



VirtualArch

Visualize to Valorise – For a better utilisation of hidden archaeological heritage in Central Europe

**O.T1.3. Regional strategy in pilot region – Roman harbour Barbir,
City of Zadar (HR)**



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Project

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1. PROJECT BACKGROUND

Although the rich and diverse archaeological heritage of central Europe is in parts known and excellently researched, a broad share of this heritage, even of international importance, is very often hardly visible and tangible for the public and faces increasing menaces. The VirtualArch project unveils regional archaeological heritage – located underground or submerged – to local and regional stakeholders that are responsible for economic development. Activities focus on the sustainable use and protection of non-visible and little-known archaeological heritage by increasing the capacities of public actors and by introducing innovative visualisation approaches and methods.

After various activities were implemented in order to explore and provide adequate measures for the valorization of pilot heritage sites, Regional strategies in pilot regions need to be developed. These strategies will suggest proper economic and societal valorization of hidden or submerged cultural heritage via visualization approaches. Regional strategies need to be developed based on the results of pilot action implementation and will also consider relevant transnational results achieved and results and experiences from other project regions gained by the exchange of information and experiences.

The Regional Strategy for the ancient Roman harbour Barbir, as a pilot heritage site 6 (submerged archaeological site in the closer vicinity of the city of Zadar, Croatia) will be based on the analysis of situation and environment in order to identify key challenges related to preservation, conservation, valorization and promotion of the site. Following the methodology mentioned above, it will be possible to define adequate objectives, measures, and activities for a proper heritage management.

However, besides the pilot location, and due to knowledge and experience gained by implementing this project, the Strategy will broaden some of its measures and activities to other cultural and archaeological heritage in the city of Zadar, the ones not being valorised enough, especially in relation to their preservation and promotion by using modern technologies. That way, the true potential of the project VirtualArch comes to life and its sustainability is well-maintained.



2. ANALYSIS OF SITUATION AND ENVIRONMENT - Pilot heritage 6

Although **Croatia** cannot compare with major tourism powers such as France, Spain, Italy or Greece, thanks to a trend of increasing numbers of arrivals and overnights in last years, Croatia has certainly become one of the most popular destinations on the Mediterranean. International tourists' expenditure in Croatia amounts to almost 20% of GDP – by far the largest share in the EU. Croatia features a typical "sea and sun" tourism model with stays concentrated in coastal areas in the summer months. In this context, **Zadar County** is no exception. Aside to a trend of increasing tourist arrivals/overnights, tourism of Zadar County records all common challenges identified on the national level:

- The primary tourism product is "sun and sea", with relatively long stays, concentrated in the coastal areas of the county and over the summer months
- The high seasonality of arrivals is challenging for local businesses operating in the tourism sector and limits its spill-over effect to other sectors
- Average tourist expenditure is significantly below that recorded in EU peers partly due to lower prices
- The threat of the over-exploitation of natural/cultural resources as well as of negative social impacts of tourism for the local population

However, Zadar county abounds in cultural and archaeological heritage, which qualified tourism operators are continually valorising in order to form new tourism offer and models for prolongation of tourism season. Different strategic documents on national and local level, with their defined objectives and measures, are focused on the development of diversified tourism offer like cultural tourism, outdoor/active tourism, etc.

Finally, in the context of project VirtualArch, Zadar County also abounds in archaeological sites that are only partly explored and valorised as a part of the tourism offer. In particular, **the ancient Roman harbour Barbir**, as pilot heritage site 6 of the project VirtualArch, is a submerged archaeological ground monument lying in a depth of about 1-3,6 meters in the closer vicinity of the City of Zadar, Croatia. Visible submerged stone structures are defined as remnants of the two piers and/or breakwaters that enclosed and secured the harbour. The harbour site Barbir was registered as an archaeological site in 1973. Except for a first survey conducted by the International Centre for Underwater Archaeology, Zadar in 2016 and 2017, no archaeological research or excavation activities have been conducted so far. Remains of an ancient pithoi vessel and numerous small archaeological findings made it possible to date back the harbour in the period between 1st and 5th century.



Within the project, the **underwater surveys and digitization of pilot heritage were completed** in summer 2018 by the International Centre for Underwater Archaeology in Zadar, which is also a UNESCO Category II centre. By mid-2019, the subsequent **visualisation was completed**. The visualisation included creating a 3D model showing the ancient harbour Barbir, a 2D video of the site that jointly shows the Roman era and present time, and a virtual tour / walk through the site, suitable for VR glasses. Alongside the abovementioned, a mobile application, suitable for both Android and iOS devices, was created and it includes all the components created thus far.

Key issues and opportunities relevant for the site:

- Despite the undeniably great cultural and historical value of the Barbir harbour, it remains unveiled and unknown, even to the local population.
- The site isn't included in any type of cultural or tourism offer; cultural and/or tourism operators are not informed /educated regarding the value of this underwater site.
- The unawareness of the presence, as well as on-going shipping and fishing activities, require new strategies in the protection and management of this site.
- This heritage and new information facilities offer possibilities for tourism development by extending the cultural touristic offer in the Zadar region.



3. OBJECTIVES, MEASURES, AND ACTIVITIES

Based on identified challenges and opportunities a set of objectives, measures, and related activities are hereinafter elaborated:

Objectives	Measures	Activities
Objective 1 Improvement of capacities for continual preservation and sustainable management of the archaeological heritage	Measure 1.1. Defining and implementing measures for the preservation of the site	Activity 1.1.1. Monitoring of the condition of the site
	Measure 1.2. Defining a management model	Activity 1.2.1. Implementation of carrying capacity analyses Activity 1.2.2. Drafting of Management plan
	Measure 1.3. Rising public awareness	Activity 1.3.1. Awareness-raising campaign for the preservation and valorisation of the site within the local population and economic operators
Objective 2 Sustainable valorisation of the archaeological heritage and its promotion	Measure 2.1. Cultural and tourism products development	Activity 2.1.1. Cultural manifestations (e.g. exhibitions, workshops, etc.) Activity 2.1.2. Creation of tourism offer in cooperation with local entrepreneurs (in accordance with carrying capacity and management plan)
	Measure 2.2. Promotion of the site and developed cultural and tourism products	Activity 2.2.1. Promotion of the site with the use of VR and visualisation tools within local tourist info centres and outdoor info points in key tourism destinations in Zadar County
		Activity 2.2.2. Online and offline promotion



4. ACTION PLAN FOR THE PERIOD 2020 – 2025

Objective	Measure	Activity	Implementing body	Period of implementation	Indicators
Objective 1: Improvement of capacities for continual preservation and sustainable management of the site	Measure 1.1. Defining and implementing measures for the preservation of the site	Activity 1.1.1. Monitoring of the condition of the site	Site management institution	Continual	<ul style="list-style-type: none"> • Reports on conditions of the site with prescribed preservation measures if needed (at least 1 time per year)
	Measure 1.2. Defining a management model	Activity 1.2.1. Implementation of carrying capacity analyses	Site management institution	1 year of implementation	<ul style="list-style-type: none"> • 1 document
		Activity 1.2.2. Drafting of Management plan	Site management institution	1 year of implementation	<ul style="list-style-type: none"> • 1 document
	Measure 1.3. Rising public awareness	Activity 1.3.1. Awareness-raising campaign for the preservation and valorisation of the site within the local population and economic operators	Site management institution	Continual	<ul style="list-style-type: none"> • Number of participants on events • At least one event per year
Objective 2: Sustainable valorisation of the site and promotion	Measure 2.1. Cultural and tourism products development	Activity 2.1.1. Cultural manifestations (e.g. exhibitions, workshops, etc.)	Site management institution / local tourism board	Continual	<ul style="list-style-type: none"> • Implemented minimum 3 cultural manifestation in a period of 5 years
		Activity 2.1.2. Creation of tourism offer in cooperation with local entrepreneurs (in accordance with carrying capacity and management plan)	Site management institution / local tourism board	In the first year after adoption of the Management plan	<ul style="list-style-type: none"> • Number of developed tourism product including visit/interpretation of the pilot site – at least one in 5 years • Visitors reviews on online sites (e.g. Trip Advisor etc.)
	Measure 2.2. Promotion and development of cultural touristic destination with the use of modern technologies	Activity 2.2.1. Promotion of the site with the use of VR and visualisation tools within local tourist info centres and outdoor info points in key tourism destination in Zadar County	Site management institution / City of Zadar	1 year of implementation	<ul style="list-style-type: none"> • Number of placed info points and its approx. visibility • Number of online visits
		Activity 2.2.2. Online and offline promotion	Site management institution	Continual	<ul style="list-style-type: none"> • Number of distributed promotional materials • Number of online visits and info points' visibility
		Activity 2.2.3. Classifying and branding of Zadar cultural heritage by using modern technologies and techniques	City of Zadar	1 year of implementation	<ul style="list-style-type: none"> • 1 document



In order to assure sustainability of VirtualArch project, it will be important to define **site management institution**, an institution in charge for implementation / coordination of implementation of defined activities. Possible site management institution could be selected within local partnership and stakeholders, e.g. International Centre for Underwater Archaeology in Zadar (ICUA), Tourism board of Sukošan, Municipality of Sukošan, City of Zadar / Zadar tourist board etc.

One of them stands out – International Centre for Underwater Archaeology in Zadar (ICUA). ICUA implemented researches on ancient harbour Barbir and since their vision is to preserve and promote underwater cultural heritage in Croatia, the Mediterranean and Europe, it is realistic to expect that they will, alongside other mentioned stakeholders and City of Zadar as the project partner, promote the results of the project and integrate them in their work. Additionally, since ICUA is one of the most important local stakeholders participating in the development of local, regional and even national strategic plans / documents, they will strongly support integration of results of VirtualArch (in particular those regarding valorisation and protection of underwater sites) in local, regional and national strategies. In this way sustainability of the project results should be achieved. However, ICUA cannot be the only site management institution since each of the stakeholders, more or less institutions, mentioned above partake in their own field of work, competence and experience, all of which contribute to timely and upright implementation of the defined activities.

Finally, the **institutional aspect**, as opposed to territorial one, lies not only in creating management plans for preservation and promotion of the cultural and archaeological heritage in the city, including the pilot site, or branding the cultural heritage by using modern technologies, but also in Department for Culture and Sports' consideration of the Strategy as relevant during creation of other strategic documents and plans on the local level, securing the sustainability of the project results and outputs.