

# **‘Putting the shoe on the other foot’ – formulating user requirements for Europe’s cultural heritage portals**

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## **Abstract**

With the change of perspective that has taken place within many cultural institutions, users are becoming kings in cultural heritage websites. Instead of asking ‘what are we able to do?’ the leading question is now ‘what does the user want us to do?’ This paper puts The European Library and Europeana – two of Europe’s most important cultural heritage portals – in this context. First it explains what mechanisms they have in place to meet user demands. Next some of the main trends they are encountering such as the reinvention of collections, personalization and API are briefly addressed.

## **Keywords**

User requirements, usability, memory institution, The European Library, Europeana, EDLnet, CENL, European Commission, Web2.0, API

## **1. Introduction**

To start with a nice cliché: the world keeps changing, especially on the net. We – being internet surfers, customers and clients – make these trends and become part of them, whether we like it or not. More important here, we demand that online service providers and other web-oriented actors adapt to our rapidly changing wishes.

When it comes to fulfilling expectations users don’t make distinctions between one website and the next. It is of no interest to them what technical wonders or organizational complications are behind them. Either a service does what we want it to do or it doesn’t.

When aiming for a great mass of returning (= happy) visitors and a climbing number of conversions, many websites are already formulating user requirements on the basis of the expectations and demands of their targeted

audience.<sup>1</sup> These requirements explain to web-developers what is expected from them - what the site or service should look like, what it should do, etc.

For a long time libraries have presented themselves without paying much attention to the needs and wishes of their users. Often it was a matter of 'what are we able to do?', not 'what does the market expect from us?'. Gradually this trend is changing. No matter how slowly this is happening, the voice of users is starting to be heard.

The European Library and Europeana illustrate very well how this revolution is gradually taking place within the cultural heritage sector. Both portals go to great lengths to ensure that today's and tomorrow's user demands are reflected in the services they are offering and developing.

## **2. The European Library (CENL) and Europeana (EDLnet)**

Although The European Library and Europeana are different in various ways, they often get mixed up. This is very understandable. Indeed their offices are located in the same building (National Library of The Netherlands) and – last but not least - The European Library is a key piece in the greater Europeana puzzle.

[The European Library](#) gives online access to the cultural heritage accessible in the national libraries of Europe. The portal is a service of the Conference of European National Librarians (CENL). Only national libraries of the member-states of the Council of Europe can join CENL and The European Library.

Via The European Library a user has access to roughly 150 million catalogue entries from across Europe. During the course of 2008, this number will grow substantially as the community of participating libraries increases. From a total of 47 states of the Council of Europe 44 countries will have become full partner of The European Library.

The European Library targets a global, higher-educated audience. Special attention however goes out to the European scholarly and librarian community.

Visitors may find digitized material as varied as music scores, posters, books and numerous important cultural treasures. To ensure that visitors can always find their way to the material - while the digitization process is still going on -, every query leads to a list of bibliographic records of the participating libraries. The number of digital resources within The European Library is expanding rapidly. For instance over the next two years, a further 20 million pages of fully digitised material from collections across Europe will be added.

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<sup>1</sup> In webstatistics conversions are measurable actions users are intended to do, for instance activate a searchbox, purchase something from a webshop, etc..

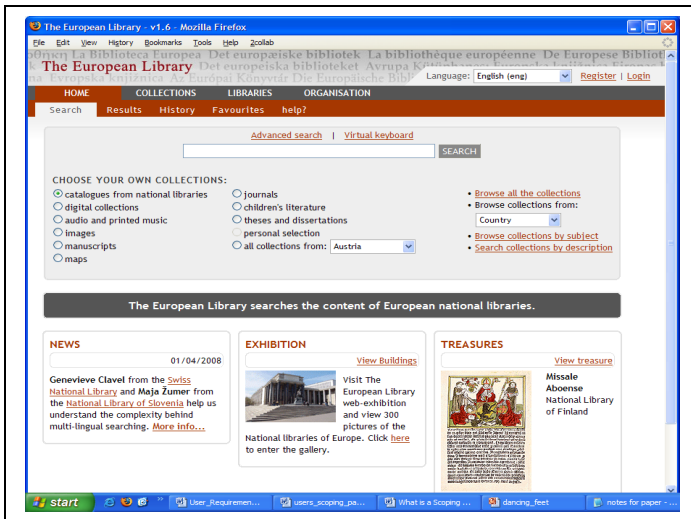


Image 1: Screenshot of The European Library homepage

Users can search cross-library or focus on one particular national library, or a thematic collection.<sup>2</sup> The portal is gradually bringing more content to the surface. Browsing experiences are now showing material that previously remained hidden in the deepweb. It currently gives free access to a whole range of cultural treasures and includes a unique [webexhibition](#) featuring 300 pictures of the national libraries of Europe.

[Europeana](#) will give integrated access to Europe's cultural richness. Via this cross-domain service users will be able to search and explore millions of digital resources that have been made available by museums, archives, libraries and audio-visual institutions from across Europe.



Image 2: Screenshot of Europeana homepage (demo-version)

<sup>2</sup> The portal works as an aggregator. Eric van der Meulen, one of the developers of The European Library, explains the technical side via this [power-point presentation](#).

A first demoversion has recently been made public. In its capacity as proof of concept for a user-oriented interface for search, discovery and use across all the contents of the domains, it shows the basic functionalities and features of the anticipated prototype.

Europeana is being produced by EDLnet, a 100% funded [eContentplus](#) project. It started in July 2007 and will run for 2 years. EDLnet takes the form of a 'Thematic Partnership' and is supported by the European Commission as part of the [i2010 policy](#).<sup>3</sup> The partnership brings together representatives from the four major cultural heritage domains: museums, archives, libraries and audio-visual collections, and from the majority of Member States. It also includes members of other European Commission projects who are working on related technical themes. The partnership between cultural heritage institutions contributing to the creation of Europeana was formalised at the end of 2007 through the creation of a Dutch Foundation entitled EDL Foundation.

The Foundation's [statutes](#) commit members to:

- Providing access to Europe's cultural and scientific heritage though a cross-domain portal
- Co-operating in the delivery and sustainability of the joint portal
- Stimulating initiatives to bring together existing digital content
- Supporting digitisation of Europe's cultural and scientific heritage

For more information about the websites and their organization please go to <http://www.europeana.eu> and <http://www.TheEuropeanLibrary.org>

### **3. How to know what to serve to a King?**

In their capacity as online service providers cultural institutions have a whole range of competitors. This means that they not only have to define their position in the online market and think of unique selling points but also that they need to live up to the same (usability) rules as their competitors. What is presented needs to be in line with – or preferably in front of – market trends and user demands that are relevant to their sector.

To find out how closely the portal matches the needs and understanding of our targeted audiences, The European Library maintains a dynamic web-marketing strategy. Statistical measurements, log file analysis, key performance indicators, campaign codes and tagged links are used to facilitate this approach.

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<sup>3</sup> "August 2006, the European Commission issued a Recommendation on digital libraries to Member States, which led to Conclusions of the Culture Council in November 2006. The Council endorsed the vision of a European Digital Library as a common multilingual access point to Europe's distributed digital cultural heritage." Source: [http://ec.europa.eu/information\\_society/activities/econtentplus/calls/faq/index\\_en.htm](http://ec.europa.eu/information_society/activities/econtentplus/calls/faq/index_en.htm)

Last year The European Library started to develop Key Performance Indicators (KPIs).<sup>4</sup> These indicators are meant to give insight into the performance of The European Library against its business goals. Simultaneously they are intended to increase the understanding of the market and its requirements. While some indicators reflect quantitative developments (e.g. traffic rates), others are qualitative, indicating the value of the generated traffic.<sup>5</sup> Since the introduction of the KPIs much progress has been made; for instance all CENL partner-libraries are now asked to apply them and support further development of them.

The European Library also relies on log-file analyses, which are being performed under the leadership of the University of Padua and Max Planck Institute of Informatics. These studies help us enhance the user search experiences and develop user-tailored services.<sup>6</sup> For instance these analyses show how users navigate within The European Library portal, and where they encounter difficulties. Recently, the analysis has been defining a user profile and usage pattern.

In addition to statistical analyses, The European Library also uses feedback of actual visitors as a basis for user requirements. Comments and criticism are pro-actively invited for instance via the blog [TELL Fleur](#) (*about The European Library*). Also [The European Library Facebook Group](#) has proved a success. Via these channels some useful comments have found their way to The European Library that otherwise would not have been heard. Also more traditional methods such as questionnaires and a usability study with focus groups have proved useful. For example decisions regarding collection entries, the location of the help functionalities and major design interventions were based on user recommendations generated by these studies.

Another important development happened in March 2008 when The European Library announced the formation of its Users Advisory Board.<sup>7</sup> Their advice will help shape the development and strategy of The European Library portal and its marketing and product development. The Board comprises a number of invited experts drawn from the international library and academic community.

## ***Europeana***

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<sup>4</sup> [Key Performance Indicators](#), an EDLproject report by Fleur Stigter (May 2007). You may also want to check the [ELAG workshop on Evaluation](#)

<sup>5</sup> It is quite a challenge to find the right indicators to monitor quality-changes, for instance aimed at the level of usability. Associating value measurement with marketing targets can however shed some light.

<sup>6</sup> Several studies have been published on the web, among others: "[A userinteraction model for The European Library portal](#)", Julia Luxenburger, Gerhard Weikum (Max Planck Institute of Informatics) and Eric van der Meulen (The European Library), paper for 10th DELOS Thematic Workshop on "Personalized Access, Profile Management and Context Awareness in Digital Libraries" 2007 Corfu, Greece. More information on log file analysis has been and will be published in the [Newsletter](#) of The European Library.

<sup>7</sup> Press release '[Users get their say developing The European Library](#)', March 17<sup>th</sup> 2008

The Europeana service being developed by the EDLnet project consists of four interlinked work packages. One of these is entitled 'Users for Usability'. It represents the perspective of the future users of Europeana. Daniel Teruggi from [Institut national de l'audiovisuel \(INA\)](#) is leading this work package.

The work package makes recommendations in line with the proposed organisational structure and then usertests the resulting demoversion and prototypes. It aims to understand the user requirements for online services for cross domain, mixed content. It will shed light on the similarities and differences between users of the different cultural domains, and will set a benchmark for future user studies in the area.

To define the user requirements for the demoversion several work package sessions were held. These requirements needed to address a list of pre-defined functionalities and all types of digital objects. They also needed to clarify how the user would want to interact with the content. The following points were used to start off the discussions:

- 1– Results of searches are digital objects or surrogates
- 2– Discovery of cross-domain collections
- 3– Multilingual interface and multilingual search features
- 4– “Innovative, modern features that are suitable for all visitors” (European Parliament Resolution 27 September 2007)
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The usecase methodology informed the work group sessions. All use cases were formulated from the perspective of a professional user from each domain and the so-called general user (a 'broadsheet reader', someone who is used to Google-like searches and who is familiar with Web2.0 tools such as Wikipedia). After the work group sessions Repke de Vries, a colleague with a background in usability studies translated the provisional use cases in descriptive user requirements.

Besides formulating user requirements, the participants also discussed the concept of Europeana, its presentation (interface) and content. The outcomes of all these discussions were fed into the agendas of the other work packages to identify and if necessary solve possible interoperability and stakeholder issues.

The past months the demoversion has been tested on a real audience. The aim of the tests was to find out how Europeana could be improved during the next development phase. An external marketresearch company has been hired to structure feedback sessions, an online questionnaire and focus groups.

The outcomes of these user tests have been outlined in the following reports:

- [Europeana demo user survey results](#)
- [Collecting User Feedback on the Europeana Demo](#)

To get a better understanding of the requirements for blind and visually disabled people, Luc Maumet and Fernando Pinto da Silva of the Comité National pour la Promotion Sociale des Aveugles et des Amblyopes ([CNPSAA](#)), were invited to give a presentation during the last work package meeting (March, INA). They advised that a website should pay attention to the DAISY standard and adhere to the W3C WAI guidelines.

The first prototype of Europeana will be ready before the summer. New rounds of user testing will follow all subsequent prototypes. The results will be described in a report on the User Perspectives, a Deliverable which is due at the end of 2008.

#### **4. THREE MAIN ISSUES**

The following has been based on user studies of The European Library and sessions of the Users for Usability Work Package. A complete overview of the user requirements for the demoversion is available at the Europeana website.<sup>8</sup>

##### **4.1 Collections**

With major digitisation projects creating large-scale online heritage resources, much attention goes into accessibility and forms of presentation. With an audience that seemingly is starting to forget how to work with collections and an expanding mass of online content, it is quite understandable that the art of presenting the material in less conventional ways is gaining attention in the cultural heritage sector.

For instance several user studies of The European Library have clearly pointed out that a growing group of users no longer understands the classical concept of collections. Professional users such as academic researchers are still willing to search via collections, but in general, more and more users expect Google-like entries. Like the 'general user', scholars increasingly expect to be able to retrieve digitized objects, without intermediate steps.<sup>9</sup> If possible they would like to download / save it and if the object is not available, they want to link to a location where they can find more information (for instance OpenURL).

Many users of cultural heritage sites do not (only) seek information but (also) entertainment. The latter group is attracted to visual, rich-media explorations. Quick routes to items of major importance are appreciated by all. This can be achieved for instance via a list of popular searches and tag clouds. Another possibility lies in presenting 'themed collections'.

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<sup>8</sup> ['User Use Cases for Maquette'](#) – A report for the EC February 6<sup>th</sup> 2008, Deliverable number D3.1, Authors: Fleur Stigter and Repke de Vries. This report summarized and synthesizes the progress of Work Package 3 of EDLnet. The descriptive user requirements for the EDL Maquette are annexed.

<sup>9</sup> ['User-centric Solutions for Scholarly Research in the Library'](#), Tamar Sadeh, Liber Quarterly Volume 17 (2007), No. 3/4

For example The European Library facilitates searching and browsing via all kinds of themed collections. One of these focuses on showing the different types of content.

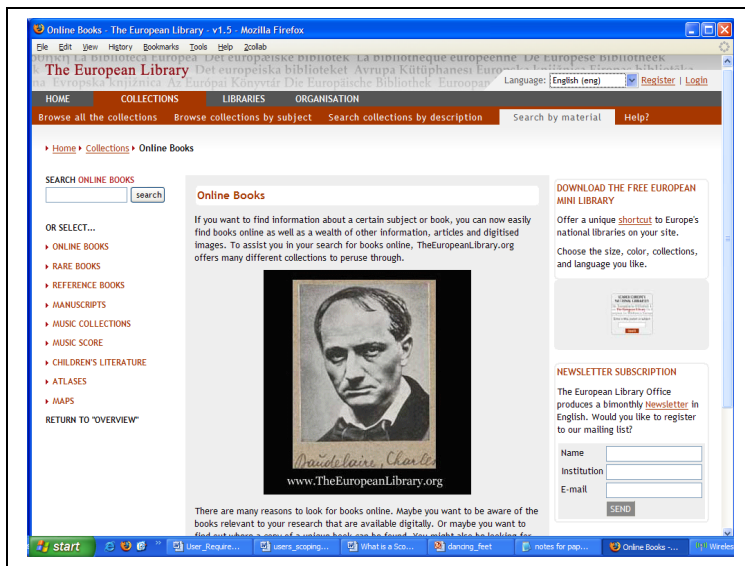


Figure 3: screenshot of landing page 'online books'

Figure 3 provides a screenshot of a so-called landing page. It shows three interrelated developments. In the middle a slide-show displays some highlights related to the 'online books'. On the left you find a search box that offers the possibility to search within the 'online books' collection. On the right the user finds a link to the installation page of the 'Mini Library' – see below, 4.3.

## 4.2 Personalisation

Aiming to comply with the demands of web2.0 a lot can be accomplished by offering options in the field of personalization. For example; making it possible to shape the interface and search results according to your own wishes (basically offering the opportunity of a 'personal touch' to a site and its functionalities), though to enabling sophisticated social tagging schemes and user-generated content.

The possibilities are endless. It is however up to the cultural heritage sector to come up with suitable concepts that offer added value to their users. In other words, ideas about how to marry demands for personalization and social interaction (communicating or sharing content with a community) with the unique resources cultural institutions have to offer.

There are a number of issues surrounding user generated content in a trusted and authenticated memory institution website. Concerns about intellectual property rights and quality assurance need to be solved before user generated



content can become widely accepted, though within the archive domain it is already being brought into practice.<sup>10</sup>

The European Library offers its registered users the benefits of a range of tailored services, including the possibility to save each search history or to download resources into a reference manager. Further options will be added in the future.<sup>11</sup>

How user-centric Europeana prototypes can become is not yet determined but without question users will have their own space ('MyEuropeana') and will be able to interact with others ('Europeana Communities').

During one of the sessions of the 'Users for Usability' work package the advantages and disadvantages of allowing users to contribute content (tags, annotation) were summed up. Advantages are:

- User generated content increases the offered mass of content
- User interaction
- User generated content could add value to Europeana in various ways

Solutions for possible issues of trust and copyright were also discussed, and questions raised about moderation or editing.

### 4.3 API and Widgets

While entering the next web generation so-called Application Programmable Interfaces (APIs) and mash-ups are often presented as the new next thing:

"My prediction would be that Web 3.0 will ultimately be seen as applications which are pieced together. There are a number of characteristics: the applications are relatively small, the data is in the cloud, the applications can run on any device, PC or mobile phone, the applications are very fast and they're very customizable. Furthermore, the applications are distributed virally: literally by social networks, by email. You won't go to the store and purchase them... That's a very different application model than we've ever seen in computing." (Eric Schmidt, CEO of Google, May 2007<sup>12</sup>)

Indeed, it is becoming insufficient to present content and services from one single static location on the web. APIs, widgets and mash-ups allow content to

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<sup>10</sup> During one of the 'Users for Usability' meetings, Olivier de Solan, Direction des archives de France, gave a very useful presentation on this topic.

<sup>11</sup> The European Library is also examining the possibilities of plug-ins and extensions. For instance "The European Library - FireFox" speedup plug-in optimises FireFox network settings for federated searching. The [plug-in](#) increases the speed of overall retrieval time by 60%.

<sup>12</sup> This is how Schmidt responded having been asked to define Web2.0 and Web.30 during the Seoul Digital Forum in May 2007. Originating from a [YouTube](#) video, the citation found its way to the [Wikipedia article on Web3.0](#)

reach a wider audience than one can do by themselves, even if you have a huge marketing department. These exportable functionalities are great because by letting other programs or sites access your content more easily, you let others do the work for you. Content-based sites such as memory institutions have many interesting opportunities in this area, especially mash-ups (letting users combine content and services, basically, work with your content).

These functionalities should be easily installed in popular, suitable web2.0 and 3.0-like environments. For instance via the [OpenSocial](#) approach users can plug in the same applications at different locations, without the involvement of IT departments.<sup>13</sup>

The European Library has followed more or less a similar approach regarding to its Mini Library.

First a mini version of The European Library search box was made available to website owners. By simply inserting a snippet of code this free widget can be installed on any website or blog. Entries in this so-called 'Mini Library' lead directly to The European Library search results. Installers of this widget can customise the lay-out, language and collection (either by default or by country) to their own preference. Next the mini European Library was also turned into a Facebook application. With almost 700 registered users and a growing fan club, this has been an instant hit.

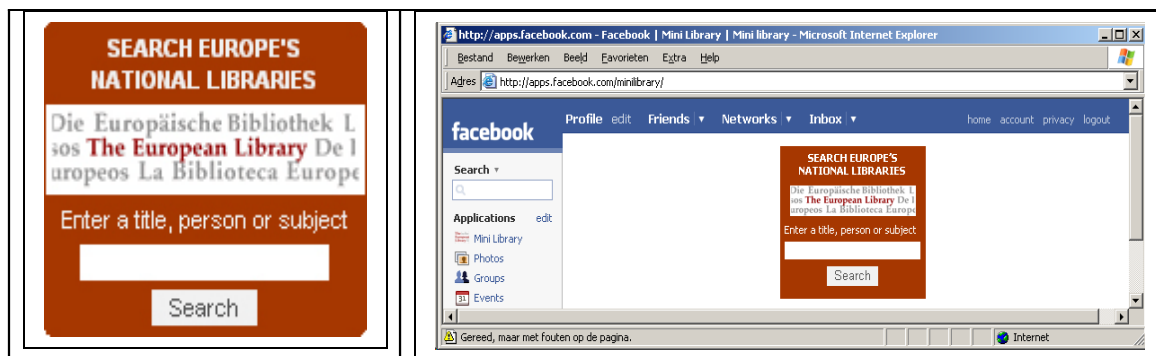


Figure 4: screenshots of the Mini Library as a [widget](#) and as an [application](#) in Facebook

Also in Europeana the importance of HTTP APIs has been picked up. The approach received much support, especially in the museum sector. While recognizing the technical challenges of this approach the following logic was presented:

- Instead of going through Europeana interfaces, let users make use of Europeana via third party sites / applications / widgets, etc.

<sup>13</sup> A good source for more information is this [YouTube video](#) that was taken during Google Developer Day 2007 – It shows Mark Lucovsky doing a presentation on 'The Google AJAX APIs' (May 31 2007)

- HTTP API increases exposure of partners: possibility to present the content in many different locations (for instance in partner websites) and in different shapes instead of one portal
- HTTP API makes it more attractive for partners to opt-in: by offering widgets, cross-domain search engine
- THUS: attract (partner) audiences locally with common (Europeana) functionalities and data (metadata) centrally<sup>14</sup>

However, as the creation of an API was not in line with the pre-defined requirements of Europeana, it was decided to postpone the elaboration of this new approach to a continuation project.. Since then a start has been made in formulating user requirements for HTTP APIs. Without any doubt more developments can be expected. For example, here is a summary of recommendations for APIs that Jeremy Ottevanger, webdeveloper for the Museum of London Group made following a discussion he started at the museum-computer-group:

- be “‘open’, feature-rich and based on established and agreed metadata models/standards/schemas that allow multiple sources and minimise data loss.”
- feature most of the functionality that can be accessed from the back-end
- include terms and conditions that specifically requires that user generated content be flexible enough to allow any reuse with attribution
- include a key to enable differentiated access to services for different types of users
- enable the addition of “crowd-sourced” user-generated metadata
- be lightweight, using REST, XML and possibly RSS and JSON

You can find more background information at [‘The Doofer Call’](#), Ottevanger’s blog.

## 5. CONCLUSIONS

Libraries and other public institutions cannot escape the rule of thumb: the user is King. Any rethinking or developing should therefore be based on their (future) demands.

Without question both the Key Performance Indicators and the Users Advisory Board will have a significant contribution in developing The European Library following a user-oriented approach. As such they will become key-factors in shaping the portal according to user needs and knowledge.

Aiming to give shape to the idea of one access point to European heritage, user demands and expectations have been made key in Europeana. Right from the start the perspective has been user, not technology driven. Considering the

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<sup>14</sup> This list was formulated during one of the meetings of the Users for Usability Work Group.

scope of Europeana some of complications will have to be dealt with in continuation projects. The European Commission supports this approach. It has announced that in 2008, the eContentplus programme will continue to support the establishment of a *live* Europeana (European digital library) “by funding projects that will prepare more content for inclusion in it as well as projects that will improve the use of its collections by users.”<sup>15</sup>

Generally speaking, portals are no great user experience but do offer access to material that otherwise would have remained hidden. With improvements in accessibility and the arrival of APIs a new chapter may start. Either way, thinking from a user perspective will definitively help memory institutions to find a place in the envisioned social, semantic web in which accessibility, easily exportable services (APIs), creating and sharing content will increase in importance. So, how about asking the kings of the web what future they think digital libraries have as a way to start ‘rethinking the library’? Indeed, it is the very first question The European Library will ask its newly formed Users Advisory Board during their inaugural meeting next month.

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<sup>15</sup> [FAQ 2008 eContentplus programme, European Commission](#) (Information Society)