



European Public Sector Information Platform

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Open Data in Cultural Heritage Institutions

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1 Executive Summary

This topic report is about the digitalisation of cultural heritage in Europe and the regulations and conditions of its re-use. The report discusses relevant research undertaken over the last few years regarding the challenges and benefits of making digital cultural heritage information available for re-use. It reviews the development of the legal framework and highlights the arguments pro and contra the proposed amendment of the PSI Directive to extend the scope of the Directive to include Cultural Heritage Institutions. However, the review of the PSI Directive is an on-going process and thus the topic report will not conclude in any recommendations regarding the proposed amendment of the PSI Directive. The report instead showcases the latest developments and examples of re-use and explore potential business models based on the re-use of cultural heritage information.

2 Introduction

Since the adoption of the EU Directive 2003/98/EC¹ on the re-use of public sector information in 2003, there has been debate on the pros and cons of extending the scope of the Directive to include Information from Cultural Institutions. With the proposed amendment of the Directive, announced in December 2011 by the European Commission as part of the Open Data Strategy², this debate has now come to a critical juncture. The European Commission has made clear its position in favour of the extension of the scope, while some EU Member States' Governments and some Cultural Institutions have expressed their concerns. At the time of writing, the picture is still fragmented.

In 2009, Rob Davies published the topic report "PSI in the Cultural Sector"³ on the ePSI platform. In the report he described the current status quo of digital cultural heritage in the European Union and what the consequences would be if cultural heritage institutions would fall under the PSI Directive. Since 2009, much has happened in this field. Although the topic report of 2009 is still very relevant today, this current topic report aims to provide an updated view of the situation of digital cultural heritage field.

The digitalisation of cultural heritage has significantly picked up both in terms of speed and volume. At the same time Europeana, the European Union's cultural heritage portal initiated in November 2008, has become more important than anyone could have expected at the outset. Almost all cultural heritage institutions acknowledge the importance of publishing their metadata to Europeana. With the proposed amendment of the PSI

¹ http://ec.europa.eu/information_society/policy/psi/docs/pdfs/directive/psi_directive_en.pdf

² <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/11/1524&format=HTML>

³ <http://epsiplatform.eu/content/topic-report-no-4-psi-cultural-sector>

Directive the European Commission has made a clear point to extend the scope of the Directive to include digitised information from Cultural Heritage Institutions.

On the demand side cultural information is seen as having a high re-use value by the private sector. For example the tourism industry highly depends on having access to cultural information in order to develop their services.

One the other hand there are still concerns and objections against the idea of cultural institutions falling under the PSI directive both from national governments and from cultural institutions themselves. These concerns are mainly the fear of losing a source of income and the concerns of costs inherent to the clearance of intellectual property rights of third parties arising from the digitalisation process.

3 Cultural Heritage

Cultural heritage is the legacy of physical artefacts (cultural property) and intangible attributes of society that are inherited from past generations, maintained in the present and bestowed for the benefit of future generations. Cultural heritage includes tangible culture (such as buildings, monuments, landscapes, books, works of art, and artefacts), intangible culture (such as folklore, traditions, language, and knowledge), and natural heritage (including culturally-significant landscapes, and biodiversity). This topic report focuses on tangible culture and its digitalisation.

4 Cultural Heritage Institutions & the public task

The public task of cultural heritage institutions cover amongst other issues the preservation, conservation and communicating cultural heritage. The keeping of cultural heritage from the past or present for the future is known as preservation or conservation. While this is a significant task of cultural heritage institutions such as libraries, archives and museums, providing the general public with access to the objects and collections they preserve is also of great importance. Publishing digitised cultural heritage information and metadata about the actual objects on the Internet available for everybody to re-use can play a significant role making cultural heritage more accessible.

5 Cultural Heritage Information & PSI

The concept of “public task”⁴ is a crucial element of the PSI Directive. It establishes the demarcation line indicating where the PSI Directive applies. The starting point of the PSI Directive is the notion that public sector bodies (PSBs) have been established principally to perform a public task, which is the *raison d’être* for the public sector. In the process of

⁴ <http://epsiplatform.eu/content/what-public-task>

performing this public task, PSBs collect, produce, reproduce, and disseminate documents. This is the “Public Sector Information” the Directive applies to: PSI that is produced “anyway” routinely for a PSB’s own needs, whereby the public task is the demarcation line for application of the Directive.

The Directive does not say what falls within its area of application, but rather leaves this to national law or common administrative practice. In practice, as a rule, where activities of the PSB will be undertaken under a public mandate, the PSI created in that process will fall within the scope of the Directive.

What does this mean if the scope of the PSI Directive would be extended to include Cultural Institutions? It is evident that the actual objects and collections held by cultural institutions are not Public Sector Information and thus would never fall under re-use regime of the PSI Directive even if the extended scope of the Directive would include those institutions. However cultural institutions produce more and more information that could be considered PSI. This includes the creation and curating of metadata about the objects, aggregation, indexing and semantic tagging of digital copies of cultural heritage objects in databases. These can be considered as producing PSI if these activities are considered to be part of the public task of those institutions.

What would this mean for commercial exploitation of PSI by Public Sector Bodies themselves? Interestingly the PSI Directive states in recital 9 that in case a PSB re-uses its own PSI commercially, it must take care not to discriminate against other re-users in its charging policy or re-use conditions:

“To avoid cross-subsidies, re-use should include further use of documents within the organisation itself for activities falling outside the scope of its public tasks. Activities falling outside the public task will typically include supply of documents that are produced and charged for exclusively on a commercial basis and in competition with others in the market.”

In his report “PSI in the Cultural Sector” Rob Davies writes:

“Were cultural institutions to be brought within the scope of the Directive, the question would arise as to which, if any, of its major re-use activities falls outside the public task. There has been much discussion not only of the need to define more clearly the public task of cultural institutions in the context of PSI re-use, but also recognition of the difficulty of establishing a “pan-European” definition and even of identifying specific statements of the public task in a given national or institutional situation, especially in such a way that enables necessary developments in the public sector task over time (e.g. in line with technical innovations).”

It appears that until today there is no clear definition about what the “public task” of cultural institutions in the context of PSI re-use is.

6 The proposed amendment of the PSI Directive

In December 2003, the EU adopted Directive 2003/98/EC on the re-use of public sector information". The PSI Directive sets the framework order to ensure fair, transparent and non-discriminatory conditions for the re-use of PSI. It also aims to harmonise regulations in EU Member States. The main purpose of the PSI Directive is to stimulate market growth, innovations and added-value products and services based on PSI re-use.

The PSI Directive also establishes that regular reviews of its application will be conducted. As foreseen in Article 13, the first one was carried out in 2009⁵, whereby the EC decided not to make any amendments but rather to monitor the sound application of the Directive and to initiate a subsequent review in 2012. The review clause required the Commission, among other things, to address the scope of the Directive. In practice this meant that the Commission had to analyse whether cultural institutions, education and research organisations and public service broadcasters, currently excluded from the scope, ought to be covered by the Directive.

Since public Institutions in the cultural sector hold highly valuable content and information, the exemption of these institutions could be seen as running counter to its central vision, given that the Directive is aimed specifically at information with high value and potential for re-use exploitation.

In December 2011 the European Commission published a proposal to amend the PSI Directive, as part of the Open Data Strategy⁶. In this proposed amendment⁷ the Commission suggests several changes to the Directive, such as the introduction of independent regulation authorities at the national level and extending the scope of the Directive to include cultural institutions, such as libraries, archives and museums. The proposal further suggests that PSI should be made available for commercial and non-commercial re-use at zero or marginal costs wherever possible and promotes the use of a standard open license.

Numerous cultural institutions and national governments have expressed their objections against the proposed amendment, including most recently the Dutch 'no' to the extension of the scope of the PSI Directive to include cultural institutions⁸. These institutions have serious concerns with regard to the question of whether the benefits will outweigh the costs.

It comes as no surprise that on the other side of the debate, the PSI re-use and the Open Data Community received the Commission's proposal very positively. There is consensus that the Commission's proposal will significantly strengthen the position of organisations

⁵ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52009DC0212:EN:NOT>

⁶ <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/11/1524&format=HTML>

⁷

http://ec.europa.eu/information_society/policy/psi/docs/pdfs/directive_proposal/2012/proposal_directive.pdf

⁸ <http://epsiplatform.eu/content/dutch-government-response-ec-open-data-strategy-proposal>

and individuals that wish to re-use Public Sector Information and - as a consequence - will contribute to unlocking the economic, cultural and social potential of the information held by the European Public Sector.

However some civil society organisations have articulated criticism regarding some details and have advised the Commission to improve upon the proposed amendment. This has included the COMMUNIA Association that published a Policy Paper titled “Reaction of the COMMUNIA association to the proposal to amend Directive 2003/98/EC on re-use of public sector information”⁹. The authors of the paper criticise the formulation of Article 3.2 as follows:

“This formulation includes documents where the intellectual property rights rest with the institutions that have these documents in their collection, but it does not include all those documents that are not covered by intellectual property rights because they are in the public domain.

Compared to the amount of works in the Public Domain that are held by cultural heritage institutions, the amount of works for which these institutions have intellectual property rights is tiny. With this in mind, the first priority of the amended PSI directive should be to ensure that works that are in the Public Domain should be re-usable for both commercial and non-commercial purposes.”

Rob Davies concludes his topic report “PSI in the Cultural Sector” with the following words:

“The question whether cultural heritage institutions should be included within the scope of the Directive is complex. In general, cultural institutions represent a hybrid sector, collecting material of which a high proportion involves third-party rights. As yet, they generate comparatively little new PSI, although this is growing. The benefits of subjecting them to the regime of the Directive appear on balance to be modest at current levels of activity, although it is probable that the value of cultural information will rise in the context of new technology-driven developments in and around digital libraries.”

7 Metadata of Digital Cultural Heritage

It is important to note that Cultural Heritage Information, especially with regard to the proposed amendment of the PSI Directive, refers to the metadata about an object rather than to the actual object itself. When a digital copy of an object is made, the intellectual property rights of that digital copy might belong to the cultural institution or the person who has made the digital copy.

It is the metadata that is important in this respect. Metadata is the data about the actual object, so for example the name of the author, the year the object was created, which country it comes from, and so on. There appears to be some confusion at some cultural institutions in this respect, as some believe that the proposed amendment of the PSI

⁹ http://www.communia-association.org/wp-content/uploads/2012/01/120122communია_PSI_directive_reaction.pdf

Directive would require them to give away the actual digitised object itself at no charge. By releasing the metadata under an open license, the collection can be re-used or linked to other collections, for example in the Europeana project. This way, collections can be found more easily and gain added value through being put in a new context by linking it with other collections. At the same time, the institutions will not lose any rights (unless they choose to) to those objects they actually hold intellectual property rights to.

Several initiatives have sought to advise Cultural Heritage Institutions on how they can easily apply an open license to the metadata of their objects. An example being the Open Metadata Handbook¹⁰ of the Open Knowledge Foundation and the how-to-guide by Dr. Till Kreutzer titled "Open Data - Releasing data from library catalogues"¹¹. It was produced at the request of HBZ, the central library for higher education institutes in the German state of North-Rhine Westphalia. The guide aims to clarify legal questions libraries face when opening up their catalogue data. The target readership is employees in public libraries that do not have a legal background. It describes when copyright and database rights may apply, and under which conditions open data can be released.

8 Access to Digital Cultural Heritage

The digitisation of cultural heritage greatly increases the ease to accessing these cultural objects. According to the report "PSI in the Cultural Sector"¹² 75% of the major cultural institutions indicated that they offered free access to their digitised content to end-users, while the remainder had placed some kind of charge for accessing at least some of their content. Around one-third of respondents charged for licences to re-use content. In order to get the material to the public more than just free access is required. Firstly, a technical environment to make free access possible is required. Cultural institution needs to release its material in such a way that it is both machine- and human- readable and with enriched metadata. After that the institution can choose to put its metadata into an environment of its own, or to let it be aggregated with another larger institution or project, such as Europeana. The better the metadata is, the more likely it is that the material of the institution can be found and linked to other datasets.

The simplest way to give access to the data is by opening up a digital portal, which many institutions have done by now. The Europeana project uses the same method to make cultural data available, but on a European level. Digital collections however, can be used in far more ways than just the portal. They can for example be connected to other collections, to geographical points, or be accessed by mobile phones with a GPS tracker. Application Programming Interfaces (APIs) allow developers to build new tools to access the data for the creation of innovations and new products and services.

¹⁰ http://en.wikibooks.org/wiki/Open_Metadata_Handbook

¹¹ <http://www.hbz-nrw.de/dokumentencenter/veroeffentlichungen/open-data-leitfaden.pdf>

¹² http://ec.europa.eu/information_society/policy/psi/docs/pdfs/report/cc462d011_1_1final_report.pdf

9 Intellectual Property in Cultural Heritage

While the majority of objects and collections held by cultural institutions are in the public domain, there are also objects and collections with intellectual property rights attached to them. This is the case when either the object has not yet fallen into the public domain (in most countries e.g. 70 years after the author's or artist's death) or because there are third party rights attached to the object.

In digitisation or licensing for re-use, cultural institutions need to consider whether a work has fallen into the public domain or, alternatively, is still protected by copyright or by related rights. New rights may arise in the process of digitisation: This can be the intellectual property rights of third parties that arise in the process of scanning, photographing, indexing of digital objects or by curating, annotating or semantically tagging of metadata, or in relation to database rights or where moral rights such as Authors' Rights exist to protect the rights of civil servants. Institutions considering the release of cultural heritage information for re-use need to establish who owns any such rights that may be created and how third parties, including employees and contractors, may exploit them.

In consequence a major concern for cultural institutions relates to the costs inherent in the identification of third-party rights holders, in order to enable copyright clearance and licensing for re-use. The High Level Expert Group on Digital Libraries, Sub-Group on Public Private Partnerships (HLEG-DG Sub-group)¹³ report confirms that for book digitisation, the biggest project challenge of all proves to be copyright clearance. The intellectual property rights of every potential right holder have to be considered. In many cases, they need to be contacted individually for permission to digitise their work.

10 Digital copies of public domain works

Should digital copies of artefacts that are already in the public domain also be in the public domain? Next to museum shops and other retail activities, the commercial exploitation of digitalised photos, scans and image libraries are possibly the largest revenue-generating activity for cultural institutions across the EU. Libraries, archives and museums all run image library services. In his report "PSI in the Cultural Sector" Rob Davies writes on this issue:

"The supply of images of artefacts is in particular a major business area for museums. Whilst important for the financial well-being of many large institutions, it is not clear that these activities are defined as part of their public task. Were this to be agreed as the case, the Directive would not apply to them.

It is commons practice that cultural institutions distinguish between the supply of

¹³ http://ec.europa.eu/information_society/activities/digital_libraries/other_groups/hleg/index_en.htm

standard-resolution images without charge or at low cost and high-resolution images that may be ordered by re-users at a commercial price through an image library. Many of the original artefacts that are made available in this way are in the public domain and no longer covered by copyright. The danger with high-resolution images only being available for re-users at commercial prices is that this can limit third party access and re-use of the material. This potentially represents the risk of public domain material becoming “privatised” in the digital world through restrictive access and re-use conditions. In any consideration of bringing image libraries under the scope of the Directive, it would be relevant to provide if possible general guidance as to whether image libraries or other services provided by cultural institutions fall within or outside the public task or at least what criteria might be used to determine this.”

11 Digitalisation of Cultural Heritage

Over the past decade, more and more attention has been paid to the digitalisation of cultural heritage. This is a consequence of the rapid progress in computer technology and the increased importance of the Internet as a medium of access to information. The two main reasons for digitisation of cultural heritage are preservation and sharing. Digital objects do not decay the same way their originals do. Although preservation of digital objects is a complex issue as well, it can be said that the digital image stays the same forever. Old film rolls made of nitrate simply disintegrate after a certain period of time and there is also the infamous “vinegar syndrome” affecting cellulose acetate films. Digitising these objects preserves them for eternity.

At the same time, digital objects can be easily shared across the world. All a person needs is an Internet connection to connect to the different archives, libraries and museums in the world. An additional benefit is the fact that all these different collections from the physical museums, libraries and archives can be connected to each other, creating new digital collections and stories about the history of Europe.

In the European Union there are thousands of cultural institutions with millions of cultural objects. Although the vast majority of these institutions are already working on the digitisation of their material, there is still a lot of work to be done. In 2010 Max Kaiser published the report “Putting 600,000 Books Online: the Large-Scale Digitisation Partnership between the Austrian National Library and Google”¹⁴. The report indicates that of all the different cultural heritage institutions, museums are far ahead of the other institutions. 25% of their material was digitised at that point, where archives and libraries remained at around 1%. The full study showed that the total cost of digitising Europe’s entire cultural heritage, would cost a total of 100 billion US dollars.

¹⁴ <http://liber.library.uu.nl/publish/articles/000540/article.pdf>

When looking at these numbers, it is important to realise that libraries and archives have a different type of objects. Museums have objects that lend themselves to for example the making of a digital photo or a digital photocopy. Libraries and archives have not so much scanned the actual objects, than carefully collected the information about the objects that shape a collection or an archive. This type of research is their core business and therefore their metadata becomes their data in itself. Thus, there is less need to digitise the actual object for aesthetic purposes as long as it is well described and archived in their database.

There are several challenges concerning the digitisation of cultural heritage. First of all it is cost intensive, both in terms of time and money. The costs of full-text digitisation of books are enormous¹⁵. Both small and large institutions indicate that they are having trouble creating resources for digitalisation. Furthermore, they also often lack the technical knowledge to do this in the most effective way. Another concern the institutions have is whether the benefits of the digitalisation outweigh the costs. Although there have been several studies done about the value of digitised content and the new possibilities, the fear still remains that the costs made during the process, will never be recuperated¹⁶. To overcome this problem, there are a number of EU funded projects that can help the institutions with the digitalisation process, as well as make them aware of the new benefits and value of the digitised content. This goes beyond mere economic value and addresses also the value for society and future generations.

12 Public Private Partnerships

Apart from government initiatives at national or European level it is evident that large companies such as Google and Microsoft will play a major role in large-scale digitalisation of cultural heritage. An example is the public-private partnership between Google and the Austrian National Library. The partnership with Google called “Austrian Books Online”¹⁷ aims to digitise approximately 600,000 volumes with a total of about 200 million pages from the beginning of the sixteenth to the second half of the nineteenth century. These digital copies will be made available free of charge via Google Books and the Digital Library of the Austrian National Library. A project this size would have been hard to accomplish for the Austrian National Library without a partner such as Google.

According to the report “Putting 600,000 Books Online: the Large-Scale Digitisation Partnership between the Austrian National Library and Google”¹⁸ by Max Kaiser, the Austrian National Library considers its decision to enter into a public-private partnership (PPP) as being justified by the report “The New Renaissance”¹⁹, published in January 2011 by a high-level expert group of the European Commission (the Comité des Sages):

¹⁵ http://ec.europa.eu/information_society/activities/digital_libraries/doc/refgroup/annexes/digiti_report.pdf

¹⁶ http://ec.europa.eu/information_society/policy/psi/docs/pdfs/report/cc462d011_1_1final_report.pdf

¹⁷ <http://www.onb.ac.at/austrianbooksonline/>

¹⁸ <http://liber.library.uu.nl/publish/articles/000540/article.pdf>

¹⁹ http://ec.europa.eu/information_society/activities/digital_libraries/doc/refgroup/final_report_cds.pdf

The report deals with the fundamental significance of digitisation for the democratisation of access to knowledge and culture. While the EU member states have declared themselves in favour of making European cultural heritage accessible through the joint European platform Europeana, which provides access to holdings from libraries, museums and archives, there has been limited availability of public funding for the large-scale digitisation projects that are necessary. The report, considering this situation and the high costs of digitisation, sees in PPP models an essential complement to funding provided by the public sector. However, the report stresses that free public access to the digitised items must be secured and that such partnerships should not be exclusive. The key suggestions by the Comité des Sages have recently been taken up by the European Commission in their updated Recommendation on the digitisation and online accessibility of cultural material and digital preservation²⁰, published in October 2011 which contains an annex with key principles for public-private partnerships.

Both the suggestions of the Comité des Sages and the recommendations by the European Commission are in line with the cornerstones of the agreement between the Austrian National Library and Google. In defining the general framework of the partnership it was essential for the library to clearly define its goals and non-goals. Both partners in the early stages of their talks already agreed the most important points:

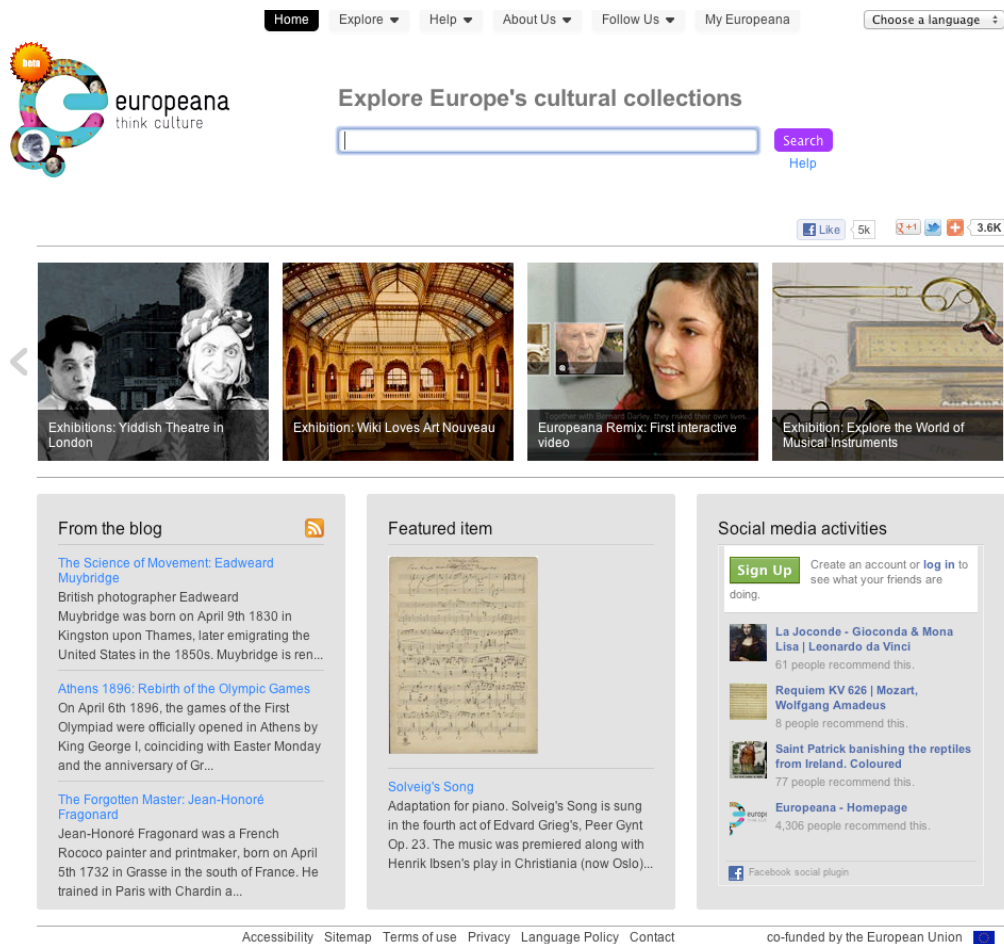
- *Only public domain material may be digitised.*
- *Cooperation with Google is non-exclusive. The library is free at any time to digitise the same holdings with other partners.*
- *The library receives copies of all digitised items and can make them available online for non-commercial use.*
- *Both partners are obliged to make all of the digitised items available for online access free of charge. This obligation exceeds the duration of the partnership.*
- *The Austrian National Library can make their digitised items available through other platforms such as Europeana and provide them to research partners.*
- *The library is fully autonomous in decisions regarding which books are to be digitised in the framework of the project.*
- *The logistics and digitisation processes are supervised and evaluated by the library's Conservation Institute.*
- *The library can terminate the partnership in case it does not meet its expectations.*

²⁰ http://ec.europa.eu/information_society/activities/digital_libraries/doc/recommendation/recom28nov_all_versions/en.pdf

For both partners the project represents a ‘win-win’ situation: As a leading search enterprise Google supports the Austrian National Library’s goal of making its historical holdings available online to a worldwide audience. On the other hand, through this partnership, Google obtains relevant multilingual content that contributes to its goal of making all books of the world findable and searchable.

13 Europeana

Founded in November 2008, Europeana is Europe’s largest cultural heritage portal, giving access to millions of digital artefacts contributed by over 2000 cultural heritage institutions across Europe. Europeana is co-funded by the European Commission. Currently, more than 20 million objects can be found through Europeana and it is expected that this number will reach 30 million by 2015²¹. Europeana offers access to Europe’s history to all citizens with an Internet connection. Not only does Europeana hold a huge amount of promise for researchers and scholars who benefit immensely from having access to huge aggregated datasets about cultural heritage objects, but through the use of APIs Europeana promises to stimulate the development of a swathe of apps and tools with applications in tourism and education.



The screenshot shows the Europeana website interface. At the top, there is a navigation bar with links for Home, Explore, Help, About Us, Follow Us, and My Europeana, along with a language selection dropdown. The main heading reads "Explore Europe's cultural collections" with a search bar and a "Search" button. Below the search bar, there are social media sharing options for Facebook (5k likes), Twitter, and others, with a total of 3.6K interactions. A carousel of featured items is displayed, including "Exhibitions: Yiddish Theatre in London", "Exhibition: Wiki Loves Art Nouveau", "Europeana Remix: First Interactive video", and "Exhibition: Explore the World of Musical Instruments".

The page is divided into three main content areas:

- From the blog:**
 - [The Science of Movement: Eadweard Muybridge](#) - British photographer Eadweard Muybridge was born on April 9th 1830 in Kingston upon Thames, later emigrating to the United States in the 1850s. Muybridge is ren...
 - [Athens 1896: Rebirth of the Olympic Games](#) - On April 6th 1896, the games of the First Olympiad were officially opened in Athens by King George I, coinciding with Easter Monday and the anniversary of Gr...
 - [The Forgotten Master: Jean-Honoré Fragonard](#) - Jean-Honoré Fragonard was a French Rococo painter and printmaker, born on April 5th 1732 in Grasse in the south of France. He trained in Paris with Chardin a...
- Featured item:**
 - [Solveig's Song](#) - Adaptation for piano. Solveig's Song is sung in the fourth act of Edvard Grieg's, Peer Gynt Op. 23. The music was premiered along with Henrik Ibsen's play in Christiania (now Oslo)...
- Social media activities:**
 - [Sign Up](#) - Create an account or log in to see what your friends are doing.
 - [La Joconde - Gioconda & Mona Lisa | Leonardo da Vinci](#) - 61 people recommend this.
 - [Requiem KV 626 | Mozart, Wolfgang Amadeus](#) - 8 people recommend this.
 - [Saint Patrick banishing the reptiles from Ireland. Coloured](#) - 77 people recommend this.
 - [Europeana - Homepage](#) - 4,306 people recommend this.

At the bottom of the page, there is a footer with links for Accessibility, Sitemap, Terms of use, Privacy, Language Policy, and Contact, and a note that the site is co-funded by the European Union.

²¹ <http://epsiplatform.eu/content/topic-report-no-4-psi-cultural-sector>

Source: <http://europeana.eu/portal/>

Around 20 EC-funded projects work on different aspects of Europeana. These range from getting more specific data into Europeana, such as on Jewish heritage in Europe with the Europeana Judaica Project²², to the creation of software tools that allow cultural institutions to convert their metadata to the European Data Model (EDM) and add it into Europeana (DM2E project²³).

Although the contributions of cultural heritage institutions to Europeana are completely voluntary, Europeana's Data Exchange Agreement²⁴ governs the terms and conditions regarding data delivery and re-use. Europeana has announced that from July 2012, all their metadata will be made available under a CC0 license²⁵, waiving away all rights to that data, making it available for re-use, both commercial and non-commercial.

14 Re-using Digital Cultural Heritage

As noted before, the digital heritage becomes more valuable when it is re-used. In this section an overview of the use of cultural heritage information is given, both in commercial and non-commercial projects. For the scope of this topic report three examples of projects that re-use cultural heritage information were handpicked.

German Federal Archive: 100,000 images to Wikimedia Commons

One of the most well known examples is the re-use of cultural heritage information on Wikipedia. Several successful pilot projects have been realised where a cultural institution made a dataset available for re-use in Wikipedia. From autumn 2007 to December 2008, the German Federal Archive partnering with Wikimedia Germany²⁶ uploaded 100,000 images to Wikimedia Commons²⁷, a media file repository making public domain and openly licensed educational media content available. The Wikipedia editors took the images and linked them to the appropriate articles. This greatly enriched the content of Wikipedia and simultaneously raised the visibility and profile of the German Federal Archive. Furthermore, the metadata of the objects was greatly improved upon by the volunteers of Wikipedia. In accordance to Wikimedia principles all content and data on Wikipedia must be made available freely to everyone for any purposes - including commercial re-use.

²² <http://www.judaica-europeana.eu/>


²³ <http://dm2e.eu/>

²⁴ <http://pro.europeana.eu/web/guest/data-exchange-agreement>

²⁵ <http://creativecommons.org/choose/zero/>

²⁶ <http://wikimedia.de/wiki/>

²⁷ <http://commons.wikimedia.org/wiki/>


WIKIMEDIA COMMONS

Main Page
 Welcome
 Community portal
 Village pump

Language select
 English
 Select

Participate
 Upload file
 Recent changes
 Latest files
 Random file
 Help
 Contact us
 Donate

Toolbox

Project page [Discussion](#) [View](#) [Edit](#) [View history](#)

Commons:Bundesarchiv/Gallery

[View Wikimedia Commons in British English](#) [v]










Language select: en
 - [Commons:Bundesarchiv](#)

English: Here you can find some examples of images from the German Federal Archive uploaded by the [Commons:Bundesarchiv](#) project. Historical events, celebrities and pictures of every day life are depicted, mostly in or from Germany, but there are also many pictures from other countries. Please keep in mind that many photographs were produced for propaganda, especially pictures from Germany during the National Socialist ("Third Reich") period and from the German Democratic Republic ("East Germany"). The Federal Archive usually retains the original or historical descriptions. These descriptions can be wrong, dated, politically extreme or offensive.

Very old photographs have become public domain, and events and persons of today can be photographed by Wikipedians with their digital cameras. But for the time between there is a huge gap in Wikipedia articles. The donation of Federal Archive is important to close that gap, and it is hoped that it can serve as a model to other institutions in Germany or elsewhere.

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Period prior to 1918 [edit]

				
1867: Frigate SMS Thetis	ca. 1889: inside the Reichstag (parliament)	1890: Tsar Nicolas II.	1898: Workers' leader August Bebel	1898: German fort at Tsingtao, China
				
1903: "Builder of the German fleet" Grand Admiral Alfred von Tirpitz	1906: Wassaramo people in German East Africa	1915: Margarethe Ludendorff	1918: Western Front	

Source: <http://commons.wikimedia.org/wiki/Commons:Bundesarchiv/Gallery>

Apps using open cultural data

In 2011, several initiatives brought together developers and scholars interested in cultural heritage. In these, programmers received access to a specific cultural dataset and they were invited to create tools, apps or visualisations with it. Several of these attempts have led to innovative products that allow users to look at cultural history from a new perspective. For example, the winner of the Apps for Amsterdam²⁸ competition "Vistory"²⁹ combines history and videos from the dataset that was provided by the Open Images project³⁰ by using the geo-location technology of a smart phone.

²⁸ <http://www.appsforamsterdam.nl/>

²⁹ <http://www.vistory.nl/>

³⁰ <http://www.openimages.eu/>



vistory
The Interactive Historical Video App
 What is Vistory?

Glimworm wint Juryprijs Apps voor Nederland
 Apps voor Nederland

Opening stadhuis
 1931-07-14 - Polygoon-Profil (producent) / Nederlands Instituut voor Beeld en Geluid (beheerder) gemeentehuizen

Bioscoopjournaals waarin Nederlandse onderwerpen van een bepaalde week worden gepresenteerd.

Plichtige opening van het door Dudok ontworpen nieuwe stadhuis te Hilversum waarbij oa aanwezig Commissaris der Koningin Jhr. Roell, minister van Waterstaat P.J. Reijner, burgemeester Lambooy. -Div. shots ext. stadhuis, totaal 53"; -div. shots drie notabelen: betreden stadhuis 17"-3"-+8"; geven handen 3"; -kinderen brengen zanghulde 40"; va 08:16 burgemeester J.M.J.H. Lambooy; -cu man 3" -muziekcorps 1'06".

1931 2012

Tweet 0 Share 7 Like 2

0.000000 2.??????

Source: <http://www.vistory.nl/>

In 2012, Europeana will continue with a series of similar events, called “Hackathons”, in order to explore the possibilities of their API, as well as creating awareness about it. For these kinds of applications, commercial re-use is a precondition. Without this, the apps built can not be distributed in for example Apple’s App-store or to show the tools or data on a website with advertorial banners. This would severely restrict the dissemination of the data.

Mapping the Republic of Letters

A third example is the “Mapping the Republic of Letters”-project. This is a collaborative, interdisciplinary humanities research project looking at 17th and 18th century correspondence, travel, and publication to trace the exchange of ideas in the early modern period and the Age of Enlightenment. The project is a collaborative effort between humanities scholars and computer scientists at Stanford University and the University of Oklahoma in the United States, and Oxford University in the United Kingdom.

By linking and visualising the data from a variety of different sources, researchers from the involved universities were able to find new insights about the relations between different writers such as John Locke, Voltaire and Benjamin Franklin. This way open data and open source software allowed scientists to produce new knowledge about a key period in European and American history.



Source: <https://republicofletters.stanford.edu/>

15 Economic impact / Value of the Public Domain

In his widely known study on the Value of the Public Domain³¹, Rufus Pollock defines the total value as the social value, which is the sum of commercial value and user value, rather than commercial value alone. In the study “The Problem of the Yellow Milkmaid”³² conducted by the Europeana Foundation, the following potential benefits were defined:

1. **Increasing relevance:** open metadata can be used in places where online users congregate (including social networks), helping providers to maintain their relevance in today’s digital society.
2. **Increasing channels to end users:** providers releasing data as open metadata increase the opportunities that users have to see their data and their content.
3. **Data enrichment:** open metadata can be enriched by Europeana and other parties and can then be returned to the data provider. Opening the metadata will increase

³¹ <http://www.ippr.org/publications/55/1526/the-value-of-the-public-domain>

³² <http://pro.europeana.eu/documents/858566/2cbf1f78-e036-4088-af25-94684ff90dc5>

the possibility of linking that data and the heritage content it represents with other related sources/collections.

4. **Brand value (prestige, authenticity, innovation):** releasing data openly demonstrates that the provider is working in the innovation vanguard and is actively stimulating digital research.
5. **Specific funding opportunities:** releasing metadata openly will potentially grant providers access to national and/or European funding (European and most national governments are actively promoting open metadata).
6. **Discoverability:** increased use and visibility of data drives traffic to the provider's website.
7. **New customers:** releasing data openly offers new ways to interact with and relate to customers.
8. **Public mission:** releasing metadata openly aligns the provider with the strategic public mission of allowing the widest possible access to cultural heritage.
9. **Building expertise:** releasing metadata openly will strengthen the institution's expertise in this area, which will become a marketable commodity such as consulting services.
10. **Desired spill-over effects:** institutions and creative industries will be able to create new businesses, which in turn will strengthen the knowledge economy.

The cultural sector is a catalyst for creativity, growth and jobs. When looking at the value of knowledge goods in general, and the public domain in particular, policymakers should take into account the value generated by complementary products and services. The study indicates that the amount of times openly licensed work is used and shared is far higher than with copyrighted work, creating attention to their (commercial) products and creating jobs.

16 Business models for Digital Cultural Heritage

One of the major concerns cultural heritage institutions have about openly licensing their metadata is the concern over a reduction of income. There is a tension between the public task of the institution to increase access to its material as widely as possible and the requirement to generate income to compensate for tight budgets.

In 2010 the EC commissioned a study to investigate the extent, type, and financial significance of the re-use of Public Sector Information (PSI) by cultural institutions in Europe. The findings of the study are a key input to a review of the PSI Directive. In the study, titled "PSI re-use in the cultural sector"³³ published in 2011, one respondent described the concerns as follows:

"The biggest challenge is striking the balance between the Museum's role in public

³³ http://ec.europa.eu/information_society/policy/psi/docs/pdfs/report/cc462d011_1_1final_report.pdf

engagement - through the dissemination and interpretation of the collection - with the need to protect and exploit IP rights. IP offers a means to generate revenue, and this has to be considered as an option to help us increase the proportion of self-generated income and thus independence from central funding. On the other hand, unrestricted dissemination of images across the web can bring its own less tangible benefits in brand awareness, and indirect revenue.”

A big question thus is: how can revenue be generated while giving away the data for free? Currently, a major task of the Europeana Project is to provide evidence to convince cultural institutions to openly license their metadata. A part of that consists of showing the institutions that there are ways to create a revenue out of open data. Their most recent publication “The Problem of the Yellow Milkmaid; a business model perspective on open metadata”³⁴ concludes that there is a strong conviction among cultural heritage professionals that the benefits of open sharing and open distribution will outweigh the risks. In most cases the advantages of increased visibility and relevance will be reaped in the short term. In other cases, for example where there is a risk of loss of income, the advantages will come in the longer run and short-term fixes will have to be found.

17 Conclusion

Since the adoption of the EU Directive 2003/98/EC³⁵ on the re-use of public sector information, in 2003, there has been debate for and against extending the scope of the Directive to include Information from Cultural Institutions.

Digitisation of cultural heritage has significantly increased in terms of speed and volume in the last few years. At the same time Europeana, initiated in November 2008, has showcased successfully the importance of making metadata about cultural heritage freely available for everybody. By today almost all cultural heritage institutions acknowledge the importance of publishing their metadata to Europeana or as Linked Open Data on the Web.

With the proposed amendment of the PSI Directive the European Commission has made a clear statement in favour to extend the scope of the PSI Directive to include digitised information from Cultural Heritage Institutions.

Both some EU Member States Governments and some Cultural Institutions have expressed their concerns and objections towards the idea of cultural institutions to be falling under the PSI directive. They fear losing an important source of generating income if they would have to give away the metadata digitised cultural heritage for free. If and under which terms and conditions cultural institutions will be included in the PSI Directive will depend on the consultations in the on-going process of the review of the PSI Directive.

³⁴ <http://pro.europeana.eu/documents/858566/2cbf1f78-e036-4088-af25-94684ff90dc5>

³⁵ http://ec.europa.eu/information_society/policy/psi/docs/pdfs/directive/psi_directive_en.pdf

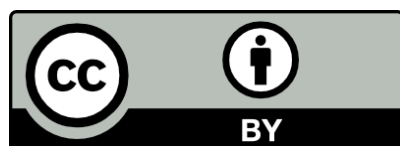
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Daniel Dietrich was born in 1973 in Frankfurt, Germany. His academic work covers political science, computer science and communication science in Frankfurt and Berlin. He worked as Research Associate at Technical University Berlin, Department of Internet and Society until the end of 2011. He has been working for the Open Knowledge Foundation (OKFN), since 2009 and is Chairman of the German Chapter of the Open Knowledge Foundation. He is the Project Coordinator for the OKF Project Open Definition as well as the Coordinator of the Working Group on Open Government Data and the Working Group on Open Data in the EU. He is the co-founder of the Open Data Network, a non-profit advocacy organisation to promote Open Data, Open Government and Transparency in Germany, Europe and beyond. In 2011 he became Editor of the ePSI platform.

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