

## **Galerion - Scientific monitoring of the picture gallery for the preventive preservation of cultural heritage**



### CONSORTIUM

Seacon Europe (Hungary) (leading partner) (<https://www.seacon.hu/en/>)

KÖFÉM Education and Public Culture Center (Hungary) (partner) (<https://kofemmuvhaz.hu/>)

#### ROLES IN THE PROJECT

##### *APPLICANT: SEACON – TECHNOLOGY PROVIDER*

*SEACON is responsible for implementation of the project, so we dedicate experienced specialists one hand for technical realization as architecting, planning, software programming second hand for the commercial activity as sales, marketing.*

##### *PARTNER: KÖFÉM EDUCATION AND PUBLIC CULTURE CENTER – CULTURAL INSTITUTION*

*PCC is responsible for research and professional phases. The institute provides the pilot location/exhibition area and the a large number of paintings with different materials*

The Galerion project creates a digital platform based on measurements for the KÖFÉM Education and Public Culture Center, which will help with the professional handling and storage of the exhibited paintings. By applying cultural knowledge and technology together, we want to solve the environmental problems related to the exhibits under real conditions.

#### SPECIFIC STRATEGIC OBJECTIVES

*Adopt processes and technologies to reinforce transformation into a greener and more digital economy.*

*The aim is to adopt processes and technologies that improve the creative and cultural industry value chains' efficiency in the use of resources, open markets for green technologies and services and uptake of digital solutions;*

This collaboration between the Public Culture Center and Technology Provider targets to enforce a holistic conception of the preservation and valorisation of cultural value. This approach is necessary to deal with the growing challenge of conservation, especially when most of the global heritage is threatened by the environmental changes.

To assist heritage professionals in solving complex and pressing needs for improved preservation and sustainable management of collections while ensuring public access and participation, the project will apply integrated measurement based digital platform for paintings' management and adaptation to climate change.

The driving force behind the project is the need for applying cultural knowledge and technology together to solve problems of real objects in real conditions.

## BASIC OBJECTIVE

The basic objective is to improve the cultural value chain by adopting specific processes and digital technologies for protection of the paintings in the Public Culture Center and similar institutions.

## GENERAL PROBLEM AND SOLUTION

Accurately calculated the PCC has 63 paintings in public exhibition rooms, 18 in office premises, and 50 works of art in storage on a floor area of 900 m<sup>2</sup>. This is a total of 131 paintings, photos, sculptures. The number of visitors is 40000 per year.

Currently, they do not monitor the environmental conditions, which can cause damage to the paintings and generate costs for themselves. By monitoring the environmental conditions, problems can be identified and treated with various environmental controls, so the preservation of the images becomes manageable.

The aim of the project is to develop a basic monitoring solution customized to an institution, which includes the continuous measurement and control of temperature, relative humidity, possibly light conditions and the real-time evaluation. During implementation we will qualify the internal environment with sensor measurements, based on which we establish risk factors for the paintings. If the environment is not suitable for the stored artefact, we alert this.

## RESULTS

The project has a focus on the cultural values, concretely on protection of paintings which are relevant part of the Cultural Heritage. We will examine how continuous measurements can be used to choose the appropriate environment for PCC's artefacts made of very different materials. If the method proves to be good, we can also target archives or libraries and other indoor and outdoor exhibition spaces.

The suitable environment for the fully preservation of artworks is not strictly defined and there are not fast and standard solutions to develop ad-hoc applications for exhibition and/or museum environments. It is not possible to apply standard schemes for air quality and climate control due to the different types of artworks in an exhibition or storage areas.

To ensure an optimised climatic environment, it is necessary to consider at least the 3 principal components of the targeted CCIs Ecosystem: the exhibition/storage area, the paintings and the visitors. Each one can be a source of scientific, technological challenges.

## DIGITAL SOLUTION

Such a complex challenge will be overcome through the innovative approach of the applied digital solution consisting in a system that integrates monitoring, evaluation and mitigation the potential impact of environmental and climate changes on painting collections.

## EUROCLUSTERS FOR THRIVING CREATIVE AND CULTURAL INDUSTRIES

CREATHRIV-EU is a European cross-regional joint cluster initiative that aims at strengthening the European Creative and Cultural Industries (CCIs) and bringing it back on the sustainable growth path after the Covid-19 pandemic. Covid pandemic has exacerbated several issues within the ecosystem that need to be addressed in order for the CCIs to play their vital contribution to the twin transition (Green and Digital) and, in turn, to the growth of the whole EU.