



Call for action:

to research institutions to provide research results in cooperation with SMEs as input for the development and preparation of prototyping innovative ICT tools for the EU funded ENI CBC MED Project:

iHERITAGE: ICT Mediterranean platform for UNESCO cultural heritage

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| Project Titles: | B_A.2.1_0056 - iHERITAGE |
| Programme: | ENI CBC Mediterranean Sea Basin |
| Financing: | European Union |
| Contracting authority: | CEEBA – Confederation of Egyptian Business Association |
| Experts to be selected: | Research Institutions |
| Location of the contract: | Egypt, Alexandria |

I. Background

CEEBA is the Egyptian Partner of the EU funded ENI CBC MED iHERITAGE project that aims to promote the creation of new products using the latest ICT technologies such as AR/VR/MR to enhance the level of interpretation of Mediterranean UNESCO Cultural Heritage. The ENI CBC Program aims to improve the lives of men and women across the region, 2014-2020 ENI CBC “Mediterranean Sea Basin Programme” as the largest Cross-Border Cooperation (CBC) initiative implemented by the EU under the (ENI) European Neighbourhood Instrument. The Programme brings together the coastal territories of 14 EU and partner countries in view of fostering fair, equitable and sustainable development on both sides of the EU’s external borders).

The iHERITAGE project aims to provide new solutions through an innovation-driven growth process to promote cross-border technological transfer, Living Labs, industry-academia collaboration and the creation of spin-offs and new products, using the latest Information and Communication Technologies (ICT): Augmented Reality (AR), Virtual Reality (VR) and Mixed Reality (MR). The project will address socio-economic challenges at cross-border level through the active involvement of young people, women and NEETs who will take part in the Living Labs, training courses, and the creation of spin-offs, thus contributing to increase employment opportunities and foster innovation. The project will support collaborations among universities, SMEs, start-ups and spin-offs devoted to the creation of AR/VR/MR products. Eventually, iHERITAGE will improve access to UNESCO cultural heritage, on site and off site, and will contribute to the establishment of the Regional Centre for Safeguarding and Valorisation of Mediterranean Intangible Cultural Heritage, to be recognized under Category 2 of UNESCO. The project has 9 partners from Italy, Egypt, Spain, Jordan, Lebanon, Portugal. The period of the project is the 15th of September 2020 to the 14th of August 2023. The project has a total budget of 3.8 million Euro with a 90% EU contribution of 3.4 million Euro.



II. Nationality Rule

The selected institution should come from countries eligible to participate in the procurement procedures as indicated in the Articles 9 of the Regulation (EU) No 236/2014, and include:

- a) Member States, beneficiaries listed in Annex I to Regulation (EU) No 231/2014, and contracting parties to the Agreement on the European Economic Area; 4
- b) developing countries and territories, as included in the list of ODA recipients published by the OECD-DAC ('list of ODA recipients'), which are not members of the G-20 group, and overseas countries and territories covered by Council Decision 2001/822/EC;
- c) the Republic of Belarus;
- d) developing countries, as included in the list of ODA recipients, which are members of the G20 group, and other countries and territories, when they are beneficiaries of the action financed by the Union under the Instruments covered by the Article 9 of the Regulation (EU) No 236/2014;
- e) countries for which reciprocal access to external assistance is established by the Commission. Reciprocal access may be granted, for a limited period of at least one year, whenever a country grants eligibility on equal terms to entities from the Union and from countries eligible under the Instruments covered by the Article 9 of the Regulation (EU) No 236/2014.

III. Scope of call for action

In the frame of the iHERITAGE project, CEEBA is launching a call for action to research institutions and SMEs to provide the scientific research needed to develop prototypes of the following ICT solutions to enhance the access to Pyramids of Gizeh and the Grand Egyptian Museum.:

AR/VR Guided Tours; 3D Recontext; VR Cardboard Excursions; Space-Time Elevator; Holographic Exhibitions; Virtual Archaeological Reconstruction (Var); VR Room And VR Booths.

The research shall for each ICT product develop the technologies and technicalities, time periods and surroundings portrayed (landscape etc), Humans costumes, appearances etc to create panoramas of the past in Virtual, Augmented and Mixed Realities.

For each ICT tool mentioned below, the awarded institution needs to provide the input needed to prototype the following:



1. AR/VR guided tours

iHERITAGE will introduce for the first time ever in some of the most outstanding Mediterranean UNESCO cultural heritage AR/VR audio-video guides. AR/VR audio-video guides will have an average of 20 Points of Interest (POI) for each archaeological site, accessible in augmented and virtual reality, including: 3D reconstructions, 3D recontextualization, ARcheo Cinema, VR cardboard excursions etc....

2. 3D context

The objective is to reconnect the archaeological find with the original archaeological context. The works present in the museums are relocated in 3d in the archaeological sites where they were found And vice versa. 3D RECONTEXT solution for the first time will be used within the iHERITAGE project. It will allow the following functions: Visualising the archaeological finds exhibited in museums in the original context they originally were made the architectural and urban context from which the works were removed (the excavations) reappear in the museums; reconstructing the historical and archaeological context with restored finds, reconstructed excavations, scenes of life and contexts of use of the past.

3. Cardboard excursions

For tour operators operating in different contexts, from historic cities to archaeological sites, virtual reality allows you to create an upselling service on the excursion.

4. Space time elevator

The installation, to be experimented in the Pyramids of Giza's Museum, allows the user to enter a virtual lift that moves through space and time. The interface allows the user to go up and down in space, from underground to ground level, from the top view of a house or neighbourhood to the aerial view of an entire city and territory. When the user reaches a specific vertical level, he can observe it in different periods, from the present to the past. The installation of the space-time elevator involves the use of custom instruments for interactive immersive projections. The technical skills are related to the immersive direction and management of multi-screen audio-visual synchronization tools.

5. Holographic exhibition

The hologram is a very attractive form of virtual content. Holographic exhibitions will involve holographic projections of the VR contents (including 3D reconstructions etc...) created for each site by the project, which will be used for AR audio-video guides and for the VR InfoPoint Booths.

6. VR room and booths:

Inside the museum or the archaeological site, VR Rooms will offer to visitors an immersive virtual experience through VR headsets, where UNESCO cultural sites will be virtually reconstructed, giving evidence of their original aspect and functions. The narrative part will be created in the form of edutainment, mixing scientific information with spectacular effects digitally created, on the basis of archaeological studies and evidence. Booths will be movable and can be brought to exhibitions and fairs.



7. Virtual archeological reconstruction

The virtual archaeological reconstruction fascinates and involves the public but divides the experts in archaeology. VAR will involve laser scanning and photogrammetry, scenes of life, comparative analyses etc. Virtually reconstructed archaeological sites will be implemented in the following products: AR audio video guides; VR rooms-booths; holographic exhibitions. Common ICT standards for producing and archiving 3D contents related to Mediterranean cultural heritage will be set.

8. VR room & booth

Inside the museum or the archaeological site, VR Rooms will offer to visitors an immersive virtual experience through VR headsets, where UNESCO cultural sites will be virtually reconstructed, giving evidence of their original aspect and functions. The narrative part will be created in the form of edutainment, mixing scientific information with spectacular effects digitally created, on the basis of archaeological studies and evidence. Booths will be movable and can be brought to exhibitions and fairs.

9. Production of Co-publication

The research institutions involved in the contract are also responsible for publishing each 1 co-publication involving contributions from researchers working on Living Labs, with special attention to contents relate to the creation of AR/VR/MR new products and services and will give specifications on innovative ICT approaches and methodologies adopted by the project.

IV. Period of the contract

The intended start date is February 2023, and the contract will end at the end of the iHERITAGE project in the last quarter of 2023.

V. Instruction for submitting the proposal

Technical Proposal:

Please indicate in your proposal for which ICT tool you offer to implement and coordinate the research including the methodology, staff involved and time frame. Please note that your proposal should include a minimum of three ICT components and a maximum of six.

Please also provide references of your institution relevant to the action, the staff assigned to the project, their expertise and CVs.

Please note that the proposal shall include the cooperation with SMEs.

Financial proposal:

Please send your detailed proposal mentioning the amount of mandays in Euro. The manday rate will be calculated based on the conversion of 100 EUR/manday (including all taxes and VAT):to the equivalent value in Egyptian Pounds, using the [official exchange rate provided by the EU for funded projects](#).



VI. Application Deadline

All submissions (technical and financial proposal including references, portfolio and other supporting materials useful for the evaluation) must be consistent with this TOR, written in English and should arrive no later than the 10th of February 2023 by email to: info@ceebea.org.

Proposals should be clearly labeled with the name of the project and the name of the contractor. Subject of email: iHERITAGE Research Agreement_(name of applicant)

For more information about the iHERITAGE project, [please visit this link](#).