



Collaborative grant scheme for innovative project ideas

Interactive cultural digital map of Montenegro (*CultDMap*)

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**DELIVERABLE 1.1: REPORT “EXISTING DIGITIZED CULTURAL CONTENT
AND PRODUCTS IN MEMBER STATES OF EUROPEAN UNION”**

Introduction

In the 21st century, digitization has a tremendous role in preserving the European cultural heritage and making it easily accessible on the global level. European Commission is actively leading and fueling the process of digitizing the culture of Europe, which is officially expressed in the Recommendation on the digitisation and online accessibility of cultural material and digital preservation of October 27, 2011 (part of Commission’s strategy for the digitisation, online accessibility and digital preservation of Europe's cultural and scientific heritage). Also, an Expert Group on Digital Cultural Heritage and Europeana is active as a body within the European Commission.

The European Union created the Europeana, the most comprehensive online platform dedicated to digitizing cultural heritage in Europe. It was launched in 2008, initially called the European Digital Library Network (EDLnet). Today, over 3700 cultural institutions are involved in the Europeana project, and it contains over 54 million digital items.

Each of the member states has its own cultural digital repositories on the national level (digital libraries, collections, 3D presentations etc.) with different degrees of effort and investment. In this report, we will present the examples of products and projects related to digitizing cultural

heritage in the selected EU member states, which were the primary focus of our comparative research. In the end, we will present the conclusions and final remarks, which will contain the essential recommendations regarding the continuation of the Project.

Germany

“German Digital Library” (“Deutsche digitale Bibliothek” – DDB) is a national online platform which presents objects and literature from 30.000 relevant cultural institutions (archives, libraries, museums etc.). Its online address is: deutsche-digitale-bibliothek.de. This virtual library was launched in 2012, and contains more than 5 million objects. It receives state funding by the German government, federal states and municipalities.

German digital library functions on the same principles as Europeana. Cultural institutions that are involved in managing the Library are responsible for copyright and user rights.



The Wossidlo Digital Archive (www.wossidia.de) is a good example of specialized digital collections in Germany. It collects cultural data related to oral tradition, such as legends, folktales, songs, local dialects etc. It has been named after Richard Wossidlo, German ethnologist who researched folk traditions in Mecklenburg-Vorpommern area. The University of Rostock preserves the “Wossidlo-Archiv” with more than two million documents. The Wossidlo Digital Archive has been created in an effort to digitalize all this material and publicize it. However,

most of the material is presented in scanned form, written in regional dialect, which makes its full meaning less accessible to the general public.

The Wossidia is participating in the ISEBEL project (Intelligent Search Engine for Belief Legends, isebel.eu), an online aggregate that collects different folktale database.

France

Gallica (gallica.bnf.fr) is an online platform managed by the National Library of France (“Bibliothèque nationale de France”). It is one of the largest digital libraries in the world, with a great number of documents, books, manuscripts, audio recordings, images and other material. Gallica was established in 1997. It mainly represents various fields of contemporary and historical French culture, as well as French translations of foreign works.



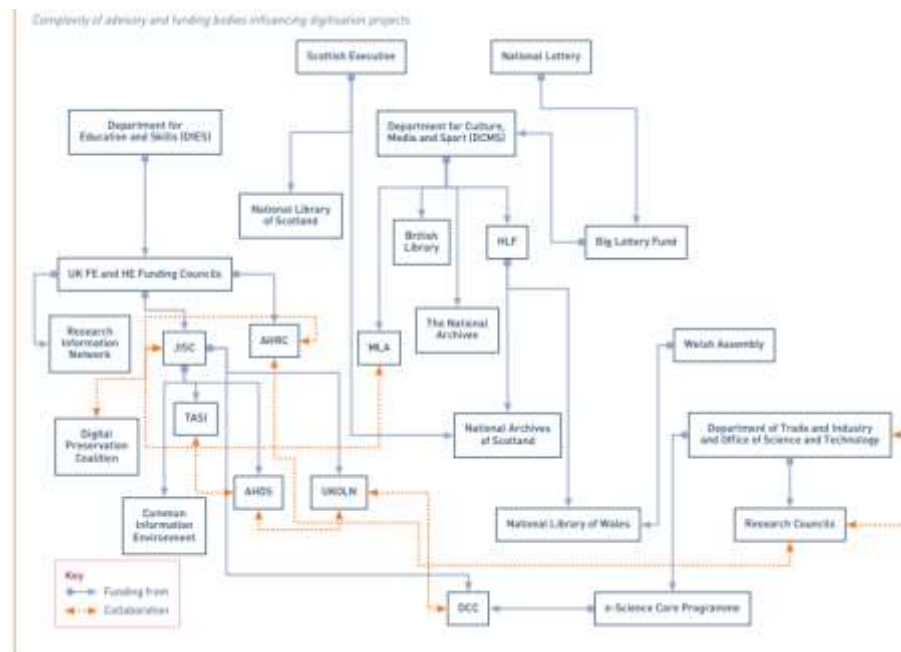
Gallica collection functions in collaboration with the Europeana. It also collaborates with affiliated digital francophone libraries in countries of South and North America (such as bndigital.bn.gov.br). National Library of France has two additional digital sub-repositories, specialized for images and manuscripts. Gallica collection is also being presented via a smartphone app.

Some of other notable digital libraries based in France are: E-corpus, Feedbooks, Harmathèque, Hyper Articles en Ligne, Isidore, OECD iLibrary, and Kurdish Digital Library.

Digital technologies have had a supportive role in recent reconstruction of the Notre-Dame de Paris Cathedral. Similar projects, aimed at reconstructing a sacral object in a digital form are: Digital Cathedral (<https://www.myleszhang.org/2017/05/16/amiens/>), e-Cathedral (https://home.mis.u-picardie.fr/~g-caron/pub/2012_RICH_Caron.pdf), and Mapping Gothic France (<https://mappinggothic.org/building/1164>).

United Kingdom

In 2012, British Library developed the Digital Library System, based on system used by the National Library of France. British Library is the national library of United Kingdom, generally considered to be the largest library in the world (170–200 million catalogued items).



Source: "Digitization in the UK – the case for a UK Framework", JISC

In April of 2017, British Department for Digital, Culture, Media and Sport launched the Digital Culture Project. The project started with consulting a wide range of relevant organizations, under the slogan #CultureIsDigital. As a part of this project, the National Lottery Heritage Fund launched a million pounds worth campaign related to developing digital capacities in the heritage sector.

There is a number of other, specialized digital repositories related to British culture. Art UK is the online platform dedicated to presenting art collections in the United Kingdom, managed in collaboration with over three thousand institutions.

Historic Buildings and Monuments Commission for England, together with the Association of Local Government Archaeological Officers and Institute of Historic Building Conservation, manage the Heritage Gateway website, providing historic environment records on the national and local level.

Some of the other notable cultural digital platforms based in UK are: Digital Curation Centre, British History Online, British National Corpus, Geograph Britain and Ireland, Eighteenth Century Collections Online etc.

Greece

There are numerous initiatives related to digitizing cultural heritage in Greece. One of them is nongovernmental initiative for digitization of the fortification walls in Elefsina from 2012. Research Centre ATHENA, at the Democritus University of Thrace, conducted the digitization of two Byzantine churches on the the Mani Peninsula, as well as partial digitization of Kavala's Old town.

Athens University of Economics and its partners (Norwegian University of Science and Technology, ATHENA Research and Innovation Centre, University of Konstanz and AICON 3D Systems) realized the PRESIOUS Project (www.presious.eu), primarily dedicated to predictive digitization of cultural heritage objects, as well as their 3D reconstruction.



Kotinos application is dedicated to presenting Ancient Olympia's museum through virtual reality and 360° photography.

Geoanalysis S.A. realized the project related to digital mapping of the Archaeological Park of Dion (www.ancientdion.org), as a part of the national program called "Digitization and Digital Documentation of the Ministry of Culture Monuments' Collections", funded by the EU.

There are also other initiatives with the similar aim. For example, Digital library Anemi gives access to digitized collection of content relevant for Modern Greek studies. It was established in 2006 by the Library of the University of Crete. Another one is the National Documentation Centre of Greece, founded by the Greek government in 1980, which is dedicated to cultural and scientific information preserved in digital form.

The Athena Research Center's Institute for Language and Speech Processing (ILSP) is currently working on developing the "digital archeology" in Greece, using 3D mapping for virtual preservation of numerous historical objects, monuments and areas.

Two funding schemes are especially important for Greek culture digitization: Programme for Digital Convergence and Operational Programme Competitiveness, Entrepreneurship and Innovation 2014-2020.

Sweden

Swedish Open Cultural Heritage (SOCH) is a national platform that aggregates digitized objects in Swedish culture, managed by Ministry of Culture's Heritage Board. The platform's online address is: www.raa.se. This project connects a great number of cultural organizations that send digitized material from their central or local databases. This data is then forwarded to the Europeana, the unified European project of this type. Swedish cultural institutions have generally shown a respectable level of transparency and openness.



Another national platform that collects digitalized cultural heritage of Sweden is called Alvin. It is managed by Uppsala University Library, together with Gothenburg University Library and Lund University Library. Its official website is: www.alvin-portal.org.

A successful example of specialized digital heritage collection is a virtual tour of the Hallwyl Museum in Stockholm. It contains very rich and detailed 3D presentation of the Museum, along with accompanying audio guides and relevant online links. The tour can be found at: sketchfab.com/TheHallwylMuseum.

The Swedish Literature Bank is dedicated to publishing Swedish literature classics in digital form. It has been developed through the partnership between several important Swedish institutions (Swedish Academy, National Library of Sweden, Royal Swedish Academy of Letters, History and Antiquities, University of Gothenburg, Swedish Society for Belles-Lettres, Society of Swedish Literature in Finland).

Project Runeberg is committed to digital archiving of notable books that belong to Nordic cultures. It was founded in 1992, and its online address is: runeberg.org.

Finland

Finna service (finna.fi) combines material from various cultural institutions in Finland (museums, archives and libraries) and gives free access to them. It is being managed by the National Library of Finland and more than 300 partners. Finna was launched as a component of the National Digital Library project by the Ministry of Education and Culture.



Finish National Gallery (kansallisgalleria.fi) has its own repositories, consisted by materials from three institutions: Ateneum Art Museum, the Museum of Contemporary Art Kiasma, and the Sinebrychoff Art Museum. For example, Ateneum has a repository consisting of 40,000 artworks that are available online. Images are free for use, since the legally defined copyright period has passed (70 years after the author's death).

CSC – IT Center for Science Ltd. (also known as Finnish IT center for science) manages The Cultural Heritage DP Service, another important digitization project related to cultural heritage in Finland. The online address of the Service is: digitalpreservation.fi.

Digital Cultural Heritage website digime.fi is the primary information channel committed to presenting the latest information related to the digital cultural heritage initiative, coordinated by the Ministry of Education and Culture.

Spain

Digital Hispanic Library (www.bne.es) is the virtual library of the National Library of Spain. It contains digitized materials such as historical books, manuscripts, photographs, maps, drawings etc.

Virtual Library of Bibliographical Heritage (bvpb.mcu.es) is a project started by the Spanish government with the goal of digitally reproducing historical manuscripts and books, as an element of historical heritage in Spain. It involves more than hundred Spanish libraries.



Miguel de Cervantes Virtual Library, managed by the University of Alicante, presents a repository of digitalized literature and historical texts in Spanish language. It was launched in 1999, as a pioneering digital library of this type in Spain.

PADICAT (Patrimoni Digital de Catalunya - Digital Heritage of Catalonia) is a digital platform dedicated to digitizing Catalanian bibliographic heritage, started in 2005 by the public Library of Catalonia, in collaboration with the Center for Scientific and Academic Services of Catalonia. The official webpage is: www.padicat.cat.

Spanish Ministry of Culture is responsible for designing electronic catalogues of seventeen museums in Spain, such as the National Archaeological Museum, the Museum of America, the Museum of Altamira etc.

Italy

Website www.3d-virtualmuseum.it offers 3D presentations of museums across Italy. Many archeological, historical and other objects of cultural heritage are presented with the aid of modern technology, primarily virtual reality and 360° photography.

In an interesting project done by researchers at the Department of Archaeology and Ancient History at the Lund University, a house in Pompeii was reconstructed with the use of virtual archeology. The researchers created a 3D model of the house's original state before the eruption of Mount Vesuvius.



The Uffizi Gallery, the most visited art museum in Italy and one of the most visited in the world, offers a virtual tour on their website (www.uffizi.it/en/online-exhibitions/uffizi-virtual-tour). There a visitor can see various artefacts in 3D form, primarily from the period of Italian Renaissance. The tour is accompanied by ambient music and each presented object of cultural heritage is followed with basic description containing historic informations about it.

The Civic Art Gallery of Ancona is hosting a virtual tour on their website (www.distori.org/VIRTUAL_TOUR/pinacoteca-civica-podesti/tour.html), containing one of the most significant art collections in the March region.

Some of the notable Italian digital libraries are: European library of information and culture – Digital Library (BeicDL), OPAR L'Orientale Open Archive, and Sardegna Digital Library.

Latvia

The most important Latvian online platform for digitized cultural content is located at www.lndb.lv, the Latvian National Digital Library (“Latvijas Nacionālā digitālā bibliotēka”). The creator of the platform is the National Library of Latvia, also known as the “Castle of Light”. It has a role of preserving and promoting the Latvian heritage and identity through digital technology. It contains 693 611 periodicals, 17 237 books, 78 643 images, 2468 maps, and 13 438 sound and video recordings.



The National Library of Latvia and its partners, the National Cultural Heritage Board, the National Archives of Latvia, and the Cultural Information Systems Centre, are involved in a project funded by the European Regional Development Fund (ERDF), which is improving the work of the Latvian National Digital Library, by expanding it with hundreds thousands of text pages, photographs, maps, digitized objects etc.

A special feature of the site is providing individualized services in order to help researchers with their specialized academic work.

The Library is involved in the Europeana and it collaborates in several projects, such as “Mitigation” or “Rise of Literacy”.

“The Latvian Culture Canon” (www.kulturaskanons.lv), created in 2017, offers videos, photos, text, books and images related to the “7 spheres and 99 treasures” of the Latvian cultural heritage. This digital collections aims at collecting the most important heritage elements and artistic works in the history of Latvia, which define the identity of this county and its culture.

The NLL has also launched two specialized digital collections: www.periodika.lv – dedicated to digitizing historical periodicals, and www.dziesmusvetki.lndb.lv, devoted to Latvian traditional Song Festivals.

Croatia

Based on the National digitalization program, the “Croatian cultural heritage” portal was launched in 2007 (www.kultura.hr), containing digitized books, magazines, audio files, newspapers, photographs, cards, etc. This project was started by the Ministry of culture of the Republic of Croatia, along with National and University Library in Zagreb, Croatian national archive and Museum documentation center.



National and University Library in Zagreb has been collaborating in the “Europeana newspapers” project since 2013, and provides digitalized collections on the webpage: www.digitalna.nsk.hr/pb.

The Croatian Academy of Sciences and Arts has its own Digital collection project, started in 2009, which provides multiple types of historic, scientific, artistic and other cultural material (www.dizbi.hazu.hr). Croatian national archive manages a rich digital collection with various historic documents in online form (www.arhiv.hr/hr-hr/Istrazite-gradivo/Sto-cuvamo/Galerija-fotografija-gradiva).

Other examples

Beside listed examples of notable national digital platforms, which were the primary focus of this research, here are other databases and services whose content was also taken into account during the course of the comparative analysis:

Ireland – 3D library of the Hunt museum, located in the city of Limerick (www.huntmuseum.com/3d-library/);

Luxembourg – Interactive 3D tours created by the National History and Art Museum of Luxembourg (www.mnha.lu/en/useful-information/3d-tours/3d-tours);

Bulgaria – Digital Plovdiv (www.digital.plovdiv.bg), a project devoted to digitized cultural and historical heritage of Plovdiv Municipality;

Czechia – Virtual 3D presentation of the National Museum (Národní museum), at http://nm.pano3d.cz/index_en.html;

Malta – Virtual exhibitions presented at the website of Heritage Malta, a national agency for museums, conservation practice and cultural heritage (www.heritagemalta.org).

Portugal – Virtual museum and digital library created by the Morbase (www.montemorbase.com), a project based in Montemor-o-Novo's Municipality.

Conclusion

Digitization of cultural heritage has brought many practical benefits, such as increased accessibility, lower maintaining costs or overcoming spatial and temporal boundaries.

However, it is not enough to just digitize cultural heritage and put it online. The second step is even more important: popularizing this digitized heritage, that is to say, getting the attention of larger audiences. In the era of modern technologies, experts can easily make a digital copy of a cultural object and store it on a website. But, at the same time, it is hard to make this material interesting for the general population, which is being constantly exposed to massive amount of other entertaining content.

For overcoming this obstacle, communication strategy is the crucial element. Proper communication strategy considers storytelling, target groups, emotions, interactivity, creativity and other dimensions of human psychology. Segments of Montenegrin culture and history can be associated with universal values and archetypal themes – this communicational approach would make the Project relevant and accessible on a global level (a notable example of material usable for this purpose is the last photograph of war hero Ljubo Čupić).



Some databases have impressively large online collections, containing thousands of digital objects of cultural heritage, but without substantial impact outside the narrow niche of academic researchers. On the other hand, a digital platform with whose messages, images and symbols produce a sense of deeper meaning, has a potential to initiate a viral campaign and reach a massive audience, thus making a wider social impact. Digitized cultural heritage is not an end in itself – it is an instrument that is supposed to make a positive effect for the people and their culture.

Therefore, a special attention to these conclusions should be paid during the dissemination phase of the Project, but also during other phases which will inevitably shape the final image and impact of the product.

Another important element is the front page of the mobile/web application, which creates the user's first impression. Many digital platforms have an uninspiring, overly administrative front page with soulless design, leaving the visitor without motivation or guidance as to how to explore the content in a meaningful and compelling way. Although this kind of presentation may be acceptable for an academic researcher, it is not suitable for the general public, since the users will

not be able to recognize the value of presented content. Therefore, it is recommended that the front page contains symbolical images, storytelling and user-friendly design that can attract the attention of an average visitor.