Innovations and the use of digital technologies in the Archaeological Museum of Thessaloniki in Greece

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Type of best practice
Innovation (including 3D, AI, Big data, Metaverse, etc)

Keywords
Digital technologies, Innovation, Democratization, Social inclusion, People centered approach, Collaborations between museums and heritage sites

The Archaeological Museum of Thessaloniki is participating in European research programs in order to elevate its digital presence taking advantage of technological developments and digital innovation. Although some of the projects are still ongoing, the results have shown that the museum have upgraded its services to the public, offering an enjoyable and meaningful experience for every visitor. At the same time, these initiatives support the connection of the museum with the archaeological sites within the city of Thessaloniki and the broader area of central Macedonia. Finally, the use of digital technologies becomes a powerful tool for museum staff to manage their collection.

Organisation in charge of best practice
Archaeological Museum of Thessaloniki

Location
Thessaloniki, Greece

Dates
Started in 2020 and will lasted for 36 months.

Description
The Archaeological Museum of Thessaloniki was built in 1962. It hods collections of numerous artefacts dating from the Prehistoric era to the end of antiquity. They come from excavations conducted throughout Macedonia since 1912, along with handed-in antiquities. The museum is currently participating in many European research programs in order to elevate its digital presence taking advantage of technological developments and digital innovation. Although some of the projects are still ongoing, the results have shown that the Archaeological Museum of Thessaloniki have upgraded its services to the public, offering an enjoyable and meaningful experience for every visitor. At the same time, these

initiatives support the connection of the museum with the archaeological sites within the city of Thessaloniki and the broader area of central Macedonia. Finally, the use of digital technologies becomes a powerful tool for museum staff to manage their collection. The Museum joins the project "CULTUREID: The Internet of Culture: RFID Technology in the Museum". RFID tags installed in each of the exhibits of the Archaeological Museum of Thessaloniki. This allows museum personnel and visitors to digitally interact with exhibits through appropriate RFID reading equipment. For the museum, it ensures the automatic recording of any interaction with the exhibits (maintenance, movement, interest-rate in the exhibition, etc.). Visitors are provided with a personalized tour at their mobile device (mobile, tablet), depending on their location, interests, and congestion in the Museum. The museum also participates in the project "SignGuide: Automated Museum Guidance using Sign Language". The goal of the SignGuide project is to develop a prototype interactive museum guide system for deaf visitors using mobile devices that will be able to receive visitors' questions in their native (sign language) with regard to the exhibits, and to provide additional content also in sign language using an avatar or video, utilizing techniques from the field of computer vision and machine learning. To this end, they will develop a demonstration system for guidance in the Archaeological Museum of Thessaloniki. System integration and commercial exploitation will be done through MLS Information Technology. The museums also launched a project entitled "e-HOE: Thessaloniki in the Age of Galerius: bringing a great period of the city's history to life, based on multidisciplinary research and state-of-the-art technologies". Building on recent advances in 3D scanning and virtual reality technologies, the e-HOE project develops innovative tools for the diagnostics, conservation, documentation and showcase of monuments and objects of the Galerius Palace Complex, the most emblematic complex of ancient buildings in Thessaloniki, which includes monuments such as the Rotonda, the Arch of Galerious (Kamara) and the Hippodrome, as well as virtually connecting the Archaeological Museum of Thessaloniki with the Palace Complex. The e-HOE tools provide the base for offering a novel multi-dimensional cultural experience highlighting two different dimensions, the historical/experiential one and the scientific/archaeological one, through cultural tours in the city. Museum visits and Complex tours enriched via augmented and virtual reality, thus, transferring the visitor in a "vivid" virtual past, where the buildings of the Palace Complex, objects from the Museum and citizens of the Galerius era involve in realistic everyday scenes of the past, offering valuable insights into the historical, social, economical and political reality of that era. In addition, the cultural tours highlight the scientific dimension of archaeology, focusing on the diagnostics, conservation and documentation of the Galerius Palace Complex and its excavation findings. The Museum has also developed the application "Museum on the Go", which is a digital tour guide of the Archaeological Museum of Thessaloniki, that brings to life the history of the city and the larger area of central Macedonia. It is an entertaining game of search in time and space that brings us closer to the finds of the Archaeological Museum and the actual archaeological sites where they were once discovered. The Museum also joins the project "Culture and Heritage for Responsible, Innovative and Sustainable Tourism Actions" (CHRISTA). The overall objective is to protect and preserve natural and cultural heritage assets and deploy them for the development and promotion of innovative, sustainable and responsible tourism strategies, including intangible and industrial heritage, through interpretation and digitisation, with capitalisation of good practices, policy learning, policy implementation and capacity building. Expected changes are in terms of improved policy

instruments in destination regions, advances in relevant policy implementation, upgrading of cultural and natural assets and innovative applications. This case is one of the most illustrative examples that show the multiple benefits for museums from the use of digital technologies. More specifically, it shows how technology can potentially facilitate collaborations between museums and heritage sites, support CH professionals to successfully manage their collections and provide visitors with an enjoyable and meaningful experience achieving educational purposes. It illustrates the importance of interacting with visitors in dynamic and powerful ways by offering transformative learning experiences, during the entire visitor's journey. Innovation and the use of technologies are at the heart of the museum's activity, helping it to make the transition from monologue to dialogue. This approach to CH is characterized by democratization, social inclusion and people centered approaches to cultural heritage. It makes CH accessible and more relevant to broader audiences, creates a sense of 'playfulness' and exploration and creates more accessible atmosphere for disabled persons.

Links
https://www.amth.gr/en/research/programs?field_research_category_tid=10

Resources needed
These projects are co-financed by Greece and the European Union.

Challenges encountered
The challenge is to keep these digital tools up to date in the coming years, as technologies are rapidly evolving.

Evidence of success
The museum has strengthened its digital presence by taking advantage of technological developments and digital innovation. It has successfully entered the era of digital transformation and explored new funding opportunities.

Potential for transfer
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Further Information
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