



The European Perspective on the Digitization of Cultural Heritage

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ABSTRACT

The European cultural heritage represents one of the concerns of the European community that was taken into consideration when it comes to express the development of the international relations among its member states, but also in increasing the awareness of the importance of cultural diversity. At EU level, were developed some initiatives regarding the cooperation between the member states in the cultural field, one of the most important being the creation of the European digital heritage, one of the concerns of the European Commission. This considers the development of European policies in this field, as well as their financing in each member state of the European Union, for easier access to information on cultural heritage, but also the preservation of the European digital heritage as a whole. This paper addresses the digitization of cultural heritage from European perspective, while analyzing the Romanian national framework regarding digitization of the cultural heritage and the way that the Romanian authorities are involved in this process. The scope of this paper is also to identify good practices that may be successfully implemented at the national level. Also, the paper approaches the concept of national cultural heritage vs European cultural heritage, from the perspective of preserving the national identity of the member states.

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1. Introduction

The concept of European cultural heritage is a concept whose origins can be found in the history of all European peoples, beginning in the Neolithic period and evolving to the present day, at the level of a member state of the European Union, the long history of the European continent and its culture remaining unaffected despite the negative events that have occurred on the European continent over time.

Social cohesion can be successfully ensured through culture at the European level, each state having the opportunity to know the culture of the other European states, a fact that also contributes to strengthening relations between them, with positive consequences including from a financial point of view, through the active promotion of cultural tourism.

The importance of cultural heritage is proven not only from the perspective of preserving European identity, but also from an economic perspective, cultural heritage being at the same time a provider of jobs throughout Europe. The digitization of the national cultural heritage represents a particularly important process that must be used to its maximum capacity by each member state, as part of the "duty" regarding its own contribution to the creation and preservation of the European cultural heritage.

2. Literature review

European cultural wealth, "represents the expression of the historical heritage and cultural identity of all the peoples of this continent" (Ursu, V., Ivanov, I. 2022). It represents a resource of immeasurable value, which strengthens the feeling of belonging to culture and heritage European, its preservation being extremely important for the cultural heritage prepared for future generations (European Parliament Resolution of January 20, 2021).

At the level of the European Commission, there is a permanent concern regarding the support it gives to member states from the perspective of protecting their own cultural heritage (M. R. Gabor et al., 2021).

With regard to the European cultural heritage, at the level of the European Union there are a series of policies, programs and financing schemes through which the European community has proposed to protect this component in all its forms, presented in Figure 1 below:

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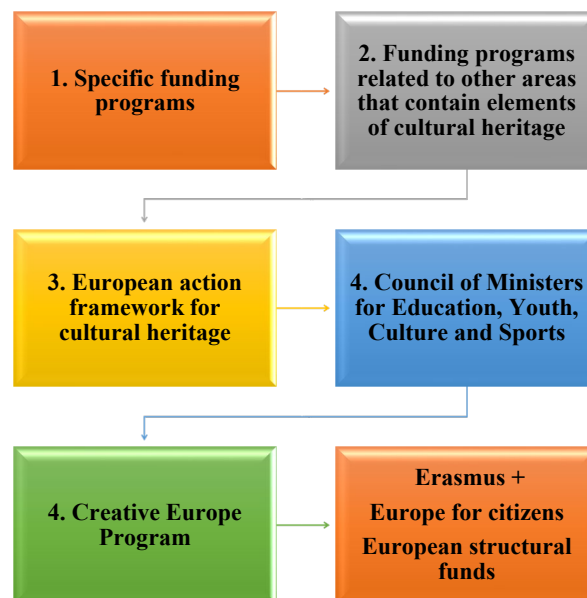


Figure 1. Actions of the European Union in the preservation of the European cultural heritage.

Source: Authors' own research

The "Creative Europe" program represents the main financing scheme at the European level regarding the support of the European community granted to the member states for the preservation of the cultural heritage at the national level. Also, as regards the other fields that contain cultural heritage elements, they are financed through the "Europe for Citizens" programs, as well as through European structural funds, such as the European Regional Development Fund.

3. Methodology

In order to elaborate this article, the qualitative research method was used (Sandor, S. D., 2013), the research being based in particular on the study of specialized literature at the European level from the perspective of the initiatives established at the level of the European Union. Also, the main methods used regarding the concept of digitization in the sphere of European cultural heritage and at the member state level were analyzed, in order to identify the current stage of this process, but also the good practices that can be successfully implemented at the level nationally in our country.

At the same time, there were used some databases from the EU, namely those related to the financing of digitization at the EU level. Concerning the projects carried out by the Ministry of Culture in Romania, there were extracted some data regarding the budget execution on March 31, 2023 (COFOG report 3 - based on the classification of government functions) with the help of FOREXEBUG, in order to analyze the funds allocated to this field.

4. Analysis/Interpretation of results

The European Action Framework. Also with regard to European cultural heritage, the European community has also established a component on cooperation between member states, through the Council of Ministers for Education, Youth, Culture and Sports. (<https://www.consilium.europa.eu/ro/council-eu/configurations/eycs/>)

The European Year of Cultural Heritage 2018 has been a beneficial moment with reference to the awareness of European cultural heritage importance, being a great moment from the perspective of its active promotion. It has been also a great opportunity from the point of view of raising awareness of public opinion regarding the feeling of belonging to European culture, being developed in the same time the document titled "The European Action Framework for Cultural Heritage"(2018). (<https://op.europa.eu/ro/publication-detail/-/publication/5a9c3144-80f1-11e9-9f05-01aa75ed71a1>)

This document describes the scope and objectives of the European action framework for cultural heritage and its principles, this framework being based on 5 pillars as follows:



Figure 2. The five core pillars of the European framework for cultural heritage

Source: Authors' own research

According to the same document, cultural heritage is considered to be a tool for promoting a more sustainable and inclusive Europe, with 2018 being a reference year in terms of the permanent movement regarding European cultural heritage.

The digitization processes. The digitization activity regarding the European cultural heritage was established through Directive 2013/37/EU. This Directive established that all documents found in libraries, museums and archives may be reused in fields such as education and tourism (Directive 2013/37/ EU). At the EU level, the main initiative regarding the digitization of European cultural heritage was put into practice through the creation of the Europeana platform (<https://www.europeana.eu/en>), which contains numerous materials in digital format on various topics, transmitted by the cultural institutions of the EU member states. This platform has a pro version, which is called Europeana Pro (<https://pro.europeana.eu/>), and it was projected for professionals in culture (Ionescu, R. V. et al, 2021). This platform works on the principle of each member state's contribution regarding the transmission of documents in different formats by cultural institutions at EU level. This process as well as the current state of the information presented on the platform are shown in Figure 3 below:

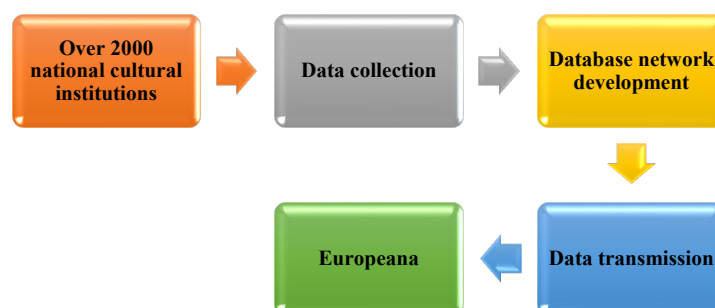


Figure 3. The work principles of Europeana platform and the current state of the information,

Source: Authors' own research

At the current stage, at the level of the Europeana platform, most information is presented in image format (31,576,776 images), the second place in terms of information presented being occupied by text files (24,619,326 text files), on topics such as sports, the first world war, art, fashion, manuscripts, maps, migration, etc.

Regarding the pro version of the platform, namely Europeana Pro, it has the mission of providing expertise, developing tools and policies to support digital change and partnerships between professionals that support innovation. European cultural heritage is not only an invaluable and unmatched cultural heritage, but it can represent a highly effective resource from a tourism perspective (Panzera et al., 2021).

This resource, if well exploited, can bring substantial income to the European continent. From this perspective, the importance of cultural heritage for the economic and social development of urban areas is very important on the European continent given the fact that the urban area tends to be the most important part of economic development (Ost C., 2018). In this respect the functional congruency refers to the match between stakeholders' expectations regarding the implementation of a social responsibility code and their perceptions on how an organization or system is assessed from the social perspective (Cristache et al, 2019).

Consequently, culture at the EU level has become an important policy dimension when referred at issues like attractiveness, innovation and social cohesion needs (van Puyenbroeck et al., 2021). The pandemic has fully contributed to the awareness of the need for digitization at the EU level, especially from economic

recovery perspective, with the European Commission ensuring funds for a series of programs, through the new multiannual financial framework, as shown below:

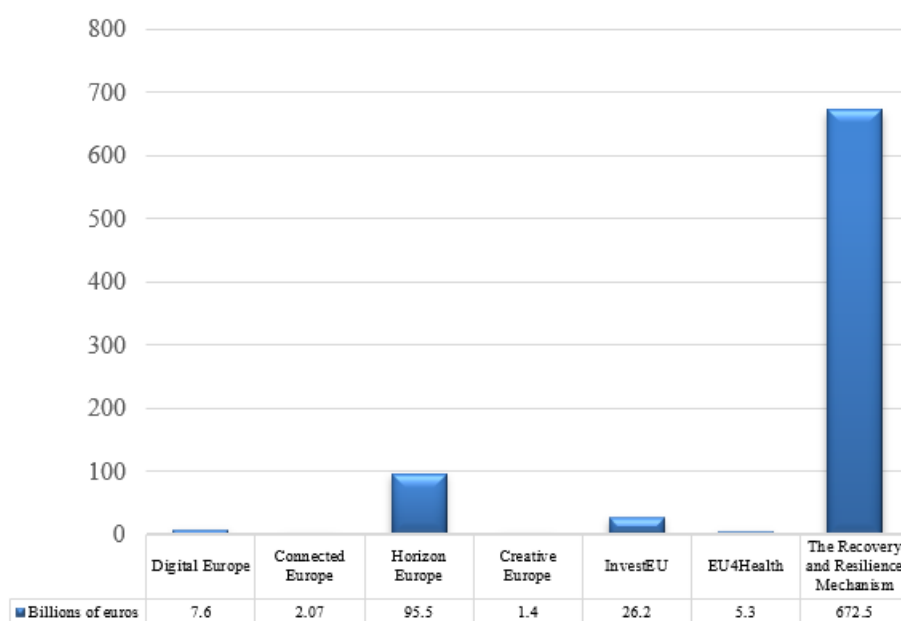


Figure 4. Funding of the 7 EU budget programs in the period 2021-2027 (billion euros)

Source: The European Commission

From the analysis of the data presented in Figure 4, it can be easily seen that the largest financing in terms of the digitalization component in Europe is provided through the Recovery and Resilience Mechanism, respectively 672.5 billion euros, the allocations per member state being carried out within the national recovery and resilience programs.

Regarding the financing of the digitization component at the European level from the perspective of ensuring cyber security, funding research in artificial intelligence development and the use of digital technology in the economy and in society, the Digital Europe Program was created.

This program is funded with €7.6 billion and is part of the next long-term financial year 2021-2027, with its main priorities funded as follows in Figure 5 below:

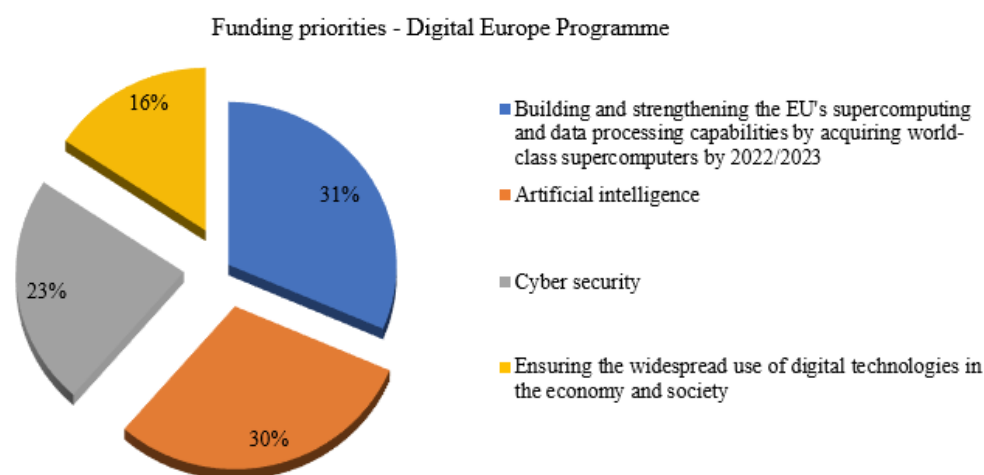


Figure 5. Share of funding priorities within the Digital Europe Programme

Source: European Commission

In Romania, through the Romanian Authority for the Digitization, there were established 7 regional digital innovation centers that were selected by the European Commission to represent Romania, as part of the objective of creating a European network of digital innovation centers. Those 7 centers created are connected now to the European Digital Innovation Hub Network, whose aim is to create a European network of hubs to promote interaction and knowledge transfer in the field. The situation regarding the participants in the projects

financed by the Digital Europe Program, as well as the amounts allocated by the EU for each of them, is described in Figure 6:

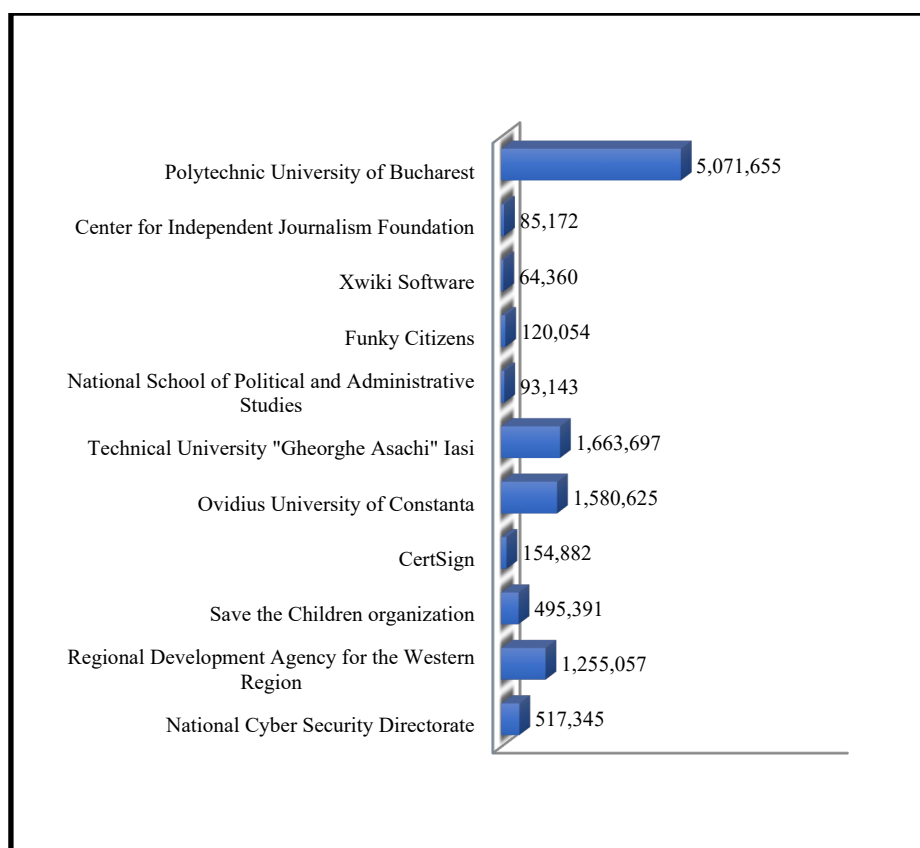


Figure 6. EU contribution related to projects financed by Digital Europe Program in Romania (euro)

Source: data from <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/projects-results>

As can be seen in Figure 6 above, the largest allocation of funds in Romania was granted to projects carried out by the Polytechnic University of Bucharest, namely over 5 million euros in 24 projects in the field of communication networks, and if we look at the fund allocations in the figure above, we can see that the university environment ranks first.

As can be seen, Romania has the necessary capacity to access funds in the field of digitization, the current state of programs financed through Digital Europe proving this.

Regarding the Romanian Ministry of Culture, the budget execution on March 31, 2023 (COFOG3 budget execution report extracted from FOREXEBUG) shows that the institution is running a number of 3 projects with funding from the state budget in 2023, as follows:

Table 1. Budget execution on March 31, 2023 regarding the programs run by the Ministry of Culture within the initiative to promote Romanian culture (COFOG 3)

Nr. Crt.	Program	Source of funding	Execution at 31.03.2023 (lei)
1	Protecting, promoting and valuing the national cultural heritage	entirely from the state budget	2.367.000
2	Promoting, protecting and valuing contemporary creation and cultural diversity, as well as protecting the ethnic, cultural and linguistic identity of national minorities in Romania	entirely from the state budget	16.970.324
3	The promotion of Romanian culture abroad and the promotion of foreign culture in Romania	entirely from the state budget	5.188.749

Source: FOREXEBUG <https://mfinante.gov.ro/web/forexepublic>

The data extracted from FOREXEBUG indicates that at this moment the Ministry is running 3 projects regarding the promotion of Romanian culture, in a total amount of 24,526,073 lei, financed from the state budget.

The stage of cultural heritage preservation through digitization. As concerning the digitization stage of the cultural heritage preservation process in Romania, important steps have been taken at the national level regarding the introduction of information technology in the preservation of this cultural heritage, with important book collections being digitized through this tool. One of these collections can be found at the Library of the Romanian Academy, where the manuscripts of the great Romanian poet Mihai Eminescu have already been digitized (<https://biblacad.ro/Eminescu.html>).

This library also contains numerous materials by Traian Vuia (plans of the automobile plane, plans of the Vuia helicopters, the Vuia-Yvonnau generator, etc.) which are accessed by those who are passionate about the history of aircraft (<https://biblacad.ro/Vuia.htm>). The library of the Romanian Academy also contains a series of rare manuscripts in digital format (<https://biblacad.ro/manuscrise.html>), maps (<https://biblacad.ro/harti.html>), as well as a section dedicated to music, where you can find works by George Enescu, Beethoven, Liszt, Chopin and many other famous composers (<https://biblacad.ro/muzica.html>).

The Central University Library has two projects related to digitization. The Lib2Life Project – Revitalizing Libraries and Cultural Heritage through Advanced Technologies (<https://lib2life.bcub.ro/elibrary-builder/>) among its objectives is the creation of a unique repository at the national level, to be shared by the other national libraries on the territory of Romania, the development of a high-performed system that may be capable to improve the document's quality, as well as the implementation of unitary norms from the perspective of digitization in this field in order to achieve some standardized technical protocols regarding the format and selection of documents, valid for all libraries on the national territory.

The second project carried out by the Central University Library is represented by Restitutio (<http://restitutio.bcub.ro/>), which practically represents the digital platform of this library, which contains collections of manuscripts, rare books, iconographic resources, press, maps and audio and video resources, access to these digital resources being open.

At the same time, the National Library of Romania has taken important steps regarding the digitization process, being created the National Digital Library (<http://digitool.bibnat.ro/R>). Here are exposed some special digital collections, virtual exhibitions, photographs, graphics, sheet music. The platform also presents information on the Romanian participation in the Europeana platform. A special feature of the National Digital Library is that it has a section for blind people (National Library for the Blind - section still under construction), which is particularly important in terms of the concept of social inclusion.

The digitization process of the European cultural heritage brought with it a series of information regarding the various practices used by the Member States in this process, including regarding the digitization process used in the case of the Europeana platform. Starting from the principle of using aggregators in terms of collecting information, analyzing it and disseminating it on the Europeana platform, it can be seen that this process offers a unified practice in terms of information collection and availability, thus allowing easy access by interested users. The main purpose being that of processing and publishing the information in a unitary manner on that platform, so that interested users know that this information can be available and accessible on the platform based on a search based on filters.

In Romania, the preservation of cultural heritage depends mainly on the will of the authorities with attributions in the field of culture, both from the perspective of the measures taken from the point of view of ensuring financing and access to European funds intended for the digitization process, given the fact that at the European level, there are numerous initiatives regarding the provision by the European community of the necessary funds in this regard, initiatives described throughout this paper.

5. Conclusions

Addressing the issue of cultural heritage is a permanent concern, from the perspective of preserving this incomparable heritage in all its forms. Digitization is, without a doubt, one of the greatest discoveries of the last century, this process being used in almost all fields of activity, globalization representing in this case a vector of rapid propagation from the perspective of access to information in digital format. Of course, there are many advantages of preserving cultural heritage in its original forms, especially from the perspective of the possibility of access in physical format, which involves the activation of the five human senses, but this preservation/rehabilitation process has huge costs, depending on the materials used in the conservation process and the age of the cultural heritage components that require rehabilitation. In the context described above, the digitization process can represent a formidable solution, both from the perspective of reducing preservation costs (these being automatically transposed into the digital environment), and from the perspective of access to as many users as possible from around the world.

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