In considering the optimal way of visualizing spatial archaeological information, the presentation of spatial data in an archaeological context most often answers the questions of *where*, *what*, and *when*. The question of *where* refers to the location, *when* to the history of the locality, and *what* to the definition through thematic properties. In archaeological research, GIS therefore provides a kind of window into the human past by observing the spatial relationships of people and space. The result of mapping archaeological sites is an archaeological map. Archaeological maps are therefore an auxiliary tool for cultural heritage management and planning for the future development of archaeological sites, and are made based on existing studies and fieldwork, which includes all the latest data. Regarding office work, it is necessary to conduct a review of relevant scientific literature, strategic and spatial planning documents, legislative framework, spatial and tourist context of the development of the archaeological site. The existing prepared documentation that can be used in the process of making the management plan can be divided into non-archaeological and archaeological documentation. Non-archaeological documentation and data should comprise of collected available professional literature on the historical context and the existing spatial relations of the site with the surrounding area, spatial characteristics, etc. It is desirable to collect data related to the analysis of the development context. Since the management plan is primarily made to preserve the archaeological heritage and to valorise its potential, it is also necessary to collect the existing archaeological documentation, which is highlighted in the table below.

Table 1. Non-archaeological and Archaeological documentation

DOCUMENTATION FOR THE DEVELOPMENT OF A MANAGEMENT PLAN	
Non-archaeological documentation	- laws and legal acts that protect cultural heritage - photo documentation of a (wider) area - data on the natural conditions of the wider area - especially important for the planning of conservation and protection in the event of natural risks, - traffic accessibility and connectivity, - tourist context - tourist movement (arrivals and overnight stays) for the city in which the archaeological site is located, data on the share of culturally motivated tourists, data on accommodation capacities and tourist ancillary infrastructure etc., - data on cultural stakeholders (institutional and non-institutional), - relevant spatial planning documentation (and other documentation regulating land use) and strategic planning documentation, - cartographic representation of land use, - geological map, - data and documentation on projects that are currently being implemented, and are relevant for planning the development of the archaeological park area, - State of the Environment Reports - Risk Assessment Reports.
Archaeological documentation	- documentation on the conducted archaeological research, - archaeological map of the site, - archaeological map of the territory, - map of the archaeological potential of the site and territory, - archaeological prediction map of the site and territory, - map of the archaeological vulnerability of the site and territory, - map of the ancient road system, - scientific archaeological literature and sources, - archaeological photo documentation (whole and parts of the site and individual findings), - field diaries from conducted research.

In the analytical part of the management plan, it is necessary to conduct an analysis of the current condition of the archaeological site, the level of protection, management methods, tourist valorisation and infrastructure equipment. As in the part of data collection, it is necessary to ensure a satisfactory degree of participation during the analytical part. The participatory approach moves away from the traditional top-down approach in conducting analyses and the process of drafting the document and involves a wide range of stakeholders in the planning process. The main advantages of this approach are better insight into real development problems, creating a strong base for community interventions, timely public involvement and providing an opportunity for all stakeholders to express themselves, their opinions and ideas and the involvement of others (civil and private) sectors. It is recommended to implement the method of analysis of examples of good practice, which assumes comparison with examples that are perceived or recognized as the best in practice. In this way, it is possible to obtain ideas and principles for approaching the organization of archaeological sites about the available resources, context and possibilities of the organization of site management.

After the analyses are conducted, the last step in the process of making the management plan is to define an action plan with development objectives, measures and activities. The action plan must respond to the identified challenges and identified opportunities and priorities in the further development of the

archaeological park and identify the relevant stakeholders and resources needed to implement defined activities. In addition, it is very important that the management plan defines implementation indicators which must be in form of quantitatively and qualitatively measurable data thus enabling monitoring, reporting and evaluation of performance in achieving the established development objectives. Public consultation and final approval should be made before the implementation of the management plan. The last phase of the development of the management plan is related to its implementation and evaluation. Characteristic of this phase is that management plan has already been developed and presented to the public. As part of this phase activities are carried out of measuring defined implementation indicators and continuous reporting on their results. Based on the measured and evaluated results of the implementation indicators, it is possible to make changes to the action plan and thus influence the change of the content of the management plan.

In order to update and harmonize the management plan with the real context and challenges during the entire process of development and implementation, three phases can be distinguished in the entire process (see below).

Table 2. Phases and activities

PHASE	ACTIVITIES
1. Phase of capacity building	• shaping the cognitive framework; • collecting non-archaeological and archaeological documentation; • conduction socio-demographic research; • comparison with previous scientific research; • raising the curiosity and awareness of public – expectations of locals and stakeholders about what is the plan and what is necessary to include in the management plan; • participatory activities – workshops, meetings with stakeholders, interviews; • creation of communication-participation strategy; • defining deliveries, project requirements and scheduling project activities; • conducting initial analyses.
2. Planning phase	• detailed analysis of the current state by professionals and in cooperation with the main stakeholders; • analysis of the monumental value of the archaeological site; • analysis of the existing management of the archaeological site; • participatory activities for securing the inclusion of public and evaluation of creation of the management plan; • define a set of development objectives, measures and activities • define implementation indicators
3. Implementation and evaluation of the	• measurement of implementation indicators; • continuous reporting on the results of the measurement of implementation indicators; • evaluation of the results of measuring implementation indicators and proposals for revision of the action plan.

Stakeholder involvement in the planning process

The bottom-up approach, typical for local territorial planning cannot be used mechanically because there are constraints imposed from above in the form of protection. The successfulness of the bottom-up approach lies in educational and capacity building programs, creating opportunities for the public to equally collaborate on parks management with the idea to "set up" the archaeological park as a part of the local community. It is necessary to transmit the message that the local community is responsible for long-term preservation of the park's future generations.

The local community is socially sustainable incisively if it is involved in planning development processes and activities in the space in which it exists. The participatory approach contributes to connecting various relevant stakeholders, identifying additional opportunities for development, increasing democracy, pointing out potential problems of vulnerable groups and placing the entirety of interaction in the context of the space that is the subject of planning. A key parameter in this intention can be recognized in the interaction of the non-governmental and state sectors in favour of preserving and promoting the archaeological cultural heritage. Since it is a decentralized approach, planning should start directly from the stakeholders involved. Higher motivation and identification with the created plan is an effective result. Since stakeholders are directly involved in the planning process, then the plans are generally more realistic. Due to the strengthening of the social aspect in the form of involvement of the local population, in this way, it contributes to the quality of the management plan and consequently contributes to the sustainability of the organization of the management of the archaeological park.

To improve public participation in the management of the archaeological site, the following activities are proposed:
- raising awareness and capacity of the local community for preservation, interpretation and use of heritage through the organization of information events and educational activities and workshops;
- conducting survey research to obtain feedback on the possibilities and quality of public involvement in the management of the archaeological site;
- involving the public in the valorisation and interpretation of the park through conducting a joint SWOT analysis;
- open dialogue through workshops/focus groups for the public to recognize among themselves possible collaborators for the development of parks or the introduction of new programs and projects.

Still, public involvement and outreach to stakeholders are possible through organizing workshops, focus group meetings as space for open dialogue about the future of the archaeological parks. Collecting inputs of all participating actors, creating a database with stakeholders' inputs, their systematization and integration in the management plan. In this context, it is recommended to form a "Working Group" or a "Working Team" to bring together stakeholders interested in voluntary participation and to provide feedback on park management. In addition to the development process, the involvement of these stakeholders in the management of

archaeological parks is recommended in the implementation of the management and development activities and in next steps by involving different stakeholders, the *Plan* intents to contribute to the thinking of archaeological parks in the context of a holistic cultural tourism project. The ultimate goal of bringing together relevant stakeholders is to contribute to the balance between sustainable preservation and the development of the economic and social potential of the archaeological heritage. For this reason, cooperation between the relevant ministries, regional and local public authorities and civil society is necessary. In this way, archaeological parks and cultural heritage would be brought to the centre of local everyday life, economy and sustainable development. Taking this into account and integrating the inputs of the partners, the table below suggests the stakeholders that should be involved in the whole process of drafting the management plan and also the development of the archaeological park.

Table 3. Stakeholders that should be involved in the co-planning process

PUBLIC SECTOR	PRIVATE SECTOR	CIVIL SECTOR
• sectoral competent ministries • conservation bodies responsible for the area where the archaeological park is located • national/regional/local public authorities • cultural institutions (museums, libraries, cultural centres...) • higher education and scientific research institutions and centres • educational institutions • local and regional tourist boards • public travel agencies	• system of companies directly involved (restoration, research, project planning, professional support, enhancement ...) competent ministries • system of companies not directly involved restaurants, food and wine, crafts...) • private travel agencies • private enterprises in culture • founder/investor/financier	• civil society organizations (e.g. in the field of culture and art, education, science and research, sustainable development, environmental and nature protection, protection and rescue, sports, spirituality...) at all territorial levels (national, regional and local) • local community • interested archaeologists, individuals, others...

Experience shows that when we exclude some of the listed entities from the management plan it usually produces certain problems later. Therefore, all potential stakeholders should be carefully analysed to avoid such situations. At the same time, each involved entity can offer certain benefits in the development and/or implementation of the management plan. This benefit can be seen in a variety of resources such as knowledge, equipment, research space or accommodation of work teams, etc. Gathering different stakeholders of different interests can be very challenging and difficult, so the results themselves and the inputs obtained can be unsatisfactory. As one of the options in this regard, the Italian partners suggest hiring an external (neutral) leader who can ensure neutrality. Such a person must have good communication skills, understand the problems and interests of individual stakeholders and find solutions to bring individual interests together and thus contribute to the quality of the management plan and consequently planning the development of the archaeological park.

An archaeologist should have a very important role in the work of the Working Team. This is an extremely important moment in the whole process. The importance of

archaeologists in the work of the working group is reflected in the development of cognitive frameworks based on the knowledge about the archaeological site. As we pointed out earlier, archaeologists are the biggest promoters of archaeological sites because their work gathers new knowledge about sites and presents them to the public and is used for the further valorisation of archaeological heritage values. The archaeologist can therefore direct the work of the Working Team towards the sustainable principle of preservation and protection and valorisation of the archaeological heritage. Furthermore, the role of archaeologists in the work of the Working Team is reflected in taking into account the specifics of the wider area, defining effective forms of cooperation, developing a "museological" project to prepare the park area and contributing to the design of knowledge transfer for the educational function of the archaeological park. Public involvement and outreach to stakeholders are possible through the following methods: focus groups, participatory workshops, meetings and "round tables", interviews with experts, open-air workshops aimed at capacity building and gathering information from the local population, surveys of the local population and informal consultations with relevant stakeholders.

Organization of the Management Structure of the Archaeological Park

An important function of the management plan is to arrange the management of the archaeological park in the coming period. The management plan should cover the topic related to the organizational structure of the archaeological park. The pilot areas of the TRANSFER project are at different stages of development and valorisation of the potential of the archaeological heritage (in organizational, infrastructural, economic, social and participatory aspects). In addition, they are located in areas of different degree of development and there are certain differences in the institutional and legislative context. Said situation necessitates the suggestion of a model of organizational structure that will be possible to apply as flexibly as possible for the management of all pilot areas. The organizational structure primarily should be harmonized according to the needs and goals of the management of archaeological sites. For this reason, there is no universally applicable organization of structures for all of the archaeological parks. The organizational structure also depends on aspects such as development context, the existing level of valorisation of archaeological sites, legislative framework, number of potential stakeholders, diversification of stakeholder network, etc. However, given the main functions of archaeological parks, it is possible to identify main areas of management according to which the formation of the organizational structure of the archaeological park can be approached. These are all important determinants that should be taken into account when proposing a model of organizational structure for the management of archaeological parks. In this phase of the project a model of an organizational structure is recommended concerning the identified functions and directions of development of archaeological sites so it can contribute to the proposed organizational structure being flexible, adaptable, and yet sufficiently specific in terms of identified staffing and knowledge needs in the context of the archaeological site management. In general, the most efficient organization of the management structure is the one that can meet and achieve the planned development activities (management/administrative, research, educational, service, tourism, etc.). The organization of the management structure of the archaeological park must meet the

expectations of the management - it must enable the performance of the primary functions of the archaeological park, the administrative prerequisites of the organization and additional activities.

Table 4. The suggestion of a model for establishing and organizing an archaeological park management structure

Manager of the archaeological park (Archaeologist)		
Primary activities	**Administration**	**Additional/occasionally activities**
- Body/staff in charge of protection and maintenance - Body/staff in charge of conducting research - Body/staff in charge of the tourist presentation - Body/staff in charge of educational programs - Body/staff in charge of ICT tools	- Body/staff in charge of general and administrative affairs - Body/staff in charge of finances - Body/staff in charge of communication and promotional activities - Body/staff in charge of human resources	external staff occasionally involved inthe activities of the archaeological park
Body/staff for planning and implementation of development projects		

2.3.2 Objectives and Strategic Guidelines for the Management of Archaeological parks

The management plan must be harmonized with the general objectives of the organization of the archaeological park and, at the same time, define specific objectives based on which it will contribute towards achieving the general objectives that were the main impetus for starting the organization of archaeological parks management. Thus, it is necessary to primarily understand the reasons and importance of the establishment and the main motivating factors for the valorisation of the potential of archaeological sites and heritage through the establishment of archaeological parks. In this context, it is inevitable to point out that archaeological sites are a recognizable spatial element that provides additional value in the spatial context. The local community is associated with this value and the archaeological heritage becomes part of the identity of the local community. Furthermore, the importance of the archaeological site is reflected in the context that the management of archaeological heritage serves as a kind of tool to raise awareness of the value of cultural heritage. Italian partners point out "improvement and growth of awareness by the local community" as one of the objectives. A prerequisite for meeting these social objectives of the organization of the archaeological park is the primary protection of the archaeological heritage, but taking into account that the logic of defence protection prevails in favour of active protection. This will consequently contribute to increase the previously mentioned understanding of the archaeological and cultural heritage (i.e. education of the population) and based on all of this create the basis for contributing to the economic development of a particular area in which the archaeological park exists.

If we summarize the stated, we can highlight the general objectives of the establishment of the archaeological park which are to be recognized by all partners, and they are: protection of the archaeological heritage, continuous research and progress of knowledge, raising the awareness of local communities for cultural heritage and contribution to economic growth.

After setting a framework for understanding, it is possible to determine the objectives of the management plan (as a tool and method of planning the development of the archaeological area) which will guide and define the objectives of development and valorisation of archaeological parks in the future. In addition to preserving the region's tangible and intangible resources, the management plan must also identify how socio-economic development and territorial change must be managed in such a way as to balance different interests and maintain over time the integrity of values that first allow localities to be identified, conservation needs with the needs of local communities and sustainable economic use of the site as a good. The goals and activities of the dominant aspects of the management of archaeological parks according to the obtained inputs of the partners are presented in detail in the table below. The dominant aspects highlighted in the table are strongly related to the previously identified general objectives of establishing archaeological parks and as such allow the concretization of potential and necessary characteristic and concrete activities in the management of archaeological park.

Table 5. Characteristic objectives and activities of the dominant aspects/themes of archaeological park management

ASPECT/ THEME	CHARACTERISTIC MANAGEMENT OBJECTIVES	CHARACTERISTIC MANAGEMENT ACTIVITIES
Society and Culture	• promote public use through access policies • organize events and meetings dedicated to experimental archaeology, production archaeology and cultural activities in general • raise awareness of the value of cultural heritage • organization of new social content • integrated promotion of cultural heritage both thematic and territorial	• promotional activities to raise public awareness • organization and offer of services for public use • education for prevention of destruction of the infrastructure of the archaeological site • arranging thematic archaeological trails • adapting social contents for people with disabilities and people with reduced mobility • development of educational programs for multi-sensory impairment and blind and partially sighted people • reconstruction and staging of historical events • organization of cultural events

Science and Research	• promote scientific research also aimed at the growth and acquisition of new archaeological heritage by analysing the "potential" presence of still buried archaeological structures • promote research on conservation topics and the relationship with technological and economic development • promote research activity in relation to new technologies applied to cultural heritage	• conducting of archaeological research resource development and implementation policies • public presentation of scientific results • applying research results for development, interpretation and tourism purposes • conducting educational activities at the site • involvement of educational institutions in research activities
Preservation and Natural Environment	• safeguard the archaeological heritage • improve environmental quality	• conservation and protection of the archaeological, cultural and naturalistic heritage • site landscaping activities • cultivation of native plants • protection of flora and fauna • actions of joint cleaning and maintenance of the environment (wider) area for the involvement of the local community
Economy	• promote cultural services • create a model of sustainable development by favouring and reorganizing economic activities • tourist interpretation and presentation • create a model of sustainable development by enhancing valorisation through the use of ICT tools	• regulation of rules on ticket and ticket prices • management and organization of human resources • creating a tourist guide program with interpretation • budget policies

The guidelines for the development of the management plan are therefore considered as:
• creating a vision and strategic framework (strategies, methods, tools, actions and projects, sources of funding and time) for sustainable development of the site in the coming period in line with international principles, but also local needs;
• establishing a balance between the protection and use of archaeological heritage and natural environment;
• developing an interdisciplinary management principle with a clear division of responsibilities of all development stakeholders;
• increasing the economic and social benefits of archaeological heritage.

As these address critical challenges in the management plan development process, they need to be taken into account as the guidelines balance between social and economic development, cultural and natural heritage, professionals and the local community, as well as heritage conservation and use. It is proposed that the following relevant strategies should be developed as part of the development or in connection with the development (depending on the development phase).

Table 6. Specific strategies and their purpose

SPECIFIC STRATEGY	USEFULNESS AND PURPOSE IN THE PROCESS (DESCRIPTION)
Communication-Participation Strategy	A tool for systematic planning of the implementation of activities in the function of managing the processes of communication with stakeholders; through the strategy it is necessary to define objectives and principles, target groups, communication measures, activities and tools, and monitoring and evaluation of communication effects.
Scientific & Research Strategy	What activities to be introduced as to achieve set objectives for new research projects (archaeological excavation, publications, scientific partnerships and collaborative projects etc.).
Conservation & Restoration Strategy	Activities that need to be implemented as to maintain physical preservation of the archaeological park; development of Conservation Programs, Schools, international cooperation programs for heritage conservation.
Strategy for the Management of Historical and Natural Heritage and Infrastructure	The strategy proposes to include the topic of restructuring the goods produced by the service and the realization of new manufactured goods and infrastructure for enjoyment. It is proposed that the Strategy also takes into account the maintenance of natural heritage, which can be a kind of "tool" to emphasize the recognisability of ancient texture.
Interpretive Plan	An interpretive plan should be prepared that identifies the interpretive topics and subtopics that best serve the didactic function of the place. Presentations and information must reflect the current scope of knowledge and need to be constantly updated and corrected
Public Awareness and Organization of Educational and Recreational Functions	What programs to introduce as to influence public engagement and raise their interests towards the park; (summer camps, public debates, festivals, open-concept events, obligatory school visits etc.). The strategy should create conditions for extending the time spent by visitors in the park by creating the necessary infrastructure to formulate an integrated offer for archaeological visits and accommodation near the area to facilitate functional relations and strong interdependence (based on mutual and complementary interests, primarily in terms of services for tourists) between the Park and other places of interest.
Business Planning & ICT tools	What products can be developed through ICT tools that can bring income to the park through tourism development and creative industries; (mobile apps, mobile games, augmented reality, virtual museum, interactive exhibition, immersive touristic experience).
Risk Management Strategy	Identification of potential risks and means on how they can be solved/avoided. The natural risk management system must be flexible enough to be able to respond to the occurrence and potential consequences of natural risks such as fires, earthquakes and other potential risks. A risk management strategy can therefore be an important tool in decision-making to reduce potential damage and can therefore also contribute to the preservation of the archaeological heritage.
Visitor Management Plan	Integral part of the management Plan which connects the strategic objectives of the management plan with visiting activities in order to ensure an adequate level of protection of the archaeological heritage and further economic valorisation of the site.

Financial Plan	The financial plan defines the financial requirements and time frame for development activities and acquisition of financial resources. The purpose of the financial plan is to clearly define the need for financial resources to achieve future goals and activities in the management plan. The financial plan needs to be reviewed regularly, especially when unexpected changes occur.
Monitoring and Evaluation Strategy	What are the indicators and outcomes of the previous set of strategies and activities. Collection of data that is beneficial to learn from and gain input on what has been done, and what should be done in the future.

2.3.3 Contents of the Archaeological Parks' Management Plan

Given its relation to an archaeological park, the management plan should summarize and include a concise and integrated economic and territorial planning activities of central and local authorities in the context of the specifics of archaeological park planning and its impact. A key part of the content of the management plan is to define the vision, development goals, development measures and activities in direct dialogue and stakeholder participation with the use of available resources in a given territorial, cultural and socio-economic context.
The management plan for the archaeological site should be defined through the following specific areas:
- Inventory and description of the value of the archaeological site
    - territorial and geo-traffic context
    - description of archaeological heritage
    - a brief history of the archaeological site
    - significance of an archaeological site
    - definition of the spatial scope of the management plan
- Management system
    - management challenges
    - stakeholder network analysis
    - participation and capacity building
    - legal and strategic framework
    - heritage and environmental impact assessment
- Strategic management areas
    - research and scientific activities
    - protection, preservation and maintenance
    - asset management
    - staffing and capacity building
    - sustainable development and general organization of territories
    - social and educational function
    - tourism management and complementary activities
    - digitization and ict tools
    - financial sustainability
    - accessibility system management
    - risk management
- Mission and vision of the archaeological site
- Action plan (includes all strategic management areas)
    - coherent set of short-term, mid-term and long-term objectives

- measures and activities
- timeline for the implementation of the action plan
- responsibility for implementation
- financial framework and available funds
- Monitoring and reporting

In the introductory chapter *Inventory and Description of the Value of the Archaeological Site* it is proposed to briefly describe the territorial and geo-traffic context of the archaeological site. The surrounding area and spatial elements can have an impact on the development of the archaeological park and therefore it is necessary to make a brief analysis of the territorial geo-traffic context. As part of the description of the territorial geo-traffic context, it is recommended to create a map in GIS with marked (relevant) spatial units, larger settlements and tourist centres nearby and the most important transport infrastructure (e.g. roads and railways, sea and river ports, airports) which affect the availability in the area. In the introductory part, it is necessary to briefly describe the archaeological heritage, the significance of the archaeological site and a brief history of the archaeological site and the surrounding area.

Next proposed chapter of the management plan is the *Management System*. In order for the management plan to be ready to respond to actual challenges, it is necessary to conduct an analysis of the current situation based on which can be properly identified key strengths, weaknesses, threats and potentials in the future management of archaeological parks. In this context, it is particularly important to identify and involve relevant stakeholders who, with providing the necessary information in the form of the necessary documentation, can also act "from the field" and thus contribute to the development process. The management plan should be created in open dialogue with all interested parties and produced in a format that is understanding and comprehensible to the public. Very important determinants that guide the way of planning the management of an archaeological site are related to the existing system and management framework. Therefore, it is proposed that the management plan includes substantive analyses related to the identification of existing management challenges. Likewise, it is very important that within the development of the management plan an important subchapter is devoted to stakeholder network analysis. This analysis should connect the existing stakeholders involved in the process of drafting the management plan, those who participated in the preparation of the drafting, but also those who are already actively involved in the management of the archaeological site. It is crucial to describe which participatory activities were carried out as part of the preparation and development of the management plan. In this section, it is necessary to provide basic information on the implemented participatory activities and the main conclusions obtained as a result of the implementation of these activities. It is desirable to explain the above-said from a methodological point of view to understand and logically set the whole process. Moreover, in the part *Legal and Strategic Framework* it is necessary to explore the basic principles of archaeological heritage management within the legal framework and to show their horizontal and vertical hierarchical structure. The purpose is to place the management plan in legal and strategic framework of property protection and planning (strategic and spatial). The *Heritage and Environmental Impact Assessment* section must identify potential impacts on

heritage and the environment and propose guidelines for assessing direct and indirect impacts.

The chapter *Strategic Management Areas* proposes to identify the main strategic guidelines for the management of archaeological parks. Given the inputs, it is proposed that the management plan should define the following strategic priority areas: *Research and Scientific Activities, Protection, Preservation and Maintenance, Asset Management, Staffing and Capacity Building, Sustainable Development and General Organization of Territories, Social and Educational Function, Tourism Management and Complementary Activities, Digitization and ICT tools, financial sustainability, Accessibility System Management* and *Risk Management*. For each strategic area, it is proposed to define strategic objectives, measures and activities. Also, each of these strategic areas can be viewed as a separate smaller strategy for a specific area of management. The inclusion of these strategic areas ensures that they are taken into the context of the development of an archaeological park.

The next chapter will define the *Vision and Mission of the Archaeological Site*. Vision is a key step of management planning and represents the framework according to which the plan is made and management is implemented. The vision is a brief description of the ideal future state of the whole archaeological site in the long run. The mission determines the objectives in space and time and is the base for the implementation of defined goals and strategies. The *Action Plan* connects planned objectives, measures and activities with the management capacities of the competent institutions and involved stakeholders, as well as the financial resources needed for the management of the archaeological parks and the implementation of defined development activities and put everything in the planned time period.

The final chapter *Monitoring and Reporting* will describe the method of monitoring the implementation of the management plan and the method of reporting. Implementation monitoring is thus a process of collecting, analysing and comparing indicators that systematically monitor the success of the implementation of documents. In order to accurately monitor the implementation and potential adjustment of the action plan to new situations during the implementation period, it is necessary to prepare a report (or at least once a year) for different topics quantifying the current state of implementation.

2.3.4 Models and means for monitoring results and evaluation

For any management plan, it is necessary to have an elaborated *Action Plan* with detailed activities and time for their implementation. Monitoring the implementation of the management plan is based on monitoring the success of achieving the objectives and activities defined in the action plan. Thus, monitoring represents a logical continuation in terms of monitoring the implementation of development activities envisaged by the action plan. Monitoring the implementation and results of the management plan is a process of collecting, analysing and comparing indicators that systematically monitors the success of the implementation of documents. Objectives in strategic planning acts must be clearly defined and measurable by using the relevant indicators. Performance indicators represent a kind of system that combines the monitoring of implementation results during the

implementation process and contributes towards maintaining quality communication between stakeholders through interpretations and reporting on implementation results. The main purpose of reporting is to inform stakeholders about the implementation of the management plan and potential constraints and needs identified during the implementation process. Likewise, reporting serves to consolidate the results achieved by individual stages of the implementation of the management plan. By combining the results, it is easier to identify challenges and needs that may not be foreseen during the development of the management plan and thus contributes to the possibility of updating the management plan. Furthermore, the importance of reporting is also reflected in ensuring the transparency of the entire implementation process. The reports on the results of implementation, therefore, represent one of the methods of checking the management of the process of implementation of the management plan and services for regular and systematic checking of progress with the planned dynamics. In particular, monitoring the implementation of the management plan would be focused on defined activities within the *Action Plan*. Outcome indicators are quantitative and/or qualitative measurable data which enable monitoring, reporting and evaluation of performance in the implementation of objectives and activities. Therefore, it is necessary to clearly define the implementation indicators (nominal/textual), the quantitative scale (unit of measurement) and target value, and sources of verification. Defined implementation indicators must cover thematically all relevant areas related to monitoring the state of archaeological sites and the effects of individual activities, level of development and valorisation, management methods, impact on the wider area (economic, environmental, social in the form of the local community), promotion of cultural heritage values, etc.The source of monitoring data depends mainly on what each indicator is trying to measure. After creating implementation indicators, methods for gathering data and the frequency of recording the various data to tack indicators must be established. This should be a conversation between program stakeholders, managers and staff. It is proposed that the monitoring process should be based on semi-annual reporting in the process of implementing the management plan.

Table 7. Example of forming an implementation monitoring framework

Objective 1:											
Measure 1.1.	Implementation indicators					Implementation time					
	Indicator name	Scale (unit)	Initial value (year)	Target Value (year)	Source for monitoring	Y1	Y2	Y3	Y4	Y5	…
Activity 1.1.1											
Activity 1.1.2											
…											

It is possible to distinguish different types of indicators in detail - input indicators, output indicators, result indicators and influence indicators. For example, if one activity is for the conservation, restoration or improvement of infrastructure at the archaeological park it is possible to distinguish:

- input indicators: resources spent for the realization of planned activities (human, financial, working hours);
- input indicators: work that has been conducted with provided resources;
- result indicators: which benefits were achieved for the park's users;
- influence indicators: the developmental effects that were produced through the realization and implementation of planned activities.

The report on the implementation of planned awareness/educational programs:

- input indicators: human, financial working hours spent for the realization of program activities;
- output indicators: number of participants, their demographic, educational and age structure; number of implemented schools, seminars, workshop participants and characteristics;
- results indicators: the achieved benefits for users of proposed programs;
- influence indicators: the general effects of the programs, web and media reporting, enhanced knowledge and skills of participants, enhanced capacities and support for local community, local recognition of cultural heritage importance in the municipality.

One of the most common management tools is the *Program Evaluation Review Technique* (PERT). This evaluation monitoring tool is divided into the following steps:

- identification of specific activities and milestones
  - the activities are the tasks of the management plan,
  - the milestones are the events that mark the beginning and the end of one or more activities;
- determining the proper sequence of activities
  - this step may be combined with #1 above since the activity sequence is evident for some tasks,
  - other tasks may require some analysis to determine the exact order in which they should be performed;
- network diagram construction
  - using the activity sequence information, a network diagram can be drawn showing the sequence of the successive and parallel activities;
  - arrowed lines represent the activities and circles or bubbles represent milestones;
- an estimate of the time required for each activity
  - any consistent unit of time can be used;
  - ability to deal with uncertainty in activity completion times;
  - the model usually includes three-time estimates:
    o optimistic time - the shortest time in which the activity can be completed
    o most likely time - the completion time having the highest probability
    o pessimistic time - the longest time that an activity may take
- determining the critical path
    o the critical path is determined by adding the times for the activities in each sequence and determining the longest path in the project
    o the critical path determines the total calendar time required for the project
- PERT chart update as the management plan progresses
  - as the management plan unfolds, the estimated times can be replaced with actual times;

46

- in cases where there are delays, additional resources may be needed to stay on schedule and the PERT chart may be modified to reflect the new situation

2.3.5 Connection of the Archaeological Parks' Management plan and topics of the WG2 and WG3

In order to properly plan the development of archaeological sites, increase its attractiveness and contribute to sustainability, various aspects of the development of the archaeological park, including planning economic activities and equipping the archaeological park with ICT tools should be considered in the process of developing a management plan. In this context, the management plan should provide short-term and long-term development guidelines with the aim to develop infrastructure, superstructure, cultural and tourist products and multimedia technologies to increase the attractiveness of archaeological sites for visitors. Specifically, management plan should open the possibility of implementing activities that economically valorise the values of the archaeological heritage and also enable future development of ICT tools in the archaeological parks. Defining and including such activities in action plan of the management plan can consequently enable the provision of financial resources from development projects of the European Union, which constantly emphasizes the importance of cultural heritage for the development of the European territory and society. Since it directs the management of the archaeological park in a certain period of time, the plan must recognize the opportunities and models for the economic sustainability of the archaeological park and the creation of multiple development benefits. Multiple development benefits are also created by ICT tools in various contexts relevant to the management of the development of the archaeological park (presentation and interpretation, organization, infrastructure, promotion, education, etc.). Development of the archaeological park and continuous planning process should recognize the importance of including and applying ICT tools in all identified phases of the management plan in order to achieve qualitative directing. From the first stages of approaching the development of the management plan, it is necessary to consider the ways (and ultimately apply) the use of ICT tools through, e.g. creating a database with available literature/information, in the work of working groups for developing the management plan, systematization and collection of documentation, etc. For example, the use of GIS tools in the initial stages of development planning can be useful in creating a spatial archaeological database. Moreover, it is possible to more comprehensively interpret and display the results of archaeological research through cartographic visualization by using GIS. Increasing the number of visitors can consequently increase the profits of the archaeological park and encourage the creation of new services and programs in the area of the archaeological park and the surrounding area. Likewise, the application of ICT tools in presentation of the archaeological park undoubtedly raises the quality of interpretation and thus attracts different target groups of visitors. The boost in the number of visitors to the archaeological park consequently increases the awareness of the value of the archaeological heritage that has the power to generate development opportunities and benefits for other elements of cultural heritage in the wider area.

An important aspect that connects the topics of management, economically sustainable activities and the use of ICT tools is promotion. Development of

technology resulted in significant changes in motives, interests and needs of tourists when choosing a destination to visit as well as activities on the trip itself. Smartphones, the possibility (and need) of constant access to the Internet and connectivity through numerous social networks largely define modern tourists. The management of the archaeological park, therefore, combines the challenges of valorisation of archaeological and historical values of the site with modern needs of tourists and thus tourist valorisation that largely depends on the level of digitalization and equipment of ICT tools in the archaeological park. The pilot project areas should consider establishing a digital presentation of the archaeological park (website) and other social media channels as a means to interact with the general public, audience and media. Using social media advertising tools as a means to target the desired audience can provide a digital environment that will be participatory online. Mentioned ideas are examples of a cause-and-effect chain that contributes to the overall development of the archaeological park, the wider area and the consequent contribution to improvement of the quality of life for the local community.

CHAPTER 3: IDENTIFICATION OF ECONOMIC SUSTAINABLE ACTIVITIES CAPABLE TO CONCILIATE ECONOMIC GROWTH WITH CULTURAL PRESERVATION (results of WG2)

3.1. Analysis and synthetic interpretation of relation and interactions between parks and territories

3.1.1 Characteristics and functions of the economic activities operating in the archaeological site and connected with management

The reflections elaborated by the specific analysis of the different archaeological areas considered (Antiquity of Ioannina – Greece], the Archaeological Park of "Urbs Salvia" and the municipality of Murter-Kornati with the EU project HISTORIC) have highlighted and definable functions exemplary matrices. Outlining a synthetic picture of the history and of the enhancement interventions carried out over the years allows to accentuate some significant shared aspects:

1) the importance of the contribution of patron entrepreneurs in financially supporting excavations and researches (as happened for example in the Greek area in the years 1875-1876 first and in the decade 1929-1939 then, under the auspices of the Archaeological Society of Athens);

2) the role of private individuals such as NGOs and companies that, in close contact with the Municipalities (as happens in Murter-Kornati), with the greater economic and organizational autonomy of external subjects in the promotion and management of cultural tourism (as happens in the Archaeological Park of "Urbs Salvia) and with the financial support of the Ministry of Culture (as in Omišalj), they carry out projects, initiatives and interventions aimed at the enhancement of the areas, viable and usable implementations, and at the dissemination of the reference cultural contexts;

3) the indispensable scientific coordination by the universities which must be protagonists of the conservation, restoration, reconstruction and arrangement of archaeological sites;

4) the crucial nature of the European Funds through which implement policies for the development of the communicative and educational potential of archaeological parks through a program of interventions that are studied and articulated;

5) the decisiveness of strategies for visits, openings and ticketing that encourage maximum usability of the parks;

6) the involvement of various actors, researchers, restorers, urban planners, architects, archeologists but also public and private tourism promotion bodies that collaborate in the development of projects and the promotion of sites.

7) the infinite need to elaborate and experiment, in addition to the classic theatrical and musical in situ evening visits, installations made through ICT which, with greater incisiveness, allow to draw attention to the areas and promote suggestive images whose memories are echoed.

3.1.2 Interrelation between the economic activities linked to the site management and the territorial economic entities

Criticalities and potential emerge from the analysis of the relationship between the economic activities related to the management of archaeological sites and the economy of the territories on which they stand. The monitoring, preliminary to the definition of an operational strategy, highlighted, in some cases, the sporadic nature of economic activities linked to the management and use of the archaeological areas taken into consideration, in others the scarce significance of the existing ones. Therefore, a methodological indication is necessary that allows us to envisage solutions in the short, medium and long term and that starts from two fundamental considerations:
- that these places can be exceptional fields of experimentation of communication strategies;
- that an archaeological site can enhance and redevelop the entire urban context in which they are inserted.

With this objective, attention to the more purely archaeological aspects cannot fail to integrate with other activities that, owned or managed by local authorities or other public and private entities (called to exercise their interests in harmony with the needs of protection), must be present. It is clear that, in order to define any future promotion strategy, it is necessary to take into account the critical issues present and that, therefore, in order for the planning to be common and shared it is essential to reach a basic level of usability (for example the archaeological areas must be fenced and accessible by public transport). Therefore, the respected spaces around the actual excavations must be equipped with services, parking lots, refreshment points; the park, in addition to the archaeological remains, in synergy with the local authorities, should host structures, located near the site, dedicated to accommodation and study of the teams involved in the restoration and conservation of archaeological remains (laboratories, libraries and conference rooms) thus integrating visitors and scholars. In order to seize new financing opportunities, it will be necessary to establish privileged relationships with the activities of the territory by proposing agreements with accommodation and catering facilities in the areas according to simple concepts of concrete networks. For this purpose a project is therefore necessary that is an expression and synthesis of different sectoral aspects and all concurrent to the enhancement of the cultural heritage and the spatial contexts of reference. However, it is important that in addition to the more visible and immediate tourist effects, the impact that the management activities of archaeological parks have on the development of other economic sectors is assessed. Restoration, ordinary maintenance, enhancement interventions through publishing or ICT have in fact repercussions both on other economic sectors and on the processes related to the training and growth of professions in the area.

It is therefore evident how widely shared the positive effects on the economic activities present within the archaeological parks in the territory. The majority of stakeholders consider the presence of a park to be quite (52) or very positive (52) for the economic growth.

60

52 52

44

24

6

2

Not at all | Partially | Quite | Very | Fully | No answer

■ 12) Does the presence of the park have positive effects on the economic activities present within the archaeological parks in your territory/country?
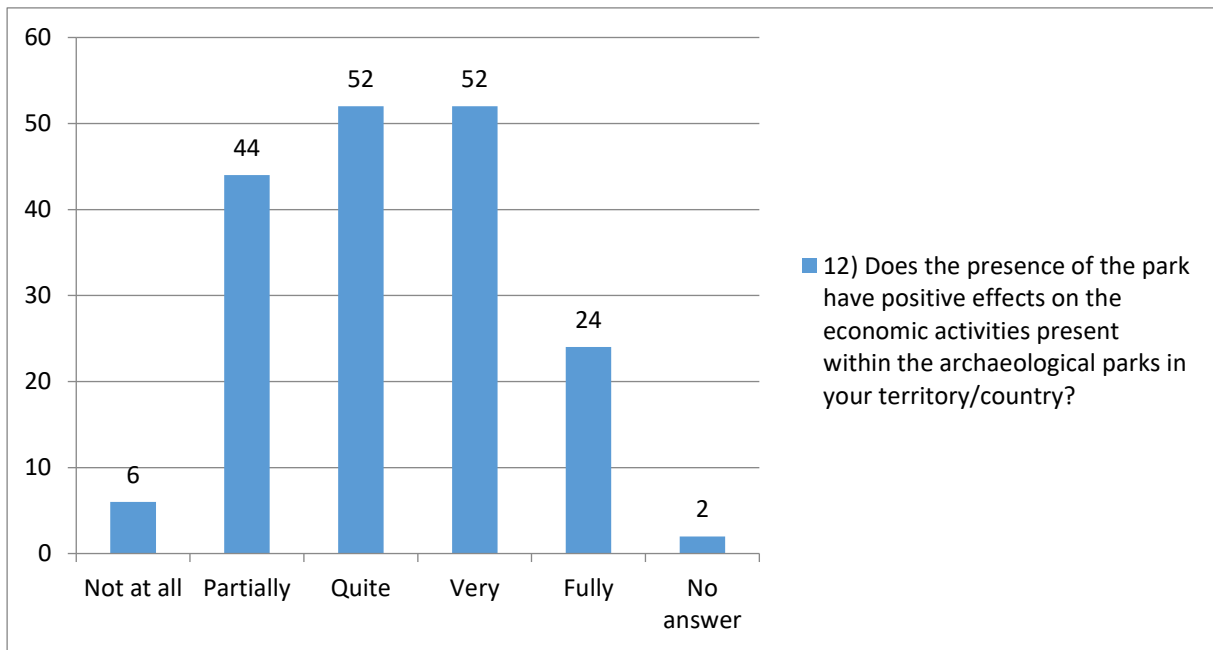
Consequently, it is essential to evaluate the social and economic impact of resources devoted for archaeological parks, in the development of the territory. In particular, for 91 of the stakeholders it is very important and for 44 it is fully important.

100
91

44

38

5

1

1

Not at all | Partially | Quite | Very | Fully | No answer

■ 13) Do you think it is important to evaluate the social and economic impact of resources devoted for archaeological parks, in the development of the territory?
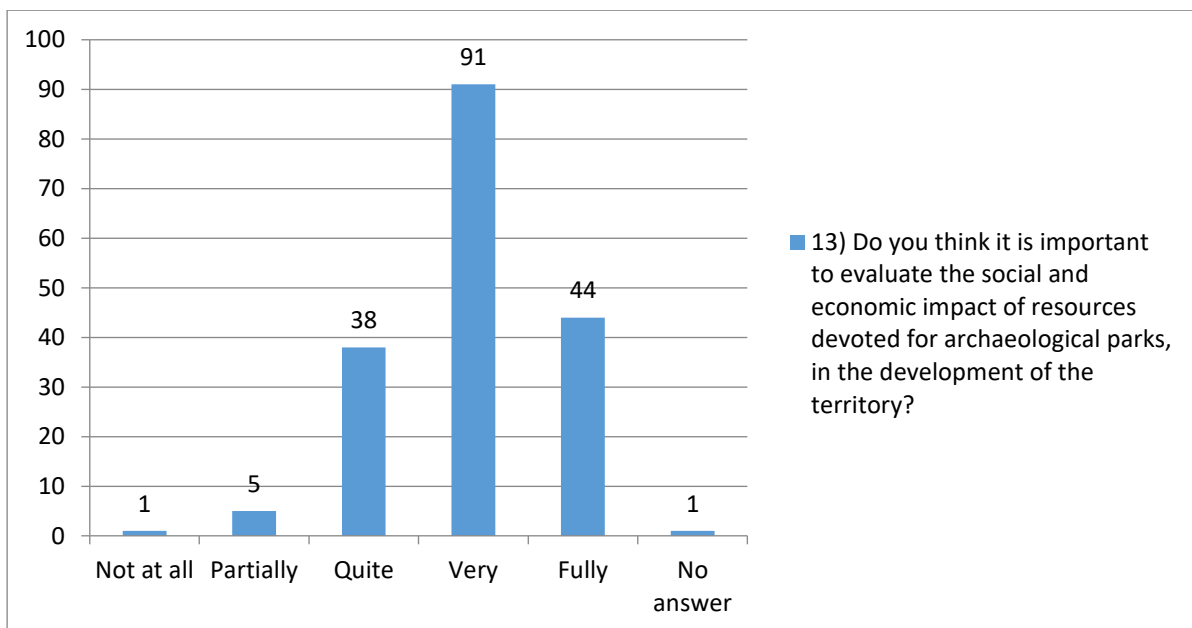
3.1.3 Ex-ante evaluation of economic and financial sustainable of archaeological parks promotion activities and policies

Next table presents the perception of stakeholders regarding to which level the activities of the archaeological park could generate positive economic turnover for the territory where the park is located.

14) How much positive economic turnover effects do the archaeological park activities in your territory/country generate (please only consider activities directly connected to the archaeological park management such as restoration, publishing, tourism ser
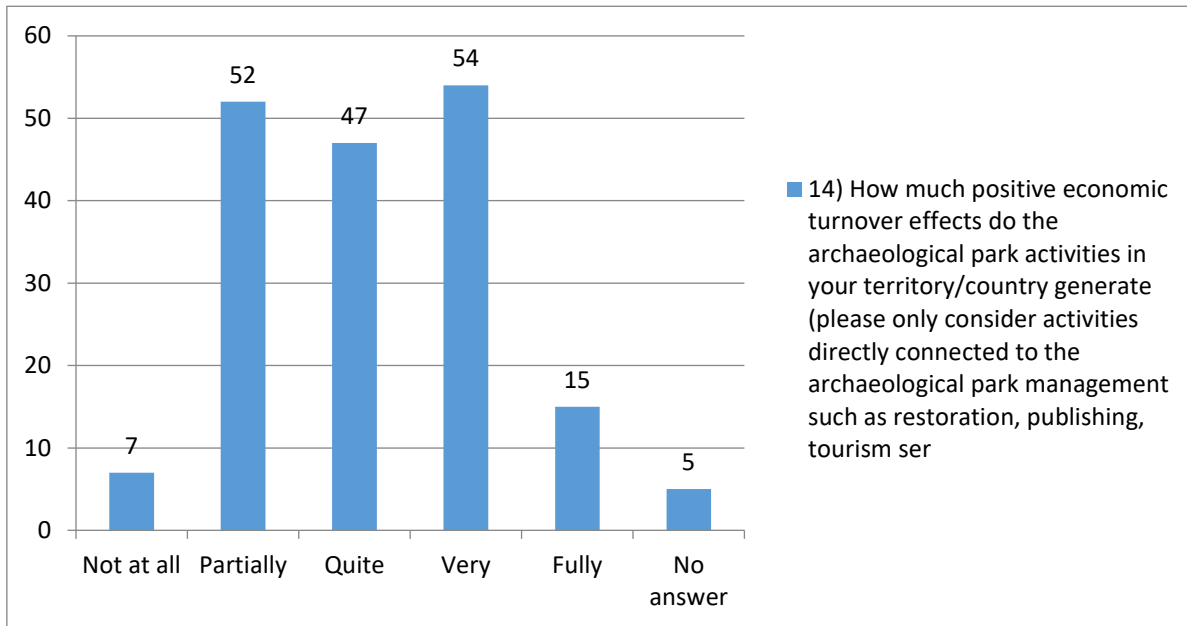
Consequently, for 104 of the stakeholders it is very useful to identify management methods of archaeological parks, which could have a positive impact on local economic development, and for 43 fully important.

15) How much would it be useful to identify management methods of archaeological parks which could have a positive impact on local economic development?
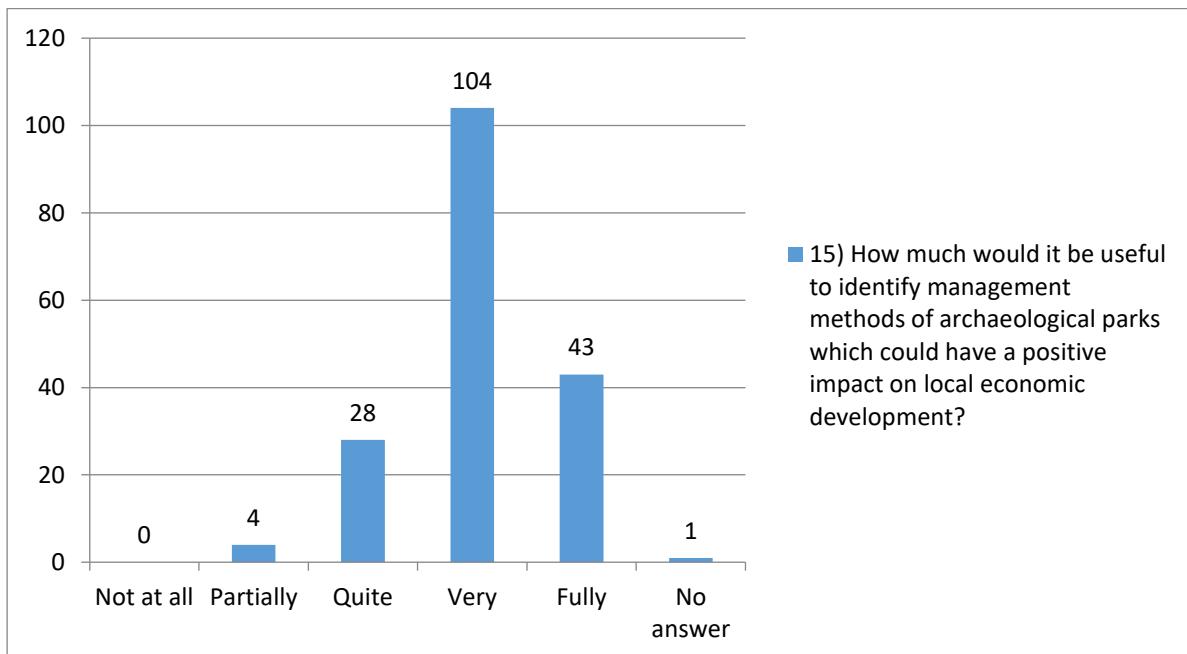
Archaeological parks' underrated sources of wealth, like the artistic heritage in general, certainly cannot boast of financial self-sufficiency. An ex-ante measurement of economic and financial sustainability that can reveal the strengths and weaknesses of the management of archaeological sites is indispensable and cannot be separated from performance evaluation. Too often, in fact, the cultural sector, despite its immense value, fails to satisfy the end user. And this criticality depends precisely on bad management that does not allow the achievement of the

set goals. It is therefore necessary to approach the logic of results. The objectives of an economic-financial perspective are to increase the number of attendees, keep the cost-effectiveness of collateral activities under control (hosting events, reviews, shows, and / or creating educational and playful environments) and increasing the revenues of additional (restaurants, bookshop). We therefore start from the need to cover operating costs and obtain a balance between revenues and operating income. The eye must be attentive to the trend of income-revenues by activity, the trend of users for each activity, the cost-effectiveness of production processes and the composition of own and improper financial income. In relation to the dissemination purpose, from the user's perspective, it is necessary to increase the number of direct visitors but also of those who are attracted to the visit for other reasons (events for example) and from the point of view of the stakeholders of the territory the goal is creation of partnerships with institutions. It was precisely the creation of these partnerships that proved successful also for the realities taken into consideration. Indeed:

- The vision of the Colentum archaeological site was generated by small pioneering projects carried out by a local NGO in collaboration with the Museum of the city of Sibenik. Then the partnership with the Municipality of Murter - KOnati allowed the implementation of hard and soft activities.

- The management plan of the Urbisaglia Park, drawn up by a working group established by the University of Macerata and then shared by all the other public entities (Marche Region, Archaeological Superintendence for the Marche, Province of Macerata, Municipality of Urbisaglia) (for example the private foundations) has identified the priorities of tables and restoration, has defined the additional cultural services and tourism promotion.

- The coordination between the Hellenic Ministry of Sports Culture and private individuals has given rise to a cross-border IPA Greece-Albania 2007-2013 Program 'From the neighborhood to the partnership', a joint action for the promotion of common cultural characteristics focused on the two ancient theaters of Dodona and Foiniki (Albania), co-financed by the European Union and national funds of Greece and Albania; and the National Strategic Reference Framework (NSRF) 2014-2020 (Regional Operational Program of Epirus) the "Ancient Theaters of Epirus", a cultural itinerary whose main stops are the five archaeological sites (Dodona, Nikopolis, Gitana, Ambracia, Kassope) and their theaters.

- The archaeological site of the Municipality of Omišalj has identified a field manager-archaeologist, a figure who with his mix of skills takes the utmost care of the professional management, conservation and enhancement of the excavations with financial support (for archaeological works in loco), on an annual basis, by various institutions (Ministry of Culture, Municipality of Omišalj and its Tourist Board, foreign institutions).

A careful economic analysis should also consistently evaluate the economic and social costs associated with tourism development policies.

The relationship of management policies with the growth of tourism is certainly important as highlighted by the survey with the stakeholders. 94 stakeholders think it is quite or partially useful to concentrate the resources destined for the archaeological parks exclusively, or as a priority, for measures to foster economic development of the tourism sector.

16) In decision-making processes, do you consider it useful to have tools (e.g. cost-benefit analysis, business plans, economic / financial budgets, capital budgeting techniques) in order to assess the economic / financial sustainability of the policies a
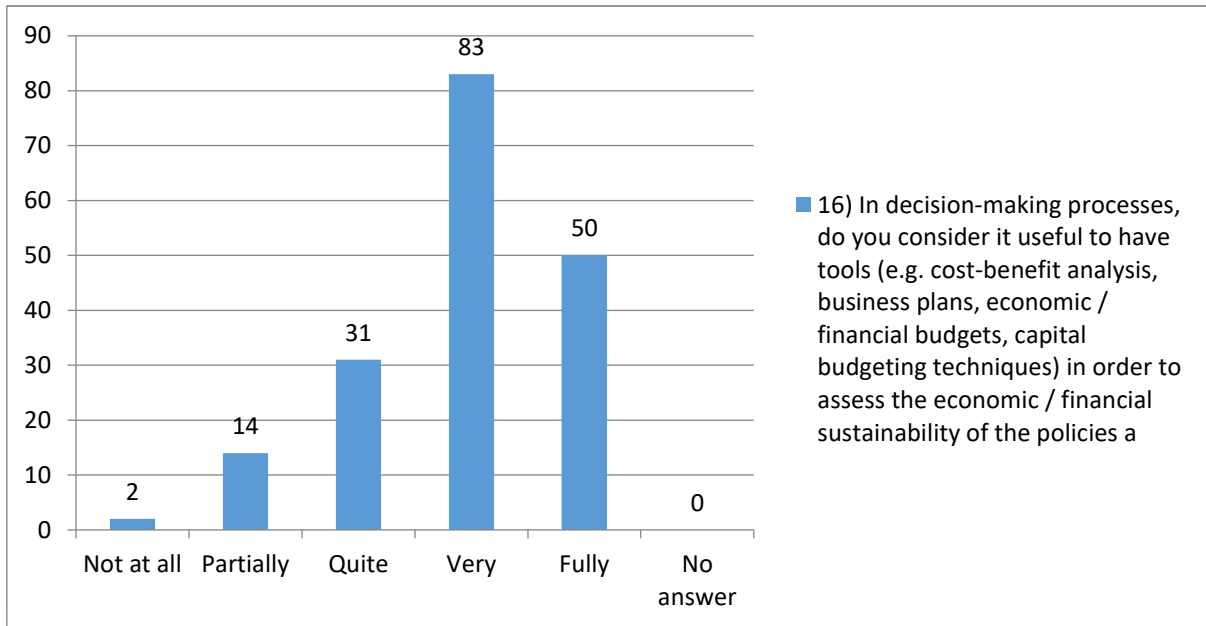
But it is also evident the importance that the management policies of the area can also have on other economic sectors.

18) Do you think it is useful to destine resources for archaeological parks to obtain positive economic spill over impacts also in economic sectors not strictly linked to tourism?
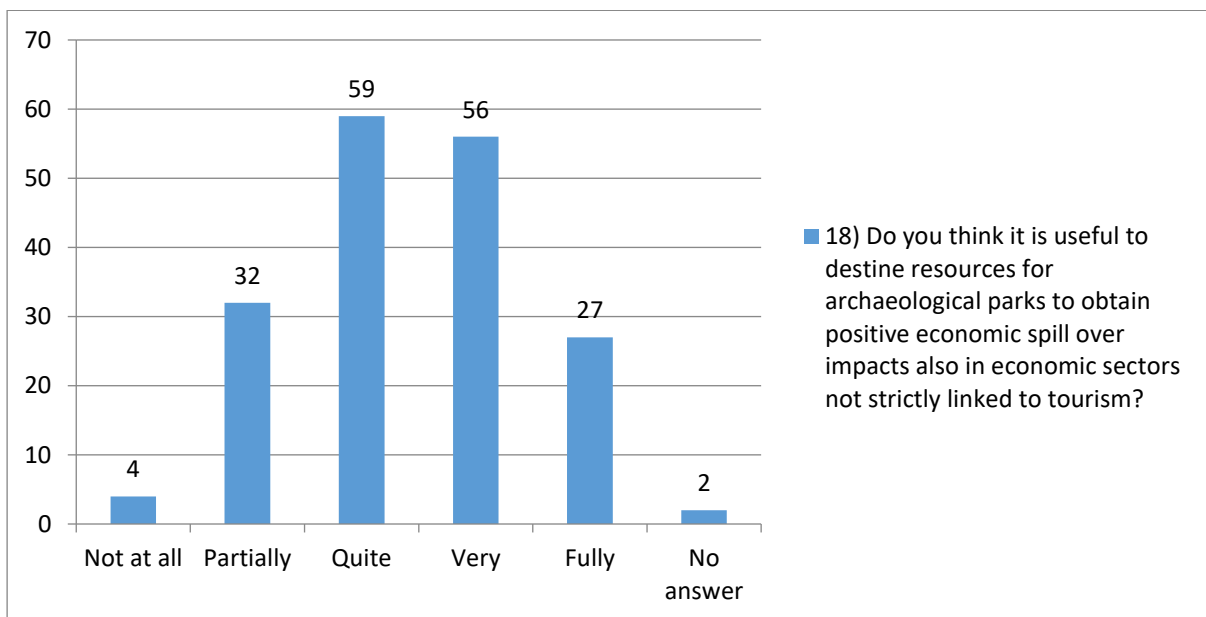
Consequently, in decision-making processes it is useful to have tools in order to assess the economic / financial sustainability of the policies and promotion activities of archaeological parks. This is very important for 83 of the stakeholders and necessary for 50.

3.1.4 Ex-post evaluation of social and economic impact of investments in the park's activities

Performance measurement is an essential requirement. For governance which, in addition to evaluating the effectiveness of its initiatives, wants to demonstrate the positive impact it may have had on the territory in which they operate and constitutes a fundamental premise for making informed choices, to have an objective criterion useful for selecting how and to whom to confer public funding and for any private lenders who are interested in assessing whether their specific requests have been met. An ex-post evaluation requires an overall and detailed analysis of the results in relation to the objectives from which to develop judgments regarding the use of resources and the effectiveness and efficiency of the strategies implemented. Identifying and investigating the factors that contributed to the success or failure of development policies is useful for making suggestions and useful proposals for improving the quality and implementation of predefined objectives. In this sense, this type of evaluation is a functional tool for the project surveillance activity. Since quantitative and qualitative data are the raw materials of evaluation, their identification and treatment are the fundamental prerequisite for the credibility of evaluative judgments. The primary data are obtained through direct observation of things or facts (with field visits, but also through photographic images) and the investigation of direct and indirect beneficiaries and subjects able to express opinions qualified for their role and / or for their knowledge (carried out for example through telephone interviews or questionnaires). The secondary sources, within an evaluation process, take on different values: they are used to measure the direct effects of the intervention, as in the case of monitoring data; they are used to estimate the indirect effects of the intervention, the results and impacts as, typically, for macroeconomic data; they are used as a reference parameter (e.g. context data, pre-intervention and counterfactual situations, benchmarks; etc.). Concretely, the evaluations may concern the impact that the projects, by increasing the number of visitors, have on the profits of local businesses (hospitality and catering businesses, service businesses, as well as artisan, agricultural and tourism businesses), on employment, on the conservation of resources and on new programs of revitalization and territorial development.

Finally, among the data to be taken into consideration is the importance that the management of archaeological parks is consistent with the job offer and employment policies of the surrounding territory.

A bar chart with the following values:

Category	Value
Not at all	11
Partially	31
Quite	49
Very	68
Fully	19
No answer	2

Legend: 19) Do you think it is important that the management of the archaeological parks is consistent with the job offer and employment policies of the surrounding territory?
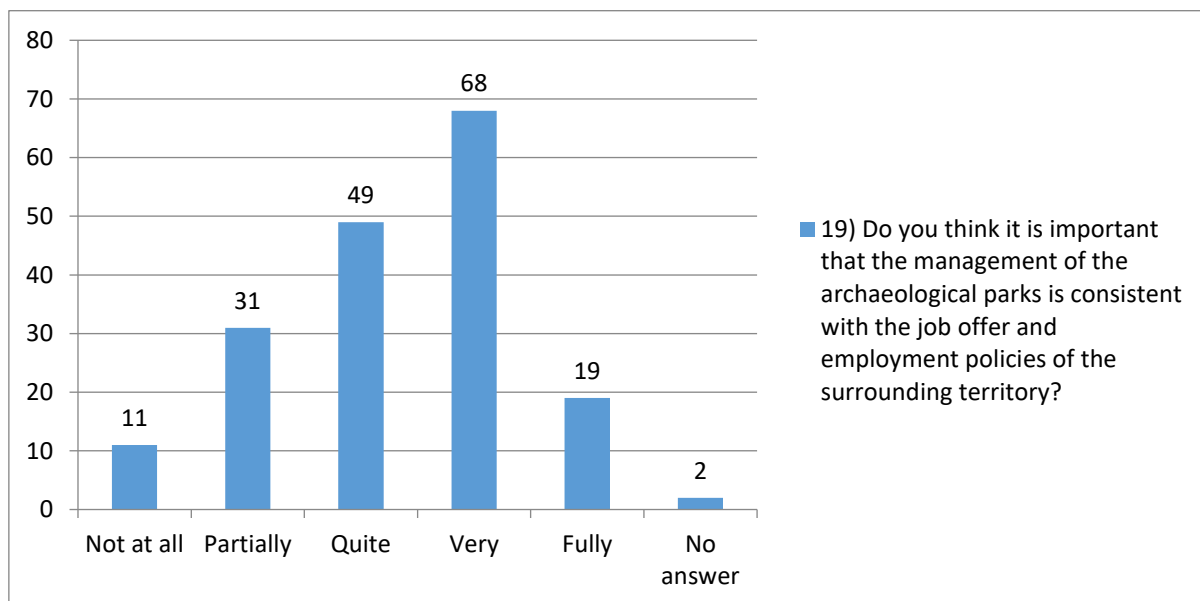
3.2. Analysis of the reference scenarios.

3.2.1 Feedbacks on the local economic development

The impact of the investments on the archaeological site pours out on the local territory and its community. At a first level, the impact may be analyzed in terms of the economic, social and environmental results observed in the local area. The level of interaction (synergy) among the different parts of the ecosystem is a valuable indicator given that the stakeholders involved in the system and their "characteristics", quantity (number), quality (role, education, etc.), political influence (span of action, reputation, eligibility, economic and institutional power…) are significantly correlated to the final impact assessment of the cultural investment. These elements may be significantly useful for determining the "extent" of the system (market and community) to be considered for measuring a second level of effects and consequences of the heritage site: the level of attraction and reputation, its positioning in the scientific community and potential effectiveness. This second level of analysis takes into consideration the indirect and intangible effects of the investment. Besides the visible consequences, measurable in terms of the development of economic activities the improvement of the heritage site may determine an increased attention on it with consequences on the relations and identity of the communities living there, in terms of higher visibility and reputation, at the regional and national level. The investments could foster or revitalize the interest for a specific archaeological site and transform it into a powerful "springboard" for educational activities, for example, or for social projects aiming at inclusion (solidarity and intergeneration support) and job's opportunities. High references play positively in public/private negotiations as well as in international projects and partnerships. If coherently managed the heritage site might play a "hub" role and attract the net of related activities which contribute to the economic and sustainable development of the local ecosystem. Moreover, the attention for positive spill-over effects derived from the cultural investment is valuable for strategic planning. Tangible and intangible effects have to be measured by valuating and indicators in order to offer comparative assessments of the different projects. A

third level of analysis is referred to the level of governance. The local, regional and national level imply different levels of intervention. They may result isolated or fragmented and proceed separately or in mutual conflict if not settled in a systemic approach. The partners refer to a variety of perception about the role of their archaeological sites in the local ecosystem and a prevalent consciousness of the positioning of the heritage site into their regional history and tradition. The archaeological parks contribute to the diversification and specialization of tourism flows and activities (cultural tourism, religious tourism, etc.) and represent a valuable asset for the local brand and the regional competitiveness, for mitigating the seasonality of tourism, to enhance the decentralization of development and to job creation. In terms of social impact this means the enhancement of the community participation, the social cohesion, the continuity of social life, the reinforcement of identity. The analysis of the direct and the intangible effects of cultural investments and their convenient measurement is an open question. The partners highlight a sensible consciousness of the direct and indirect results deriving from the presence of the archaeological site and list a series of indicators for a quantitative assessment, The parameters for evaluating the impact of cultural investment are quantitative i.e. the presence of native or foreign visitors/tourists, the amount of payments received for services by foreign travelers; the amount of overnight accommodations in the area surrounding the site; the number and quality of accommodation facilities. Surveys at local level (Ptuj) and questionnaires are generally used for collecting data. Anyway, there is no evidence of a systemic approach in collecting data and analyze information for statistics and strategic aims. On this side significant room for deepening and improving the analysis may be detected both vertically, in terms of clustering analysis of the visitors' targets and horizontally, such as data related to collateral sectors, intangible effects. The analysis of the role and the relative positioning of the heritage sites in the local context or region put on evidence the weak and threat points of the different cases. Fear of isolation and fragmentation that would take the park out of the economic and social ecosystem is one of the major weaknesses for Antigonea. More specifically, the relationships that the park has with the context and the related socio-economic dynamics could evolve towards a growing "isolation" of the park with the consequence that the asset itself will no longer be included in the enhancement networks. The region although rich in values and evidence, is still characterized by a strong economic and political fragmentation that would benefit from integrated enhancement projects. As for the overall group of partners, the systemic approach is not implemented yet as a cultural setting for the driving strategy, the actors' involvement, the stakeholders' participation and as a methodology for collecting and measuring data for re planning. The cooperation among the local stakeholders is somewhere present, like in the case of Omišalj where the Tourist Board works with the Municipality for the site's promotion and the organization of events with the idea of supplying a complex service/product, but it could be more heavily reinforced at the regional, national and international level. The partners are conscious that the stakeholders' cooperation (public, private and NGO's) would lead to foster community-based strategies and to realize projects aiming at economic (developing the economic system), cultural (resourcing conservation) and social (revitalizing villages and communities) results.

3.2.2 Enhancement of the archaeological site and touristic development

The interdependency between the management of Archaeological Parks and the development of the touristic sector is generally widely recognized. The eco systemic approach goes further and analyze how and to what extent the relevant actors of the local system and to what extent the relation is based on asymmetric relationship or mutual synergy. The partners are aligned in considering that tourism is not the unique or prevalent output of the cultural investment. The archaeological park nurtures and maintains unique connections with the wide range of actors in various sectors of social and economic activity. They refer that tourism is one of the direct opportunities to get acquainted with the heritage of a space. But not the unique sector to consider (Sibenik Knin/Croatia). Ptuj highlights the importance of the archaeological parks especially in cities/destinations where they build their cultural identity and tourism on history and archaeology, The management of the Colentum Archaeological site on the island of Murter in the Šibenik-Knin region is one of the good practice examples for the linkages between the archaeological site and complementary activities, such as oceanography, sports and recreational tourism. Tourism is an effective mean of reorganization for local production chains when the increasing demand for local products, given by the flows of visitors, exerts an incentive for transforming or repositioning on high quality (dairy, honey, agricultural) productions. Whereas is possible to connect the archaeological excavations on site to the population the social interest increases, so far that schools are getting more and more involved with different educational programs. In the Slovenian case benches and hiking trails were installed between the archaeological sectors and they brought also different/other interest group to visit the site. The projects referred by partners submit different levels of relationships between the tourism development and the management of Archaeological Parks. In some cases, the perception of an asymmetric relationship arises from the statement that "tourism enhancement should come first". Risks and inefficiencies may arise when asymmetric relations prevail. The exclusive focus on tourism and on its economic benefits can jeopardize the conservation of the archaeological site, especially in cases of overcrowd. In these cases, tourism-driven local development could become detrimental to environmental sustainability. Not surprisingly, this specific risk is perceived as significant in partners located in larger cities whereas in less congested areas this kind of risk is perceived as being lower. Typically, those risks are related to environmental, social and economic costs. To mitigate these vulnerabilities, it is important that the access to the archaeological sites comply with the "Tourism Carrying Capacity", that is the maximum number of people who can use a site without causing an unacceptable alteration to the physical environment and without an unacceptable decline in the quality of the experience gained by the visitors. Whereas a vision of mutual synergy between the heritage site and the tourism sector is given, their actions are reinforcing their respective aims and results. The partners list a range of "good practice" for the best interaction of actors in the ecosystem, namely: close collaboration among the tourism sector, the professionals and the archaeologists; visitors-friendly infrastructure and traffic connections; shared information and circular transfer of knowledge among academic and research centers, civil institutions, economic agents, community. Communication is a strong point for the interaction: scientific discoveries should be communicated and shared with a wide public and the tourism sector could better suggest and transfer to the archaeologists

the way of making history and heritage culture the most attractive from the visitors' attraction. In the ecosystem approach tourism is viewed as one part of the broader strategy of sustainable local development. The partners identify specific target of actions for a sustainable local development strategy, such as:

- supporting the infrastructure development and the land use regulation by introducing the environmental impact assessment and implementing a legislation based on international agreements and declarations;
- reinforcing the mutual information among stakeholders by enhancing the continuity of contacts to inform each other about initiative, projects and events;
- reinforcing the rules for the regulation and control of the visitors' behaviors in order to contribute to the preservation of archaeological sites, their values and usability for locals and visitors;
- facilitating or supporting private entrepreneurship to organize tourist packages in collaboration with foreign operators.
- adapting the scale of economic activities on the effective capacity of the territory. the impact of tourism on the local physical environment should be the object of a realistic assessment in terms of strengths and weaknesses, opportunities and threats and risks.

Under the perspective of sustainable local development, a lot of economic activities can be correlated with the enhancement of the archaeological site: agricultural and food chain, handicraft, local crafts, industries, ICT services, professional services related to cultural events, scientific activities strictly connected to the archeological sites, etc... The development of economic activities (beyond tourism) connected to the park's management is differently reported by the partners' experiences:

Dodona outlines the scientific-related and education activities, such as educational programs and visits, seminars and conferences in the archaeological site.

In Šibenik-Knin the activities are predominantly tourism-related. The Archaeological site of Colentum on the island of Murter offers a positive mix of enhancement of the archaeological site and its tourist valorization, which positively contributes to the local economic development. The management of this archaeological site links the cultural values of the area with complementary activities, combining history, archaeology, oceanography and cultural, sports and recreational tourism.

For Ptuj and Gjirokaster the agriculture and the industries correlated to the products (local food and wine), the local crafts and the cultural events are the main economic activities linked to the archaeological sites.

Specifically, the UNESCO site of Gjirokaster gives life to the organization of various forms of widespread hospitality (i.e., the organization of pedestrian, cycle, equestrian paths) in close connection with the tourist promotion of the UNESCO site.

3.2.3 Research of economic profitability

The purpose of this question was to see if, in realization of enhancement strategies, was take on consideration the economic and financial best practice principles. We talked about the importance of the interrelationships of the archaeological parks

with the other economic sectors, to favor this it is essential to consider the economic-financial sustainability of the enhancement strategies. Archaeological parks are sources of wealth, but are not generally financially self-sufficient. The objectives of an economic-financial perspective are to increase the number of attendees, keep the cost of collateral activities under control and increase the revenues. We therefore start from the need to cover operating costs and obtain a balance between revenues and operating income. But this is not sufficient. The strategies must generate cash flows able to compensate the amount invested, but also to generate financial surplus that can be used for future investments. There are investment evaluation tools that allow us to balance positive with negative financial effects, these tools are increasingly requested in the calls for European projects (for example NPV, IRR, business plan), but in the cultural investments we cannot forget that costs and benefits cannot be measured only in economic and financial terms. Useful to consider both aspects, economic/financial on the one hand, social/cultural on the other, which are the costs-benefits analysis, or the input-output models, which allow us to estimate ex-ante effects (all effects, economic-financial-cultural-social) of enhancement strategies. Regarding these aspects more can and must be done. Indeed, from the contributions of the WG2 members it there are lights and shadows, it possible to highlight the following aspects. Much has been done in terms of cultural promotion of the sites, all have described very important actions to enhance the cultural site, but all highlight the necessity to improve those actions. Here are some examples:

- City of Ptuj has worked on attractive marketing and connection with cultural events (historical reenactment festivals, music festivals, sport events).
- In Albania promotion of socio-economic opportunities for communities in cultural activities requires a better coordination between the DRTK-Gjirokaster, the Institute of Archaeology and the Institute of the Cultural Monuments. The excavations program should keep in mind also the touristic necessities that the site has.
- Greek partners disclosures that in the last two decades, namely since 2001, a huge amount of restoration works has been carried out funded mostly by the European Fund (over 10 million euros). Preservation, restoration, promotion of the Ancient Theater of Dodona, of the Monuments of the Archaeological site of Dodona, of the other monuments of Dodona. Specifically, for the period 2000-2014, some studies were estimating that the cultural investments should yield 3,44 million of overall economic growth in the area. This estimation needs proving, based on the data within the last five years.

Various partners assert that greater economic profitability would automatically mean the improvement of other activities on the site, greater development of one element would consequently lead to development of others. Their actions were adopted with the conviction of their efficacy to increase collateral economic activities productivity and sustainability, but generally, the enhancement strategies were taken without an ex-ante evaluation of direct and indirect costs/benefits.
The following are various partners affirmations:

- Municipality of Omisalj assert that for now it cannot talk about park profitability and the special impact on employment.

- In PTUJ's actions it was hard to measure the costs in relation to benefits, because the site is still developing to become a complete and functional archaeological park with additional offers on site, but a tentative was done, it used public surveys (local environment), input-output models.
- The Croatian partners believe that development of an archaeological site can contribute to increasing the value of the surrounding area.
- In the future development of Colentum the archaeological site on the island of Murter in Šibenik-Knin County, it is planned to revive agricultural production. The new agricultural activity that would be developed in this locality would encourage creativity and employment. This would further increase the possibilities of marketing the local products in local restaurants. It was preferred to the connection from archaeology, educational activities and catering at the archaeological site Colentum. The positive developments would consequently provide more financial resources for further development of activities and projects for the protection of archaeological values, which is a feature of sustainable management.

Regarding tools used to evaluate and to balance positive financial effects with negative in cultural investment decision, the only experiences have been those of the PlayMarche srl and of University of Macerata in managing the archeological park of UrbSalvia and in DCE project. In these two experiences, the regional funds were used to manage the cultural site (archeological parks, museum, attractive cultural areas etc.) only after an ex-ante evaluation of consequences in terms of costs, benefits, cash flow generation and governance. For example, the DCE project (evolved cultural district) was governed in an innovative way: a spin-off created by the University of Macerata, together with local stakeholders (municipality, museums, firms, private), managed the project's actions, by constructing a network of researcher, professionals and users. Every action was evaluated with a budgeting process, business plans estimated a calculated increase on revenues (ticketing, sales of products, partners guaranteed services, income from events etc.) and on costs (fixed structural costs, management costs, labor cost, administrative expenses, general expenses etc.). These processes have consented to anticipate the financial needs and provide instruments for their hedging. In these processes it was estimated to create wealth using calculated performance indicators such as net present value, internal rate of returns.

3.2.4 Archaeological Parks and human resources: labor market and education

For a proper management of archaeological parks, several professional profiles are required, such as archaeologists, curators, architects, technicians, conservators, specialized workers, guards. Beyond these core competences, transdisciplinary knowledge and skills are particularly valuable. An ideal profile would be a person with both knowledge of history/archaeology and tourism/management skills. Such professional profiles are usually recruited in the regional job market since they are endowed with the tacit knowledge on those specific local assets that are particularly valuable for the promotion of the territorial development. For some recruitment procedures, people from all over the country can apply. One of the main challenges of a successful management of archaeological sites is to ensure the involvement of all relevant stakeholders in the valorization of sites and in the organization of the

management process. Education and participation of the local population is a crucial factor in creating sustainable management of the archaeological site. Also, the development of educational tourism programs represents a great potential for tourism targeted at school excursions, camps for children and youth and families with children. Different education tools are already available in some sites, such as education programs and visits to the archaeological site, museums, educational material available in printed version and on digitalized, in Braille system, a museum kit with 3D puzzle and a printed aerial photo of the site, an application in Greek and English, of educational character available both at Google Play and App Store (Dodona – Greece). Beyond formal education provided by Schools and University, even civil association may provide a contribution. In one case, an important role in the design and implementation of development activities was played by civil associations that participated in arranging pedestrian and bicycle hours around the site, cleaning the environment of the site, designing educational activities, etc. (archaeological site Colentum-Croatia). Some archeological parks are close to a university or to a specialized school, such as in the cases of Urbisaglia-University of Macerata (Italy), Dodona-University of Ioannina (Greece), The Unesco site of Gjirokaster -University of Gjirokaster (Albania). The geographical proximity to a research or educational institution brought further advantages to the enhancement of the archaeological site. It is considered to have facilitated the training processes related to the management and enhancement of cultural heritage. It is an opportunity not only for human resources in terms of both labor market opportunities and education, and in terms of capacity to manage and preserve cultural heritage, but also for improved access to cultural heritage and participation in cultural heritage decision making.

3.3 Ideas and projects for a Common Sustainable Governance Model

The management of an ideal archaeological park should involve some basic activities such as:
- Conservation and maintenance of the monuments of the site
- Construction works for detecting or preventing environmental damage, or other mischief
- Modernization and environmental upgrading of existing facilities
- Quality upgrading of the services provided to tourists and visitors
- Allocation of financial resources to support policies aimed at enhancing and promoting cultural heritage
- Fostering synergies between cultural heritage and contemporary cultural and creative activities

3.3.1 Core and collateral activities for the management of an ideal archaeological park

a) production activities (various supply chains)
Agri-food chains and creative industries are the economic activities that can best connect the archeological site to the wider territory in a sustainability perspective. Furthermore, as for tourism development, a targeted approach for specialized

groups, in several forms of niche tourism[1]and associated services[2], would allow a sustainable valorization to be implemented, complying with the "Tourism Carrying Capacity" limitations described above.

b) activities related to training for the professionalization of the required skills
Once the management structure has been precisely defined, it is necessary to train staff and operators involved in the economic activities. Several skills are required for the management of an archeological park. Training activities that should be put in place for an upgrading of the site in relation to the following areas: monitoring and risk management of the site; training touristic guides to enable organized and systematic visits of individuals or groups; digital competences for the use of augmented reality; training staff for the organization of staging events and international archaeology students' campuses, initiatives to exchange experiences and similarities between localities from the same historical period; training activities for the implementation of projects co-financed from the EU development programs; specific course for local entrepreneurs; communication skills: storytelling workshops.

c) protection and maintenance
Activities of continuous maintenance of archaeological sites are very important and related to the long-term economic sustainability of archaeological sites priorities to be implemented relate to those "core competences" of an ideal archeological site management that have being highlighted above, namely, Monitoring and risk management of the site; Conservation and maintenance; Detecting or preventing environmental damage, or other mischief, for example, through video surveillance; Modernization; Environmental and quality upgrading of existing facilities and services; Use of augmented reality; Accessibility of the archeological area, for expanded and equal fruition, for example arranging part of the pedestrian paths to facilitate the access for people with disabilities. Moreover, to connect the archaeological heritage with other cultural heritage of the wider area, trail maintenance, securing the site with safety fences and the entire infrastructure of the archaeological sites.

d) promotion and enhancement (ICT, technological infrastructure, digitization, virtual tour)
Promotional activities require significant financial investment but consequently lead to an increase in the number of visitors, increased spending and higher financial revenues. ICT tools can increase the attractiveness of archaeological sites and thus increase the number of visitors, their involvement at the archaeological site out of curiosity, improving the overall experience and fascination of the site with new knowledge after visiting the archaeological sites. The promotion strategy should adopt a targeted approach to different target groups. This includes the use of specialized channels and methods of promotion, such as advertising the archaeological park on websites and gathering places for adventurers (hikers, cyclists) while emphasizing a favorable environment for these activities to take place

---

[1]E.g., gastronomic tourism, adventure tourism, eco-tourism, family tourism.
[2]Services related to tourism: Hotels and restaurants, Travel agencies, open air activities, like trekking and mountaineering.

near the sites. This approach would include the offer of archaeological education, workshops and tours to school groups or the offer to the elderly for workshops and education. The basis for building brand recognition are the elements of differentiation that will need to be defined in the document Brand Promotion Strategy. Further channels and means for promotional activities are proposed:

- Support to research, study and scientific documentation and promotion of the cultural heritage by specialists, such as, archaeologists, curators, architects, conservators, museum educators, researchers and representatives of academic institutions
- Organization of thematic events enhancing local traditions at various historical periods
- Insertion of the archaeological site within cultural itineraries
- Signalization activities in places that increase the visibility of archaeological sites such as strategic places
- elaboration of a complex system of visual identity
- design of promotional products and souvenirs
- web site and app development
- promotion by the use of social media
- advertising on the local radio
- encouraging tourists in sharing their experiences on social media (visitors as ambassadors) through the app
- establishment of a partnership with tourist agencies, tourist boards and accommodation providers – to introduce the visitor to the archaeological park with directions towards it.

The installation of technological infrastructure in the archaeological sites could serve promotional activities and equal access to the sites through:

- 3D animation of a possible tour of the site at its peak development phase with audio material for blind persons as QR solution
- VR devices and audio guides, games via mobile applications
- Engaging marketing and PR professionals, Audio-visual technological support, equipment installation, equipment rental, IT & virtual services support to provide a total virtual tour of the location.

e) others network activities
The informed participation of all the relevant stakeholders is of major importance in order to plan an effective management plan. Particularly, networking of stakeholders in culture and archaeology can contribute to the transfer of ideas, information, examples of good practice can ultimately increase the economic viability of archaeological sites. Furthermore, to implement a sustainable local development strategy able to conciliate economic growth with cultural preservation, it is of a great importance to build a comprehensive collaboration with tourism stakeholders, hospitality and HoReCa industry stakeholders.

3.3.2 Skills and professionalism required for the realization of the park

Once the management structure has been precisely defined, it is necessary to train staff and operators involved in the economic activities. Several skills are required for the management of an archaeological park. Training activities that should be put

in place for an upgrading of the site relate to the following areas: monitoring and risk management of the site; training touristic guides to enable organized and systematic visits of individuals or groups; digital competences for the use of augmented reality; training staff for the organization of staging events and international archaeology students' campuses, initiatives to exchange experiences and similarities between localities from the same historical period; training activities for the implementation of projects co-financed from the EU development programs; specific course for local entrepreneurs; communication skills: storytelling workshops. Skills might be gathered in four competence units:

A. management
B. promotion and communication
C. architecture and construction
D. hosting and catering services

A. Management

The management area requires: organizational skills, leadership and collaborative skills (people management, teambuilding and team working), financial skills (accountability, fundraising…), etc. The governance should take into consideration the nature of the organization (archaeological site) and give preference to a person who has experience in the specific sector (preferably an archaeologist) with managerial attitude and proved team attitudes. The sustainability of the park would be assured by a team of experts /collaborators including a financial manager expert in accounting, tax standards and regulations. It is desirable that the team for the management of the archaeological park also consists of experts for the management and implementation of development projects (as proposed by Velika Mrdakovica and Bribirska Glavica Archaeological sites).

B. Promotion

The visibility of the archaelogical site and its reputation are fundamental assets for the market positioning strategy of the park. The partners agree that promotion and communication require an intense and focused investment of resources. for promotion and communication skills: marketing and publishing sector experts with completed postgraduate degrees – either economy or social sciences; multi-year work experience with development of quality destination content, development and promotion of new content and destinations. The presence of experts in the marketing and publishing sector is highlighted by partners together with a series of activities which are strictly connected to the Cultural and Creative Industries (CCIs)3. An effective promotion of the cultural investment would positively act for the enhancement of the touristic attractiveness of the site and the reputation of the local ecosystem. Marketing professionals can occasionally be hired as external collaborators.

C. Architecture and Construction

Experts in the field of architecture and construction are required for planning and arranging the archaeological park. In the restoration sector a wide range of job skills from higher to basic education is needed. In detail, the labor market would offer

opportunities for: - university degrees in Archaeology, Architecture, Cultural Management, Conservation, Mechanical Engineering etc. - secondary education diplomas as conservators, specialized workers, monitoring/ safeguarding personnel- non-specialized workers such as cleaners, operative skills. Working experience, knowledge of specific locality and region are valuable criteria of selection in this area.

D. Hosting and Catering Services

The economic sustainability of the archaeological park is guaranteed by the effective functioning of the complex ecosystems of production activities. Tourism and Eno-gastronomic activities, hospitality and entertainment industry, green and sustainable Agriculture are valuable supply chains connected to the development of the archaeological site. The connection to the production chains is reinforced by selected professional skills in the following areas: hospitality (hotels, restaurants, catering…); agri-food and circular economy; Eno-gastronomic tourism; travel agencies; touristic guides. Tourism, specifically, requires professional knowledge of the relevant archaeological, cultural and historical facts of the site, effective communication skills and foreign languages competencies.

3.3.3 Economic-Financial characteristics of the activities

The promotional activities must be continuous on local national and international level and to be delivered by collaboration of local Boards. Obviously, all these activities need to be supported by analyses in order to highlight:
- which economic objectives are to be achieved;
- which actions allow these objectives to be achieved;
- what costs/investments need to be incurred to achieve the desired results;
- how to obtain the necessary resources to cover them.

Partners, only sometimes, responded by showing awareness of these aspects. Attempting to capture best practices and criticalities, here are some reflections for each question.

A. *what costs do you think are connected to the activities indicated above? How can they be optimized?*
- The costs include staff, administrative, infrastructure and operational expenses as well as expenses resulting from contracts entered into with third parties (Dodona).
- The costs in the archaeological site of Dodona are covered by European Funds, namely Community Support Network (CFS) and National Strategic Reference (NSRF) as well as the Hellenic Public Investment Program.

There have been six major projects, two of which are still running:
- Preservation, restoration, promotion of the Ancient Theater of Dodona, (CFS) 2001-2004. **-** Preservation, restoration, promotion of the Monuments of the Archaeological site of Dodona, (CFS) 2001-2004.
- Preservation, restoration, promotion of the ancient theater and the monuments of the Sanctuary of Dodona. (NSRF) 2007-2013 (Regional Operational Program of Epirus).

66

- Preservation, restoration, promotion of the theater and the other monuments of Dodona Phase A. (NSRF) 2014-2020 (Regional Operational Program of Epirus).
- Milestones I. IPA Cross-Border Programme Greece-Albania 2007-2013. From Neighborhood to Partnership. The Project was co-funded by the European Union and the National Funds of Greece & Albania.
- Ancient Theaters of Epirus. National Strategic Reference Framework (NSRF) 2014-020.

Connected cost relate to promotional costs, as well as costs related to planning and deployment of marketing activities. (Omisalj, Ptuj). The main conditions for achieving these activities for the archaeological sites of Velika Mrdakovica and Bribirska Glavica are resolving competencies related to the management of archaeological sites and resolving existing property issues (part of private ownership) and the existence of a plan and strategy for site management. However, given the proposed activities, the costs associated with the activities are reflected in:
- costs of performing protective and systematic archaeological research;
- costs of infrastructure adjustment of archeological sites for visitors;
- costs of wages for employers;
- costs of conducting educational workshops and trainings of conservation and restoration of archaeological heritage for professionals, relevant stakeholders and local community;
- costs of forming tourist educational program for kids and young people;
- costs of education for guides on archaeological sites;
- costs of building the capacity and training for managing development projects;
- costs of creating brand strategy and marketing plan;
- costs of regular maintenance of archaeological parks;
- costs of establishing free Wi-Fi connection in archaeological parks.

B. how do you evaluate the economic and financial sustainability of the park?
Organization of park based on sustainability principles must be the priority to all. It is fundamental that in the future park management will be partly self-sustainable. In the long run, smart and targeted investment in promotion will be justified by greater number of visitors, that will bring more revenues through sales of tickets, souvenirs, rental of location for private and business events.

i) how can ticketing policies be organized?
For the archaeological site of Dodona an integrated market for electronic payments systems was developed for the purchasing of tickets and other services for the visitors of the site, as well as the distribution of various species, photographs, digital publications or applications related to site. At same time, economic packages were designed that include visits to the sites and monuments of archaeological and historical interest of the nearby city of Ioannina, (Archaeological Museum of Ioannina, Byzantine Museum of Ioannina, Its Kale Citadel) as well as to other major archaeological sites of the Region of Epirus (e.g., the Route of the Ancient Theaters of Epirus).
With digitalization the aim is to reduce personnel costs, the online sales of tickets is also the priority for the Municipality of Omisalj.
The archaeological sites of Velika Mrdakovica and Bribirska Glavica are currently

completely free for sightseeing and visiting. There are neither working hours nor an organized visit/guide to the site. Given that the visitor infrastructure is currently not regulated, ticket sales, especially without organized guidance, are not realistic at the moment. Prerequisites for organized ticket sales are the improvement and modernization of the infrastructure of archaeological sites, arrangement of the management structure and competencies over the sites, organization of permanent thematic management of sites and thematic connection with other attractions and introduction of joint ticket sales. In this case, based on different types of visitors but also the context and the wider area in which the archaeological sites are located, the organization of ticket sales should be possible in several ways as follows:

- on arranged entrances to archaeological sites Velika Mrdakovica and Bribirska Glavica;
- in cities in which archaeological parks are offered - in tourist offices of the cities of Skradin, Vodice and Šibenik and Museum of the city of Šibenik;
- online ticket sale.

ii)   income from other activities (events, workshops, publications, product sales, different services)?

Hellenic Organization of Cultural Resource Development (hereafter: HOCRED) receives, manages and allocates:

- the revenues from the sale of tickets, casts, copies, replicas, ceramic objects, works of art, jewelry, toys, games, applications with archaeologically inspired themes, books, guides;
- the fee revenues from production of professional photographs, films (documentaries, international productions etc.) air-photography, production of digitals and 3D images etc.;
- the revenues provided by the exploitation of every building or asset owned by the HellMiCS, along with shops, cafes and canteens, situated within an archeological site (e.g., the store and café close the entrance of the archaeological site of Dodona). The exploitation includes rental agreements and lease contracts with a maximum duration of 18 months.

Municipality of Omisalj plans to have revenues from rental of location for private and business events (weddings, celebrations'), workshops, photo-shootings. Additional revenues are planned from sales of souvenirs, pastry, digital transformation contents and other attractive contents that produced internally.

Despite that the archaeological sites of Velika Mrdakovica and Bribirska Glavica are currently completely free of charge for visitors to enter, by holding cultural and gastronomic events, concerts, drama plays, sales events and presentations of handicrafts, etc., they represent potential sources of funding that could be used in further development and valorization of the potential of the archaeological sites. Such kind of sources of funding can later be directed to regular and development activities and thus contribute to the economic and financial sustainability of archaeological parks. To make this possible, it is necessary to take care of the arrangement of the site to be ready for the organization of such events as well as to provide all the necessary organizational prerequisites and take into account the cost-effectiveness of the organization.

iii.   how to find external financing (European funds, ministerial calls, private partners, art bonuses)?

Over the last twenty years the archaeological site of Dodona received external financing through the Community Support Network (CFS), National Strategic Reference (NSRF) and Hellenic Public Investment Program, due to ministerial calls.

External financing:
- presupposed solid documented proposals where the economic evaluation of the investment in an archaeological site must follow 3 phases:
  - identification of financial, social, cultural, and environmental objectives of the interventions.
  - definition of the criteria able to measure the ability of the projects to pursue the objectives.
  - attribution of a performance indicator to each criterion.
- is connected to the area of the investment, where income, infrastructure and services, play a crucial role. (e.g., based on a socioeconomic analysis conducted by the Pantheon University in Athens, Epirus was one of the regions worst hit by the economic crisis for the period 2008-2014).

For financing the Municipality of Omisalj approached the Ministry of Culture, aiming to make the Archeological Park part of and managed by Rijeka Natural History Museum. The aim to ask for commercial sponsorship funds intended for promotion and revitalization of cultural heritage and historical localities. EU funds are definitely a targeted source of financing in the next developmental phases of the project, mainly aimed at an interpretation center, the documentation for which is already in development. The experience of Ptuj is similar.

In the Sibenik-Knin experience emerge that the best way to ensure continued opportunities for ancillary external co-financing is to hire experts to prepare, write and implement development projects. Also, it is necessary to establish strong links in continuous cooperation with county and local development and tourism agencies as well as with cultural institutions with which it will be possible in partnership to apply and implement development projects. In this manner, it also contributes to the creation of links between individual elements of cultural heritage which in turn contributes to the development of cultural tourism and the recognition of cities and counties as cultural tourist destinations. Such relationships and processes form important segments for achieving long-term economic sustainability.

3.3.4. Ex-ante and ex-post impact evaluation

a) ex-ante evaluation: how can the economic and financial effects of the planned management activities of an archaeological park be assessed during the design phase? with which indicators and tools?

The economic and financial effects of the planned management activities of archaeological site of Dodona during the design phase could be assessed by the implementation of a multicriteria analysis model, based on the following criteria:

- The compatibility of interventions with conservation needs in terms of prevention, maintenance and restoration.
- The level of use of the site following the realization of the investment

- The ability of the project to guarantee the promotion of the historical and cultural value of the archaeological site.
- The pursuit of financial results.

The Municipality of Omisalj follows investment trends in the market. Thus, it will be able to have better guidelines for potential investors and partners. By evaluating the investments of corporations in Croatia into culture, through their marketing activities, following EU development, revitalization, infrastructure and horticulture funds. Proactive communication with stakeholders and shareholders of the project, institutions and private sector will enable better positioning, diversity and attractiveness of our position in the market. After finalizing marketing strategy and visual identity, creative concept and clear guidelines for management, promotion and digitalization, further analysis and obtaining the offers from contractors will enable us to estimate costs of the project. By preparing a detailed workplan, setting detailed timeline, it will economize working hours, and by smart time management and timely negotiations it will secure more competitive contractors in the market. Based on the current state of the Sibenik archaeological sites there are still no measurable indicators at the archaeological sites themselves that could indicate a starting point for considering the potential economic and financial impacts of the planned activities. Currently, all the activities are at the level of proposals and the existing activities at archaeological sites do not generate significant economic profits. In the context of assessing the economic and financial effects of potential activities planned to be carried out at archaeological sites, it is also proposed to conduct a benchmarking analysis that can identify potential economically viable patterns and ways of planning development. One of the steps for quality monitoring of the implementation of activities is because of the definition of implementation indicators that will enable the comparison of progress and success of the implementation of individual activities. An important point of reflection is the follow example of an implementation indicator table.

Indicator	Measure	Base value	Target value
Number of concluded cooperation agreements with local family farms/agricultural producers	number	x	y
Establishment of a souvenir shop	Has a souvenir shop been established?	no	yes
Conducting employee training for the interpretation of archaeological heritage, leading development projects…	number	x	y
Number of implemented attraction presentation and interpretation projects	number	x	Y
Share of financial resources for development projects whose source is national and international development programs	percentage (%)	x	Y

Number of implemented projects for arranging access to public and social facilities for people with disabilities	number	x	Y
Number of projects related to improving the promotion of archaeological parks	number	x	Y
Number of projects related to the improvement of technological infrastructure	number	x	Y

Based on the conducted situation analysis, it is also proposed to conduct a demand analysis and a cost-benefit analysis. Given that the archaeological sites of Velika Mrdakovica and Bribirska Glavica need to conduct additional archaeological research, it is necessary to perform an analysis of research costs, which should include total labor costs (Cw) (including labor costs, machinery and ancillary costs), material costs and equipment for research (Cm&e), documentation and processing costs (Cd&p) and other (unforeseen) costs (Coth). Since the research will be conducted after securing funds from various national and international development programs, the research costs will not financially burden the manager of archaeological sites and will create new knowledge and outcomes that can be used in the presentation of archaeological sites. The cost of research can be calculated as follows:

$$Cr = (Cw \times Ndays) + Cm\&e + Cd\&p + Coth$$

The costs of presentation include costs of creating the products for visitors (Cvp), costs of material and equipment (Cm&e), costs of creating souvenirs (Cs), costs of work (Cw), costs of site maintenance (Cmain), costs of branding (Cbr) and other costs (Coth). The costs of presentation are possible to estimate as to the sum of all the costs, or respectively:

$$Cpres= Cvp + Cm\&e + Cs + Cw + Cmain + Cbr + Coth$$

Revenues from the presentation are possible to estimate as to the sum of ticket revenue (It), service revenue (Iser), souvenir revenue (Is) and other sources of revenue (Ioth) (e.g., fees for early usage of the site such as movie production, scenography for plays, concerts, etc.) respectively:

$$Ip = It + Iser + Is + Ioth$$

After the CBA analysis is conducted, as another possibility it is suggested conduction of scenario analysis and multicriteria analysis of the choice of the best development possibilities.

b. ex-post evaluation: a first proposal for a common (and flexible) evaluation toolbox based on socio-economic indicators

It is widely recognized that x-post evaluation in the common model should be based on indicators able to assess the:
- Economic impact
- Social impact/Knowledge and culture/Human resources upgrading
- Environmental impact

Selected indicators should be:
- Defined in relation to the purposes of the Common Sustainable Governance Model
- Meaningful for monitoring results
- Measurable
- Objective
- Robust/Comparable over time and -ideally- across space

During the project's meetings several methodological issues were discussed, in some cases they can be considered as general challenges, while, in other cases, they have emerged as related to the specific needs of some archeological sites. To define a suitable evaluation toolbox, a proposal is to first defining relevant outcomes, then, collect all the official available information, and, finally, to elaborate possible indicators that are not available but should be measured -especially in non-standard situations- to enhance the management of the park. One example of such non-standard outcomes are externalities/spillover effects. The partners agreed that third step is crucial, they also recognized that ICT tools can be used for both a quantitative but also a qualitative approach to measure outcomes.

Data sources

The partners raised several limitations in the collection of relevant data for developing evidence-based and result-oriented monitoring, reporting and evaluation. Sometimes available official data are too broad and thus useless to properly evaluate progresses towards the objectives of the common sustainable plan (e.g., n. of visitors). In these cases, it is important to complement official data with other well-designed primary sources, such as questionnaires, surveys that can detect qualitative information of the sites and visitors. Furthermore, to evaluate changes over times it is important that these qualitative tools will be designed and information gathered in a continuous and systematic way. ICT tools are of great importance for the quantitative and qualitative monitoring of the activities promoted by the park. The potential of big data should be further investigated: some of the information available are open-source, free to use, but usually general-purpose. Nevertheless, their usability could be declined, case by case, with respect to the needs of each site.

Territorial scale

Another important methodological issue is the identification -case by case - of the relevant geographical area of interest that should be the reference for ex-post evaluation of the economic and social impacts. A general view is that two main territorial scale may be considered in the Common Model:

(1) a first short-distance scale with the aim to evaluate what are the local effects of the integrate management of the archeological park, (e.g., municipality, county, provincial, regional)

(2) a second wider territorial scale to eventually evaluate effects beyond the local dimension

As a first approximation, the option (1) should be adopted for all the sites while the option (2) may be part of the flexible solutions of the common model. In fact, it can be noted that proper territorial scales for evaluation and its boundaries should consider the internal/external structure of the institution responsible for managing the park and the extent of its stable relations with other stakeholders on the territory. In this respect, another challenge to define a Common Sustainable Governance Model is the different availability of data at the local level, this is a possible source of heterogeneity across archeological sites. The Common Model may have a general proposal in the form of "common indicators/Common Evaluation Toolbox" and a more specific set of evaluation tools, considering the information (both qualitative and quantitative) that can be available at the local level. In more details, the partners made proposals for specific indicators on the economic, social and environmental impact. Most of the partners recognized the importance of assessing the general economic impact on the territory, in terms of traditional indicators of economic growth, public investment, job creation (Dodona, Ptuj, Gjirokastër). According to some partners (Šibenik, Ptuj) economic effects should be assessed by comparing the state of the indicators before and after the implementation of the management plan as regards tourism incoming flows and connected economic activities. Further areas of evaluation have been mentioned. Particularly, from a sustainable perspective it is also important to assess the social impacts such as the involvement of the local community, the protection of the archeological sites and the protection of related economic activities. Furthermore, an additional area of relevant ex-post evaluation is the potential knowledge spillovers in neighboring areas, culture development and skill upgrading. The following tables presents a summary of the proposals from the partners for the evaluation of the economic and social effects and the related socio-economic indicators. They are distinguished in terms of basic economic outcomes such as economic growth, job creation, infrastructure development and investment and tourism development (Table 1) and further socio-economic outcomes related to social impact, protection, knowledge and culture (Table 2).

Table 1 – Ex-post evaluation: basic economic outcomes and associated indicators

Revelantoutcomes	Associatedsocio-economicindicators
General economic development and (Dodona, Gjirokastër)	- Total production - Gross value added (infrastructure and services provided) - Overall economic growth of the territory

Job creation (Dodona, Gjirokastër)	- Labor income - Number of employees - Number of people directly involved in management activities
Investment realized and financial resources allocated (Dodona, Ptuj, Gjirokastër)	- Amount of investments in the archaeological park - Realized projects on site, infrastructures and cultural activities - Amount of received nonrefundable financial means
Tourism incoming flows and related economic activities (Šibenik, Ptuj)	- Number of tourist arrivals and overnight stays in the cities - Number of visits to the cities' museums - Share of culturally motivated tourist arrivals in the County (*how to measure it?*) - Tourist incomes on the destination level - Number of visitors - Number of guided tourist visits - Number of new tourist products connected with the site

Table 2 – Ex-post evaluation: Social impact, protection, knowledge and culture

Revelantoutcomes	Associatedsocio-economicindicators
Social impact (Gjirokastër)	- Public participation
Protection of sites and related economic activities (Gjirokastër)	- Condition of preservation of buildings - Level of protection of local handicraft and agri-food heritage
Knowledge spillovers, culture and skill upgrading (Gjirokastër)	- Level of knowledge growth related to the park area - Realized cultural activities (exhibitions, conventions, conferences, performances, ...) - Level of professionalism of employees directly involved in management activities - Development of professionalism and economy related to the management and improvement of cultural heritage in neighboring areas - Technology innovation set

In conclusion, monitoring of the outputs and results is crucial for the proper management of a Common Sustainable Governance Model. Actual practices of

monitoring, both quantitative and qualitative, could be improved significantly. This implies to strictly connect the objectives of the Common Model with relevant, measurable and reliable indicators. More advice and guidance on the general definition of the evaluation toolbox are required. These need to cover not only the results of the measures concerned but a greater focus on their wider effects on local/regional development.

CHAPTER 4: IDENTIFICATION OF ICT TOOLS ABLE TO ENLARGE ARCHAEOLOGICAL GOODS' AUDIENCES AND IT SYSTEMS ABLE TO BETTER ANALYSE FEATURES AND NEEDS OF ARCHAEOLOGICAL PARKS' VISITORS

4.1. Analysis and synthetic interpretation of relation and interactions between parks and territories

Considering the broader European framework, i.e.:
- Cultural policies, trends and recommendations such as the Faro Convention (2011), recognizing the individual and collective right to access and engage with Cultural Heritage (CH) and fostering democratic participation by the use of digital technology.
- EU's perception of CH as a source of sustainable development, improving people's lives and living environments (EU 2014).
- European policies encouraging digitization and the use of ICT as valuable horizontal tools at the service of these priorities (Council of the EU 2014).

as well as the generalized digital transformation, i.e.:
- The constant evolution and ever-widening dimensions of ICT
- Their fruitful adaptation to the field of CH
- Their potential to democratise access to culture, also recently highlighted by European Year of Heritage (Sciacchitano 2019; Lykourentzou 2019)
  and reckoning with the recent restraints of the COVID-19 pandemic and their consequences in the current scenario (European Heritage Alliance 2020, NEMO 2020) in order to transform them into opportunities, we conclude that the relation between ICT and CH becomes increasingly strong and complex:
  – facilitating and expanding access and interpretation;
  – raising awareness on issues of cultural and environmental protection;
  – fostering new forms of multilevel and multi-stakeholder participatory governance;
  – encouraging creative industries, SME and community-led initiative for the development of the territory.

Under this perspective, interactions between archaeological parks and territories could strongly benefit from the digital shift, creating synergies and cross-sectoral cooperation.

4.1.1 Issues related to the understanding and the contextualisation of the archaeological ruins

One of the most evident problems in respect to the understanding of the parks' archaeological heritage is linked to the insufficiency with which the heritage is described and contextualised (94 among the stakeholders).

Bar chart showing responses to question 20) Are the structures, preserved within the archaeological parks in your country, generally well described and are their characteristics clearly displayed for a wide audience?

Not at all	Partially	Quite	Very	Fully	No answer
27	94	43	16	0	0
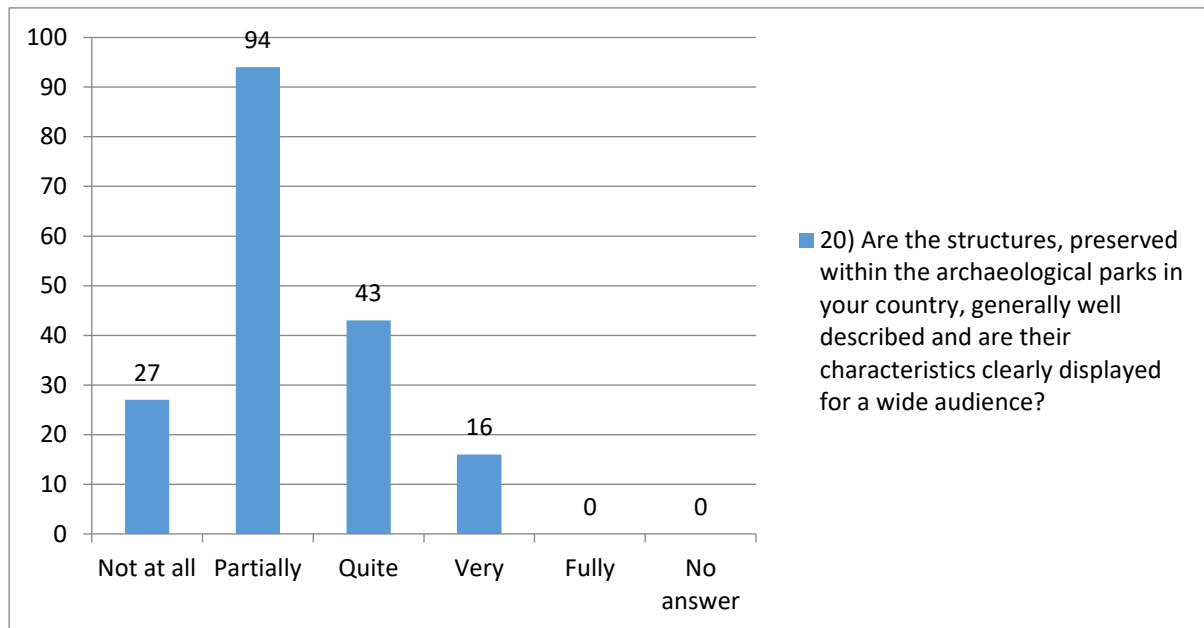
The first step towards the integration of ICT in archaeological parks is the understanding and the contextualisation of the archaeological ruins.

Main issues are:

- Intrinsic to the ruins and to their relation to the territory: location; state of conservation, also of the site in his complexity; accessibility; particularities of the territory; space evolution and transformations of the landscape; relation to present-day area, geolocation, etc.
- Methodological: general scientific approach; survey – exploration - excavation techniques; diagnostic, conservation and restoration; study and interpretation, etc.: this chain will lead to the understanding of the ruins by experts and then to its valorisation through various methods, means and media.
- Managerial: legislative and administration framework; proprietary state; governance; financing; stakeholders; conservation issues; safety concerns; copyright, etc.

To these, we should add issues linked to ICT, such as:

- Infrastructure: hardware, software and apps installation, maintenance and update.
- Cost: particularly high for state-of -the art ICT applications.
- Attitudinal barriers: many CH professionals are still sceptical about ICT applications, notably about the accuracy of the representations and the "poetic licence" of storytelling scenarios.
- Digital literacy of CH professionals: the lack of digital skills reduces the possibilities offered by ICT. On the other hand, emerging specialisations, such as those defined by the Erasmus+ project Mu.SA (www.project-musa.eu) -Digital Strategy Manager, Digital Collections Curator, Digital Interactive Experiences Developer and Online Community Manager- can multiply the benefits.
- Lack of a comprehensive vision of digital site management: an integrated tool, keeping an overall record of data (research, storage, conservation, budget, operation, visitors etc.), could create a solid digital chain, allowing multiple and cross-disciplinary uses. On the contrary, archaeologists still use traditional pre-

computer tools (Niccolucci 1999) and the digital approach in these professionals/academics is very slowly spreading

Also, for this reason, it is useful to identify ways to enhance the experience with ICT. 98 of the stakeholders think that it is very important to enhance the experience during the visits of archaeological parks through ICT.
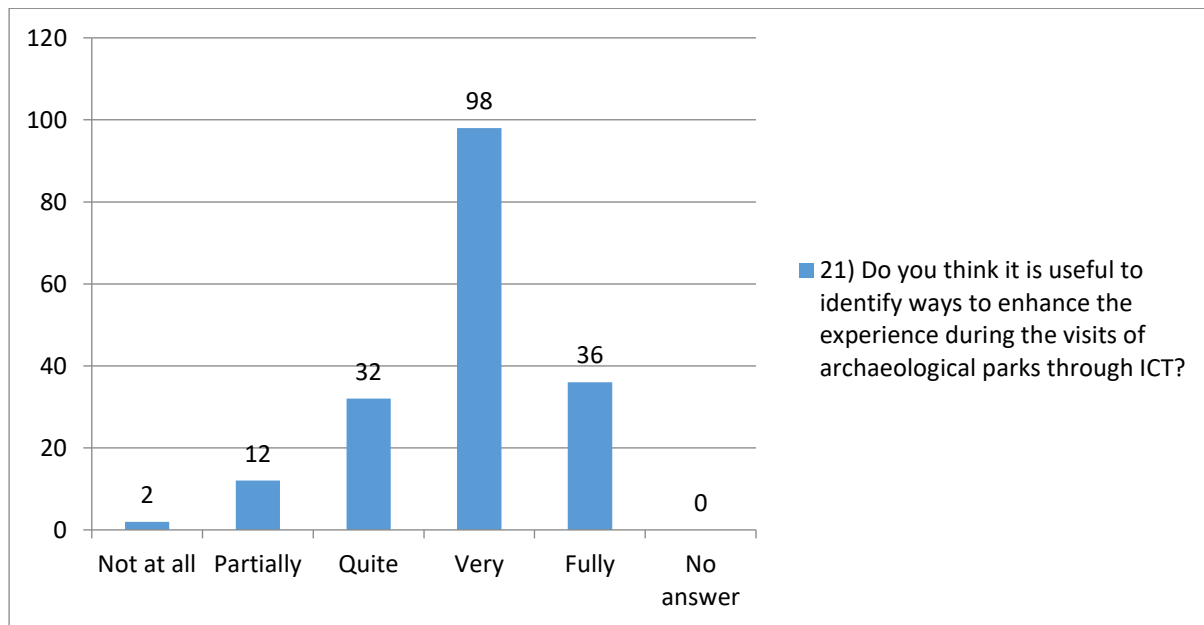
4.1.2 Specific ICT tools for on-site visits

The adaptation of ICT technologies and tools to the needs of archaeological research and documentation (geographical prospection, mapping, laser scanning, photogrammetry, 360° photography, ultra-high-resolution images etc.) offers at the same time extensive possibilities for the development of specific ICT tools for on-site visits. 3D-scanning, modelling and reconstructions are used in advanced VR imaging technologies, adding layers of understanding and interpretation to the ruins. Mixed Reality (MR) and Augmented Reality (AR), blending the virtual with the real, have found ideal application areas in archaeology and heritage (Roussou 2008, Forte 2016).

These tools offer different approaches and degrees of engagement:

- guided or self-guided site tours, with various degrees of personalization, initiative, interaction and diverse points of view (360°-panoramic, bird-eye, underground, magnification of details, overlaying of different archaeological layers…)
- virtual compensation of objects, reconstruction of structures and of the environment, 3D-prints, animation, holograms etc., giving the possibility to follow the different phases of a building, development of a site, the evolution of a territory, etc.
- storytelling, gaming, treasure-hunting, rpg.

- Immersion, combining AR, MR and interactive panoramas, and stimulating the sense of presence by addressing more than one senses (sound-scape, haptic technologies, olfactory triggers…).
- Analysis and feedback in relation to the quality of visits, that was demonstrated as mandatory for reaching expectations of users (Pescarin 2014) and recently should be obtained via automatic or more efficient systems (Quattrini 2020).

These tools are accessible either via personal devices (smartphones and tablets) according to the definition Bring Your Own Device (BYOD), or via devices offered by / integrated in the site.

Personal devices are the most effective way of enhancing visitors' experience, without expensive infrastructures. The easily accessible apps do not require downloading of heavy data packages -but they need a stable internet connection. In particular the so-called web-apps strictly present this requirement. They foster personalized, tailor-made experiences and allow visitors to share their impressions through social media. Moreover, they are safer to use from the point of view of sanitary measures.

On-site equipment, such as monitors, projectors, touch-screens, interactive floors, VR headsets, sound-systems, audio-guides etc., is more expensive, requires infrastructure, maintenance, and presents special difficulties of installation in open-air sites; on the other hand, it can create spaces and ambiences fostering a unique immersive experience.

Some of the benefits of this approach:
- Improved access (both intellectual and physical), overcoming barriers such as language, age or disabilities
- Audience attraction, diversification and development
- Approach on a visual, auditory and textual basis
- Knowledge processes with the "sensory-motor" method instead of the "symbolic-reconstructive" one
- Enhancement of visitors' experience
- Edu-tainment, combining educational approach to entertainment
- Motivation for repeated visits
- Fostering of multi-disciplinary collaborations
- Enlargement of the attractive potential of the territory

Nevertheless, the main challenge of these tools is to enhance and integrate the "real" experience of the site without overshadowing it or distracting the visitor.

4.1.3 Specific ICT tools for remote communications

For the stakeholders it is useful to identify ways through ICT to allow virtual visits and "remote communications" of the archaeological parks.

Bar chart legend: ■ 22) Do you think it is useful to identify ways through ICT to allow virtual visits and "remote communications" of the archaeological parks?

Bar values — Not at all: 7, Partially: 27, Quite: 43, Very: 73, Fully: 30, No answer: 0
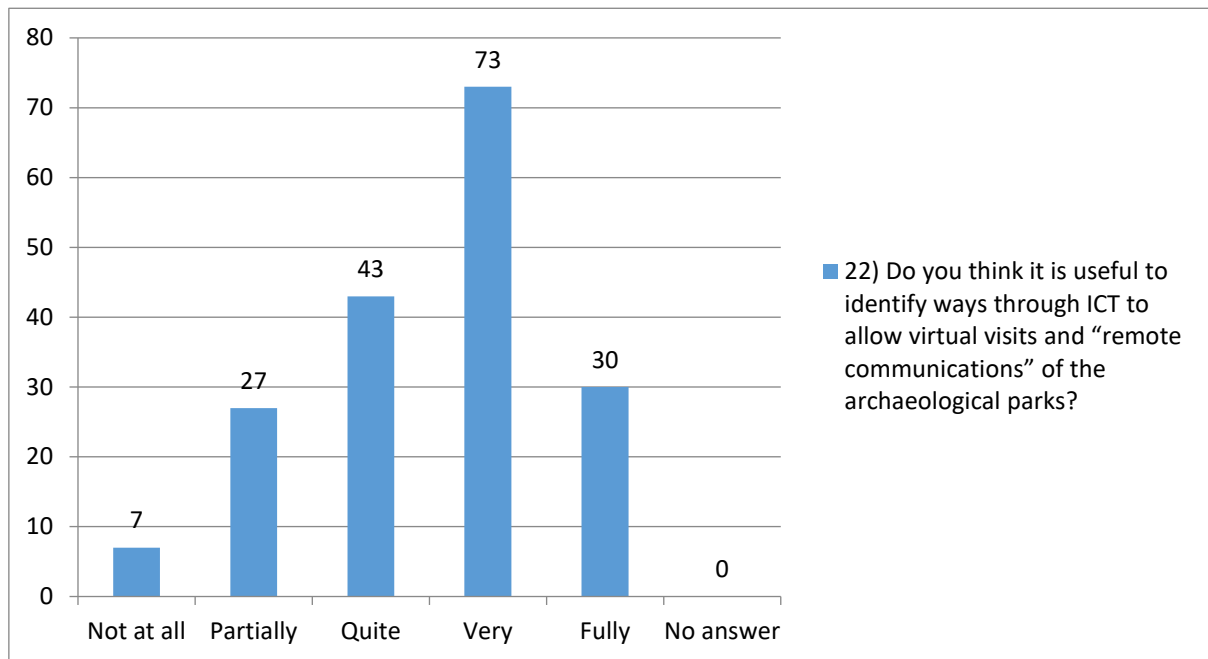
Tools developed for remote communications can have multiple uses:
- Pre-visit: helping visitors prepare and organize their experience
- Post-visit: consolidating the experience
- Substitute to a real visit (nowadays more than ever, because of the pandemic), with special features breaking down barriers and expanding access to the site to all categories of virtual or potential visitors. Particular stress should be given to the possibilities offered to people with disabilities.
- Gaming, social networking and other tools creating "long-lasting" links with users.
- Typologies of data acquisition that are more adequate for the development of remote-visit projects are: 3D modelling from SfM photogrammetry integrated also with laser scanner; 360° photography combined with interactive panoramas (the most popular example being Google Street View Technology and Google Arts & Culture program, providing the opportunity to use street view but inside the museum / site); or even 360° videos, the next level of the 360° experience, where a view in every direction is recorded at the same time, shot using an omnidirectional camera or a collection of cameras. YouTube provides online 360° videos from 2015; interactive maps; etc.

Moreover, the same tools used on-site can be adapted for remote communications, either <u>at home</u>, using personal devices and accessed via internet, or in <u>dedicated spaces</u> connected to the site (at the entrance, eventually combined with an information centre and/or a souvenir shop, nearby or even far away).

An interesting option of remote communications (online chat, live video, social networks, etc.) is the possibility to follow in real time activities taking place in the site (a guided tour, field work, restoration, various cultural activities, etc.)

Social media and other real-time apps allow actual visitors to connect to potential / virtual visitors and share their experience. This is a crucial aspect of ICT when addressing native digital generations, like Generation Z, who are not passive users but content-producers, eager to interact and to exchange.

4.1.4 Other tools

The edu-tainment approach can actually transform archaeological parks into stages that mediate the relationship between the contemporary visitor and archaeology, new media and technology:

- **Video and projection mapping techniques,** projecting lights and images on existing surfaces, are the result of cross-sectoral collaborations, involving researchers, ICT professionals, artists, directors, light designers etc. The combination of images, lights and sounds can give birth to sensory journeys.
- **AR/ MR/ VR apps**, proposing various "scenarios" of visits, involve directors, scenarists, actors… and "props" and allow visitors to select among different levels of interaction and immersion: spectator, treasure-hunter, role-player
- The use of **"personas"** encourages the audience to engage and explore actively the site and the territory, co-creating a personalized experience through a wider freedom of choice of activities, times and typology of learning, stimulating problem-solving skills as well as system thinking and willingness to cooperate.
- **Image recognition/AI** can be used in applications providing a gamification experience.
- **Holograms**
- **3D-modeling** and **3D-printing** with free access to open data from the collections of the site can foster contemporary artistic creation and support creative industries.
- **User-generated content** and the growth of social media stimulate interaction and creativity.

4.1.5 Conclusions

One of the most important benefits of ICT is that they can connect the site to the wider territory, in the context of a networking strategy that can help integrate other "tourist attractions" into a comprehensive valorization circuit, proposing various itineraries and promoting different aspects of the area through a holistic "pack" of experiences.
A main aspect to be taken into consideration is the possibility of ICT to provide feedback, assessment and evaluation of various aspects of the AP management and operation.

4.2. Analysis of the reference scenarios

Moving on from the theoretical framework of ICT on the service of archaeological parks and territories to the practical analysis of the reference scenarios, i.e., the selected case studies, it becomes obvious that the current state of digitalisation process reflects directly the priorities, orientations and choices at national, regional and local level, as well as the strengths, weaknesses, opportunities and threats stemming up from the general management scheme of each park.

4.2.1 Current state of digitalization

The reference scenarios correspond to three main levels of digitalisation, with various degrees in between:
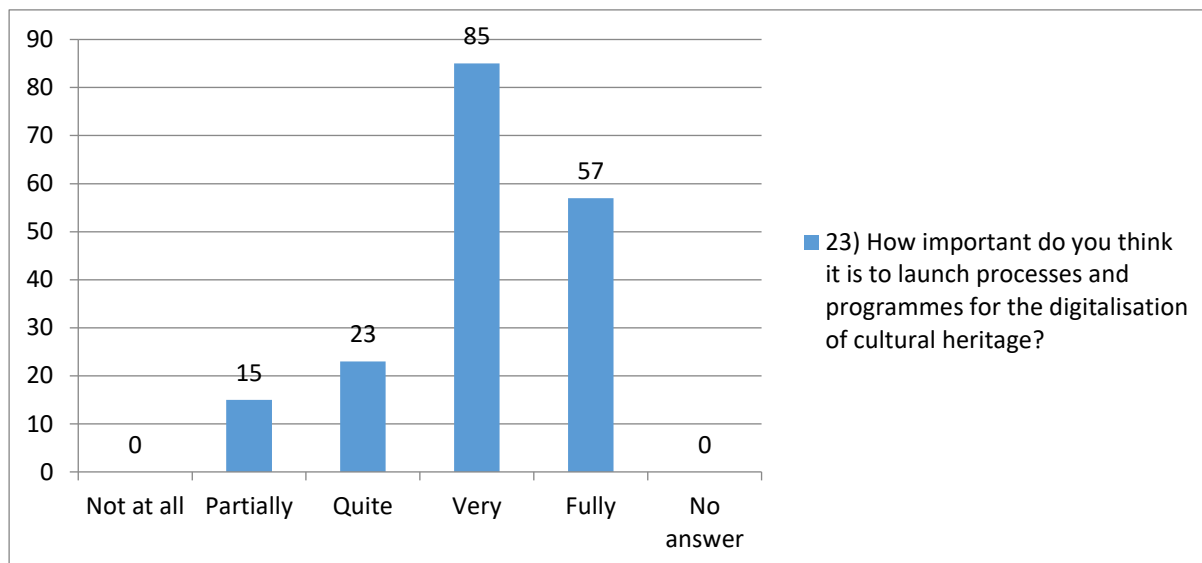
1. Level 1: no infrastructure / internet connection; no digitalisation; no ICT tools. It is the case of **Antigonea** or of **Poetovio**. So, the perspectives offered by the TRANSFER-model are very interesting.
2. Level 2: Digitalisation mainly for purposes of documentation.
   In **Mirina**, recently excavated archaeological material is **documented digitally**; detailed plans in computer design and photogrammetry could be used in future applications; one important monument has already been **3D reconstructed**. However, a huge amount of earlier material has not been digitalized yet and the lack of specialized staff does not help in this direction.
   Šibenik City Museum uses an obsolete system of digitalization of its collections for purposes of documentation and lacks **proper equipment for the process.** Future projects include a **national digitalization program** which has not yet been implemented.
3. Level 3: Digitalisation at the service of the management. Leveraging ICT tools to enhance the accessibility, communication and promotion of the site.
4. The archaeological site of **Dodona** has **a wireless internet network.** Moreover, a **3D representation** of the site in the 3rd c. B.C. and a **3D video with the successive phases** of the sanctuary have already been prepared. Future projects include **3D reconstructions** of the main buildings and the development of an innovative **platform for creating tour applications** using elements of augmented reality and gaming.

In **Urbisaglia**, an interactive 3D modelling and visualisation of the roman territory and the city of Urbs Salvia with **VTERRAIN** proposes not only new and innovative methods of organising the data themselves but also new perspectives for visitor / tourist use; **QR-codes** are placed in the archaeological area; **3D-printing models** enhance accessibility for visual impaired; **videos** uploaded on the web allow remote communication. Furthermore, Urbisaglia has recently been involved in important projects, aiming to develop **versatile 3D models** and multimedia contents, that can be used in further AR and MR applications.

However, despite the disparities between the case studies, some common observations emerge from a basic SWOT analysis:

Strength	Weakness
The intrinsic value, and in many cases the visibility /recognizability of the site / the territory.	The lack of a comprehensive digital policy and of an integrated tool for the management of the site.
Opportunity	Threat
The project TRANSFER: a management model including ICT tools with multiplying effects for both the site and the territory.	The lack of continuity in projects, policies and strategies.

For stakeholders it is important to launch processes and programs for the digitalization of cultural heritage at the basis of the processes of protection and enhancement. For 85 it is very important and for 57 absolutely important.

The chart shows responses to "23) How important do you think it is to launch processes and programmes for the digitalisation of cultural heritage?"

Not at all	Partially	Quite	Very	Fully	No answer
0	15	23	85	57	0

4.2.2 The relationship between parks and surrounding landscape in relation to the ICT tools

The given "passive" relationship between parks and surrounding landscape has infinite possibilities of evolving into an inter-active exchange.

The analysis of the reference scenarios highlights not only different levels of interaction, but also different perceptions of the very nature of this relationship, hence defining the most useful ICT tools in this direction.

- ICT as a **facilitator**: landscape is an integral part of archaeological sites, essential for their perception. Better understanding of the geographical position and of the relationship Site/Territory in its historical dimension adds useful layers of perception. Antigonea, for instance, held a strategic position in the Drino valley, in relation to other satellite sites, fortifications and roads, which can be grasped better through the use of ICT tools.

  New technologies foster new interpretations and help bringing users closer to archaeological heritage, by re-crating the space / time evolution and transformations of the site's landscape; thus, the *cultural landscape* dimension is valorized, putting forward the relation of CH to present-day area. This offers new opportunities for cultural heritage education through *edutainment*. The archaeological site of Dodona, for example, could offer its numerous visitors an enhanced experience, developing further the already-existing 3D-reconstructions adding the layer of landscape in AR and VR applications etc.

  Moreover, ICT encourage a more inclusive and "democratic" perception of CH, breaking down barriers of accessibility (physical impairments, cognitive and socio-economic obstacles etc). Of particular interest is the comparison between the physical, emotional and cognitive experience of the actual archaeological park and the experience of that same park created and reconstructed through ICT, or of the "real" space and the intervention of tools such as light design and 3D-video mapping.

- ICT as a **mediator** between the archaeological site, the surrounding territory and the (potential) users. The web offers loads of disparate information, which can be filtered and channeled to foster this relation. New technologies (i.e. geo-

localization) allow traceability, visibility and accessibility of a larger area; moreover, they can help connecting the archaeological sites with the territory and structuring a liaison between the scattered cultural heritage: this is the case of Urbisaglia and the PlayMarche DCE project, focusing on the development of a Game-App dedicated to the discovery of some of the towns of Macerata Province. The network of sites around Šibenik could largely profit from a joint presentation.

- Yet, the breakthrough revolution is the transition to a human-centered / user-centered approach, facilitated by the use of mobile apps, personal devices and location-aware tools: *Marcheology* (https://www.marcheology.it/en/), the geoportal for Marche archaeological heritage developed by Polo Museale Marche, offers users the possibility of organizing all aspects of their experience, including not only local attractions and special events, but also offers of food, accommodation, buys etc. This could be a useful example for the city of Ptuj, which is establishing an ICT network in which the AP Panorama could be included in a unified plan, promoting the larger cultural heritage region – complex as a tourist destination (and resolving, at the same time, maintenance issues). The perspective of joint initiatives between countries (such as a common website promoting neighbouring archaeological parks of Albania and Greece) would also increase their international reverberation.
  It is important to observe how the complementarity between the territorial dimension and the cultural dimension increasingly passes through new technologies, although ICT tools cannot be considered as a substitute for heritage or territory: ttheir role is to create multiple links between the two dimensions.
- ICT as an **awareness-raising** tool: New technologies on the service of landscape education and cultural heritage education can foster the understanding of complex notions, thus developing a greater civic sense and an active engagement in the sense of responsibility. Environmental issues, such as those faced by Mirine-Fulfinum, surrounded by industrial facilities with possible invasive effects ICT can offer useful tools for empowering local communities; moreover, it has the potential of connecting people, not only at regional, but also at national and international level.

Very useful can ICT be in developing relationships between archaeological parks and the territory for the stakeholder.

Chart data:
- Not at all: 0
- Partially: 19
- Quite: 33
- Very: 107
- Fully: 21
- No answer: 0

Legend: ■ 24) How useful can ICT be in developing relationships between archaeological parks and the territory?
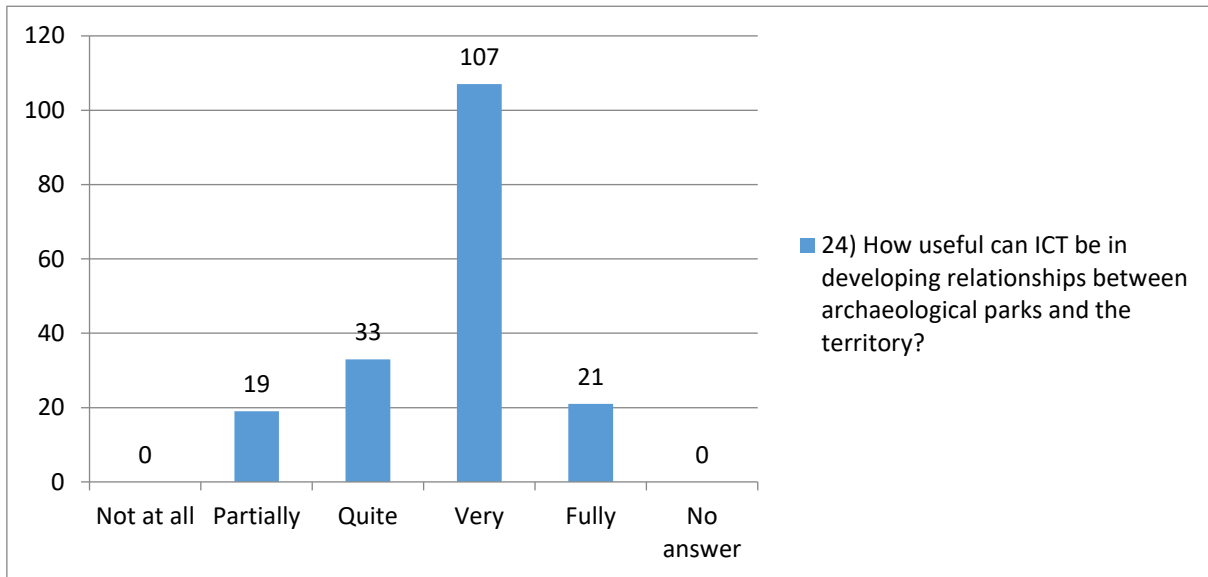
4.2.3 For an integration between the site enhancement processes and the territorial infrastructures

The contemporary urban landscape is the evolving image of dynamic social, economic and ecological changes and heterogeneity. It constitutes the mirror of history, natural and cultural, urban processes. The presence of an archaeological park deeply influences the dynamics of territorial development. In this framework, the development of systems for the knowledge of the territory can become a fundamental urban planning tool for public administrations use in the various stages of development policy programming regarding the territorial infrastructures.

The integration between the site-enhancement processes and the territorial infrastructures has to consider the observations from both the current situation of each case and the existing relationships and trends between the site and its territory. The first step would be a PEST analysis facilitating the understanding of the current situation, the expectations and the trends at various levels and thus pointing out the needs and possibilities of ICT tools, both in the management and in the enhancement of the parks in relation to their territories.

| Political	Environmental
The informed participation of all the important actors (central and regional administration, Archaeological Service and local stakeholders) it is of major importance to build a comprehensive collaboration and reach a consensus	The existence of protected and green areas, as well as the proximity of the site to large urban centers, have to be considered.
Socio-economical	**Technological**
Defining the stakeholders and networking in a broader perspective of common interests and benefits, bringing together academic and territorial institutions as well as local enterprises, working in the park with	Mapping of existing infrastructure and ICT resources from all stakeholders and the exploration of bridging and collaborations having a direct impact on visibility and on the integration in a

its cultural heritage and the understanding of its potentials.	wider national and international framework.

Next comes the development of an integrated and sustainable governance model, made possible by a series of tools made available in an integrated and implementable form (including ICT). Thus, in the immediate vicinity of an archaeological park, an area subject to specific use and enhancement regulations, including environmental ones, planning will take place on the basis of shared parameters both in terms of territorial planning and governance. Moreover, infrastructural works would be better planned in a shared-governance framework.

Then, the enhancement process would start with the implementation of relevant digitalization methodologies and ICT tools.

Finally, joint projects should be planned and implemented, starting from infrastructure and evolving towards more ambitious ICT tools fostering fruitful collaborations within the territory. Eventually, focusing on tools such as *Marcheology* can be the starting point for a fruitful collaboration with local activities and enterprises that can positively affect the local economic growth both directly and as a secondary repercussion.

Very useful (106 from the stakeholder) can ICT be in developing synergies between management processes of archaeological parks and enhancement of the cultural heritage spread across the territory.
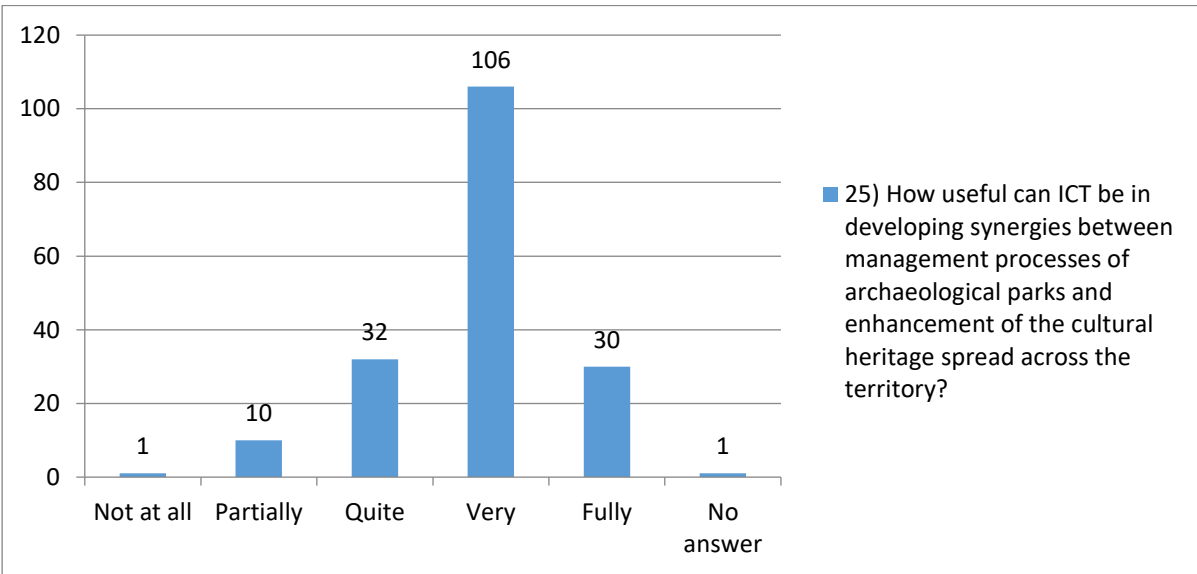
4.2.4 Users' interest tracking system, users' profiling, decision-making tools related to fruition analysis and management

Decision-making tools should be developed within the spirit of the World Heritage Convention, in order to *'encourage everyone to participate in the process of identification, study, interpretation, protection, conservation and presentation of the cultural heritage'* (Article 12a of the Faro Convention).

First, it is appropriate to consider the usefulness of tracking the interests of users and their profiling not only in the final stages but also during the methodological

approach and the operational activity of collecting research data. Both phases are indeed crucial as they offer the opportunity of comparing different skills, approaches and expectations (coming from researchers, directors, curators, but also administrations, companies and managers) regarding the importance of knowing better the users.

The definition of "public" itself is very complex (which and how many categories fits in it?) as well as the frame of an archaeological park, which is to be considered as an "archaeological landscape" where users not only benefit from the cultural heritage but also of other kinds of services (educational workshops, bookshops, coffee shops etc.).

Approaching the "public" we also need to distinguish:

- <u>real public</u>: people who not only go to the park but also participate in its activities. For these users, forms of membership and fidelity programs can be considered;
- <u>potential public</u>: those who could be interested in the park but have not established an association with it yet. Expansion strategies should be directed to this group;
- <u>non-public</u>: those are the users who do not consider the park capable of meeting the expectations associated with their free time.

Moreover, not all the information obtainable from user tracking and profiling are useful. Thus, it is necessary to focus only on those relevant for operational activities. What we really want to get information about is:

- <u>user's socio-demographic profile</u> (age, gender, origin, educational qualification, etc.);
- <u>motivation</u> (i.e.: cultural, tourism, socialization or relaxation): useful to evaluate the effectiveness of marketing and communication;
- <u>experience</u>: its evaluation is needed to improve the weaknesses and emphasize the most appreciated aspects;
- <u>ICT and other communication strategies</u>: the analysis of their use and effectiveness is essential in evaluating what is already in place and what needs to be implemented;
- <u>cognitive learning process</u>: it is crucial to understand whether the visit has contributed to increasing knowledge or interest;
- <u>behaviour during the visit</u>: useful for evaluating the effectiveness of the path and the communication apparatus such as captions and panels.

About the Parks

In **Antigonea** a new management plan should be undertaken as applied in other parks in Albania such as Butrint and Apollonia. Also, an improved coordination between different institutions such as the Institute of Archaeology, the Institute of Monuments the DRTK Gjirokaster, local government should be undertaken. As Antigonea is situated in the ancient Epirus, in vicinity to the Greek border a promotion in a joint website of Greek and Albanian sites would be beneficial for the advertising of the area.

Concerning **Dodona**, it has to be noticed that, in Greece, the decision-making tools related to fruition analysis and management of an archaeological site requires a dynamic opening of the Ministry of Culture and Sports towards the proposed

stakeholders, according to the specific characteristics, needs and environment of the archaeological site. This taken into account, a good strategy of implementing the effectiveness of user's tracking systems in the management and planning activities could be the one of integrating all the sources that allow us to get info about user's interests and needs with the work of various committees and working groups, workshops and individual meetings with local stakeholders.

The site of **Mirine-Fulfinum** needs yet to be enhanced, and the ICT tools should be installed. Therefore, there is no organized tracking system in use, for now. However, few internet sites publish and inform us about the park. These are the only ones that can be used for the analysis of both interest and users' profiling, but they should be targeted.

The remote sites connected to **Šibenik** need infrastructure for monitoring installations, also useful for tracking visitors' behaviour in a passive way.
Ptuj is already a recognizable tourist destination, with well-developed tourist offer in town. The possibility to expand and upgrade the offer, including AP Panorama, should take into consideration the users profiles, needs and expectations in an active way.

The Archaeological Park of **Urbisaglia** is advertised in some sites and apps and has its own page on the Municipal website. All these systems can be a starting point for a user's tracking strategy, but they need to be implemented and targeted in order to be useful. A more effective enhancing plan should include social media strategies as well as a better visibility in institutional websites, local manifestations and activities and dedicated touristic tools, websites and advertised activities. Also, the role of Meridiana srl, which works on the park and manages its touristic activities, should be considered.

4.2.5 Conclusions

Looking at what has been so far discussed makes it quite clear that the first step to approaching users' interest profiling should be the design of a digital communication space: website, mobile apps, newsletter and social media. Also, membership campaigns or the adoption of cards dedicated to customer loyalty should be useful.

There are different types of profiling on the web and here it is important to examine also more respectful approaches to our visitors.
For instance, Cookies contain data that allow users to be monitored and profiled while browsing, to study their movements and habits of web consultation or consumption as well as for the purpose of sending advertising for targeted and personalized services (so-called Behavioural Advertising through profiling cookies). Given their privacy invasiveness, the legislation requires a proper information of the user and the request of their consent (the refusal of consent only affects the ability to access some functions or contents and not the site as a whole).
Profiling and segmentation activities allow us to devise ad hoc strategies and navigation paths, also by synchronizing the personal 'identity card' with the digital ecosystem. The interaction and preference data enable us to create a mapping of interests and activities, remotely and in situ (ticket purchases, participation in

webinars, online purchases ...). By the synchronization of personal, behavioural and historical data, it is possible to draw up a user profile, segment it and approach all useful marketing and communication strategies.

Profiling data can be collected through 'registration' on the site itself. Four main types of approach to accessing the site can be identified:

- <u>mandatory registration</u>: it achieves a more complete profiling, but its fill in process may annoy the user;
- <u>optional registration</u>;
- <u>silent recording</u>: it is a mandatory registration, but it only concerns some sections and activities of the site;
- <u>no registration</u>: data may be requested at every access.

Social networks are other valuable tools for communication and profiling: a more immediate link is established with the followers, depending on a more inclusive type of interaction. It is possible to store a huge amount of structured data as these tools have sophisticated algorithms by which they correlate user activities, reconstruct social networks, keep track of the clicks made and the time spent on a specific content and automatically analyse the messages transmitted by users.

Other than online tools, in situ tracking systems can analyse the silhouettes of people passing by, detect the number, even without any storage or management of images, with privacy compliance. It could also be connected to the site with a check-in web service to produce statistics. Advanced tracking technologies based on video streams and analysis of user and visitor behaviour, conceived with an interdisciplinary approach and combining museological and museographic knowledge and expertise in Artificial Intelligence, should be considered for a next generation of users' profiling. A useful example on this account can be *Visitracker*, the system developed by the Department of Education of the University of Oslo in collaboration with the National Museum of Oslo, which conduct surveys in the form of questionnaires, and track and analyse real time observations of individuals and groups in Museums.

It is also possible to design of new forms of data visualization (e.g., Management Dashboard) and KPIs (Key Performance Indicators) for the determination of uses and bringing to a decision support tool for the manager, stakeholders and/or decision makers in archaeological park.

To conclude, all these operations are relevant not only in the project phase (to test the efficiency, the usability, to drive design and decisions) but also during the everyday management and life of the park in order to have feedbacks about the communication effectiveness. These data are essential to improve not only the user experience, but also the purpose and enhancement of the archaeological park as a whole. This paradigm is surely enhanced if the digitization process is implemented in all phases of planning and managing the archaeological park. this is crucial to measure the impacts of DCH experiences in relation to specific targets and calibrate subsequent actions, including the construction and design of a 'digitization chain'.

4.3. Ideas and projects for a Common Sustainable Governance Model

ICT offer a wide array of tools, whose main interest is their versatility, thus their possibility both to serve a Common Sustainable Governance Model and to be adapted to the specific needs, expectations and limitations of different case studies.

ICT tools offer various solutions to the:

1. Organization and management of the Archaeological Park

2. Research and maintenance
3. Information and Interpretation resources
4. Connection to the territory and its resources
5. Quantitative and qualitative monitoring of the Archaeological Park

Many of them are useful in more than one sectors, contributing to the holistic governance of the Archaeological Park.

4.3.1 Organisation of the Park Plan

In order to support the general organization of the Park Plan, the first step is the implementation of the main infrastructure: hardware and software.

- **Personal Computer/ Workstation**: the most basic ICT tool, storing, processing and retrieving data.
- **PC's peripheral devices**: printers, scanners, projectors, interactive whiteboards.
- **Local network:** assists a collaborative scientific and administrative work.
- **Internet access**: allows connectivity and the fastest flow of information.
- **Software**: various programmes assisting the general organization and the management of the park
  - Project manager
  - Communication platforms
  - Web applications
  - Cloud services)
  - GIS system: very useful in all phases of development, implementation and updating of the Management Plan. It offers a quick overview of the area, its environmental and administrative / legislative norms and constraints. If accessible from all the actors involved in the Park's management, a GIS system eases the collaboration between them as well as the effectiveness of their actions; Furthermore, an integrated database recording all the archaeological finds should provide a full resource for the evaluation and planning of the conservation work and maintenance of the park, its environment, its structures and artefacts. A GIS system also provides tools for utilizing GIS data.
  - "Integrated Archaeological Site Management Information System" (a kind of Digital observatory): a platform gathering and offering daily a holistic account of the Park's operation (e.g., opening hours, timetable of public transportation…). Moreover, if connected to CCTV, it enhances monitoring of the park.
- **CCTV, drones, live webcam**, *in situ* **(contact or contactless) sensors, IoT technologies:** linked to a central information system, they monitor in real time the status of the park and its structures. Moreover, they can monitor access and human activity in the park, assisting the surveillance and helping with the planning and implementation of preservation strategies as they allow to calculate the anthropic impact on the cultural heritage.

4.3.2 Research, documentation, maintenance and protection
- **Digital cataloguing** of the archaeological findings (including all earlier phases of the research) and of all the metadata linked to the research, study, maintenance of the AP, is the most important initiative in this category. Many software solutions are available. More specific:
  1) Collective Access is a free, open-source cataloguing tool and web-based

90

application for museums, archives and digital collections. Its main focus/strength is on cataloguing and metadata

- ─ -Accessible anywhere via web browser
- ─ -Pre-configured with popular metadata standards
- ─ -Customizable fields, views, workflows, and more
- ─ -Quickly creates PDFs and spreadsheet reports
- ─ -Supports batch importing, exporting, and cataloguing
- ─ -Easily style to fit your brand's look and feel
- ─ -Browse with customizable facets and filters
- ─ -Switch on/off public commenting, tagging, and rating
- ─ -Display content via maps, timelines, and visualizations
- ─ -Multiple options for media display and interaction

2) CollectionSpace is web-based, open-source collections management software for museums and more.
   - ─ Professionally manage your organization's collections with user-friendly, web-based, open-source software
   - ─ Improve stewardship of the resources you hold in the public trust
   - ─ Support diverse collections in an effective, efficient, and scalable way
   - ─ Share data via web services and an advanced native API
   - ─ Connect and integrate with tools such as digital asset management systems, digital preservation systems, and content management systems
   - ─ Shorten response time for research requests
   - ─ Future-proof your organization's technology infrastructure and sustainability
   - ─ Robust tools to store and describe a wide variety of digital assets, including images, documents, audio, and video files

- **(Aero) photography**: conventional method of documenting environment, archaeological sites, artefacts… In many cases extremely underestimated method is by today's standards relatively cheap and very effective. By photography the heritage can be researched, documented, monitored and protected. Aerophotography gives us data about landscape, settlements and is an excellent method for monitoring the development of regions (urbanization, land-use, natural influences of natural phenomena…) and its impact on heritage. Periodical photography can draw attention to any endangerment of heritage (destruction, degradation…) so its use as a monitoring tool is also justified.

- **Photogrammetry**: a camera collects colour information about surfaces within its field of view. Photogrammetry is technology of obtaining reliable information about physical objects and the environment through the process of recording, measuring and interpreting photographic images and patterns. Digital image capturing and photogrammetric processing includes several well-defined stages, which allow the generation of 2D or 3D digital models of the object as an end product. Comparing to 3D scanning in photogrammetry there can be more "dark areas" which should be processed by software such as MeshLab. Also, geolocation is not priority but with additional processing it can be done with excellent accuracy.

- **3D scanning** – if the photogrammetry is based on colour information, 3D scanning is based on coordinate information. 3D scanning is the process of analysing a real-world object or environment to collect data on its shape and possibly its appearance. A 3D scanner can be based on many different technologies, each with its own limitations, advantages and costs. A 3D scanner collects distance information about surfaces within its field of view. The model produced by a 3D scanner captures the distance to a surface at each point in the model. This results to a point cloud with coordinate and colour data. By 3D scanning the heritage (i.e., the AP within the territory, the structures and the artefacts) can be researched, documented, monitored and protected.

- An extensive database with **GIS system** can integrate the information produced by 3D scanning. GIS data is used as a basis for planning reconstructions, conservations and maintenance work. It serves also as a database for any digital or analogue products for the AP (reconstructions, replicas…). Open Access to the existing documentation has an obvious advantage of data sharing with the research community.

  One of the most popular scanning technologies in archaeology in the last 10 years is LiDAR (light detection and ranging). Research of archaeology has moved from "site research" to "landscape research" and LiDAR technology[4] is suitable for scanning large areas. Its added value is that gives us also information about invisible archaeological remains underground.

- **Geophysics** in archaeology[5] gives data about underground remains. As there are many limitations to the technology (bad ground conditions, no chronological / stratigraphic data, unreliable interpretation, this method needs to be combined with at least one more method (i.e., scanning or photography).

- **Digital replica** of the AP: it maps and records the main elements, including different characteristics (geometrical, mechanical, physical, stylistic, chromatic, etc), in digital formats, using different formats, mainly graphic, such as images, 3D models etc. To achieve this purpose one of the most relevant element is the creation and the use of a unique and integrated workflow, including:
  - data captured through laser scanners, drones, photogrammetry, panoramic photography
  - the elaborations of the 3D and 2D data, such as panoramic images, photos, point cloud and mesh model.

  This system offers the possibility to transfer data of similar workflows into institutional databases, with possibility to feed also Europeana, as well as to manage data in innovative research infrastructure and platform (Ariadne+, 3DHOP etc.).

---

[4] Slovenia is scanned with LiDAR technology and the data is available free online.

[5] Geophysics gave excellent data in the case of Panorama.

4.3.3 Enhancement of the information and interpretation of the Archaeological Park

ICT tools offer numerous possibilities of enhancement and personalization of the experience of the visit. In order to develop fully their potential, it is recommended to ensure Wi-Fi coverage of the AP. Moreover, at least some of the supports or devices (tablets, audio-guides, headsets…) should be provided by the park itself.
Having taken this into account, we can distinguish different levels of immersion offered by ICT:

High immersivity:
VR headsets
Advantages: Maximum involvement of the users, they can have the most realistic and emotional experience about virtual archaeological reconstructions.
Disadvantages: High cost of development; short "technological life"; cost of headsets; necessity of the presence of an operator specialized to help the users; only one user can use the devices; medium maintenance costs; hygienic issues; visitors might hesitate to use it or feel dizzy after using it.
Architectural projections / Light design
Advantages: Adds virtual layer of information directly on the real environment, either by projection using video-projectors or through holography; users can visit simultaneously and interact with a digital world without the use of specific devices, such as headsets, smartphone or tablet.
Disadvantages: Very high cost of development, installations and equipment; short "technological life"; specific light conditions to work; medium complexity of maintenance.
Medium immersivity:
AR/MR apps
Advantages: Combination of the real world and digital content, projecting directly digital data on the archaeological remains and recalling elements of the surroundings; they can be built on personal devices (Bring Your Own Device – BYOD) or on others owned and maintained by the park.
Disadvantages: High cost of development; short "technological life"; not all personal devices are always compatible; the app might be heavy or require an internet connection; complex maintenance, especially for iOS app; need for precise light conditions to work efficiently; (older) visitors might not feel at ease with their use. For devices owned by the park: need for a charging system.
Low immersivity:
Podcasts and Apps for smart devices
Advantages: Applicable to all devices; free download; simple to use; possibility to personalize the experience.
Disadvantages: Cost of development; short "technological life"; small display; connection speed - need for Wi-Fi; (older) visitors might not feel comfortable to use it.
QR codes
Advantages: Depth and layering of information; easy to develop; low cost.
Disadvantages: Connectivity; some visitors don't use QR code scanner or digital devices at all; visually unpleasant.

Video on screens

Advantages: Low cost of the devices; possibility to involve more users simultaneously; easy to use by the majority; it is easier describe the whole archaeological site according to its contest and landscape.

Disadvantages: Low involvement of the users, consolidated technologies with low interest for users.

Website

Advantages: Wide use; accessibility, remote communication; easy renewal of information, low cost for the AP; communication, promotion and management network of common touristic and cultural projects and offers possibility to develop networks within the territory and its resources or between countries.

Disadvantages: Low involvement of users; needs dedicated administrators.

Social media

Advantages: Very popular amongst many categories of visitors (especially young ones); easy renewal of information, low cost for the AP; possibility to share information and experience, attracting wider audiences and building a community.

Disadvantages: Needs dedicated administrators; not all visitors are familiar with social media.

4.3.4 Promotion policies and offer of services *via* ICT tools

All promotion policies and offers of the AP and its territory can be served by the ICT tools in use by the Park:

The promotion of the site can benefit also from special events that are centered on ICTs such as the use of light design, augmented reality and 3D video mapping aiming to create a sensorial experience.

4.3.5 Resources of the territory to be taken into consideration

In order to plan a conscious and effective use of ICTs it is primarily important to involve the project's partners and stakeholders of the territory: local and regional authorities, civil society, local entrepreneurship and creative industries, education…

Strategic planning and cooperation, development of networks at local, regional, national and international level are of prime importance.

Planning the use of ICTs to enhance an archaeological park must also consider the characteristics of the landscape and the natural environment.

Moreover, lots of factors have to be taken into consideration during planning:

- Comprehensive offer of cultural heritage
- Other tourist attractions, local products...
- General infrastructure (utility connections)
- Traffic connections
- Accommodation and restaurants
- Broadband internet (with wireless option)

4.3.6 Quantitative and qualitative monitoring

In order to verify the effective improvement of the park the monitoring of users' feedback and interest is essential. Some of the most common tools used for quantitative and qualitative monitoring are:

Visitor survey – used for quantitative and qualitative monitoring. Depends on the contents of the document we can get reliable information (profiling of visitors). Digital survey is possible but there must be efficient system to motivate visitors to fill it in.

Counters – counters are used often on transition AP areas. Positive side is that every visitor is counted but there cannot be control over double counts and it gives us no information about profiling.

Application profiling – used for quantitative and qualitative monitoring. Depends on the contents of the document we can get reliable information (profiling of visitors). This method requires access to internet and communication device. Even if it is available in AP there is significant part of visitors that are not using it (do not know how or do not want to).

Google analytics – method for counting visitors on the basis of Google account users. This method is based on the fact that many visitors have a smart phone with internet connection and Google account with tracking settings. So it works on the principle of Google Traffic map. Method is limited to a very specific type of visitors.

Smart devices and Apps – allowing to study users analytics, to track visitors path and behaviour; some include digital tools for expressing opinions (e.g. discussion forums) and material exchange, digital writing tools for using personal stories and narrative information to give in the experience of visiting a personal and emotional touch, tour and navigation support applications using mobile devices.

In situ advanced tracking technologies based on video streams and analysis of user and visitor behaviour should be taken into account for a next generation of users' profiling.

Some examples of applications are the following:
* https://www.ratenow.cx/Industry/1/customer-experience/14/museum
  RateNow gives voice to all your visitors in real time so you can identify areas for improvement instantly and transform their cultural experience.
* https://www.nubart.eu
* https://www.nubart.eu/audio-guides.html#visitors-data
* https://www.nubart.eu/audio-guides.html#visitors-feedback

To conclude it is useful to have user tracking and profiling information in the management processes of archaeological parks.

Legend: 26) How useful do you think it is to have user tracking and profiling information in the management processes of archaeological parks?

Chart values: Not at all: 5, Partially: 19, Quite: 50, Very: 76, Fully: 30, No answer: 0
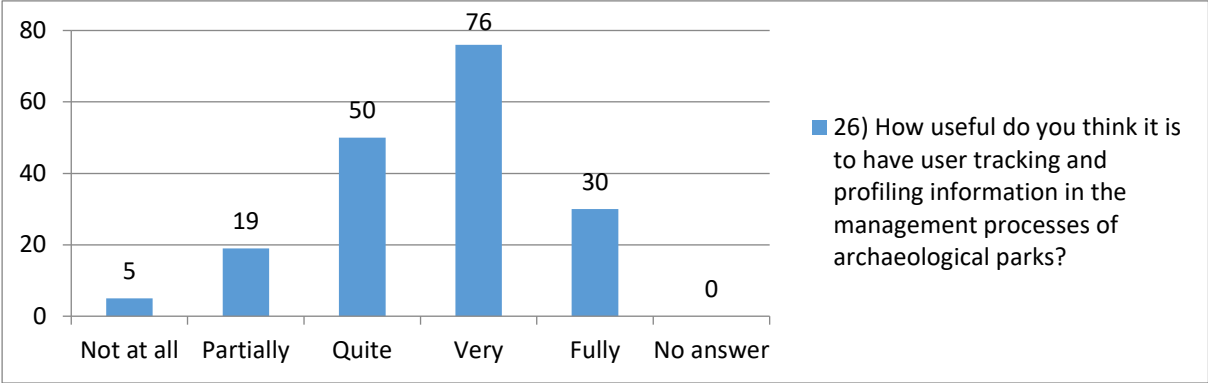
Chapter 5: Common Sustainable Governance Model

The common model and the guide lines are the result of the work of the three WGs. For this reason, chapters 5 and 6 must be read in perfect integration with the previous ones, to which for some in-depth information on specific topics, please refer to

5.1 Methodological approach: essential questions to base the Planning on

Definition of Archaeological Park

Our definition of Archaeological Park develops the premises and approaches of some of the main European conventions connected to cultural heritage and landscape, and in particular the Malta Convention, the European Landscape Convention and the Faro Convention.

The first "Convention for the protection of the European archaeological heritage" signed in Malta on 16.01.1992 entrusts the archaeological heritage with an important role in economic policies and development and social cohesion. It establishes that the needs of the protection of archaeological remains must be integrated into territorial planning programs through the sharing of objectives, consultation and participation in the decision-making process of the communities, making archaeology a tool for growth and sustainable development

The European Landscape Convention, signed in 2000 in Florence (meaning the Landscape as a homogeneous part of the territory whose characteristics derive from nature, human history and mutual interrelationships), invites to propose new relationships between the protection of cultural resources and territorial planning. It associates areas of significant cultural value, such as archaeological parks, with the concept of active protection, thanks to the integration of cultural heritage into the landscape, and allows the gap between the field of protection and Plan. The Plan overcomes, as a tool to try to connect cultural resources with that of sustainable development.

The process of transition from the management of the individual asset to that of the context and landscape has undergone a further definition thanks to the Framework Convention of the Council of Europe on the value of cultural heritage for society, signed on 27.10.2005 in Faro. The Convention reaffirms and strengthens the role of populations in the processes of identifying the values of cultural heritage. It stresses that the goal of the conservation of cultural heritage, and its sustainable use, is the human development and quality of life. These objectives can be achieved by strengthening the synergy of skills between public, institutional and private actors, and by strengthening the process of finalizing the management of cultural heritage to the enrichment of "economic, political, social and cultural development processes and land use planning […]".

This theoretical and methodological framework is constantly confronted with national and regional practice and laws that uniquely regulate and define the characteristics of the areas subject to specific constraints and management processes. It is therefore important to underline the experience of the issuance in Italy of the Ministerial Decree 18.04.2012 "Adoption of guidelines for the

establishment and enhancement of archaeological parks" with the aim of providing guidelines for the organization and management of archaeological parks

The Archaeological Park is therefore: a territorial area where a predominantly archaeological value of the Landscape has been identified, integrated with the presence of historical, cultural and environmental landscape values, object of enhancement.

However, the definition identifies two different cases:
- cases in which the elements that define the archaeological value can be circumscribed within a unitary perimeter (parks with unitary perimeter);
- cases in which the archaeological emergencies are numerous and scattered in residual spaces of the city or in rural or natural contexts (network parks).

– *Which elements, other than the existence of archaeological monuments and heritage, can be ascribed between the common characterising ones for an archaeological park with respect to the rest of the territory.*

By its very definition, the Archaeological Park must overcome the state of isolation in which archaeological remains risk being inserted and becoming the "container" and "generator" of functional, biological and cultural relationships between the various internal and external natural and cultural components at the perimeter of the archaeological area. Its purpose must be to outline new managerial balances and force us to rethink the traditional conception of the museum area in favour of an increasingly widespread interpretation of the park as "production equipment".

- *Which elements and forms of use can give the area, where an archaeological park is located, more or different peculiarities and valuable qualities with respect to the surrounding ones?*

The Park Plan should promote enhancement strategies based on integration processes that take place on several levels. That is, it must favour the integration between what is "outside" and what is "inside" the Park itself.
The strategies of the Plan, for example, must aim at the development of forms of use capable of generating important local effects. The first form of use is that for educational and / or scientific research purposes which is particularly appropriate. The Archaeological Park, however, must not only aim at a form of use capable of attracting a particular social "elite", but also more numerous masses.

- *The Archaeological Park should not be seen as an open-air museum, where the activities are limited to the preservation and exposition of the archaeological goods only functional to the visit itself (a museum seen only as a place for a social service). The new perspective on Parks and Museums and also the current public interest led to a new strategy which wants "the Museum and the Park to become places for the active production of culture, proposing themselves not only as knowledge-oriented sites but also as places devoted to entertainment, experience and socialisation.*

The goals of the institution of an archaeological park will be first of all to guarantee the preservation of the heritage, known and unknown and its transmission to the future generations in the best and safest conditions, according to the knowledge and the current resources, and second to communicate the knowledge for the individual growth.

In an Archaeological Park, the archaeological elements, compared to a museum, are contextualized in the territory and therefore it is essential to evaluate also relations with the landscape and avoid that the archaeological structures are mortified because they are isolated and deprived of relations with the physical, historical and anthropic environment.

The aim of reconciling the needs of everyday life with the enhancement of the archaeological heritage must not cause the isolation of archaeological monuments.

Despite the advancement of the cultural debate and the modern positions expressed also in the documents of the EU, there still remains a substantially »monumental conception« of the cultural heritage, which tends to isolate from their context the archaeological heritage to which the rules of protection apply.

It is therefore necessary to extend the indications of point 2.7 "Educational function and role of the museum in the community" of the ICOM code of ethics outside the Museum and on a wider spectrum of human activities: "…*The museum has the important task of enhancing the educational function and attracting a wider audience, appealing to all members of the community, territory or group to which the museum refers. The public must have the opportunity to collaborate with the museum to support its aims and activities.*

The interaction with the community that constitutes the public of a museum is an integral part of the educational mission of the museum itself, …Omissis".

It is therefore necessary to involve local populations in the awareness of the positivity of starting a balanced and harmonious relationship between the presence of the Park and social, cultural and economic activities.

It is therefore necessary to avoid the museification of the territory, whose destiny and necessity are the transformation, which is necessary to allow development.

Proper management and planning must therefore contribute to economic and social growth in an ecosystem approach.

Already the Venice Charter for the restoration and conservation of monuments and sites, signed in 1964, recalled how the conservation of archaeological architecture is linked to the ability to integrate them with the use and with the processes of modification of the territory.

The conclusion of the foregoing is the need on the one hand to deal with the urban dimension of the territory, on the other with the realization of the "educational" and "conservative" purposes, which are the basis of the establishment of the Archaeological Park.

Archaeological investigations, with the aim of increasing knowledge, must take into account the need to promote public use and educational-recreational activities. It will be necessary to think of a research activity that can also be aware and active in satisfying the needs expressed by a community.

In this scenario a conscious use of ICT tools can be highly effective in creating a bond between the community and the Park on multiple levels, according to the concept

of heritage communities. It can also enhance the communication of scientific results as well as the ruins and monuments themselves which are frequently difficult to read by the public/users. Technology, used not to overshadow the cultural heritage but to enhance its experience, can help the Park providing those immersive and/or educational experiences that makes it a place where culture is produced and shared alongside with experiences, education and formation. The need to satisfy an always more spread desire of technological entertainment combined with a higher request of narrative and didactic contents can actually transform archaeological parks into stages that mediate the relationship between the contemporary visitor and archaeology, new media and technology.

– *What kind of issues are common to the archaeological parks and which ones are critical to a point they can compromise their value taking the risk of actually losing it?*

The Park Plan must overcome the concept of conservation of heritage (cultural or natural) based only on defensive, minimization or impact compensation strategies. It must therefore not stop at the mere preservation of the good. It is therefore not just a passive protection plan, but a real project of the territory on the territory. It must be able to interact with all the other natural and cultural elements, integrating them and promoting their development.

– *How the assessment of the economic impact of management activities must be included in the Management Plan, at local and regional level?*

The Management Plan must guarantee stability, efficiency and the economic resources necessary to achieve the objectives of protection and enhancement of the archaeological park. In order to optimize the investment and financing choices to be implemented on the latter, an assessment of the conditions of economic and financial sustainability is necessary in which costs and revenues are defined so as to quantify the extent of the need for economic resources necessary to create, improve or make more efficient the management of the archaeological park. The analysis allows, therefore, to evaluate the convenience of the investment from the point of view of the direct, indirect and induced effects on the local and regional economic system. The organization of the park is based today on principles of sustainability and it is essential that all enhancement processes include a sustainable use of the assets. The plan, therefore, must have a long-term horizon in order both to identify targeted and intelligent investments for the promotion of the park and to regularly detect the transformations and the overall impact of the heritage and the territory.

– *How the economic activities enhanced by the park have an effect on the local and regional economy?*

The activities enhanced by the park have positive externalities on local economic development. They act as a "spring board", directly, through job creation, but also indirectly, through the activation of other economic sectors linked to the main activities undertaken for the management of the park and the implementation of the strategies described above. They also allow to strengthen the relationship between the park and the surrounding territory and, particularly, among the ecosystem

stakeholders. The goal of a local sustainable development should be pursuit through an ecosystem approach whereby Park development policies and planning are also aimed at the economic growth and social cohesion of local communities.

Economic activities make it possible to ensure financial sustainability for the promotion of new activities and projects that are valuable for the wider local community from a social and cultural point of view.

Economic activities are also useful for attracting sponsorships. They can foster public- private partnerships or even participation to calls and tenders.

Antiquarian museums and archaeological areas: coordinated fruition also through the use / applications of ICT for the coordinated use and communication of cultural heritage.

In the event that the Archaeological Park is also equipped with a museum or Antiquarium, it is important that ICTs are used to start integrated visits

5.2 How to organise a Plan.

The Park Planning is seen as a plan between the plans, which aims to build a dialogue with other planning strategies involved in the whole territorial context.

5.2.1 Training methods and characteristics of the working group and expertise involved.

Creating a Park Plan that goes "beyond the constraints" also means having a heterogeneous and multidisciplinary working group at your disposal, able to cooperate and combine the demands of protection with those of governance and changes in the territory.

The challenge will be to merge all the contributions that will derive from all the subjects involved according to a method that goes beyond the "bottom up", typical of local territorial planning, since, in the case of Archaeological Areas, there are constraints imposed from above or the protections.

The protection and enhancement of heritage thus tends to finally take on a programmatic value and no longer just a constraint, concretely posing the problem of the resources to be invested also to encourage the implementation of projects and best practices.

In this perspective, it is necessary to:

1) verify equalization and negotiation instruments to promote and encourage the acquisition of public areas
2) define a shared method for the quantitative and economic-financial evaluation of the park areas in order to create a public comparison with the various social and economic subjects concerned (owners, inhabitants, users, administrators, organized groups);
3) identify synergies and the elimination of diseconomies.
4) define public or private management methods deemed most suitable for achieving the expected objectives;
5) verify the forms of participation and sharing of choices with the local population and with operators;

6) verify the best forms of communication and promotion of the park for the creation of a territorial marketing path.

5.2.2. Modalities for the co-planning.

Cooperation and public consultation in the resource management and territorial governance is a theme that involves not only institutions, but also the plurality of social actors and stakeholders in various ways affected by the management choices.

This process must be able to put together all the contributions that will derive from a multitude of subjects which can be summarized in:
1) those responsible for managing the site
2) local authorities with direct governance over the area
3) The public management system
4) The system of private companies
5) Local authorities

The centrality of the relationship between the Park and the socio-economic and territorial context is therefore evident and the complexity of the intertwining of interests and problems that must be faced; for this reason here, more than elsewhere, the perspective of interinstitutional co-planning seems to impose itself, with the aim of comparing and making the obligations of protection and enhancement dialogue with the life of the territory, linked to the needs imposed by agricultural management and building development , a perspective that makes a division between the "museum" area and the territory completely unrealistic.

5.3 Mission of the Plan.

5.3.1 Preserving systems with a specific archaeological interest.

The Archaeological Park is established in a territory in which, taking into account the European Landscape Convention, a predominantly archaeological value of the Landscape has been identified and consequently, properly analysed and taking into account the dynamics and pressures that modify it, the goal is to qualify it, considering the specific archaeological values.
Recognizing the prevalent, but not the only, archaeological vocation of the park territory, the objective of a Plan must be to identify the methodological and technical guidelines useful for the development of our knowledge for the primary purpose of protection.
The obligation to protect the archaeological heritage remains the priority obligation.

The objective of preserving the specific qualities of the areas of greater archaeological value and enhancing the specific differences with all the others must therefore be pursued with a global and ecosystem strategy that integrates protection with sustainable management. As part of this strategy, the protection and enhancement of the heritage must take on a programmatic value linked to the Project and no longer only to the constraint established by law.

5.3.2 Promoting scientific research.

One of the main objectives of a Management Plan for an Archaeological Park should be the promotion of scientific research.

To start with, the planning strategy should list and categorise all the different institutions and actors that have a role in research, protection, enhancement, education, and cultural activities both on a local and national level.

A crucial aspect should be the planning of an enhanced communication and interaction between the institutions as mentioned above and local stakeholders with the aim of encouraging a wider participation in many aspects of the scientific research. Conceiving the Park as the centre of interest of different actions, such as the promotion of technological guided tours or the hosting of shows or activities that can be related to the cultural value and history of the site, can attract external funds or help converging different interests in common fundable projects.

A good and accessible communication of the heritage and history connected to the park as well as the development of new forms of interaction with the site and its goods should help establishing a virtuous circle of interest and promotion that from scientific research reaches communities, institutions, and enterprises and vice-versa.

5.3.3 Promoting public fruition and public service through access policies and raise awareness of the value of cultural heritage.

The European framework in which we operate promotes a stronger engagement toward a more democratic access to cultural heritage. Documents, policies, and recommendations such as the Faro Convention also foster a democratic participation through the use of digital technology, whose potential in this area has been also recently highlighted by European Year of Heritage (Sciacchitano 2019; Lykourentzou 2019).

In this scenario, the use of ICT tools in the development of a Management Plan for the Archaeological Parks should primarily aim towards the following objectives, concerning fruition of cultural heritage and public service:

- facilitating and expanding access and interpretation of archaeological goods and history of the site and territory;
- raising awareness on issues of cultural and environmental protection in the perspective of creating a common sense of identity linked to the local cultural heritage that will ultimately foster an easier and more participated conservation preservation policy;
- providing tools and platforms that enable easier and more fruitful forms of multilevel and multi-stakeholder participatory governance also encouraging creative industries, SME and community-led initiative for the development of the territory.

Due to the pandemic emergency of the yeas 2020-2021, but also in a wider and with further consideration of the future development of the approach that new generations may have to the cultural heritage, promotion of fruition should provide remote accessible contents.

Interactions between archaeological parks and territories could strongly benefit from the digital shift, creating synergies and cross-sectoral cooperation.

Moreover, in order to plan a conscious and effective use of ICTs it is of primarily importance to involve the project's partners and stakeholders of the territory: local and regional authorities, civil society, local entrepreneurship and creative industries, education… Integrated apps and tools that provide possible interactions between the services offered by the territory can have the effect of enhancing the connections between different local actors, promoting common patterns of both fruition and possible collaborations.

5.3.4. Promoting enhancement and educational-recreational activities, dedicated of cultural heritage both thematic and territorial in particular with the use of the ICT tools, and so the organization of new social content.

The use of ICT tools in a creative industry perspective needs to be based on a solid and conscious interaction between technology and archaeology. Preservation and enhancement of the cultural heritage should also take into account the principles of what is now known as *edutainment*. Native digital generations should be one of the main targets for the projects conceived in this perspective. The goal should be the establishment of a stronger relationship between the cultural heritage and these new generations and their peculiar interest, skills and inclinations, also encouraging new projects and supports for digital storytelling and forms of shared narration.
Possible patterns of development of this section of the Plan for archaeological parks could encourage:

- The use of AR and VR technologies that allow to offer to the visitors the sight and the experience of objects and monuments that are no longer existing or available for conservative purposes. They also offer, if properly used, the possibility of working on multiple chronological levels, giving to the user the possibility to appreciate the development of a site and see the evolution of a monument, the city or even the territory.
- The use of video and projection mapping techniques which are capable to amaze and involve even the less interested users by the impact of the content created without overshadowing the existent heritage. This technology, consisting in projecting lights on existing surfaces, can also be enriched with new and different contents created by the interactions between archaeologists, technicians, and other professional figures, like, for instance, artists and light designers. The combination of images, lights and sounds can indeed give birth, starting from scientific knowledge, to sensory urban journeys.
- The use of videogames in museums and archaeological parks. The initiatives that introduce gaming features in the fruition systems of archaeological goods encourage a "learning by doing" approach. They are mainly directed to the involvement of young generations and children which normally participate less in the cultural activities connected to museums and archaeological parks or whose interest is more difficult to gain by traditional systems.

5.3.5. Planning and structuring a governance model

The organizational and managerial structure that can be proposed, more than other aspects, must be flexible, adaptable and yet sufficiently effective in terms of personnel from a quantitative and qualitative point of view.

The governance, as quoted by the 5th World Parks Congress, plays a key role for »the effective management of protected areas of all types in the 21st century'« (World Parks Congress, 2003, p.41) and according to the Convention on Biological Diversity (2004) and various authors poor governance would be one of the major threats for misleading parks and stakeholders' objectives.

The governance model actually designs and shapes the roles and the relations among the park management actors and the park organization itself and its external context made up of multiple stakeholders. Moreover, social and political contexts affect directly and indirectly the park governance system through governing bodies at regional and national level.

The quality and effectiveness of park governance is guaranteed by the right identification and coherent involvement of the stakeholders

These ones should be represented and take a role in the governance model according to the relevance and connection to the park existence.

Starting from a general classification in state and private management models, a variety of governance models (including a co-existence of the two) may be planned and structured according to the local and cultural specificities of the park. Independently of its nature, strategic and operative roles and functions they have to interact and be performed. Strategic functions set up and supervise the mission, the vision and the governance guidelines of the park. They refer to the president and the general manager of the park, to experts in the fields of: archaeology, history and culture. Sponsors, financial supporters, local community stakeholders may concur to the strategy definition and vision. The guidelines given by the strategic board are transferred to the managerial board to be implemented into operative actions.
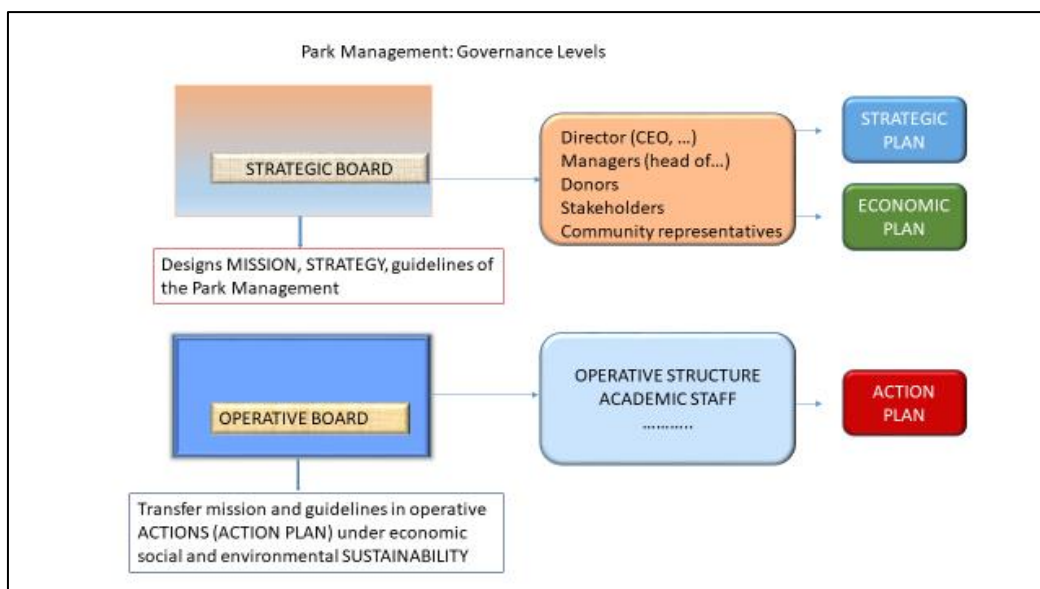
5.3.6 Modelling for the sustainable economic development

To ensure a sustainable economic development it is necessary to follow certain principles:

- ensuring an open park model: inclusive, guaranteeing environmental protection and connected to the surrounding economic system, encouraging its development and job creation;

105

- ensuring the financing of the park's socio-cultural and recreational/educational activities through the profitability of the economic and productive activities linked to the park;
- ensuring the availability of external financing from sponsors and various investors as well as participation in European calls for tenders;
- favouring forms of tourism with low environmental impact;
- combine visiting activities with nature-historical conservation actions in a structured and continuous manner;
- guaranteeing the accessibility of the park and the usability of the services for special needs.

5.4 Phases of the Management Plan's development

5.4.1. Elaboration of documents and cognitive frameworks.

The cognitive framework, understood as an organic and exhaustive representation and evaluation of the state of the territory and its evolutionary processes, must take into account aspects that will flow into the subsequent elaboration of the synthetic frameworks.

The main components of a cognitive framework are:
1. The Archaeological System
2. Environmental naturalistic
3. The system of fruition
4. The historical and cultural context
5. The economic context

5.4.1.1. The Archaeological System
The archaeological investigations for the readability of the main components of the Landscape are the basis of the Scientific Project-
The study of the archaeological reality, from the monumentally visible one to the one still to be investigated, will have the specific objective of contributing to the general organization of the territory aimed only in the first instance at its articulation in areas or parts characterized by different forms of use, enjoyment and protection but above all, after the elaboration of the design frameworks, included in the Plan itself.
The second objective will be to elaborate a research and excavation plan linked to the overall needs for the enhancement and use of the archaeological site and organized over a multi-year time horizon.

5.4.1.2. Environmental naturalistic
The naturalistic report must provide an accurate picture of the geological and botanical-vegetational structure and must pay particular attention to the evaluation of the landscape context in its various degrees of anthropization. The analysis will have to be carried out in a portion of the territory larger than that of the park
In the case of networked parks, it allows to provide territorial homogeneity of the widespread archaeological heritage.

The geological analysis must provide information of a geological, morphological, pedagogical and hydrographic nature relating to the park area and the surrounding area. The aim is also to highlight the main phenomena of optional danger in action (landslides, floods, earthquakes,)

The analysis of the vegetational-botanical system provides information on vegetation and agricultural systems, taking into account the layout of the territory and the relationship between human action and the natural context, from whose dialogue the current landscape arises.

5.4.1.3. The system of fruition,

The ISNART data shows that, at least in Italy, among the main tourist objectives there are excursions, archaeological and museum heritage. These are all needs met by the Archaeological Park that condition the fruition project for recreational, as well as educational and scientific purposes.

The distribution in the territory of all the components that can be connected in a "system of use" determines the system of functional relationships between the goods to be connected. Understanding the meaning of the Park's role in the "network" of interconnection between these assets for recreational purposes means identifying the organization of current use by investigating the state of the infrastructure and its relationship with the forms and use of the land.

5.4.1.4. The historical and cultural context

The Archaeological Park is established in a territory in which a pre-eminently archaeological value has been identified which must however be contextualized in the territory also with the aim of starting fruitful relationships with other and different elements of the landscape.

In parks within urban areas or areas with continuity of life, this aspect has a particular value as the Park fits into an urbanized context in which relations with the buildings are linked to active transformation processes.

5.4.1.5. The economic context.

The culture of management is closely intertwined with the themes of the use of goods, resources, expenditure, administrative capacity and professional skills. The choices that will be made for the constitution of an archaeological park will have to take into account a plurality of factors, also in consideration of the sustainability of the project and its cultural, social and economic impact.

A critical factor in management is that of the "complexity" of the system, a possible obstacle to the implementation of truly effective forms. Complexity is relative

- financial programming (for a sufficiently long period);
- the identification of broad and efficient forms of governance between the various public and private subjects involved;
- the need to ensure stability in administrative action, while at the same time creating employment
- qualified through quality cultural programming capable of satisfying intangible needs, stimulating knowledge and growth of citizens.

The GIS

The formation of the Plan is a process of intersectoral and interdisciplinary synthesis, aimed at offering a systemic understanding of the reality of the Park and at defining a management strategy that is as "integrated" as possible.
The different phases of the planned activities, starting from the construction of the cognitive frameworks, are intended not in sequential terms, but of mutual interaction, and to this end a fundamental role is played by the construction of the Territorial Information System, managed through a GIS.

5.4.2. Synthetic interpretation and summary interpretation of knowledge

As part of a planning project, the value of the historical-cultural heritage must also be defined with the contribution of the population concerned. The place of value judgment imposed from above by a specialty, must be accompanied by justification, forcing us to resort to intersubjectively shared arguments rather than exclusively affirmed truths.
It is therefore necessary to identify further interpretative categories for cultural heritage. In fact, new variables intervene regarding the interpretation of quality ranging from symbolic to testimonial value, for the perception of the populations. This means emancipating interpretation from the exclusive historical-archaeological categories, opening it to dialogical confrontation and to the pluralism of the processes of signification and interpretation.

5.4.3. Elaboration of the Project

The Archaeological Park is therefore a territorial area where a predominantly archaeological value of the Landscape has been identified, an area characterized by important archaeological evidence and by the presence of historical, cultural and environmental landscape values, object of enhancement.
Since the most relevant requirement for the construction of an archaeological park is constituted by the archaeological evidence that justifies specific management, the archaeological interest must be the pivot of the definition of a Common Model and of Guidelines for Planning and Management.
For this reason, the basis of the management project must be the scientific project, capable of identifying the contents of the park and the themes to be exploited (diachrony, monuments, relationship with the landscape) and to determine the subsequent choices.

Starting from the analysis of the cognitive frameworks, the Project must take into account different elements and contain different documents:

5.4.3.1 Mosaic of urban and territorial planning
To increase the attractiveness of an archaeological site, it is necessary both to enhance its qualities and to improve the territorial context. The site management processes must therefore be coordinated with the processes:
• management of the landscape and the urban and territorial environment;
• enhancement of the cultural and environmental heritage;
• conservation of historic centres and the quality of settlements.

These processes, however, refer to different subjects and to different urban and territorial forecasts for which objectives and coordination tools are needed

The project for the archaeological area must consequently deal with current planning and programming, with respect to which common perspectives and potential synergies can be recorded, but also inconsistencies and negative interferences.

Relations with existing planning must be structured on the basis of a common interpretative grid.

- structural aspects which, through interdisciplinary readings and interpretations, produce a systematic vision of the area under study: structures, characters, values and fragility;
- strategic aspects that tend to outline project hypotheses not yet sufficiently defined to be supported by technical-normative contents, but sufficiently sketched to initiate and configure forms of co-planning and shared participation;
- operational aspects strictly connected to the administrative milieu in which they are located and therefore to the greater or lesser efficiency of the systems;
- technical-administrative aspects that translate into norms.

5.4.3.2. Contents for the regulatory text

It is not necessary to impose a priori to a zoning of the territory modulated on the different levels of protection, but to try to make the protection dialogue with the set of provisions for the regulation and management of permissible transformations within the parks, in line with the quality objectives of the Plan.

Protection, sustainable management and planned transformation are strictly interdependent activities linked to a global strategy that must enhance the specific qualities of each resource and its differences with all the others. It will thus be possible to allow for the implementation of transformations compatible with the quality objectives set out in the Plan.

On the basis of what has been said above in the regulatory text, some regulatory architectures must be used that do not stop at zoning, but aim to provide references, addresses, guidelines, directives and specific determinations for the implementation of the plan. Notwithstanding the essential role of the division into zones in identifying the different degrees of protection. The traditional rules for areas are flanked by rules for projects and rules for resources; both normative categories tend to overcome the classification in zones in order to grasp relational design aspects capable of going beyond any rigid subdivision.

Rules for areas

In defining the rules for areas, in order to concretely apply a dialogue between the plan for the park and urban and territorial planning, it is necessary to proceed with the definition of the regulatory content after a careful examination of what has already been prepared by local and large area plans. The goal is to conceive the park plan as a tool with complementary and supplementary (rather than substitutive) action to the previous ones.

Therefore, for each zone destination, two descriptive levels must be summarized (description of the zone; description of the existing forecasts affecting that

specific zone) and a third propositional level, in which supplementary rules are introduced with respect to those already in place.

Indication for project management
The Plan, in order to promote some actions necessary for the safeguarding and conservation of the emergencies present and to favour the educational and recreational use of the Park, must provide for the formation of programs and projects aimed at promoting and coordinating initiatives and interventions to implement, enhance o qualify the archaeological resources, services and infrastructures on which the functionality and social usability of the Park depend, involving the plurality of institutional subjects and, possibly, the operators and local actors concerned.

Models and means for evaluation of economic-financial sustainability of park enhancement strategies and monitoring results of the economic impact

The first phase when the strategies are identified, when it is necessary, is to understand their consequences in economic terms (ability to produce income, to create/maintain direct and indirect businesses) and financial terms (ability to finance the initiatives with internal or external means). To this end, it is useful to structure a business plan in which:
- take into account the peculiarities of the reference market/markets in order to know its production/service provision capacity, growth potential, potential demand, cost and revenue structures;
- provide budget documents in which the revenues and costs of the park's activities can be quantified prospectively;
- provide summary documents on the financial feasibility of the enhancement strategies adopted, taking into account the profitability of existing activities and the potential for receiving external financing;
- identify indicators of economic/financial viability of viable investments;
- indirect cost-benefit analysis, linked to the cultural dimension of the projects, not directly measurable at an economic/financial level.

The second phase involves the evaluation of the results when plans and actions have been implemented, at least in part. It is thus necessary to identify a set of indicators strictly linked to the strategies, to the actions that will be adopted and to associate expected results.
 While it is recommended that the definition of strategies involves all the stakeholders, it is equally important that the process of identifying the indicators is open to contributions of the operators directly involved in the implementation of actions and in the activities being assessed, in a participatory way.
It is therefore crucial to include in the Management Plan for an Archaeological Park a logical scheme that explains the links between strategies, actions, expected results, and indicators associated with them as summarized in Figure 2.

Figure 2 – Strategies-Actions-Results-Indicators
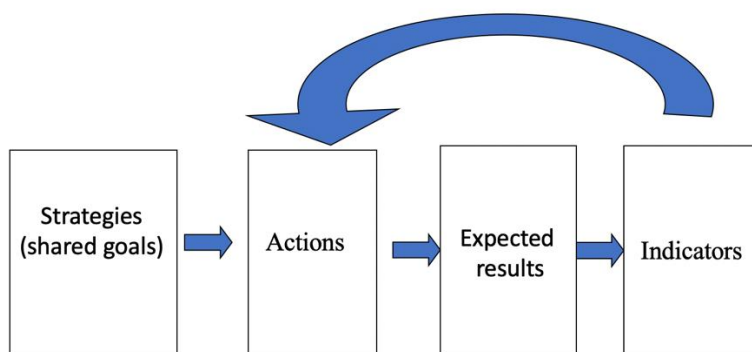
In fact, an effective monitor and impact assessment of the Management Plan requires the identification of shared objectives, actions - i.e., the interventions or classes of interventions necessary to fulfil these strategies – and the expected results that are the outcomes of the actions to be implemented.

The identification of the most appropriate result indicators is, therefore, an important step in the drafting of the Management Plan because indicators allow the prospective goals to be translated into concrete and measurable facts. The indicators are also important to allow a communication about the progress of the strategy in a way that is both understandable and immediate towards stakeholders and citizens.

Moreover, an effective system of collection of statistical data and definition of result indicators is essential when a Management Plan for an Archaeological Park and related activities are benefiting from European Structural and Investment Funds. In fact, it is worth reminding that, with the aim of ensuring adequate measurement quality standards, the Community Regulations in the programming period 2014-2020 have introduced a specific ex ante conditionality on "Statistical systems and result indicators" for European projects.

In particular, an effective system of result indicators must guarantee solidity and statistical validation, clarity of their interpretation and sensitivity to policies. Furthermore, each result indicator must be associated with objectives which, according to a methodology suggested by the European Commission (SMART), should have the following characteristics:

- (S) Specific: the criterion emphasizes the need for a specific objective rather than a more general one. This means that the objective behind the indicator must be clear and unambiguous.
- (M) Measurable: the second criterion emphasizes the need for concrete systems to measure progress towards achieving the goal. If a goal is not measurable, it is not possible to know if the policy one is pursuing is making progress.
- (A) Achievable: the third criterion emphasizes the importance of realistic and achievable goals. That is, they must not be either above or below, in which case there is a risk that they may be considered insignificant.
- (R) Relevant: the fourth criterion emphasizes the importance of choosing objectives that matter, that is, at the basis of which desired changes are generated.
- (T) Time bound: the fifth criterion emphasizes the importance of achieving the objectives within a time limit beyond which they lose relevance.

5.5 Critical issue for guide lines development

Critical issue for guideline development is:

- *regulative*
- *of strategic reference*
- *of argumentative justification*
- *of economic impact*

5.5.1. regulative: aimed to protecting with appropriate rules, constraints and prescriptions, the sites, resources and landscapes institutionally protected, prevailing, where necessary, on the discipline put in place by the other plan instruments.

5.5.2. of strategic reference: to identify methodologies for coordinating the actions and intervention programs under the various subjects, public and private, operating in the area.

5.5.3. of argumentative justification: to clarify the issues and the reference values, the reasons behind the choices and their negotiation's margins, the conditions of dialogue and confrontation between the different interested institutional subjects, operators and stakeholders.

5.5.4. of economic impact: to evaluate the reasons and the economic impact of the interventions taking into consideration other sectors that may be developed from a socio-economic sustainability point of view.

CHAPTER 6: GUIDELINE

The Technical Guidelines will serve to develop executive management plans for archaeological areas. This chapter 6, so, is a useful guideline on how to develop executive management plans, which are documents summarising all objectives and goals, planned activities and implemented actions, interim and final results, outputs, and the monitoring and evaluation of the adopted Common Sustainable Governance Mode.

6.1 Methodological approach: essential questions to base the Guideline

- *How can flexible guidelines be developed and adapted to the different socio-economic situations that take into consideration the Common model?*

The analysis conducted in the identification phase of Best Practices and ESA, as well as the subsequent work of the WGs, highlighted significant differences in the socio-economic contexts within which the examples of Parks examined are structured.
These differences are evident throughout the territorial ecosystem and in particular in relation to: rules relating to the protection and enhancement of the archaeological heritage; level of territorial and urban planning processes, subjects involved in the management of the territory and archaeological parks; amount of investments in the management and enhancement processes of the archaeological heritage; sources of financing and methods of disbursement of resources; ability of the economic system to interact with the management processes of archaeological parks; technological infrastructures; skills and experience in the application of ICT to heritage management and enhancement processes; endowments and individual knowledge of the public in relation to ICT.

It should also be added that the management activities of an archaeological park must take into account the need to deal with the numerous variables that interact in a territory, effectively obliging to identify the specific methods of intervention on a case-by-case basis,
It is therefore illusory to think of developing common manuals, methods and guidelines that can be applied uncritically in each area, obviously having to provide for different "Missions" and different strategies that take into account the reference context.
The methodological and operational approach of reference (Chapter 5) remains firm, but the guidelines must be interpreted as a series of indications and opportunities that must be analysed and articulated in the forms on a case-by-case basis and not as an obligatory path.

- *Which aspects of the territory can affect the functions of the site's management and in which relationships are they with Science and Research; Preservation and Natural environment, Society and Culture, Economy?*

The site managers are not used to looking outside and to consider the effect of their activities on the territory and equally to the potential that the activities that take place outside have or may have on the management processes of the site.

The integration processes between site and territory can, on the other hand, operate on three lines:
1. Create a supply chain that operates in relation to site management;
2. Connections between the enhancement of the archaeological site and that of the territory;
3. Integration of the site enhancement processes with the infrastructural equipment of the territory.

To increase the attractiveness of an archaeological site, it is therefore necessary to both enhance its qualities and improve the territorial context.

The presence of qualified training and research centres, such as Universities, with direct relations and with the park is, consequently, a fundamental element for the strengthening of management activities.

In fact, continuous research is on the one hand at the basis of the progressive qualification and expansion of the offer, and on the other at the basis of the scientific project that underlies and conditions all management activities.

The environmental context plays a fundamental role in management processes as where there is no continuity of life, the observer perceives, by visiting the archaeological remains, that he is not on an island but that he is immersed in a natural or rural context. From here, hypotheses of use for recreational and educational purposes can arise through potential synergies between the two themes

The overall quality of the territory and the integration of the offers help to expand the tourist and excursion demand. In fact, it increases the critical mass and the ability to create expenses in visitors.

The **socio-cultural context** influences the management processes of the site, and therefore coordination methods must be envisaged in the terms of:
* management of the landscape and the environment;
* local endowments and equipment;
* human resources available and skills at stake;
* cultural activities in general and for free time in the area (festivals, exhibitions, museum activities, tourism promotion);
* presence of qualified training centres, which have organized direct relationships.

The site management process must ensure **cultural accessibility** to resources to:
* local community of reference;
* to the diversified segments of cultural tourism demand.

Cultural accessibility guarantees the use of public services produced by the management process and guarantees the presence of a necessary condition for economic development.

The territorial system must guarantee physical and social accessibility, that is:
* quality of the social environment;
* infrastructure and transport system;
* overall growth processes of the service offer.

The improvement in the quality of the territory is therefore transformed into a real possibility of growth, even economic, if related to the site management activities, agreed with all the territorial components, and if it guarantees network accessibility,

i.e., improves the infrastructures and services functional to production and distribution of information to produce knowledge.

- *Is the tourism sector the main sector to be evaluated in terms of possible economic growth?*

Tourism is certainly the main sector that could benefit from the investments on the archaeological sites, both in terms of employment, but also for the promotion of local attractiveness and competitiveness. The incoming of flows significantly improves when the usability of the park and when the visibility of its actions improves.

Investments in the site and the related tourism development engender positive intangible effects and contribute to the brand reputation of the specific area. The territory acquires an identity on which it is possible to build a reputational brand that involves the whole community and from which the various production chains of the territory benefit. If coherently managed, the heritage site might play a "hub" role and attract stakeholders and relations which contribute to the economic and sustainable development of the local ecosystem.

It goes without saying that, adopting an environmentally sustainable perspective, tourism must not be understood as a mass tourism.

- *Which sectors in particular should be developed from a socio-economic sustainability point of view?*

A wide range of activities are connected to the socio-economic sustainability of the park in terms of: conservation, recreation, and economic purposes.

Conservation and protection are fundamentally related to the long-term economic sustainability of archaeological sites. The sectors involved vary from the construction works for detecting or preventing environmental damage or other risks, to the modernization and environmental upgrading of existing facilities, including technological monitoring and training of surveillance personnel.

Recreation is one of the attractive requisites of the park which may be reinforced by upgrading the quality of the services provided to tourists and visitors and more generally by fostering synergies between cultural heritage, contemporary cultural and creative activities, education and digital technology.

The economic sustainability of the archaeological park management is guaranteed and maintained by the effective functioning of a complex and interrelated ecosystems of production activities offering both products and services. Tourism such as Eno-gastronomic activities, hospitality and entertainment industry, green and sustainable agriculture are some of the most valuable supply chains and connected economic sectors to the development of the archaeological site as a system. The connection to the production chains is not only closely determined by the presence of entrepreneurial skills and attitudes but also reinforced by sectors' professional and technical skills in the connected economic sectors: local manufacture and handicrafts , retail sale of cultural goods (books, music and video), publishing (book, newspapers, journals and periodicals); computer games and computer programming activities, audio-visual sector (motion picture, videos, television, sound recording and music publishing, photographic activities), communication and media, architectural activities, specialized designed activities.

The attraction of the park is significantly influenced by the quality of promotional activities and of training of specialized skills.

The promotion strategy should be multichannel, selective for different target groups and inclusive. It should be also connected to the offer of archaeological education (workshops and tours for school groups and elderly population)

Once the management structure has been precisely defined, it is necessary to train staff and operators involved in the economic activities as well as in the organization and management of the park. (See 6.4)

To summarise as regards the relationship with **the economic system**, the potentialities linked to the possibilities are highlighted:
1. to create useful synergies with the production activities directly involved or engageable.
2. to evaluate the labour market by reference
   - presence of operators in the restoration sector
   - presence of experts in the marketing and publishing sector
   - presence of operators in the sector of services, catering and other support for use

If there is no such integration, result:
1. reduction of management effectiveness;
2. exclusion of forms of economy of scale that can reduce costs;
3. *compression of the potential economic impacts of the enhancement, referring to the supply chain, the "vertically integrated" industry capable of providing inputs and management and which, thanks to valorisation, can enjoy important benefits.*

- *Museums and archaeological areas. Use / applications of ICT for the fruition and communication of cultural heritage.*

In recent years there has been a significant evolution of the fruition processes in which the role and needs of the visitor to museums and archaeological areas have been profoundly transformed. Technology has been a decisive and stimulating factor in this evolution and is an extraordinary element in responding to the new needs of use and communication of heritage. ICTs are tools that support, create, accompany the various activities of a museum and an archaeological site such as the documentation, management, conservation and restoration of collections; they are used to communicate with visitors, and to promote the activities of the museum, also making use of devices "familiar" to the public such as smartphones, tablets, computers. They directly contribute to the "education and enjoyment" purposes of cultural heritage and to the improvement of digital accessibility, that is the ability to be inclusive and accessible also through digital, increasing access and use of the cultural offer in all contexts, both on site and in a way mediated by technological devices and guaranteeing an ever-greater involvement for people with specific needs.

When designing a path inside an archaeological park, or a museum, or you are about to improve an existing one from the point of view of use and communication, you must first analyse the specific context, its strengths and its weaknesses.

Knowledge of the public, improvement of use and communication:
Phase 1. The knowledge of the public.
The more you know the audience and their needs, the more you are able to facilitate their experience and involve them. Visitors, in fact, do not constitute an indistinct and homogeneous whole but are made up of groups of people of different ages, cultural backgrounds, social backgrounds, learning styles, personal goals, interests; a complex mix of characteristics that influences the respective behaviours during the visit. The analysis of the specific context in which one is about to operate must therefore provide, in the first instance, the definition of one or more target users with respect to which to direct communication by operating at multiple levels of reading and accessibility. The definition by a cultural site of its communication policy starts precisely from the definition and knowledge of the types of public (s) that you want to reach and with whom you want to communicate and from the deep knowledge of the cultural needs and expectations of the public is real what a potential. Only by starting this awareness process will it be possible to implement communication strategies that meet the different specific needs of visitors.
A first interesting application of ICT in the context of the objective of improving the use could be, in a more advanced phase, the analytical tools, the software that allows analysing the access data and the feedback of the visitors (monitoring of accesses, analysis of the forms of customer satisfaction survey profiles).
Phase 2. Improvement of the experience of use and communication of the heritage.
Once you have defined which audience you want to address, you choose what to communicate and how, that is, the means of communication.
The communication of its contents takes place primarily within the museum site or the archaeological park. There is also another level of dissemination consisting of the contents that are to be diffused through the web and social media.
Communicate within the museum site or the archaeological park. With regard to on-site communication strategies, it is important to evaluate systems to improve the reading and understanding of the monument or object. Communication mediated/supported by the web and social media. Careful planning of in-situ communication through the support of ICT should, especially in today's context, provide for forms of integration on the web and social channels. In this sense, the use of the web and social networks should constitute a support, integration, an expansion of the physical experience within the site itself. Therefore, the creation of additional contents and virtual experiences, starting from the simple virtual visit, should constitute a form of integrated use and not a substitute.

- *How to identify the area of interest of the park of a local and regional nature on which the effects of the management actions fall?*

In the definition of the Management Plan of an Archaeological Park an important methodological issue is the identification of the relevant geographical area that should be the reference for the evaluation of the economic and social impacts of the actions implemented.
Two main territorial scales could be considered:
(1) a first one, short-distance scale with the aim to evaluate the economic and social impact of the implementation of the Management Plan of the archaeological park, for example, the municipality where the Archaeological site is located.

(2) a second wider territorial scale to eventually evaluate effects beyond the local dimension (e.g., region).

As a first approximation, the option (1) should be adopted for all the sites while the option (2) may be part of the flexible solutions of the common model. It can be noted that proper territorial scales for evaluation and impact assessment should consider the governance structure of the park, its internal/external organization, the institutions responsible for managing the park, and the extent of their relations with other stakeholders.

6.2 The knowledge framework.

It will have to be developed on a larger portion of the territory than that directly affected by the archaeological heritage.

The documentation, when possible, in relation to the local context, must be carried out in compliance with overriding national standards (see: ICCD for cultural heritage in Italy)

The specific analysis must be preceded by the collection of information relating to the regulations and management projects in progress:
• laws and legal acts that protect cultural heritage
• data on cultural stakeholders (institutional and non-institutional),
• data and documentation on projects that are currently being implemented, and are relevant for planning the development of the archaeological park area,

6.2 1. The Archaeological System

After collecting scientific archaeological literature and sources, archaeological photo documentation (whole and parts of the site and individual findings), field diaries from conducted research it is necessary to proceed with the processing of

6.2.1.1. Archaeological map of the site: The detailed survey of the ancient remains is the initial and essential prerequisite for the realization of the Plan. It must take into account both the elements emerging from the ground, and those known only on the basis of bibliographic data, historical sources, cartographic, cadastral sources, surveys on the ground; photointerpretation; any diagnostics on the ground or remote etc. It must be in relation both to the territorial context as a whole and to the monumental emergencies located within the perimeter of the park or in the network system, for networked parks.
It must be digital, in 3D and structured in such a way as to support all the analyses on the state of conservation and the projects necessary for maintenance and restoration.

6.2.1.2 Archaeological map of the territory (map of absolute potential): By archaeological potential we mean the probability that in a territory there are preserved archaeological remains buried. The map records all the archaeological evidence known in the area. The map must take into account the emerging and buried structures known on the basis of bibliographic, archival and survey data. It will have to be georeferenced and constantly evolving

6.2.1.3. Archaeological predictivity map of the site and the territory (map of the estimated potential): The archaeological potential is configured as a predictive action when it is estimated for the areas in which there is no archaeological evidence.

6.2.1.4. Map of the archaeological vulnerability of the site and of the territory: Vulnerability is the parameter that must be taken into consideration for the determination of the risk of damage to the archaeological heritage in relation to anthropogenic events (public or private building works that include handling actions of the earth) or natural (landslides, floods, earthquakes).

6.2.2. Environmental naturalistic

The geological, morphological, hydrographic and pedagogical study of the Park area will also make it possible to highlight the dangers linked to the characteristics of the territory, as regards in particular the degree of seismicity and hydrogeological instability (such as landslides, floods, flooding and stagnation of water, superficial and coastal erosion, subsidence, subsidence, etc.) which would constitute a risk for the assets themselves, their use and enhancement.

6.2.3. The system of fruition

6.2.3.1. Technological main infrastructure
In order to develop an efficient plan regarding the use of ICTs in a specific archaeological park it is necessary to state the existing situation of that site in relation to some crucial aspects.
First, it should be analysed the level of digitization the park has already reached. Three main levels of digitalisation, with various degrees in between, can be listed:
1. Level 1: no infrastructure / internet connection; no digitalisation; no ICT tools.
2. Level 2: Digitalisation mainly for purposes of documentation.
3. Level 3: Digitalisation on the service of the management. Leveraging ICT tools to enhance the accessibility, communication, and promotion of the site.
In this evaluation essential infrastructure, hardware and software should be listed and considered:
1. Personal Computer/ Workstation: the most basic ICT tool, storing, processing and retrieving data.
2. PC's peripheral devices: printers, scanners, projectors, interactive whiteboards.
3. Local network: assists a collaborative scientific and administrative work
4. Internet access: allows connectivity and the fastest flow of information.
5. Software: various programmes helpful for the general organization and the management of the park
   – Project manager
   – Communication platforms
   – Web applications
   – Cloud services
   – "Integrated Archaeological Site Management Information System" (a kind of Digital observatory): a platform gathering and offering daily a holistic account of the Park's operation (e.g. opening hours, timetable of public

transportation…). Moreover, if connected to CCTV, it enhances monitoring of the park.

6. CCTV, drones, live webcam, in situ (contact or contactless) sensors, IoT technologies: linked to a central information system, they monitor in real time the status of the park and its structures. Moreover, they can monitor access and human activity in the park, assisting the surveillance and helping with the planning and implementation of preservation strategies as they allow to calculate the anthropic impact on the cultural heritage.

Secondly, starting from the stated level of digitization, it is crucial to set the existence of specific infrastructures, tools already developed, possibilities of improvement of further development of the existing situation. A scheme can be followed, as suggested:

1. For level 1 of digitization:
   - Can infrastructures be implemented?
   - Can the internet coverage be reached?
   - What institutions and stakeholders should be involved in order to develop suitable ICT tools for the enhancement of the park?
2. For level 2 of digitization:
   - Who is in charge of the digitised documentation?
   - Can the digitised documentation be implemented for the development of ICT experiences in the park? Are the formats interoperable with the current ones? There are obsolescence issues to be faced?
   - Are other actors needed in this project? If so, which ones can be involved in the plan?
3. For level 3 of digitization:
   - Is the digitized archive of archaeological heritage and data of different nature suitable for the public and for the employees?
   - Does it have the expected impact on the park's enhancement?
   - Is there any lack of competence in using or showing the products of technological projects already completed?
   - Can the existing material be enhanced, improved, or further developed? There are obsolescence issues to be faced?

In order to answer those questions, some main aspects should be taken into consideration:

- Infrastructure issues: hardware, software and apps installation, maintenance, and update
- Cost issues: particularly high for state-of -the art ICT applications
- Attitudinal barriers: many CH professionals are still sceptical about ICT applications, notably about the accuracy of the representations and the "poetic licence" of storytelling scenarios.
- Digital literacy of CH professionals: the lack of digital skills can reduce the possibilities offered by ICTs. The existence of emerging specialisations – Digital Strategy Manager, Digital Collections Curator, Digital Interactive Experiences Developer and Online Community Manager – should be taken into account.
- Digitalisation level of the community of territory the park is part of.

- Lack of a comprehensive vision of digital site management: possible necessity of an integrated tool, keeping an overall record of data (research, storage, conservation, budget, operation, visitors etc.)

6.2.3.2. Receptivity (hotels, restaurant).
For a correct preparation of the management plan, a study must be envisaged concerning the reconnaissance of the reception activities present in the area of the archaeological park data on accommodation capacities and tourist ancillary infrastructure etc., in order to develop a complete tourist offer.

6.2.3.3. Viability and connection (airport, road, stations)
It is necessary to develop a survey of the existing infrastructures outside the park, making particular reference to accessibility, both in relation to the major communication routes (railways, land, areas, maritime), and in relation to the urban context (roads, parking, vehicles of transport)

6.2.3.4. Evaluation of the type of visitors, actual or potential
It is necessary evaluate the tourist context - tourist movement (arrivals and overnight stays) for the city and the territory in which the archaeological site is located, data on the share of culturally motivated tourists.
It is necessary, also for the purposes of preparing the future communication plan, to evaluate the type of visitors, actual and potential.
These analyses will have to consider not only the local communities (with particular attention to schools and cultural institutions in the area), but also the tourist potential, so as to focus on suitable strategies to meet the needs of the different audiences and promote the widest participation possible

6.2.4. The historical and cultural context

6.2.4.1. Historical road map: which must take into account direct and indirect archaeological data and sources

6.2.4.2. Cultural emergencies map: cultural emergencies that are not archaeological, but which in any case refer to the cultural context of the territory, must also be taken into consideration. Particular attention will be paid to the built heritage and in particular to museums and buildings of architectural interest, rural building heritage.

6.2.5. The economic context

This type of analysis must be preceded by a careful study of socio-demographic nature

Collection of the relevant economic data may pose several challenges. These challenges should be addressed for developing evidence-based and result-oriented monitoring, reporting and evaluation.
We have already mentioned the problems related to the setting up of reliable indicators and outcome variables. Evaluation and impact assessment may inadvertently lean towards those variables that are easier to quantify, for instance,

number of visitors. Yet, there is no obvious solution to the identification of indicators related to more intangible social benefits, such as welfare or quality of life, or even sustainability in the fruition of archaeological site

Moreover, sometimes available official data are too coarse for a detailed spatial analysis and thus useless to properly evaluate progresses towards the objectives of the Common Sustainable Plan (e.g., n. of visitors).

In these cases, it is important to complement official data with other well-designed primary sources, such as questionnaires, surveys that can detect qualitative information of the sites and visitors.

Furthermore, to evaluate changes over times it is important that these qualitative tools are designed in a continuous and systematic way. Also, relevant information should be collected on a continuous basis.

ICT tools are of great importance for the quantitative and qualitative monitoring of the activities promoted by the park. The growing availability of Big Data and the higher granularity at which data are available represents both a great opportunity and at the same time, a challenge. In particular the potentialities in the use of Big Data require further investigation. In fact, some of the information available are open-source, free to use, but usually general-purpose. It should be reminded that their usability could be declined, case by case, with respect to the needs of each site.

Another challenge to define a Common Sustainable Governance Model is the different availability of data at the local level, this is a possible source of heterogeneity across archaeological sites. The Common Model should include a general proposal in the form of "common indicators/Common Evaluation Toolbox". The general proposal is limited to those indicators that can be easily available in several locations. It should be considered as a flexible arrangement as it can also be integrated and adapted in relation to the specific objectives of each site. Therefore, The Archaeological Site may decide to add some additional quantitative and qualitative result indicators closer to the desired results not included in the proposed set. A more specific system of indicators can be designed, besides, after a careful collection of the relevant information available at the local level, the specific indicators identified - both qualitative and quantitative- can be refined on the basis of the knowledge base that is available locally.

6.2.6. Management of information through GIS.

In order to manage all the different documents and contributions that can be useful for the management plan of the park, the use of a GIS is recommended. Also, some new applications of HBIM for archaeological heritage demonstrated to be useful in order to manage different information granularity and level of detail. These last tools also enable a proper link with GIS platforms.

Analytical, evaluative, proposing documents elaborated by the different specialised professions that are involved in the management plan should not be simply added to one another but integrated and compared through all the process of the plan's elaboration. GIS is therefore a tool in order to systematise, organise, interpret and plan, putting together all the different information and data about the park into a geo-referenced system. All the processes involving a knowledge and data sharing should converge in this system in order to be read and used according to the objectives each park will give itself. It should therefore encourage the dialogue

between the stakeholders involved in the management plan, becoming the database of the park characteristics, info, and projects as well as a useful tool for the archaeological knowledge implementation, protection and enhancement.

6.3. Synthetic interpretation and summary interpretation of knowledge.

For the summary interpretation of knowledge, it is necessary the adoption of a common scheme of comparable evaluation criteria and categories.

The decomposition and the recomposition of the different profiles of estimative analysis in a vision that is tendentially holistic of the area analysed are oriented to the localisation of the territory structural reading targeted to support alternative strategical options according to the different reference backgrounds.
The territory's synthetical interpretation analysed represents the natural landing place of the analysis and the interpretations of the sectors shortly mentioned in the previous paragraph.
It represents a fundamental moment of the archaeological park Plan as it is the base of its regulation function respect to the other plans and programs and a reference framework for the strategical orientation it must express.
The comparison among the different analysis has been made easier thanks to the adoption of a common scheme of criteria and evaluation categories that can be compared.

The scheme is about an evaluation grid defined by the different sectorial evaluation profiles with 4 factors of components or situations identification and more precisely:
1. structuring factors, intended as a set of components and relations with which the local systems organization concretely emerges;
2. characterizing factors, intended as components and relations that connote each local system by giving it an identity in order to distinguish it from the others even with similar structures;
3. qualifying factors or situations, intended as elements or conditions such to give a local system a certain quality or importance or value without changing its structure or characters;
4. critical factors or situations, intended as a set of elements or conditions, active or potential, of decay or de-qualification or modification which do not compromise the structure or the characters or the quality of the systems.

The outcome of this analysis will be the identification of the strategies and projects aimed at their implementation, contents of the regulatory text

6.4 Contents for the regulatory text

6.4.1 Mosaic of urban and territorial planning

The project for the archaeological area must deal with current planning and programming, with respect to which common perspectives and potential synergies can be recorded, but also inconsistencies and negative interferences. In both cases, a dialogue with the bodies responsible for planning and programming on the area under study must be sought, not for a simple adaptation to current planning, but for

a reciprocal contamination. It will also be necessary to provide for any (appropriately concerted) modification actions of the other plans based on the Project for the archaeological park.

6.4.2 Rules for areas

The areas must be identified through a series of "recognition measures": perimeter and representation on a cartographic and cadastral basis; drafting of the updated map of constraints; filing and evaluation of individual monuments. In this way we can speak of the protection of the archaeological landscape, which does not only protect the emerging or underground asset and does not end in the individual areas in which there are direct archaeological constraints, but also includes and protects the surrounding areas that constitute the environmental context in to which the areas are inserted, connoting the relative landscape. These areas must be equipped with rules for use intended to ensure the conservation of distinctive features and their enhancement.

In the articulation of the rules by areas, in order to concretely apply the desired dialogue between the plan for the park and the municipal and territorial urban planning, it is necessary to proceed with the definition of the regulatory content after a careful examination of what has already been prepared by the planning itself, with particular attention to the municipal one

6.4.3. Strategies and indication for the realization and management of Projects

The first level of analysis will lead to the organisation of the Archaeological Project.

The archaeological project constitutes the basis and the backbone of the entire project plan. It is preceded by the Inventory and Description of the Value of the Archaeological Site.
The definition "archaeological" refers to the methodologies, typical of archaeological investigation, through which these remains have been investigated and interpreted, thus also referring to the remains of the medieval and post-medieval age.
The reasons underlying the constitution of the park will be illustrated in the archaeological project and therefore the elements that have led to the identification of a pre-eminently archaeological value of the Landscape. This data will be objectified through the preliminary illustration of the consistency, type, characteristics and state of conservation of the archaeological remains.
The scientific project is particularly important in networked parks where it will aggregate different archaeological areas, re-attributing unity and contextual continuity to what is divided and scattered on the territory (urban or extra-urban). The aggregations can be thematic-typological, synchronic or diachronic.
In the network parks each area will be configured as autonomous in public use, but will have amplified potential when inserted within a unitary system.

The various actions, relating to the various strategic lines, should converge in the planning documents that the local government bodies are planning to launch ("implicit plan") or that are already in place.

It is also necessary to obtain a broad and participatory consensus from the local communities on the above strategies. It being understood that the territory will always present its self, however, as an area of tensions between programming and individual drives, it is necessary to identify shared strategies. It will also be opportune to grasp the ideal and desirable image that the inhabitants and, more generally, the "city users" will have of that site.

The archaeological project is completed by the indication of the planned activities that will be included in the Management Plan
The knowledge acquisition phase, as already noticed, is clearly one of the main ones in the development processes of the Park Plan and in considering the importance of the archaeological themes respect to others, the activities targeted to increase the historical archaeological knowledge must be particularly put at the centre of the Park Plan goals itself.
Some of the most important goals to reach through the scientific research are:
- to individuate the critical elements according to the goods preservation and their relations with the territory;
- to increase the number of visible archaeological heritage in order to enrich the quantity of the offer;
- to increase the historical and archaeological knowledge on the town and the territory, with the target to better define the museum paths and the didactic projects;

In particular it is necessary:
- The cataloguing program connected with the digitalization plan
- The archaeological map realization and the territorial surveys
- The brickworks mensiochronological analysis
- The project for the archaeological Antiquarian or Museum
- The remote sensing surveys

6.4.3.1. Management and implementing of the main infrastructure.
It is essential that the Archaeological Park Plan contributes to the enhancement of the territory and therefore also of the infrastructural system to make the link between the park and territory effective and profitable.
The project will have to take into account or envisage new interconnection hubs between various types of infrastructures, allowing the smooth transition from a fast system that connects with more distant and slower territories.
This cannot be separated from the study of "green infrastructures", understood as a multifunctional "network system" interconnected with each other, such as the ecological network, the accessibility and use network, the historical-cultural network, the network of agricultural fabric, the network of infrastructures and human settlements, the social network.

6.4.3.2. The project for the use of ICT and the digitization plan
Planning the enhancement and integration of ICT systems in a park should consider what is more suitable for each park depending on the possibilities the technologies offer and the characteristics of the park itself.

Depending on the level of digitisation owned and the one to be planned but also on the specific needs each park has, it is important to envisage a use of ICTs that takes into consideration the role they can have in a park:

- ICTs as a facilitator
- ICTs as a mediator between the archaeological site, the surrounding territory and the (potential) users.
- ICTs as an awareness-raising tool.

This stated, ICT tools offer numerous possibilities of enhancement and personalization of the experience of the visit. In order to develop fully their potential, it is recommended to ensure Wi-Fi coverage of the AP. Moreover, at least some of the supports or devices (tablets, audio-guides, headsets…) should be provided by the park itself, while the basic ones should follow the logic of BYOD (bring your own device).

Depending on the park's needs, objectives and means, tools, and professionals available, each park should consider which kind of immersive experience they want to develop/provide. The various possibilities are listed below:

High immersivity:

Medium immersivity:

Low immersivity:

Once examined the advantages and disadvantages of each possible tool to be included in the management plan, each park should consider their main objectives in a wider framework that, as stated in the Common Model, must include at least:

- A better communication of the archaeological heritage on site
- The promotion of the park and its activities
- Accessibility
- Democratisation of the cultural heritage and knowledge

The choices made in the project phase should be coherent with this methodological approach, should consider the park's actual means and possibilities, in terms of financial context, reachability of the site, stakeholders involved etc., and the specific objective the site has regarding its main basin of visitors and actors interested in it. It is also important to foresee a sustainable ICT plan that can be operational for a long time.

6.4.3.3. The restoration and static consolidation of the archaeological heritage: activities that need to be implemented as to maintain physical preservation of the archaeological park

This strategic plan is implemented through actions that concern in particular the encouragement of interventions for the recovery of the archaeological heritage after:

- analysis and monitoring of the main monumental components of an archaeological nature, their maintenance, restoration and enhancement;
- archaeological investigations for the legibility of the main morphological and historical ancient components of the city and the territory.

In this phase, the perspectives regarding possible research developments will also be explained, so that, starting from the acquired knowledge, a program can be developed aimed at developing the still unexpressed potential of the area with the possible prefiguration of times, forms and actors of their promotion.

- interventions for the restoration and consolidation of the artefacts present, even if in a state of ruin.

6.4.3.4. The management of the natural heritage and the existing infrastructure

This strategic plan is implemented through actions that concern in particular:
- the restructuring of service structures;
- the construction of new buildings and infrastructures for use.

The maintenance of the natural heritage within the park is also of considerable importance, which not only serves as a furnishing of the area but also as a "tool" to highlight the recognisability of the urban texture of the archaeological remains.

The Plan must make the archaeological area a main component of the historical-cultural network, thus improving the entire green infrastructure, helping to create an equipped network that performs multiple connective functions:

- **as an ecological network**, specifically concerning the system of natural landscapes that improve the natural heritage and the environmental quality of the network.
- **as a network of accessibility and use**, represented by the system of paths that allow movement through the crossing of places of high environmental and landscape quality.
- **as a historical-cultural network**, consisting of the system of elements typical of the traditional historical landscape (built, agricultural and natural), which contributes to the construction of a sense of identity and belonging to places, made up of: monuments and historical-artistic emergencies; archaeological sites; historic rural settlements; historical roads and tracks; hydraulic works of historical origin; elements of the plot of the traditional agricultural landscape (rows of trees, hedges, terracing, etc.);
- **as a Network of the agricultural fabric**, that is the system of farms linked to agri-food production, which act on the territory, contributing to the care of the territory and the construction of the landscape.
- **as a Network of infrastructures and human settlements**, represented by the anthropic system of settlements and connecting infrastructures consisting of: linear and nodal infrastructures of the transport system, residential settlements, technological systems, productive and commercial settlements, industrial plants, from shopping centres etc.;
- **as a social network**, or rather as a system of relations between the communities that live in a place and its territory of belonging, which is expressed through the knowledge, use and enhancement of local resources.

6.4.3.5. The enhancement and organisation of forms of educational and recreational use and Interpretive Plan.

An interpretive plan should be prepared that identifies the interpretive topics and subtopics that best serve the didactic function of the place.

Presentations and information must reflect the current scope of knowledge and need to be constantly updated and corrected

Any didactic and educational activities that are intended to be carried out within the park (guided tours, educational workshops, experimental archaeology, etc.) will also be taken into consideration, putting in place all the synergies with the bodies responsible for the different levels of training (from childhood to third age).

As regards the services, in addition to the park area, for which ticket offices, toilets, routes, furnishings, support structures for research, development and training etc. will be designed, particular attention will be paid to the on-board areas. ', so as to define the relationships with the external context (access routes, transport, parking lots, rest areas, fences, etc.).

This strategic plan tends to improve the competitiveness of the tourist offer through actions aimed at:

   i.   improve the access roads to the area in its dimensioning, organization and structural and spatial characterization;

  ii.   highlight and enhance the identity of the area and its context, looking beyond the archaeological and landscape structure of the park, beyond the aesthetic and sacred expressions of the ancient Roman city;

 iii.   create the conditions for extending the time spent in the park by visitors (which is currently consumed in a few hours), creating the necessary infrastructures to be able to formulate an integrated offer of archaeological visit and overnight stay in the vicinity of the area;

 iv.   foster functional relationships and close interdependence (based on reciprocity of interests and complementarity, especially in terms of services for tourists) between the city of Urbisaglia and the archaeological area;

  v.   create spaces for rest and recreation, even outside the park area, in order to capture a large demand for outdoor recreation.

6.4.3.6. Research, documentation, maintenance and protection of the archaeological resource through digital supply chain.

Digital cataloguing of the archaeological findings (including all earlier phases of the research) and of all the metadata linked to the research, study, maintenance of the AP, is the most important initiative in this category. Many software solutions are available. More specific:

1. Collective Access is a free, open-source cataloguing tool and web-based application for museums, archives and digital collections. Its main focus/strength is on cataloguing and metadata
   - Accessible anywhere via web browser
   - Pre-configured with popular metadata standards
   - Customizable fields, views, workflows, and more
   - Quickly creates PDFs and spreadsheet reports
   - Supports batch importing, exporting, and cataloguing
   - Easily style to fit your brand's look and feel
   - Browse with customizable facets and filters
   - Switch on/off public commenting, tagging, and rating
   - Display content via maps, timelines, and visualizations
   - Multiple options for media display and interaction
2. CollectionSpace is web-based, open-source collections management software for museums and more.

- Professionally manage your organization's collections with user-friendly, web-based, open-source software
- Improve stewardship of the resources you hold in the public trust
- Support diverse collections in an effective, efficient, and scalable way
- Share data via web services and an advanced native API
- Connect and integrate with tools such as digital asset management systems, digital preservation systems, and content management systems
- Shorten response time for research requests
- Future-proof your organization's technology infrastructure and sustainability
- Robust tools to store and describe a wide variety of digital assets, including images, documents, audio, and video files

(Aero) photography.
Photogrammetry.
3D scanning.
Geophysical documents useful in archaeology.
Digital replica of the AP.

6.4.3.7. Enhancement and promotion policies plan, of services via ICT tools.
The edutainment approach can actually transform archaeological parks into stages that mediate the relationship between the contemporary visitor and archaeology, new media and technology:
video and projection mapping techniques, projecting lights and images on existing surfaces, are the result of cross-sectoral collaborations, involving researchers, ICT professionals, artists, directors, light designers etc. The combination of images, lights and sounds can give birth to sensory journeys.
- AR/ MR/ VR apps.
- Image recognition/AI.
- Holograms
- 3D-modeling and 3D-printing.
- user-generated content and the growth of social media.
One of the most important benefits of ICT is that they can connect the site to the wider territory, in the context of a networking strategy that can help integrate other "tourist attractions" into a comprehensive valorisation circuit, proposing various itineraries and promoting different aspects of the area through a holistic "pack" of experiences.

6.4.3.8. Vehicular and pedestrian accessibility systems with particular regard to routes, access and facilities reserved for disabled people and the elderly.
The archaeological park, therefore, must provide access for frail or disabled people therefore for a correct use and enhancement all internal and external mobility must be guaranteed both by lifts and ramps (where needed) that allow a complete visit to the visitor and suitable toilets. In the complete usability of the archaeological park, particular attention must be paid to the search for exhibition and communication solutions dedicated to visitors who suffer from disabilities or the elderly.

6.4.3.9. Systems of equipment and services for the management of the social function of the park, (Visitor Management Plan)
The visitor management Plan will make clear the choices to be made to make the various components of the park usable, restoring meaning to the visible remains and contextualizing them in the historical landscape
It is necessary to consider the catchment area of the area during the year (resident population, permanent or seasonal presences of workers, students, tourists) and, on the basis of the elements acquired in the analysis phase, the project must include both considered essential for physical access and movement inside the park, for the knowledge and understanding of the historical and cultural value and for safety, and the other services that can help the visit.

I. Preliminary organization of the visit, promotion

II Welcome, orientation and aids to the visit

III. Comfort, ease of movement within the areas

IV. Further opportunities for study or entertainment

V. Services

VI. Logistics facilities for research

6.4.3.10. Communication Plan for the Communication-Participation Strategy, with particular reference to the use of ICT.
The communication plan will explain the technical choices, consistent with the contents identified in the scientific project, calibrated on an analysis of the park's potential users, aimed at ensuring differentiated levels of scientific dissemination to a wider public than that of specialists what constitutes the essence and specificity of the park

For the elaboration of the Plan, it is appropriate to refer to the objectives and principles recommended by the ICOMOS Charter for the interpretation and presentation of cultural sites.
Communication tools and methods must be articulated on different levels: if, on the one hand, the scientific-specialized aspects (critical editions of monumental complexes, seminars and conferences, etc.) must not be neglected, on the other hand the results of the research must be translated archaeological in a clear and accessible language, making use of all multimedia and reconstructive tools. Particular attention must be paid to the communication dedicated to visitors who suffer from various forms of disability.

Tools developed for remote communications can have multiple uses:
- Pre-visit.
- Post-visit.
- Substitute to a real visit.

- Gaming, social networking and other.

6.4.3.11. Civil protection plan in case of natural disaster

Part of the monumental archaeological heritage is preserved in a fragile territory due to natural and anthropogenic risks. In order to deal with the potential emergencies of natural disasters, which have direct or indirect repercussions on the heritage (seismic, hydrogeological, fire risk), it is essential the collaboration of the various subjects called to intervene in the event of a calamity and therefore the need for these subjects to prepare guidelines for the protection of the archaeological heritage in emergency, integrated, when existing, to the Municipal Civil Protection Plan.

6.4.3.12. Public Awareness and Organization of Educational and Recreational Functions

Activities must be planned, consistent with the characteristics of the archaeological park. They will help the fruitful and lasting dialogue between specialists, scholars and users. This relationship will be particularly profitable if already in the planning phase, local communities and cultural institutions of the territory and in particular schools will be involved. Public illustration activities can be carried out on aspects relating to the excavation, classification, documentation and restoration of archaeological finds. It is particularly useful to take a cue perhaps from ongoing research. Archaeology courses or stages, environmental education seminars, natural science laboratories, conferences relating to disciplines or issues related to the history of the site or the peculiar characteristics of the park can be carried out periodically, also on the basis of specific collaborations.

As part of the fruition project, temporary events may also be planned and scheduled, such as shows within the preserved structures aimed at recreating the ancient environment, or courses dedicated to the illustration of technical or artisanal aspects of the production of objects through methods of experimental archaeology,

The Park will be able to organize exhibitions, parties, traditional and folkloric events.

The strategy should create conditions for extending the time spent by visitors in the park by creating the necessary infrastructure to formulate an integrated offer for archaeological visits and accommodation near the area to facilitate functional relations and strong interdependence (based on mutual and complementary interests, primarily in terms of services for tourists) between the Park and other places of interest.

6.4.4. Models and means for evaluation of economic-financial sustainability of park enhancement strategies and monitoring results of the economic impact

6.4.4.1 The economic sustainability.

The analytical-assessment process of the economic and financial sustainability of a park's enhancement strategies should be undertaken before the strategic choices are made.

The critical note for the assessment of these conditions is the evaluation of the internal and external conditions for the research and preparation of an

implementation model capable of translating the set objectives into an organisational and functional set-up for the management of the asset or activity.

Starting from the management set-up, it is necessary to:
a) define the set of management functions highlighting the specificities from the point of view of costs and revenues;
b) representing the management of the resource in a dynamic and multi-year time horizon;
c) outline the nature of management (profit/no profit);
d) contribute to the definition of the institutional form (direct public, mixed, SpA, foundation, etc.).

The economic-financial evaluation cannot disregard a profound knowledge of the management structure and, once the socio-cultural objectives have been set, must make it possible to:
a) classify, plan and size the functions and activities (functional set-up based on objectives);
b) identify the strategic management variables (human resources and their level of qualification and professionalism, for example)
c) examine the impact of cost and revenue items on the economic structure of management (to dimension the financial requirements and the cost of the various functions);
d) provide indications on processes, options and initiatives that affect the economic-financial structure of management (towards network logics, integrated management models or the trend towards global service for large attractions).

The financial evaluation is a methodological tool for estimating and evaluating the cash flow generated by an investment. It should be included in the framework of the analysis of the feasibility/sustainability conditions (Feasibility Study), as it allows the evaluation of the capacity and financial return of a project through the aggregation of cost and revenue items in an integrated plan of forecast accounts. It is aimed at defining and determining the costs and revenues that will be generated during the operating phase by the activities linked to the management of a valorisation system, in order to foresee the need for resources, hypothesise the sources of supply and, ultimately, direct the form of management, depending on the conditions that will be realised in the future. This analysis must take the form of an economic and financial planning tool (forecast income statement and balance sheet - functional forecast balance sheet).

6.4.4.2. Organization chart
For the management of the Projects developed during the planning phase, the presence of quantitatively and qualitatively adequate personnel is fundamental, referable to two different areas of professionalism: on the one hand professionals with legal, administrative-managerial and operational coordination skills, on the other specialists with technical-scientific skills.
The assignment of scientific direction must be entrusted to a figure with documented skills and experience in the archaeological discipline consistent with the main theme of the park, if necessary flanked by a scientific committee composed of experts with

the same characteristics, who guarantee different skills but consistent with the types of remains to be enhanced and with the characteristics of the park itself.

The Park's organization should be designed and modelled after its priorities and strategic functions, which according to partners' acknowledgement might be outlined in the following five structural functions:

Park's functional structure

| Economic sustainability |
| Recreation |
| Conservation |
| Innvoation and R&D |
| External relations&netoworking |

The Economic Sustainability of the park must comprehend its economic profitable management in order to assure its ordinary management, conservation and innovation activities for future maintenance. The management of the park requires professional skills in: business administration, people management (team building and leading), finance and accountability, marketing and sales management, logistic and process management.

Outsourcing professional experts might be considered to support the areas of: EU programmes and funding, sustainability, fundraising.

Staff who knows how to administratively manage projects co-financed by European Union development programs can contribute to the economic viability of archaeological sites.

Economic sustainability is pursued through market and industry trends research, by fostering education of local entrepreneurs, by improving communication and sales trainings of staff. These activities can foster the tourist attractiveness of archaeological sites and thus promote local culture.

Recreation basically insists on tourism, educations and promotion aiming at providing a consistent and steady flow of visitors to the park. Wide range of competencies form high and professional to middle and low (operative) skills are necessarily requested for this area.

Basically, skills recruitment and training should be focused on the following roles and tasks:

- Touristic and Educational activities: touristic guides to organize systematic visits of tourists and students; staff for the organization of staging events to attract scholars and researchers from national and international archaeological sites and universities. Students and researchers' campus activities, especially if internationally attractive, can reinforce the park's visibility and interest and

create a network of researchers for scientific and academic development purposes.

- Hosting and Restoration services: the economic impact of the park is mainly channeled into the local sectors of hotel industry and eno-gastronomic sector. Particular attention is dedicated to dynamic environmental and sustainable activities (outdoor sports and hobbies, natural tourism, B&B's, trekking routes, circular economy, green and sustainable agriculture,) locally connected to the park's community.
- Promotion: focused investments should be devoted to park promotion, communication and to the enhancement of its brand reputation. Training skills in audio visual and media, web programming and publishing, as well as fluent English competencies should be planned as strategic for it. Actually, the visibility and the reputation of the archaeological site are fundamental assets for the market positioning strategy of the park, requiring a substantial investment in high professional skills, as opportunely acknowledged by the partners.

Conservation refers to heritage care and preservation of the archaeological site (collections, monuments, excavations, archives,); to heritage promotion (exhibitions, publications, licenses and permissions); to heritage security (park's monitoring and safeguard, security norms)

ICT, Innovation and R&D: a continuous innovation activity and research is a basic pre-requisite for future survival of the park. Information technology and Digital innovation are nowadays strategic processes of transformation for adapting and empowering any organization acting in a social and market community. Park's management and structure should be transversally crossed and supported by the functions of digital management, data collections and analysis, cybersecurity, scientific and operative research.

External relations & networking: the park plays a consistent social and political role in the territorial governance for its cultural and economic connections to the local public and private stakeholders. Under a circular perspective the park attracts resources from the community (shareholders, stakeholders, sponsors and investors, local agencies and associations, national and international networks, NGO's, private and public schools and universities) and gives aim and opportunities to the community itself (training, business networks, cultural projects and development). The relevance of this positioning is linked to and determined by a strong action of scouting and networking with actors and collective agents at the various governance and territorial levels. External Affair office should support park's organization with professional and specialized skills for: territorial marketing and management, brand management, national and international partners scouting, media and social communication.

Once the management structure of the park is defined in its specific roles and tasks and accordingly to the park's specificity and identity, managers, staff and operators will be selected and trained. The most appropriate trade-off between specific technical experience (archaeology, history, heritage conservation) and team management attitude should be a requisite for the managerial roles.

The project may contain the proposal, taking into account the various national laws, to establish a body in charge of the management of the Archaeological Park. In this case, the establishment of the park will be accompanied by a Statute, which will indicate in addition to the aims and objectives, the legally responsible subjects and the executive-management bodies with their respective competences, and by Regulation. The Regulations will also define the organizational structure, the professional profiles, the criteria for the recruitment of personnel or for the assignment of qualified assignments, etc.

The Regulations of the organizational structure responsible for managing the archaeological park must specify:
- the organization chart: functions, number
- minimum number of employees, contractual form envisaged;
- the profiles of competence and the methods of recruiting the director and the scientific staff; the levels of responsibility and autonomy towards the Entity / owner;
- The possible use of stable forms of interinstitutional collaboration (through agreements with local authorities, universities, etc.) or with private non-profit organizations (voluntary associations, cooperatives, etc.);
- The procedures for entrusting services under management to private companies: In this case the service contract must provide for the cultural requirements of the staff involved and the forms of control by the institution.

6.4.4.3. Economic and financial sustainability of the park
Considering that the cultural heritage sector is characterised by scarce resources, where profit margins are achieved with difficulty, it is even more necessary to immediately address the problem of economic and financial sustainability of the cultural enhancement system to be implemented, since the financial aspects are one of the few invariants in the process of building the management structure. For an adequate assessment of the economic and financial sustainability of the project it is necessary, after defining an analytical evaluation period, to draw up a business plan structured in at least five parts, as follows a brief description of the content of each of them.
- **Investment plan** - A list of all expenditures that are strategically expected to be incurred in the future, broken down by year and with detailed reference to the actions, measures and activities that justify them.
- **Budget -** An analytical description of the sources of revenue and cost of operation, foreseen in each year of the analytical evaluation period.
- **Financing** - Description of any feasible partnerships, public-private financing hypotheses.
- **Financial sustainability** - Examination of the dynamics of the cash flows generated by current operations also in relation to the hypotheses on the investment and financing plan.
The purpose of this section of the business plan is to reconstruct the dynamics of cash flows (liquidity) in order to certify the expected financial sustainability of investments in the medium to long term. The cash flow of current operations can be determined by adjusting the operating result after tax for non-cash costs and any disinvestments/investments in working capital.

- **Financial performance evaluation/Multi-criteria analysis** - Calculation of parameters that allow for a financial assessment of the performance of investments, in section 6.7 there is a brief description of the most commonly used techniques.

6.5. Guidelines for co-planning

In the co-planning phase, it is necessary to involve:

1) Those responsible for managing the site

2) Local authorities with direct governance over the area

3) The public management system
- sectoral competent ministries
- national/regional/local public authorities
- cultural institutions (museums, libraries, cultural centres...)
- higher education and scientific research institutions and centres
- educational institutions (University,)
- local and regional tourist boards
- public travel agencies

4) The system of private companies
- system of companies directly involved (restoration, research, project planning, professional support, enhancement ...) competent ministries
- system of companies not directly involved (restaurants, food and wine, crafts...)
- private travel agencies
- private enterprises in culture
- founder/investor/financier

5) Civil society
- civil society organizations (e.g., in the field of culture and art, education, science and research, sustainable development, environmental and nature protection, protection and rescue, sports, spirituality...) at all territorial levels (national, regional and local)
- local community
- interested archaeologists, individuals, others...

In the co-planning phase, it is necessary:
- raising the curiosity and awareness of public – expectations of locals and stakeholders about what is the plan and what is necessary to include in the management plan;
- participatory activities – workshops, meetings with stakeholders, interviews;
- creation of communication-participation strategy;
- defining deliveries, project requirements and scheduling project activities;

- participatory activities for securing the inclusion of public and evaluation of creation of the management plan;
- define a set of development objectives, measures and activities
- define implementation indicators

To achieve the goals, it is useful to use an external facilitator: a neutral outsider, who is trained in bringing people with diverse interests together, can be helpful in negotiating difficult relationships and share the economic analysis: determining the site's potential economic benefit to the local community, or ways to ensure that profits from tourism stay in the community, displays a commitment to stakeholders

6.6 Methods and strategies for evaluation and review

Monitoring the implementation and results of the management plan is a process of collecting, analysing and comparing indicators that systematically monitors the success of the implementation of documents. Objectives in strategic planning acts must be clearly defined and measurable by using the relevant indicators. Performance indicators represent a kind of system that combines the monitoring of implementation results during the implementation process and contributes towards maintaining quality communication between stakeholders through interpretations and reporting on implementation results. The main purpose of reporting is to inform stakeholders about the implementation of the management plan and potential constraints and needs identified during the implementation process. Likewise, reporting serves to consolidate the results achieved by individual stages of the implementation of the management plan. By combining the results, it is easier to identify challenges and needs that may not be foreseen during the development of the management plan and thus contributes to the possibility of updating the management plan. Furthermore, the importance of reporting is also reflected in ensuring the transparency of the entire implementation process.

6.6.1 Basic economic outcomes

Example of possible economic and social effects and the related socio-economic indicators are included in the following tables. They are distinguished in terms of basic economic outcomes such as economic growth, job creation, infrastructure development and investment and tourism development (Table 1) and further socio-economic outcomes such as impact, site's protection, knowledge and culture (Table 2).

Table 1 – Ex-post evaluation: basic economic outcomes and associated indicators

Relevant outcomes	Associated socio-economic indicators
General economic development and	- Total production - Gross value added (infrastructure and services provided) - Overall economic growth of the territory
Job creation	- Labour income - Number of employees

	- Number of people directly involved in management activities
Investment realized, and financial resources allocated	- Amount of investments in the archaeological park - Realized projects on site, infrastructures and cultural activities - Amount of received non-refundable financial means
Tourism incoming flows and related economic activities	- Number of tourist arrivals and overnight stays in the cities - Number of visits to the cities' museums - Share of culturally motivated tourist arrivals in the County - Tourist incomes on the destination level - Number of visitors - Number of guided tourist visits - Number of new tourist products connected with the site

Table 2 – Ex-post evaluation: Social impact, protection, knowledge and culture

Relevant outcomes	Associated socio-economic indicators
Social impact	- Public participation
Protection of sites and related economic activities	- Conditions of preservation of buildings - Level of protection of local handicraft and agri-food heritage
Knowledge spill overs, culture and skill upgrading	- Level of knowledge growth related to the park area - Realized cultural activities (exhibitions, conventions, conferences, performances, ….) - Level of professionalism of employees directly involved in management activities - Development of professionalism and economy related to the management and improvement of cultural heritage in neighbouring areas - Technology innovation set

6.6.2. Accreditation

To ensure compliance with the actions necessary for the establishment of archaeological parks and the redevelopment of existing ones, it is essential that an accreditation procedure is put in place at national or European level, based on compliance with the shared methodology, identifying measurable and monitorable quality requirements over time.

6.6.3. Methodology for the ex-ante economic evaluation

With reference to the previous sections once budgets and investment plans have been drawn up, it is possible to assess whether the investment is acceptable or not. Below are the main methodologies used for this purpose.

Net Present Value (NPV)
It is a methodology based on the discounting of the net cash flows of the operation, i.e. the NPV of the project is defined as the value to date of all the positive cash flows (benefits) produced by the project net of the value to date of the negative cash flows (costs) justified by the dynamics of the investments, hence the following definition with reference to the eight years of the project:

$$NPV = \sum_{t=1}^{N} \frac{positive\ cash\ flow_t}{(1+k)^t} - \sum_{t=1}^{N} \frac{negative\ cash\ flow_t}{(1+k)^t}.$$

K is a discount rate that must be an expression of the cost of capital and that adequately takes into account the variability of the results (risk) of the sector in which the investment is being made. It can also be defined as the minimum acceptable return on the investment.

If it is reasonable to expect that cash flows will be produced beyond the period of detailed analysis (eight years), it is worth adding their present value (Value at Term). Generally, the evaluation made is prudential, it tends to believe that the project, without significant strategic changes, can be considered in stable conditions capable of producing a cash flow equal to at least the EBIT after tax.

The NPV of the operation is an expression of the capacity of the project to remunerate according to market parameters the operators and the capital involved, and therefore of the feasibility of the operation, according to the following decision rule:
- an NPV > 0 implies the feasibility of the investment with reallocatable liquidity;
- an NPV = 0 implies the feasibility of the investment without reallocatable liquidity;
- an NPV < 0 implies the unfeasibility of the investment.

Internal rate of return (IRR)
The IRR is an index of the financial profitability of an investment, which is identified with the composite annual rate of return that an investment generates. Mathematically, it is defined as the discount rate that makes the NPV equal to zero.

In general, a project should be pursued when the IRR is greater than the cost of capital employed in the investment project.

In other words, the IRR represents the maximum financial cost associated with the sources of finance that a company can assume in relation to a given project. Consequently, an investment project is desirable if its IRR is higher than the opportunity cost of the capital employed, whatever its nature.

Multi-criteria analysis

Multi-criteria analysis takes into account simultaneously a variety of objectives in relation to the intervention being assessed. It allows objectives to be considered in the investment analysis which cannot be included in the financial and economic analysis, e.g. enhancement of culture and environmental protection.

In general, the multi-criteria analysis can be organised as follows:

1. definition of the objectives - the objectives must be expressed in measurable variables, must not be redundant, but may be alternative;
2. construction of the "vector of objectives" - a technique must be found to aggregate the information and make a choice; the objectives must be given, if possible, a "weight" that reflects their importance;
3. definition of judgement criteria - these criteria may refer to the priorities pursued by the various actors involved or may refer to particular aspects of evaluation;
4. analysis of impacts - this activity consists of carrying out an analysis for each chosen criterion of the effects it produces; the results may be quantitative or qualitative;
5. detection/assessment of the effects of the intervention in terms of the selected criteria - from the results of the previous analysis (both in qualitative and quantitative terms) a score is given for each criterion
6. identification of the types of subjects involved in the intervention and detection of the respective preference functions (weights) accorded to the various criteria;
7. aggregation of the scores of the various criteria on the basis of the preferences expressed - the individual scores can then be aggregated providing a numerical evaluation of the intervention which can be compared with other similar ones.

6.6.4. Methodology for the ex-post economic evaluation

Ex-post evaluation in the Common Sustainable Model should be based on indicators able to assess the:
- Economic impact
- Social impact/Knowledge and culture/Human resources upgrading
- Environmental impact

Selected indicators should be:
- Defined in relation to the purposes of the Common Sustainable Governance Model
- Meaningful for monitoring results
- Measurable
- Objective
- Robust/Comparable over time and -ideally- across space

To define a suitable evaluation toolbox, a proposal is firstly defining relevant outcomes, then, collect all the official available information, and, finally, to elaborate possible indicators on the basis of qualitative information, when statistical data available at the local level are not sufficient to monitor and assess progress towards the expected outcomes of the strategies identified.

The proper identification of result indicators is crucial, and ICT tools can be used for both a quantitative but also a qualitative approach to measure outcomes.

Economic effects should be assessed by comparing the state of the indicators before and after the implementation of the Management Plan as regards tourism incoming flows and connected economic activities.

Further areas of evaluation are important. Particularly, from a sustainable perspective it is also important to assess the social impacts such as the community involvement, the protection of the archaeological sites and the protection and enhancement of related economic activities. Furthermore, an additional area of relevant ex-post evaluation is research outcomes, the potential knowledge spill overs in neighbouring areas, culture development and skill upgrading.

6.6.5. Quantitative and qualitative monitoring through **ICT**.

Decision-making tools should be developed within the spirit of the World Heritage Convention, in order to *'encourage everyone to participate in the process of identification, study, interpretation, protection, conservation and presentation of the cultural heritage'* (Article 12a of the Faro Convention).

Approaching the "public" we need to distinguish:

- real public: people who not only go to the park but also participate in its activities. For these users, forms of membership and fidelity programs can be studied;
- potential public.
- non-public.

What we really want to get information about is:

- user's socio-demographic profile.
- Motivation.
- experience.
- ICT and other communication strategies.
- cognitive learning process.
- behaviour during the visit.

In order to verify the effective improvement of the park the monitoring of users' feedback and interest is essential. Some of the most common tools used for quantitative and qualitative monitoring are:

Visitor survey
Counters
Application profiling
Google analytics
Smart devices and Apps

6.6.6. Models and means for monitoring results and evaluation

In particular, monitoring the implementation of the management plan would be focused on defined activities within the *Action Plan*. Outcome indicators are quantitative and/or qualitative measurable data which enable monitoring, reporting and evaluation of performance in the implementation of objectives and activities. Therefore, it is necessary to clearly define the implementation indicators (nominal/textual), the quantitative scale (unit of measurement) and target value, and sources of verification. Defined implementation indicators must cover thematically all relevant areas related to monitoring the state of archaeological sites and the effects of individual activities, level of development and valorisation, management methods, impact on the wider area (economic, environmental, social in the form of the local community), promotion of cultural heritage values, etc. The source of monitoring data depends mainly on what each indicator is trying to measure. After creating implementation indicators, methods for gathering data and the frequency of recording the various data to tack indicators must be established. This should be a conversation between program stakeholders, managers and staff. It is proposed that the monitoring process should be based on semi-annual reporting in the process of implementing the management plan.

Objective 1:											
	Implementation indicators					Implementation time					
Measure 1.1.	Indicator name	Scale (unit)	Initial value (year)	Target Value (year)	Source for monitoring	Y1	Y2	Y3	Y4	Y5	...
Activity 1.1.1											
Activity 1.1.2											
...											

It is possible to distinguish different types of indicators in detail - input indicators, output indicators, result indicators and influence indicators.
One of the most common management tools is the Program Evaluation Review Technique (PERT). This evaluation monitoring tool is divided into the following steps:
- identification of specific activities and milestones
- determining the proper sequence of activities
- network diagram construction
- an estimate of the time required for each activity
- determining the critical path
PERT chart update as the management plan progresses