

# Cultural Heritage through the Lens of e-Governance

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**Abstract.** This paper explores the intersection of e-Governance and cultural heritage digitization, discussing its potential impact on the economy and social life amid rapid advancements in Information and communication technologies (ICT).

**Keywords:** Cultural Heritage, e-Governance, Digital Documentation, Online Access, ICT.

## 1 Introduction

E-Governance is an invariable part of the world's economic development and globalization processes only accelerate this process. For its part, e-Governance is a set of strategic and tactical measures, policies, technological solutions and legal norms defining the framework for the development and functioning of the information society in all its aspects. In a world of free movement of people, ideas, goods and technology, the lack of effective e-Governance can be a significant deterrent to the competitiveness and prosperity of a region, area or country, and therefore more and more political and economic leaders are paying attention to the need for rapid implementation of electronic management in various segments of public life (Pavlova, 2021).

Cultural heritage is the manifestation of the shared values, traditions, and customs that societies have passed down through generations. It is a crucial aspect of societal identity and continuity, emphasizing collective responsibility to preserve and disseminate these shared treasures (Harrison, 2012).

Concurrently, e-Governance, the application of information and communication technologies for public administration, has become an integral part of modern governmental frameworks (Bwalya & Mutula, 2014). Preserving and promoting cultural heritage has traditionally relied on physical institutions and resources. However, in the digital age, e-Governance presents a unique opportunity to harness technology for the documentation, conservation, accessibility, and democratization of cultural heritage.

## **2 The Role of e-Governance in Cultural Heritage Preservation**

Cultural heritage is a key component of a country's identity and is essential to its social and economic development. In this context, e-Governance is a powerful tool that can play a vital role in the preservation and promotion of cultural heritage. Using the latest technologies, it can be guaranteed that cultural heritage will be preserved for future generations and will be accessible to people all over the world.

Digital technologies have revolutionized the way we interact with our cultural heritage. They have broken barriers, opening up our collective history and culture to the world and helping in preservation efforts (Parry, 2009). E-Governance initiatives can be instrumental in facilitating these interactions. They can help in organizing, storing, and retrieving cultural artifacts and knowledge, making them accessible to a broader audience. For instance, in Estonia, a pioneer in e-Governance, the digital archiving and e-accessibility of cultural heritage have been integrated into national e-Governance strategies (Runnel, Pruulmann-Vengerfeldt, & Reinsalu, 2009).

The "Estonian Digital Archives" contains digital replicas of vital cultural documents, which are readily accessible for research, education, and public interest. The Estonian Digital Archives is a notable initiative that allows for the preservation and accessibility of important cultural documents in digital format. The Estonian Digital Archives serves as a repository for digital replicas of significant cultural documents. These documents can include historical records, manuscripts, photographs, artworks, and other cultural artifacts. By digitizing these materials, Estonia ensures their long-term preservation and provides easy access to researchers, educators, and the general public. The integration of digital archiving and e-accessibility into Estonia's e-Governance strategies has several benefits. Firstly, it helps to safeguard cultural heritage by reducing the risk of damage or loss that physical documents might face over time. Digital replicas can be stored in secure servers and backed up to prevent data loss. Secondly, the availability of digital cultural heritage materials promotes research and education. Scholars and students can easily access these resources remotely, allowing for in-depth study and analysis. It also enables the dissemination of knowledge and cultural understanding to a broader audience, including those who may not have physical access to the original documents. Furthermore, the Estonian Digital Archives contribute to transparency and openness in governance. By making cultural heritage materials digitally accessible, the government promotes public interest and engagement. Citizens can explore their country's history, culture, and identity, fostering a sense of belonging and shared heritage. Overall, Estonia's integration of digital archiving and e-accessibility of cultural heritage into its e-Governance strategies showcases the country's commitment to preserving and promoting its cultural wealth. It serves as an excellent example for other nations seeking to leverage technology for the preservation and accessibility of their cultural heritage.

The open data initiatives in e-Governance open new horizons for cultural heritage preservation. They promote transparency and foster an inclusive environment for citizens to partake in their heritage (Zuiderwijk & Janssen, 2014). For example, the British Museum's project, "The Portable Antiquities Scheme" leverages open data and crowdsourcing to record archaeological objects found by members of the public,

thereby expanding knowledge of Britain's past (Bevan, 2012). Open data refers to the concept of making government data freely available to the public in a machine-readable format. In the context of e-Governance and cultural heritage, open data initiatives involve releasing and sharing data related to cultural artifacts, historical records, archaeological findings, and other heritage resources. By opening up access to cultural heritage data, governments promote transparency and accountability. Citizens have the opportunity to explore and analyze the information, verify historical facts, and gain a deeper understanding of their cultural roots. This transparency helps build trust between the government and the public, as citizens can independently verify and assess the available data. Moreover, open data initiatives foster an inclusive environment by allowing citizens to actively participate in their heritage. Researchers, scholars, and developers can utilize open cultural heritage data to create innovative applications, visualizations, and interactive platforms that enhance the understanding and enjoyment of cultural heritage. Additionally, open data facilitates collaborations and partnerships between government institutions, academia, cultural organizations, and the public. These collaborations can lead to innovative projects, research initiatives, and community-driven efforts for the preservation, digitization, and accessibility of cultural heritage. In summary, open data initiatives in e-Governance indeed open new horizons for cultural heritage preservation. They promote transparency, foster inclusivity, and create opportunities for citizens to actively engage with their heritage. By sharing and making cultural heritage data accessible, governments enable a broader audience to explore, appreciate, and contribute to the preservation of their cultural heritage.

E-Governance initiatives have the potential to integrate cultural heritage into e-learning systems, providing interactive and immersive experiences. This integration can facilitate learning and appreciation of cultural heritage in innovative ways (Luo, Li, Feng, Yang, & Zuo, 2021). The use of virtual reality (VR) and augmented reality (AR) in e-Governance could create virtual tours of heritage sites or simulations of historical events, transforming cultural education and tourism.

E-Governance offers numerous possibilities for preserving, promoting, and democratizing access to cultural heritage. However, for this potential to be fully realized, societies must address challenges like digital literacy, data security, and the digital divide. Investing in digital infrastructure and education, and ensuring ethical and inclusive digital practices, can help build a future where cultural heritage thrives in the digital realm.

E-Governance facilitates wider access to cultural heritage resources, breaking down barriers of distance, time, and physical limitations. Online databases, digital archives, and virtual exhibitions enable people from around the world to explore and learn about cultural heritage regardless of their geographical location. Additionally, interactive platforms and social media channels foster engagement, allowing users to share their experiences, contribute knowledge, and participate in discussions surrounding cultural heritage (Huvila, 2008).

E-Governance encourages collaborative governance models, involving multiple stakeholders in decision-making processes related to cultural heritage. Online platforms provide a space for communities, experts, and policymakers to collaborate, share knowledge, and exchange ideas. Crowdsourcing initiatives, for instance, allow the public to contribute to the preservation and interpretation of cultural heritage by providing

information, transcribing documents, or tagging digital assets. This collective participation leads to a more inclusive and diverse representation of cultural heritage.

### **3 Cultural Heritage through the Lens of e-Governance in Bulgaria**

E-Governance plays a crucial role in the digitalization of cultural heritage by providing the technological infrastructure, governance frameworks, and platforms necessary for managing and leveraging digital assets. It enhances the accessibility, preservation, and promotion of cultural heritage while fostering public engagement, collaboration, and effective governance in this domain. By digitizing movable and immovable cultural heritage objects, multiple goals can be achieved in various fields. On the one hand, digitization gives new life to cultural heritage and allows the general public to become familiar with such objects of it that are located in physically remote or even inaccessible places. On the other hand, digitization contributes to the active inclusion of cultural heritage in pan-European exchange and diversity, including by increasing Bulgarian participation in the European digital portal “Europeana”. Thirdly, digitization enables the creation of virtual museums and digital libraries by converting physical artefacts and documents into digital formats that can be accessed and displayed online. This opens up new opportunities to preserve and share cultural heritage and knowledge with a wider audience, regardless of their location or time constraints. The introduction of common standards in the digitization of cultural-historical heritage and museum exhibitions is essential for electronic management to ensure consistency and compatibility in the methods and forms of digitization. This will contribute to making digital collections more accessible, interoperable and sustainable in the long term. Standards can cover various aspects of digitization, such as metadata, image and data formats, file naming conventions, quality control and storage. By adopting and adhering to these standards, museums and cultural institutions can improve the quality and usability of their digital collections, as well as facilitate the collaboration and exchange of digital resources between different organizations. Digitization of cultural heritage can stimulate the growth of creative sectors by making cultural resources more accessible and enabling artists and creators to draw inspiration from them. Digital technologies also offer new opportunities for the creation, sharing and distribution of cultural content, which can lead to the development of new artistic practices, products and services. In addition, digitization can help preserve and protect cultural heritage for future generations, which in turn can inspire and inform of new works of art and creativity. In implementation of the National Development Program Bulgaria 2030, the digitization of cultural heritage in Bulgaria can contribute to the country’s sustainable development and regional growth by preserving and using its diverse cultural resources.

By digitizing cultural heritage resources, such as works of art, literature, music and architecture, Bulgaria can make them more accessible to the public, both at home and abroad. This can stimulate cultural tourism and help promote the country’s cultural identity and diversity. Digitization can also enable the preservation of cultural heritage

for future generations and support the sustainable use of resources in the creative industries. By providing access to cultural heritage resources, Bulgaria can stimulate innovation, creativity and entrepreneurship, which can lead to the development of new cultural products and services and contribute to the country's economic growth. In addition, digitization of cultural heritage resources can facilitate the exchange of knowledge and ideas between regions, promote intercultural dialogue and understanding, and contribute to the development of a shared cultural heritage.

The Ministry of Culture, in partnership with the National Institute on Immovable Cultural Heritage (NIICH) have been working on the project "Digitalization of the archive of immovable cultural values of world and national importance, construction of a specialized information system, electronic register and public portal" procedure "Priority Projects in Implementing the Roadmap for Applying the Strategy for Development of e-Governance in the Republic of Bulgaria 2016-2020 of the Operational Programme Good Governance 2014-2020. The project aimed to develop electronic governance in the field of immovable cultural heritage preservation and to improve services for citizens and businesses. One of the essential tasks of the project was to build and implement a specialized information system for registration, collection, digitization, processing and storage of the National Documentary Archive of the National Institute of National Archives, as well as the creation of an electronic public register of immovable cultural values (Bulgarian National Audit Office, 2021).

In 2021, the Concept of the register form was updated, related to the periods for the implementation of the stages, the inclusion of measures for digitization of registers, as well as the addition of new results for reporting the implementation of the previous measures, including digitization of the National Public Register of Immovable Cultural Values maintained by the National Institute for Immovable Cultural Heritage (Report on the Progress..., 2021).

In November 2022, the Ministry of e-Governance and the University of Library Studies and Information Technologies signed a memorandum of interaction and partnership, the purpose of which is the development of innovative and interdisciplinary educational disciplines in the field of information technologies. In this regard, the application of digitization and the introduction of new ICTs are among the fundamental factors that are related to the preservation and socialization of cultural heritage.

The upcoming implementation of measures in the field of electronic management include expanding the scope of the register of immovable cultural values with data on all objects of immovable cultural heritage in the country, as well as ensuring automated data exchange with other information systems and improving the process of administrative service for citizens and businesses.

## **4 Conclusions**

The intersection of e-Governance and cultural heritage digitization represents a transformative force in the digital age. By leveraging technology to preserve and make cultural heritage accessible, governments can drive economic growth, foster innovation, and strengthen social cohesion. However, addressing the challenges associated with

digital preservation and ensuring inclusive access are vital for realizing the full potential of this convergence. As governments continue to embrace digital transformation, the preservation and digitization of cultural heritage must be a priority to safeguard our shared human legacy for future generations.

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