DELIVERABLE

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D6.3: A redesigned and relaunched portal for The European Library

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Dissemination Level	
P	Public	X
C	Confidential, only for members of the consortium and the Commission Services	

Revision History

Rev.	Date	Author	Org.	Description
0.1	18/10/2011	Friedel Grant	TEL	Initial draft
0.2	19/10/2011	Aubéry Escande	TEL	Revised draft
0.3	19/10/2011	Friedel Grant	TEL	Comment Integration
0.4	24/10/2011	Susan Reilly	LIBER	Review of draft

Table of Contents

1. __Context and Objective__

This document constitutes Deliverable 6.3 of the Europeana Libraries project: *A redesigned and relaunched portal for The European Library*. It has been created by Work Package 6, which is responsible for communicating about and promoting the Europeana Libraries project.

The objective of this deliverable is to give an overview of the redesign and relaunch process that will eventually lead to an entirely new website for The European Library. It includes the rationale behind the process, a timeline of the project and specific details from a technical, aesthetic and usability perspective.

2. <u>Introduction</u>

The current website of The European Library (http://www.theeuropeanlibrary.org) holds and gives access to a wealth of valuable information for researchers. At the same time, the website is outdated in many ways. It lacks the functionality and visual appeal desired by modern internet users.

In addition, The European Library website was originally designed with librarians as the target audience, and national libraries as the main providers of content. Our profile is now shifting to encompass:

- A broader range of researchers

- A more diverse set of content from several types of institutions. The Europeana Libraries project alone will add some 5 million objects in a variety of formats to the database, from 19 of Europe's leading research libraries.

- Collaboration with other key library groups, including LIBER, CERL, and the Europeana Foundation.

For all of these reasons, it is imperative to modernise the website with a fresh design and improved functionality.

3. Related Deliverables

Several other deliverables are relevant to this document. They include:

D6.1 Brand Strategy – The Brand Strategy document was of critical importance in setting out the priorities and views of each stakeholder group, in relation to issues such as 1) setting a clear target group for the new service 2) clarifying how the new service would be branded 3) outlining the core functions that should be part of a new website 4) identifying the value propositions of the new service for stakeholders and end users.

D6.2 Stakeholders Communication Plan – The Stakeholders Communication Plan ensures that all parties involved in the Europeana Libraries project understand the aims of the Best Practice Network Europeana Libraries and will help in the promotion of the new service. In particular, it prepares the ground for the evolution of The European Library into Europeana Research, and promotes understanding of the distinction between the agreed target markets for Europeana and The European Library, by developing and communicating clear brand statements.

D6.4 End-user Communications Plan – The End-user Communications Plan will set out the key targets and messages for communicating with the target audience of the new portal. It will ensure that the networks of our partners are used to full effect.

In addition, the work of Work Package 2 to create D2.4 (*Report on a sustainable library-domain aggregation infrastructure for Europe*) is relevant to this deliverable. Although D2.4 is not yet complete (it is due at the end of the Europeana Libraries project), the work on this deliverable has already yielded valuable insights on what future partners may expect from a portal. A survey conducted by Work Package 2 showed, for example, that the services with the most value from the perspective of prospective partners included:

- Enabling searching of bibliographic records of texts in hard-copy and metadata for related digitised texts at the same time
- Offering OCR services for providers' digital content to support full text searching in the portal Pushing the data out to other academic / research services
- Providing access to universities' own digital repositories

## 4.   Overview of the Redesign Project: Timeline and Main Steps

The **technical and design work** to create a new version of The European Library website began in October 2010, and lasted for one year. The main steps were:

1. **October 2010-November 2010** - Preparing a Design Brief: to form part of the Tender Document for potential suppliers.

2. **October 2010-January 2011** - Drafting and submitting the Information Architecture.

3. **November 2010** - Reviewing comparable research websites, to inform our decision about the required functions.

4. **December 2010-February 2011** - Drafting Functional Specifications.

5. **January 2011-March 2011** – The Tender Document was circulated to design agencies across Europe. Subsequent responses were assessed by people from across the Europeana Libraries network.

6. **February 2011-May 2011** - Creating Wireframes to present the agreed functions and information architecture as graphical representations of page layouts with all components (text, links, boxes, tools) but without any graphic design.

7. **April-May 2011** - Signing supplier contract, including negotiating on functionalities, timescale and costs.

8. **May 2011-July 2011** - Creating initial design; reviewing and revising it until it meets expectations, including usability testing by Hamburg University.

9. **June 2011-September 2011** - Building the new portal, incorporating the specifications, wireframes and design elements.

The rest of this deliverable provides more detail on the various steps.

5.   Information Architecture, Functional Specifications and Wireframes

The Information Architecture of The European Library's new website lays out the various positions of all the relevant pages in relation to one another, including primary and secondary navigation points. Creating this documentation was one of the first steps in the overall process of creating a new website.
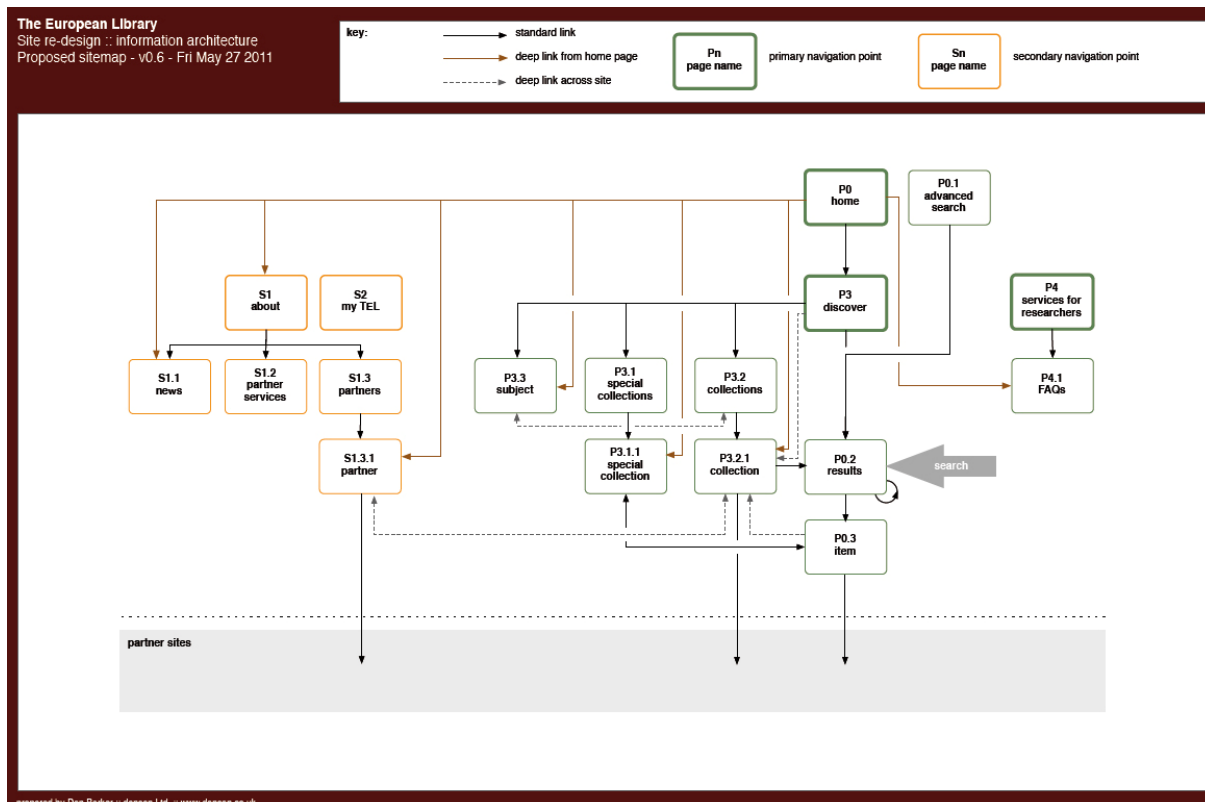

A diagram showing the Information Architecture of the new website.

Next, the Functional Specifications of the website were defined in written form. They outlined what would happen, for example, when a user clicked on a button, and they formed one of the two main sources of input to the Wireframes (see below). In addition, comparable research sites were reviewed to ensure that all relevant functionality had been noted.

The Functional Specifications were presented to key stakeholders; at the meeting of the Library Coordination Group in Sarajevo, Bosnia and Herzegovina (December 2010), and the Europeana Libraries kick-off meeting in The Hague, Netherlands (January 2011).

With the Information Architecture and Functional Specifications complete, work began on the Wireframes. The Wireframes of a website show the agreed functions and information architecture of the new website as graphical representations of page layouts. Components such as links, boxes and tools are included, but graphical design elements are not included.
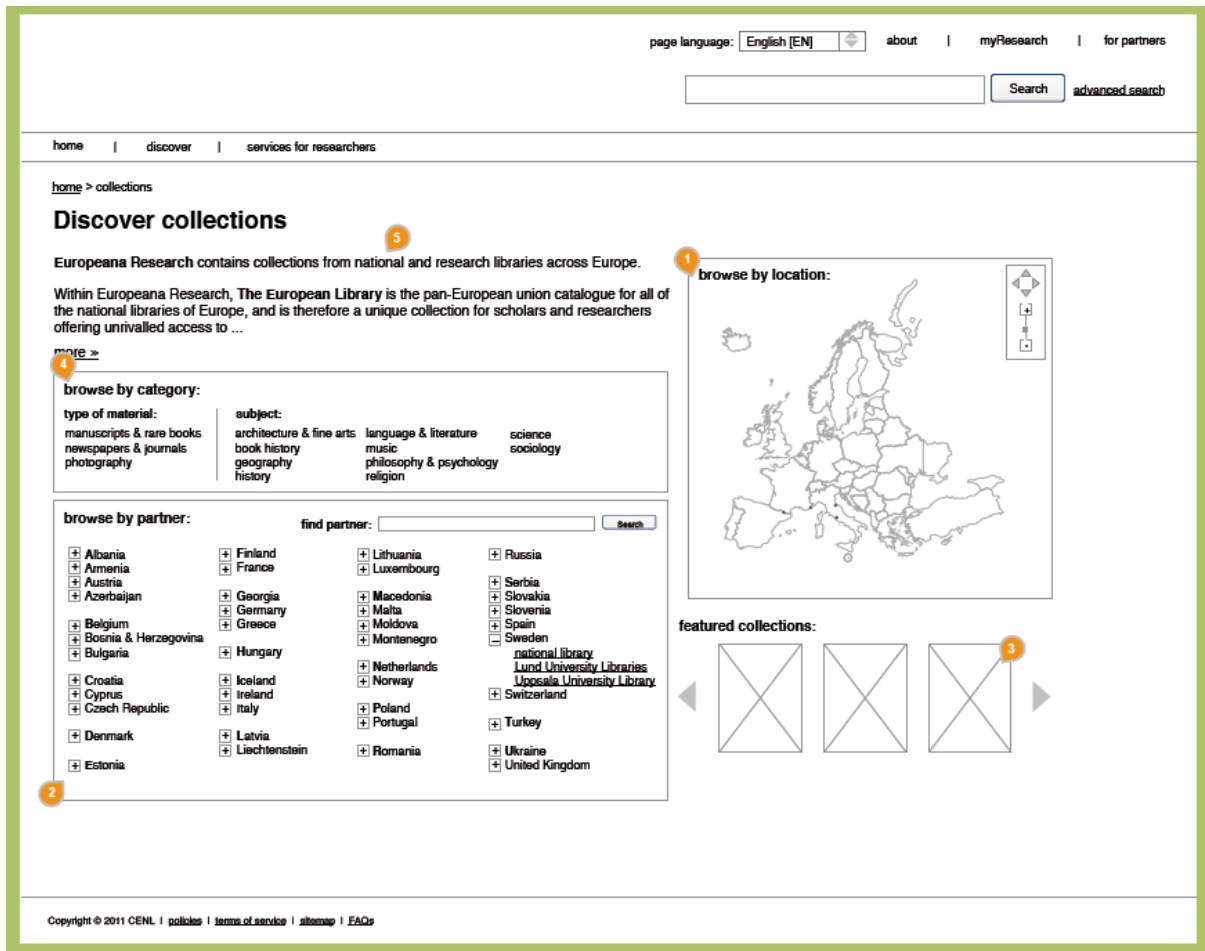
One of the Wireframes pages, showing the basic layout of a page on the new website.

The next step was to ensure the usability of the website, and this was done through testing of the Wireframes. We submitted the Wireframes to Ulrike Spree, a Professor at Hamburg's University of Applied Sciences. She defined some typical tasks which a user might want to perform:

- General browse - a user wants to find out what the portal is really about (bibliographic records, some digital content, some full text, some special collections).

- Exact search - search for a well-known item (ie. The Divine Comedy by Dante).

- Specific domain search in the digital humanities field (i.e. a medievalist needs an electronic tool for viewing, transcribing and manipulating manuscripts because he wants to compare several works. Can Europeana Research help him/her?) The European Library will provide clear partnership with researcher services like Mendeley (http://www.mendeley.com/manage-annotate-pdf-research-papers/)

These were tested with users, and successful results were obtained. Ulrike Spree also praised several aspects of the website, including:

- Clear and well structured layout

- Appealing concept

- State-of-the-art entry to the portal via a simple search

- Tools that allow browsing supported by visual tools (map, timeline)

6.   **Design**

A design brief was prepared in late 2010 and circulated to 6 design agencies, based in Europe and the United States, in January 2011.

The document outlined the overall goal to redevelop The European Library's site to meet the needs of the research community worldwide, and to incorporate new content from research libraries alongside the existing content from national libraries. It also highlighted several design improvements that were needed as part of the wider project.

Potential candidates were told they should incorporate designs for:

- Home/landing page
- Search results pages for bibliographic, digital and full-text content
- Views of bibliographic record, digital object, full text
- Browse collections, libraries etc

All elements were expected to be W3C compatible (in plain HTML, without the use of Flash, Java applet etc.), search engine optimized and cross-browser compatible. In addition, valid cascading stylesheets (CSS) and a range of logos were requested.

Particular challenges and needs with regards to design were also outlined, including the need to:

- Represent network and library partners, while keeping a good balance between their logos and that of The European Library
- Highlight visual and full-text content on the homepage
- Allow for multi-lingual text across the site, while at the same time minimising text in order to reduce the work needed by staff to maintain multi-lingual resources.
- Find a way to make catalogue records visually interesting
- Highlight the various types of content
- Be seen as a trusted source of content
- Encourage users to explore and browse through the available material

Of the 6 design agencies who received our tender, 5 responded.

We then formed a design task force, made up of 14 members from all Europeana Libraries stakeholder groups: The European Library, LIBER, CERL, CENL and the Europeana Foundation. This task force reviewed and evaluated the proposals, according to a defined set of criteria:

- Creativity and appropriateness of the proposal
- Cost-effectiveness
- Quality of the proposal and of the work plan
- Standing of the supplier

Details of the work and the designs were also submitted to WP6 members and The European Library's Management Committee.

At the end of this process, the London-based design agency SalterBaxter scored most highly. They had submitted four potential designs for the new website.
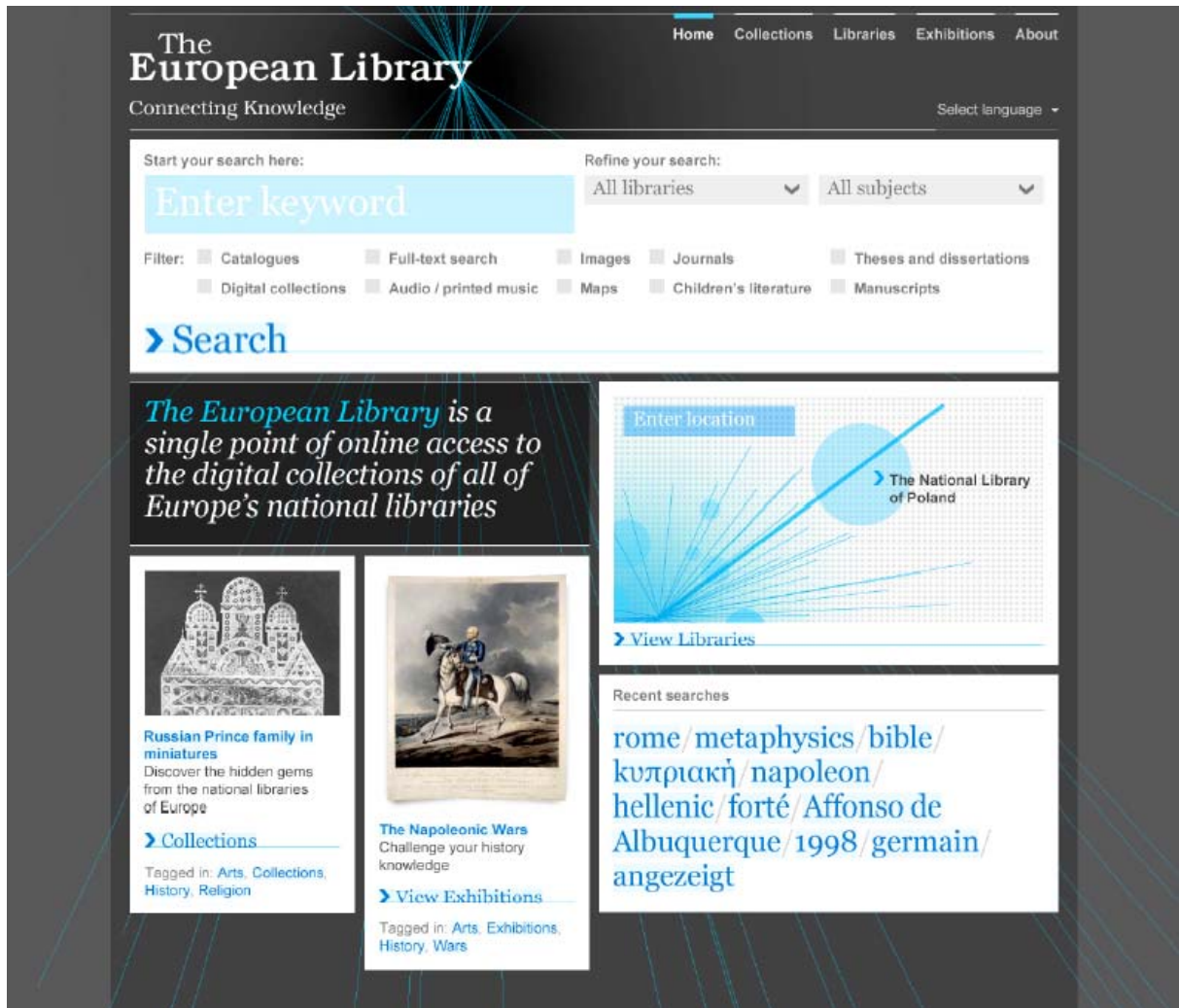
One of the design proposals submitted by the winning agency, SalterBaxter.

In May 2010, SalterBaxter was commissioned to design the new portal. The development of the design was closely monitored by The European Library office from June 2011 to August 2011.

7. Build Process

Once the technical blueprints and design elements of The European Library website were defined, it was possible to begin building a functional portal, with a limited amount of representative content from each of our defined areas of focus.

This work began in August 2011 and continued through to the end of September 2011. It was led by The European Library's technical team, with the help of a freelance consultant, and resulted in the current test portal.

The new website was then demonstrated to key stakeholders, starting with the Conference of European National Librarians (CENL) in September 2011, and to the LIBER board in October 2011.
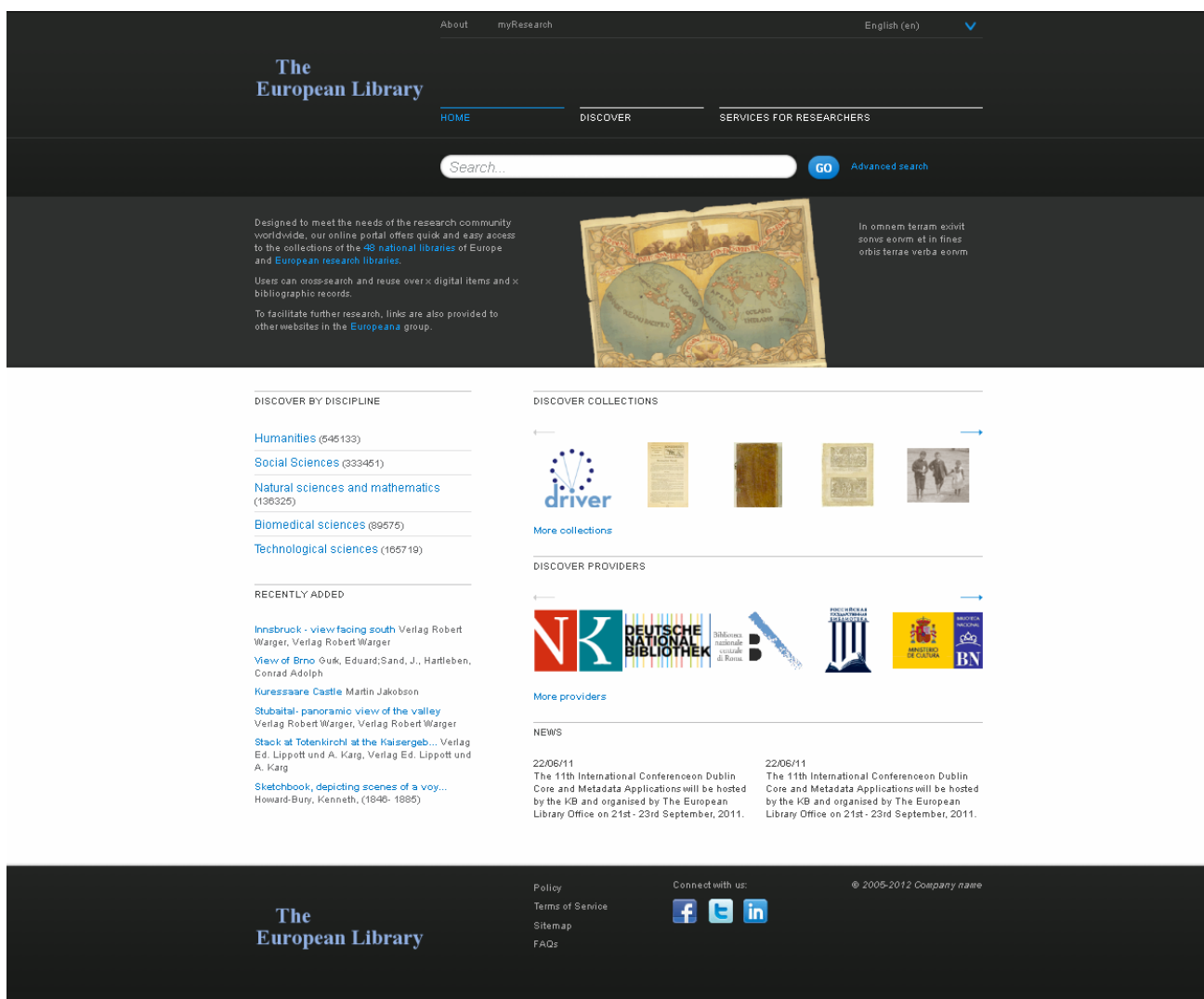
Home page of The European Library. The logo is currently being developed and will be incorporated in early November.

8.   <u>Private Testing</u>

The first version of the test portal (also known as the *alpha* version) will now be evaluated by students at Hamburg's University of Applied Sciences. They will specifically look at the following aspects:

- Definition of User Experience goals and measures (analysis of The European Library documentation and prototype)

- Cognitive walkthrough of the existing paper prototypes (Wireframes), to log the reactions of the students to the general portal concept of the portal

- Low-budget comparison with two possible competitors on the basis of a standardized heuristic evaluations of usability and user experience

- User Experience tests with 6 people, based on relevant use cases

- User Experience report and recommendations for redesign submitted by the whole team

Additionally, the portal will be tested through the networks of all partners involved in the Europeana Libraries project, and during and following a plenary meeting in Belgrade (November 2011). We are also approaching other universities with a strong specialisation in the Digital Humanities field, to see if they can help with user testing.

9.   **Public Launch**

With the *alpha* phase of development complete, the portal will move to a *beta* version and its public launch during the first six months of 2012. The objective is to have a fully-operational portal in place and established within the researchers' community by September 2012, to coincide with the start of the new academic year.
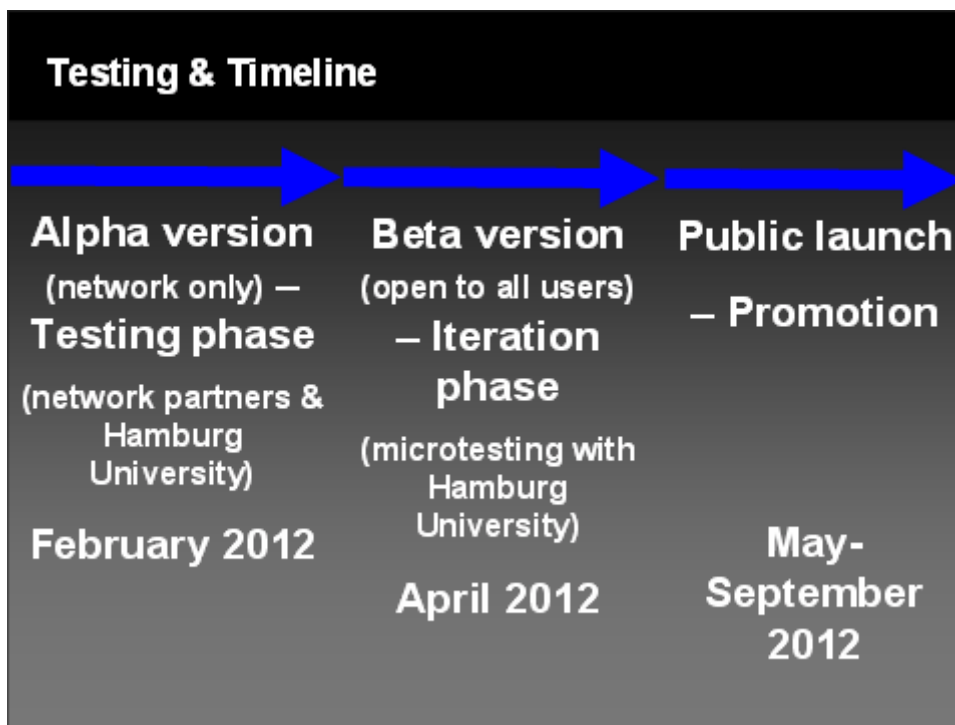
Further details of how the portal will be marketed to end users will be included in Deliverable 6.4, the End-user Communications Plan.

10.   <u>**Appendix**</u>

Supporting documents attached to this deliverable include:

- Evaluation of Design Proposals

- Usability Evaluation Report

The European Library redesign project

1.   Introduction

The European Library invited proposals for the supply of design services as part of a redevelopment of the existing website.

The Design Brief was sent to six design agencies[1]. Five of them returned proposals by the deadline of 25th February.

The European Library set up a taskforce[2] to evaluate the proposals. The taskforce comprised 14 representatives of CENL, CERL, LIBER and Europeana Foundation, all members of the Europeana Libraries project. Each member of the taskforce was provided with clear guidelines on marking the proposals[3].

This paper summarises the outcome of the evaluation process.

2.   Overview of the evaluation

The taskforce was asked to evaluate the design agencies according to the following criteria:

- Creativity and appropriateness of the proposal
- Cost-effectiveness
- Quality of the proposal and of the work plan
- Standing of the supplier

2.1   Overall marks

The **overall feedback** was as follows:
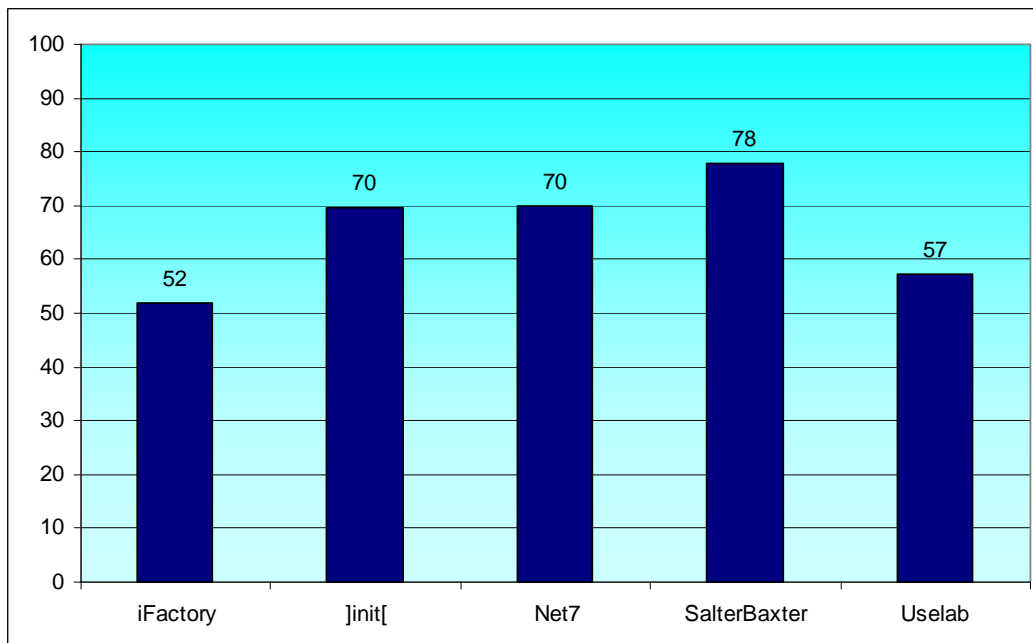

Table 1: Average mark per supplier across all 4 criteria

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[1]See Annex 1 for a list of the six design agencies
[2]See Annex 2 for a list of members of the taskforce
[3]See Annex 3 for the mark sheet and evaluation criteria

SalterBaxter was the design agency that received the best overall marks.

2.2   Creativity

Because The European Library will undertake the technical development of the site in-house, we weighted the marks in favour of the **creativity** criterion by giving it a high percentage of the overall marks (30%)
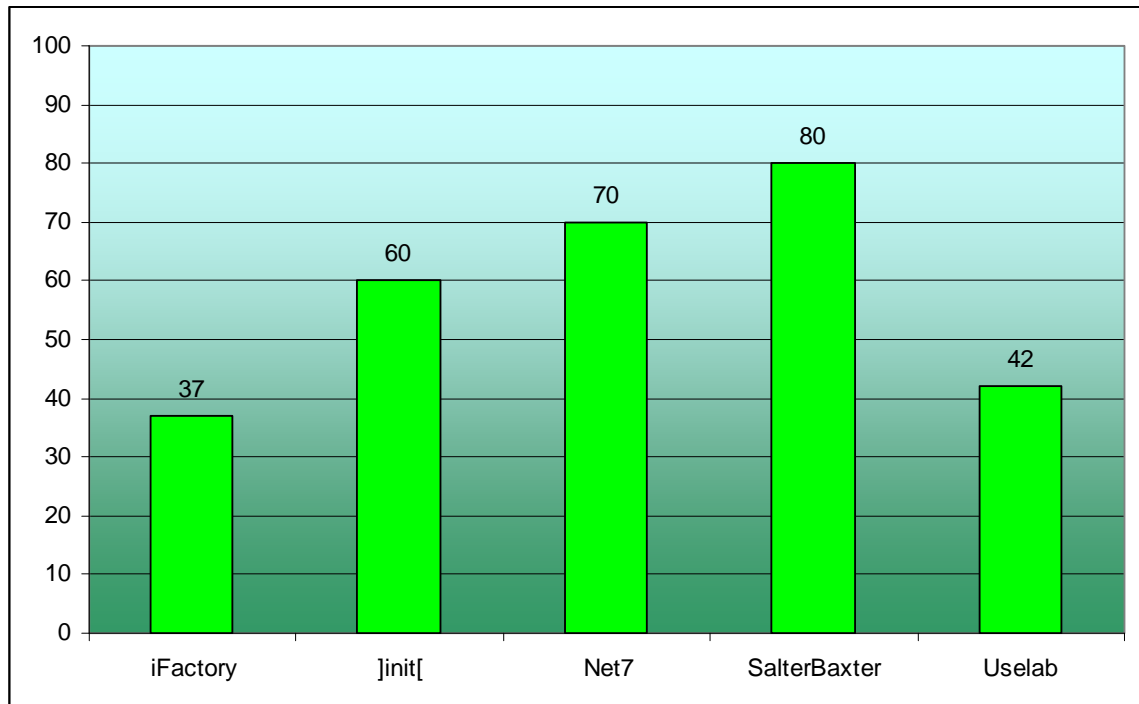

Table 2: Average mark per supplier for creativity

The above chart shows that the taskforce gave SalterBaxter the highest marks in terms of the design solution.

2.3   Cost-effectiveness

Another important criterion was the **cost effectiveness** of the solutions proposed by the design agencies (20%).
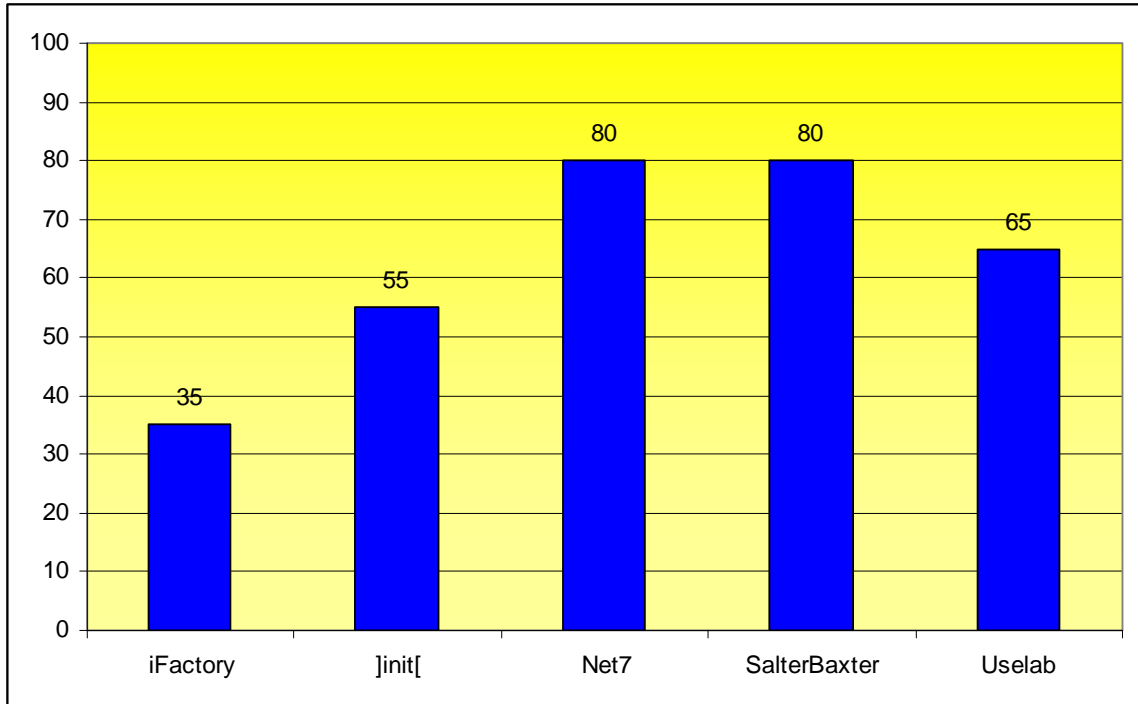
Table 3: Average mark per supplier for cost-effectivness

The above chart displays the closeness of Net7 and SalterBaxter in terms of cost-effectiveness.

2.4   Quality of the proposal and work plan

The **quality of the proposal and of the work plan** was divided into three elements: potential quality of the deliverables, completeness of the proposal and potential for timely completion. This criterion was weighted at 30% of the overall evaluation.

Table 4: Average mark per supplier for quality of the proposal and work plan

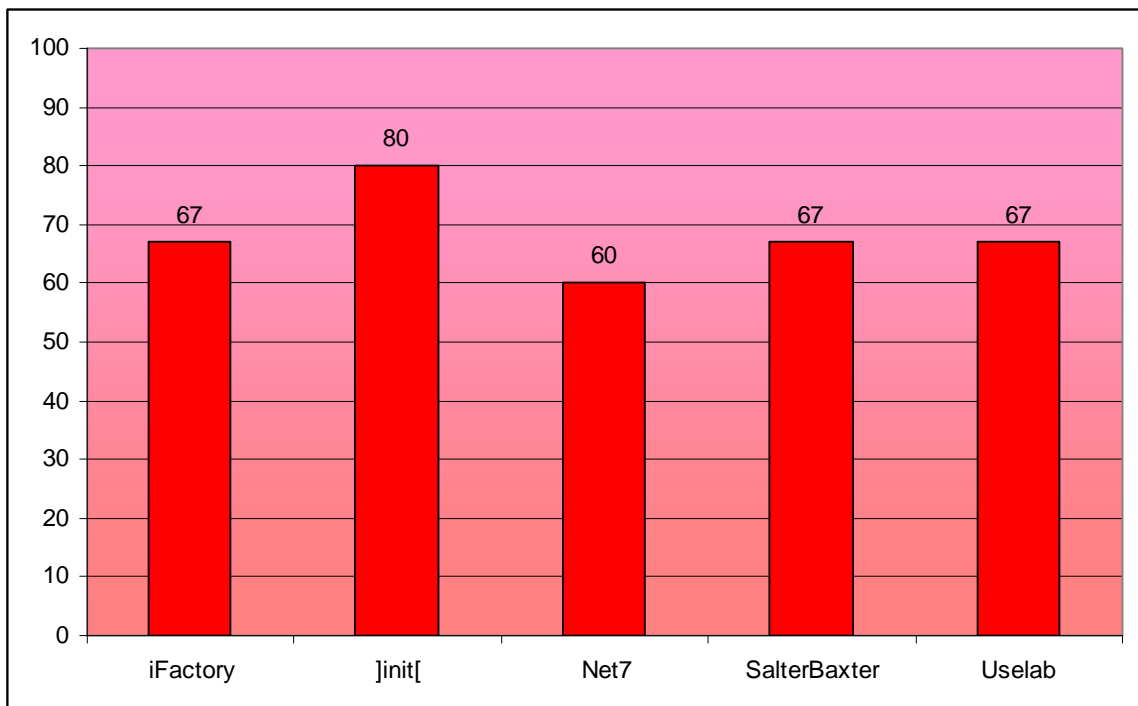In the above chart,]ini[collected the best scores, followed by SalterBaxter and Uselab.

2.5   Standing of the supplier

Finally, the **Standing** of the design agencies counted for 20% of the evaluation marks
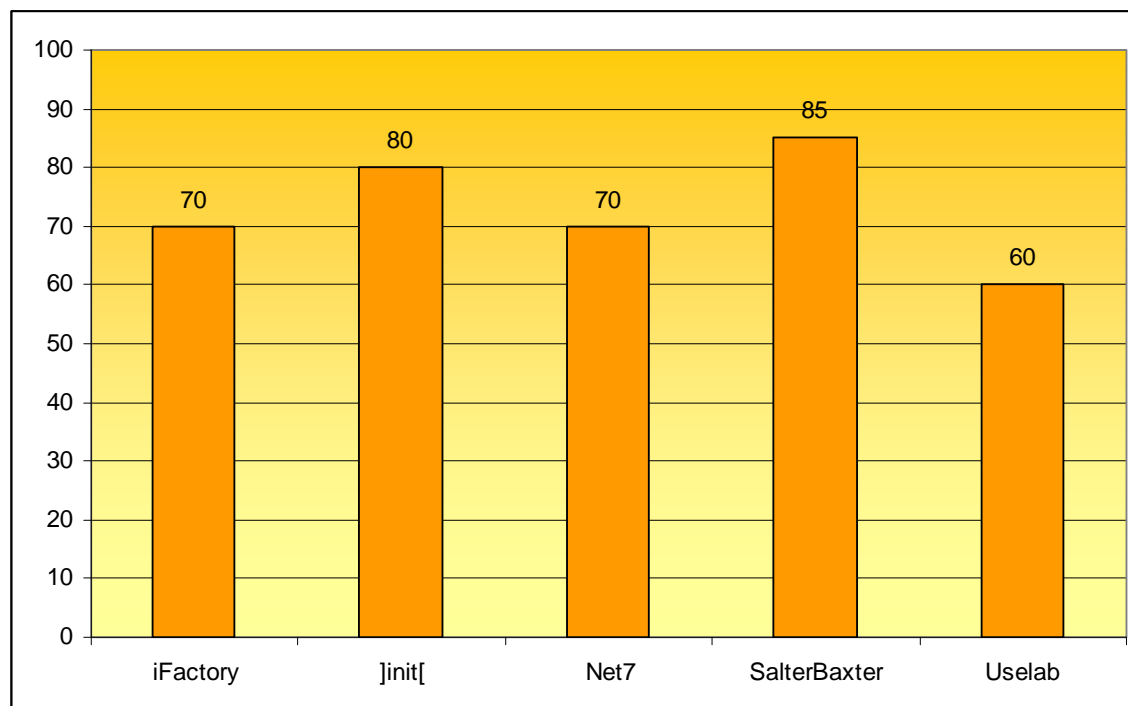

Table 5: Average mark per supplier for 'standing'

In the above chart, the taskforce marked SalterBaxter as the best candidate.

3.   Recommendation

Based on the above results, the taskforce recommends that SalterBaxter undertake the assignment of redesigning The European Library. The re-launch is currently scheduled for the academic year 2011 (October 2011).

Note that although SalterBaxter came up with the best design solutions, they would charge £48,000 Pounds (€56,000 Euros), which is above our budget. We have not yet entered into negotiation on price.

SalterBaxter developed the design of Europeana and the British Library corporate branding.

4.   Next steps

The European Library Management Committee will consider the redesign of the portal alongside the recommendations of the brand strategy report being compiled as part of the Europeana Libraries project. The Management Committee meets on 11th April.

Annex 1 - Design agencies involved in the call

Uselab
http://www.uselab.com/nl/
]init[
www.init.de
Claus Koch GmbH
www.clauskoch.com
Net 7
www.netseven.it
iFactory
http://www.ifactory.com
Salter Baxter
www.salterbaxter.com

Claus Koch GmbH did not respond to our call. All other candidates responded to the call and sent their proposal on time.

Annex 2 - Task force members involved in the agencies evaluation

CENL
Uldis Zarins (National Library of Latvia)
Žiga Cerkvenik (National and University Library of Slovenia)
Giorgi Sabanadze (National Library of Georgia)
CERL
Mss Petra Wåhlin (Uppsala University Library)
Anna-Karin Andersson. (Uppsala University Library)
Rene Haljasmäe (Academic Library of Tallinn University)
LIBER
Wouter Schallier (LIBER Executive Director)
Nicolaie Constantinescu (LIBER Communications and Marketing Committee representative)
Europeana Foundation
Jill Cousins (Programme Director of The European Library and Europeana)
Jon Purday (Europeana Communications Senior Advisor)
The European Library Office
Louise Edwards (General Manager)
Aubéry Escande (Communication and Editorial Manager)
Susanna Lob (TEL Consultant)
External Consultant to the Redesign Project
Dan Barker

Annex 3 - Mark sheets template

CRITERION	DEFINITION OF CRITERION	MAX. MARK
Creativity and appropriateness of the proposal	How far does the proposal show creativity and flair? Please rate the creative aspects of the proposal. Are they appropriate to the needs of The European Library?	30
Cost-effectiveness	Does the proposal offer value for money? This does not necessarily mean the cheapest but the highest quality of service for an appropriate price.	20
Quality of the proposal and of the work plan	This covers 3 main elements (10 marks each) 1) Potential quality of the deliverables. Is there strong evidence that the deliverables will be of the highest quality?	10
	2) Rate the completeness of the proposal. Is the supplier able to provide a solution to all the requirements addressed in the Design Brief?	10
	3) Potential for timely completion. Is there strong evidence that our timescales can be met?	10
Standing of the supplier	Rate the supplier in terms of their experience and that of their key personnel. Does the proposal give confidence that they can develop a sound working relationship with us?	20
OVERALL		**100**

The European Library
Logo and website redesign

A proposal by Salterbaxter

Introduction

The following presentation outlines some initial creative ideas. However, in order to come up with the perfect solution to your challenge we would need to work closely with you as well as with the outcomes of other currently ongoing project work:

– Brand strategy

– Functionality parameters

– Information architecture

– Functional specification

– Logo and visual language

– And in an ideal world there would also be user testing

Theme 01: Connecting

The European Library is a single point of access connecting online users to the content of multiple libraries across Europe.

With the theme of connecting in mind this idea creates a visual language that places The European Library at the 'heart of Europe's research infrastructures'.

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The European Library

Theme 01: Connecting
– logo and visual language

- the logotype is a simple modernisation of the current logo

- the hero graphic is a series of lines that join together at a single point illustrating the purpose of The European Library

- the point at which the lines in the hero graphic all meet sits behind the logotype reflecting the concept of a 'single point of access'

- we have introduced a strapline 'Connecting knowledge' to further illustrate and clarify the purpose of The European Library

- together, the updated logo, the new strapline 'Connecting knowledge', and the hero graphic create an immediate understanding of The European Library and how it can help them

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Theme 01: Connecting
– interface design

- supporting this theme, the Search facility is given primary visibility on the homepage

- below the Search area on the right, an animated feature gives each of the Library brands a presence on the homepage of the site and also allows users to search libraries individually (this is dependent on functional spec)

- also on the right, a 'Recent searches' feature reflects the dynamic nature of the site and the wide and varied range of topics being searched (this is dependent on functional spec)

- deeper content areas are also surfaced on the homepage encouraging visitors to different parts of the site

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Theme 02: Practical and efficient

In order to be the go-to destination for researchers around the world. The European Library must create a user-focused online experience. This means clarity and simplicity, efficiency and value. This theme focuses on creating a practical and effective experience that delivers and engages users: Explore / Focus / Solve

Explore

Focus

Solve

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THE
EUROPEAN
LIBRARY
EXPLORE
FOCUS
SOLVE

Home   Collections   Libraries   Exhibitions   About

Language select ▼
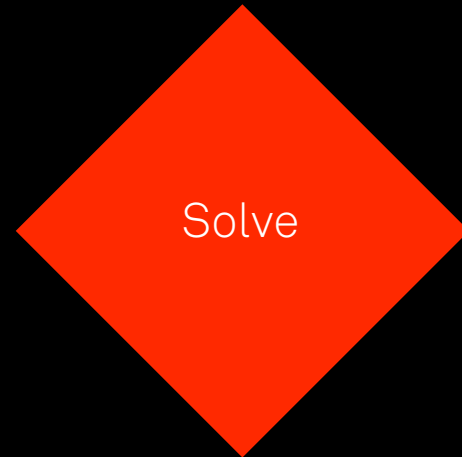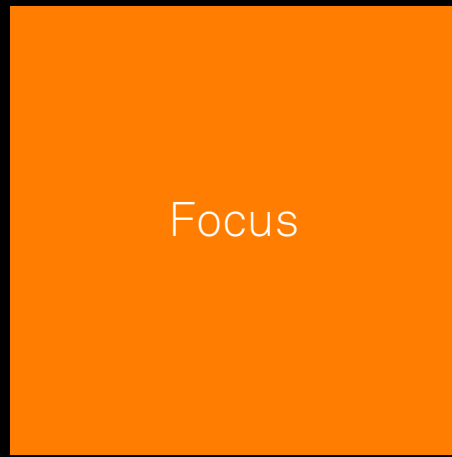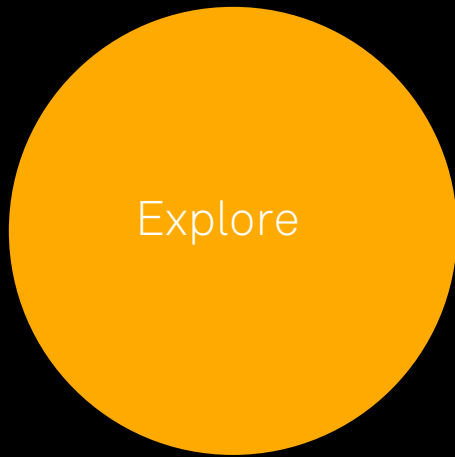
Start exploring here:

Enter keyword

Refine your search:

All libraries ▼

All subjects ▼

☐ Catalogues
☐ Digital collections
☐ Full-text search
☐ Audio / printed music
☐ Images

☐ Maps
☐ Journals
☐ Children's literature
☐ Theses and dissertations
☐ Manuscripts

→ Search

The European library connects you to the digital collections 48 of Europe's national libraries

● EXPLORE

First explore the library's collections by entering your search criteria with keyword suggestions.

→ View Libraries

■ FOCUS

Refine your search through library, or category and type of content.

→ View Collections

◆ SOLVE

Once you have found your material, save it to your 'Light box'. This allows you to view groups of content together and lead you to your solution quickly.

→ Find out more

Reading Europe

Discover the hidden gems from the national libraries of Europe

→ Collections

The Napoleonic Wars

Challenge your history knowledge by visiting our war exhibition

→ Exhibitions

↑ Your lightbox

Theme 02: Practical and efficient – logo and visual language
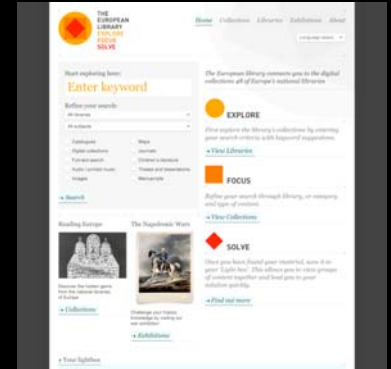
- the logo is made up of the three different shapes that mark each stage in the Search process

- together these shapes create a simple, clean and contemporary logo which is aligned to the user experience - form and function combined

- we have included the three words of the process in the logo – this descriptive language will translate well

- the word Solve suggests the end benefit to the user, not just the search but the result

- selecting a modern and minimal colour palette would create the opportunity for clear consistency across both print and online.

Theme 02: Practical and efficient – interface design
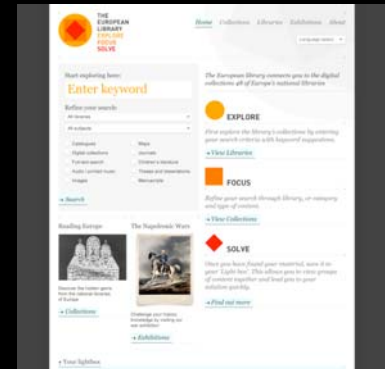
- the interface design is driven by the objective to create an efficient and effective online user experience

- the method and mechanism of Searching is the crux of the site – the logo, the approach to content and the layout of the interface

- please note that, as with the previous route, we have based this design on the current Search on the website rather than the Search upgrade currently being defined by the work on functionality. Depending on the outcomes of this work, both the logo and the interface design could be adapted to incorporate the way that the Search will work and how the Search results will be generated

Theme 03: Authoritative and content rich

It is vital that users trust The European Library to be a reliable source of information. This theme focuses on creating a visual language with authority by combining contrasting elements of new and old to create a contemporary interface.

Also key in supporting the theme of authority is to prominently feature an eclectic mix of content, all of which can be accessed via the The European Library.

the
European Library

Explore the collections of 48 of Europe's finest libraries. Your search starts here...

Enter keyword

All libraries

All subjects   **Search**

Geography and History
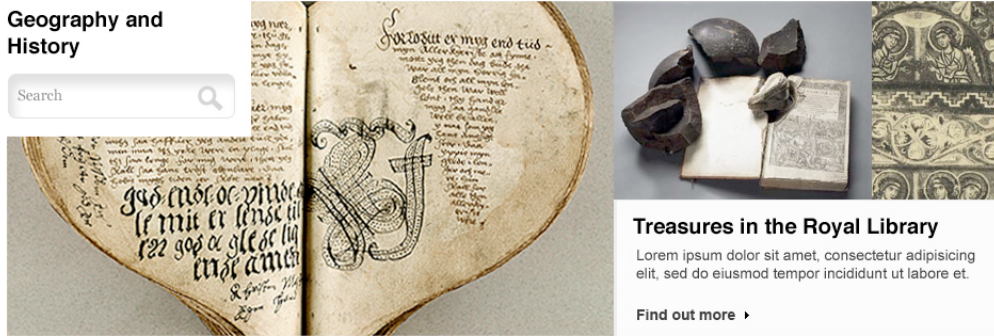
Search

Treasures in the Royal Library

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et.

Find out more

Computers, information and general reference

Search

RECENT SEARCHES

Binary
Genetics
Microlysi

Philosophy and Psychology

Search

RECENT SEARCHES

Saussure
Logic
Sophist

Religion

Search

RECENT SEARCHES

Theravada
Crusades
de Lange

MOST POPULAR

Social sciences
Events   Language
Geography and History
Science   Religion
Social sciences
Events   Language

NEWS & EVENTS
Get our "Reading Europe: European culture through the book"

20 July 2010 | Art

Reading Europe
"Reading Europe" offers a rare opportunity to view some of the hidden literary gems from the national libraries of Europe.

20 July 2010 | Art

Social sciences

Search

Language

Search

Science

Search

Theme 03: Authoritative and content rich – logo and visual language
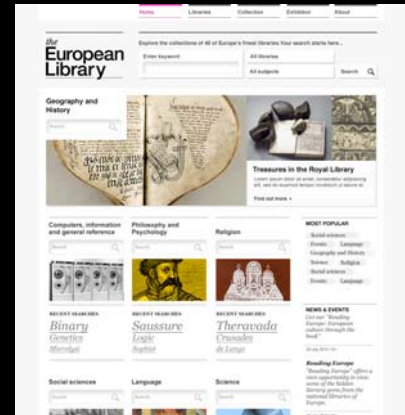
- the logo establishes the look and feel of this theme by juxtaposing serif and san serif typefaces

- the interface design is a contemporary mix of old and new: serif fonts juxtapose with modern fonts, imagery of ancient objects sit alongside images of the modern day, bright colours sit alongside black and white

- a strapline, Access to Europe's heritage, is both descriptive and authoritative.

- a wealth of surfaced imagery supports this strapline

Theme 03: Authoritative and content rich – interface design
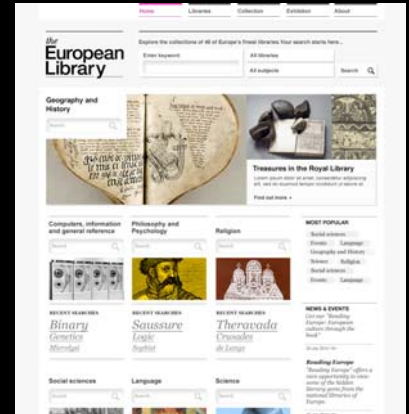
- this idea uses a portal style approach to the homepage

- an element of content from all of the ten topic categories (as per current website) is surfaced on the homepage

- the information under each topic – both pictures and words – can be updated dynamically and frequently so that visitors to the site always discover something new

- each topic also has its own Search facility which means that regular visitors can instantly filter their Search by going straight to their specialist topic area

- a rotating banner feature area provides the opportunity to profile different content

- a 'Most popular' feature reflects the currently most searched on topic

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Theme 04: See more

The wealth of information made accessible via The European Library is nothing without the inquisitive nature of researchers and students.

This theme focuses on developing a visual language that captures the creativity of the The European Library's target audience.

Theme 04: See more
– logo and visual language

- this is a very initial theme inspired by the idea of the kaleidoscope that, through a combination of mirrors and light, creates a new way of seeing the world

- the interface design illustrates a very early idea of how a series of kaleidoscope graphics could create an iconic look and feel for The European Library

- although a very initial thought this approach begins to bring to life a very different aspect of The European Library focusing on why users are there: to be inspired, to imagine, to explore, to discover, to create, to solve, to see more

- the logo sitting alongside this graphic approach would need to be kept very simple so as to sit alongside the visual language rather than compete with it

- the images created by kaleidoscopes are themselves inspiring and can be paralleled with the online experience offered by The European Library

' "enabling viewers to see more and discover things you hadn't even imagined. Search for inspiration, search for solutions, search now..."

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Thank you

Usability evaluation of

Europeana Research Prototype

Wireframes (Website redesign –

Wireframes –v0.7 – Tue Jun 28 2011)

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Table of content

1   Short Summary

The portal is a useful addition to Europeana on the one hand and the individual websites of the participating European National Libraries.

Inspecting the website redesign wireframes the main question is: Will the user recognize the purpose of the website? Understanding navigation and guessing who is behind the site causes a lot of cognitive effort.

Once the user started the search process or browsing the sequence of necessary steps is more straight forward and easy to follow.

1.1   Positive aspects

- Clear and well structured layout
- Regarding navigation and orientation on your site I positively noticed that you provide path information on each subpage in order to indicate the user's location and the subpage's relation to the main page
- Europeana Research is an appealing concept
- Entry via simple search is state of the art
- I like the SERP-page and the functionalities to refine the results. You may consider to change the functionality from the left site (were it is perceived as part of navigation) to the right site (were it is perceived as an option for the user to modify results (try the beluge prototype on http://beluga.sub.uni-hamburg.de/list?searchtext=usability&filter[]=institution%3A588&submit=Suchen
- All 11. from 11. item – group record to 11. item full text record easy to understand and state of the art
- Your users will appreciate all the tools that allow browsing supported by visual tools (map, timeline)

1.2 Assumed usability problems

The navigational shell is clear and comprehensive, however path information (bread crumb) sometimes confusing

- o 4. subject (where am I? discover? services for researchers?)
  - o home | discover | services for researchers is a compact and concise structure, but does it really reflect the whole content provided? Do I get a cognitive map of the content?
  - o do you think of providing a sitemap?
- I am not sure the mission of the portal is brought across on 2. home. This will very much depend on the wording of the welcoming text
- I perceive the portal as vacillating indecisively between a tool to support serious, single-minded research (in this case collections and exhibitions could distract) and a showcase of the treasures of the partners.
  - o → maintain the clear distinction between collections/holdings and exhibitions/featured collections as it is in the current version
- For the last case you probably need to even more concentrate on 'show what you have'.
- Labels sometimes reflect more the language of the provider than the needs of the customer (what is a collection? what is a partner?)
- The difference between exhibition and collection is obscure
- Labelling - will users understand that Europeana Research means Europeana content for researchers and not research on Europeana?
- Classification: missing distinction between topical clustering and hierarchical logical subjects (rooting in DDC classification still visible). I appreciate the effort to detach the subject categories from typical librarian categories ;-) , but the way they are presented now they lack comprehensiveness and logic and may unsettle the user
- Visualisation of dates of publication as browsing aid. I wonder whether this is really a useful information - with respect to the heterogenity of your content to offer the browsing via date function before the user entered a search. Maybe it is more useful to implement it as a filtering tool after the user entered a search term.

- SERP, your users may appreciate suggestions how to refine their results using more specific search terms (as most of your partners seem to use DDC, LCC and LCSH -subject (11.item individual catalogue record) you could use content from these metadata fields (see beluga for comparison (http://beluga.sub.uni-hamburg.de/list?searchtext=usability&filter[]=institution%3A588&submit=Suchen)

2   Cognitive Walkthroughs

A Cognitive Walkthrough (CW) is used to evaluate the cognitive effort a user will presumably have when using a software or web site. It also helps to identify those messages and actions on a web site where the cognitive effort for visitors could be reduced.

It is suggested to use a CW when there is, like in our case, a relatively detailed prototype - in paper or as digital wireframes - of the web site. The idea of this method is taking over the role of a user. Putting oneself in the position of a fictional user can be supported and simplified by detailed descriptions of one or two typical users, so called personas because they simplify the role-playing element in a CW.

2.1   The Method - "Wearing the Users' Shoes"

The cognitive walkthrough starts by defining some crucial use cases that typical users (personas) are likely to perform using the web site.

For a start the following 4 use cases were considered:

- Use case 1; general browse - a user wants to find out what the portal is really about (bibliographic records, some digital content, some full text, some special collections).
- Use case 2: exact search - search for a "known" item (The Divine Comedy by Dante).
- Use case 3: specific domain search in the digital humanities field (i.e. a medievalist needs an electronic tool for viewing, transcribing and manipulating manuscripts because he wants to compare several works. Can Europeana Research help him/her?) TEL will provide clear partnership with researchers services like Mendelay (http://www.mendeley.com/manage-annotate-pdf-research-papers/)
- Use case 4: specific tool search in the digital humanities field (i.e. new media encounter implies video surveillance usage. A student wants to find a set of

background books to support his studies in the field of video surveillance across Europe. Can Europeana Research help him/her?)

Next step in a CW: Consider the use case and define exactly and in detail the steps the persona is meant to go in order to reach her/his goal. These are exactly the steps that users with this special use case are intended to go in the mind of the software designers.

For each step ask yourself:
Will the user try to achieve the right effect?
Will the user notice that the correct action is available?
Will the user associate the correct action with the effect to be achieved?
If the correct action is performed, will the user see that progress is being made toward solution of the task?

The evaluator(s) attempts to come up with a "success story" for each step in the process. If user cannot come up with one, he/she instead creates a "failure story" and assesses why the user might not accomplish the task based on the interface design. These insights are then used to improve the usability of the website or application.

Separating tasks into these minute steps is helpful because it allows you to guess exactly where and when the interface fails to conform to the user's expectations.

2.2   Documentation of results

2.2.1   First impressions

Although the about box is still filled with blind text it can be assumed that the user will need (too) long time to find out whether this is an access point to the content (catalogue data and digitized material) of all European Libraries or just a show case of selected material. Selection criteria are not obvious for the visitor of the portal.

Suggestion: "About Europeana research": Instead of a text a tagline should suffice. The occasional interested customer can click "about" in order to learn more. Too much space is used for this explanations box; it moves the interesting access points (discover by subject / discover collections) too far nearly below the fold. Replace box

in the upper left by tagline, move search slot up, place browsing structure in the middle.

2.2.2 <u>Navigation experience</u>

Navigation systems

Clear layout but the allocation of information to navigation types is sometimes puzzeling. Sitemap and FAQ are services like switching to another language or learning about TEL. It should be placed in the upper bar (global navigation). The lower bar - correctly - contains legal MUSTS.

Horizontal navigation bar

As I could not interpret easily the horizontal navigation bar on the top of the site I hardly used it. Some spontaneous question occurred:

- o "discover" what?

- o Why these brackets with EN in „English [eng]"

- o "about" – what?

I did not know what to expect underneath discover as it is a very general label. I missed a navigation category partners in the horizontal navigation bar. I would probably even have tried out "for partners" to find more specific information. I would have clicked on "services for researchers" and left it immediately as it is not what I expected:

- o Directory of research infrastructure (did not expect to find this here)
- o Associate reading lists (don't understand what that is. Something like delicious? Don't need another tagging opportunity for resources
- o Upload record studies by researchers (no idea what that is)
- o Academic social networks (not another network)
- o Directory of citation handling services (can't decipher connection to Europeana Research)

Breadcrumb navigation

Always a helpful feature however I was often puzzled by the labels.

home > collections > collection → Expected: home > discover collections > collection

home > subject → Expected: home > discover by subject

7. Europeana Research collections (why are there no breadcrumbs visible?)

Search

In some cases I would have been insecure where I was actually searching. What is the difference between "Search Europeana Research" (2.home) and "Search subject" (4.subject).

1. **Case – general browse**

User entered the website either by chance (e. g. she came here via a search engine) or by recommendation (for example by a colleague or as a student by your professor). User is visiting the site without a special purpose and is just browsing

- o to find out what the portal is about
- o to find out more about the holdings
    - o bibliographic records
    - o some digitized content, some full text,
    - o special collections

We assume our persona is conscientious and patient.

Desired sequence of actions:

> 1. Visitor reads Europeana Research → finds out Europeana Research is a free service that offers access to the resources of the 48 national libraries of Europe in 35 languages. Resources are bibliographical (catalogue entries) and a growing offer of digital items (books, posters, maps, sound recordings, videos, etc.).
> 2. Chooses a subject and browses the subject categories to find out what relevant material concerning her/his research topic is on offer

3.	Flicks through the collections rapidly, recognizes highlights of the collections and takes down notes of collections that could be helpful for further research

Steps	2.home Site/Action /	Comments
Step 0 – orientation	**2. home** Scanning the website What sticks out? First impressions? What is confusing, ambiguous? Assumed steps from here?	Is this Europeana or not? Were will I search? Metadata, Fullext, collection description? What kind of material can I expect as result? Will I really get all the results for my searchterm from all the participating partner institutions? Topical focus? Is this an offer mainly for the humanities (recently viewed items is mainly historical)
Step 1	**2. home** Scanning the site for information about	
Success story		
The user will be trying to achieve the right effect	X	
The user will notice that the correct action is available	X	About clearly visible on the left
The user will associate the correct action with the desired effect	X	
If the correct action is performed, the user will see that progress is being	X	

made		

Failure Story		
The user will **not** be trying to achieve the right effect		
The user will **not** notice that the correct action is available		
The user will **not** associate the correct action with the desired effect		
If the correct action is performed, the user will **not** see that progress is being made		
Step 2	**2. home** Browsing the portal via subject categories	Why these categories? How are they ordered? I am interested in computer science and new media. Nothing for me in this old fashioned portal?

Success story		
The user will be trying to achieve the right effect	X	Discover by subject clearly visible
The user will notice that the correct action is available		
The user will associate the correct action with the desired effect	X	
If the correct action is performed, the user will see that progress is being made	X	

Failure Story		
The user will **not** be trying to achieve the right effect		
The user will **not** notice that the correct action is available	x	User can't interpret order of offered subjects (alphabetical, importance?). In the current version of The European Library at least for a library experienced audience the ordering according DDC classification is recognizable.

		In case the user can't pigeonhole 'his/her subject to the correct category (computer science, new media) first confusion could occur
The user will **not** associate the correct action with the desired effect		
If the correct action is performed, the user will **not** see that progress is being made		

Step 3	4. subject Came here from click on "Discover by subject"	After click on one subject user is confused. She expected direct information on subjects, not information about collections featuring subject. Confusing "Search subject". Is this the general search or is the search limited on the subject that was chosen?

Success story		
The user will be trying to achieve the right effect	X	
The user will notice that the correct action is available		
The user will associate the correct action with the desired effect		
If the correct action is performed, the user will see that progress is being made	X	Realises further browsing and searching in the individual collections is necessary
Failure Story		
The user will **not** be trying to achieve the right effect		
The user will **not** notice that the correct action is available	X	User is disappointed – expected direct access to items in collections.
The user will **not** associate the correct action with the desired effect	X	Confused, asks herself whether she really chose the correct action
If the correct action is performed, the user will **not** see that progress is being made		

All steps repeated for the choice discover and the inspection of various other sites.

Desired sequence of actions /step numbers vary:

1. Enter diverse discover offers (by subject; discover collection; discover partners)
2. Chooses a subject and browses the discover categories to find out what relevant material concerning her/his research topic is on offer
3. Flicks through the collections rapidly, recognizes highlights of the collections and takes down notes of collections that could be helpful for further research

	2. discover	
Steps	Action	Comments
Step 0 – orientation	Came here from the	Not quite what I expected. Have to go through a lot more choices: language subject.

	link discover	Are the subjects the same than on "home"? My eyes rest on dates of publication: nice feature – not very interesting on this level. It only gets interesting after I started a search question and want to further limit my search. What is the meaning of the white line left of 1500?
What sticks out? First impressions? What is confusing, ambiguous? Assumed steps from here?		
Step 1	Browsing the portal via subject categories	Why these categories? How are they ordered? I am interested in computer science and new media. Nothing for me in this old fashioned portal?
<td colspan="3" style="background:#8CC63F">**Success story**</td>		
The user will be trying to achieve the right effect	X	
The user will notice that the correct action is available		
The user will associate the correct action with the desired effect	X	
If the correct action is performed, the user will see that progress is being made	X	
<td colspan="3" style="background:red">**Failure Story**</td>		
The user will **not** be trying to achieve the right effect		
The user will **not** notice that the correct action is available	x	In case the user can't pigeonhole 'his/her subject to the correct category (computer science, new media) first confusion could occur
The user will **not** associate the correct action with the desired effect		
If the correct action is performed, the user will **not** see that progress is being made		

Step 1	3.discover	

	came here from 2. home Will have a look on "discover collections" on the right. Click on "see all collections"	Frustrated because of more options, partially the same than on home. Confused what the difference between subjects and collections is. Still not knowing what a collection is. Notices timeline on the bottom but not interested in at this stage of exploration: as long as not content information is given information on publication dates is meaningless.
Success story		
The user will be trying to achieve the right effect	X	
The user will notice that the correct action is available	X	
The user will associate the correct action with the desired effect	X	
If the correct action is performed, the user will see that progress is being made	X	
Failure Story		
The user will **not** be trying to achieve the right effect		
The user will **not** notice that the correct action is available		
The user will **not** associate the correct action with the desired effect		
If the correct action is performed, the user will **not** see that progress is being made		

Step 1		What will be shown on the images?

	7.Europeana Research collections / inspectin "Reading Europe" Clicking on image of one collection	Utterly fed up with long "advertise style" description on the right with little information
The user will be trying to achieve the right effect	X	
The user will notice that the correct action is available		
The user will associate the correct action with the desired effect	X	
If the correct action is performed, the user will see that progress is being made	X	
Failure Story		
The user will **not** be trying to achieve the right effect		
The user will **not** notice that the correct action is available	X	Tries to browse the collections, only when no browsing function available clicks on "see all collections"
The user will **not** associate the correct action with the desired effect		
If the correct action is performed, the user will **not** see that progress is being made		

	Back to home. Wants to find out about participants	Using the Logo "Europeana Research"
Step 1		
Success story		

The user will be trying to achieve the right effect	X	What will be seen on the image below "discover Partners"
The user will notice that the correct action is available	X	Will notice gallerycarousel of partners.
The user will associate the correct action with the desired effect		
If the correct action is performed, the user will see that progress is being made	X	

Failure Story

The user will **not** be trying to achieve the right effect		
The user will **not** notice that the correct action is available		
The user will **not** associate the correct action with the desired effect	X	Wondering if there is another way to get an overview of all participating institutions
If the correct action is performed, the user will **not** see that progress is being made		
With the following step I am absolutely unsure as I could not figure out the correct path navigating from home to 16. partners. Two choices: Click on image "discover partners" or "for partners"		Both options seem utterly unlikely, as I am not a partner and I do not want to discover partners but get an overview
Step 1	**16.partners Browse by location using the map**	How did I get to 16. partners?

Success story

The user will be trying to achieve the right effect	X	Good: two entry points – if user does not know the exact name of a country she can use the map and vice versa.
The user will notice that the correct action is available	x	

The user will associate the correct action with the desired effect	x	
If the correct action is performed, the user will see that progress is being made	X	
Failure Story		
The user will **not** be trying to achieve the right effect		
The user will **not** notice that the correct action is available		
The user will **not** associate the correct action with the desired effect		
If the correct action is performed, the user will **not** see that progress is being made		

	5. services for researchers	
Steps	Action	Comments
Step 0 – orientation What sticks out? First impressions? What is confusing, ambiguous? Assumed steps from here?	Came here from home	Do not understand offer. What are research infrastructures? What is TEL content? What are record studies? (very good studies ;-)). I did not expect to find a link to citation style services here. Could be interesting if differences in conventions of different countries are dealt with. → Wireframe is still too incomplete to evaluate usefulness. I suppose a 'nice to have' candidate. Researchers will probably already use their specific research tools and rather look for ways to integrate "Europeana Research" results in their existing toolset than the other way round. Mendeley may be useful.

6. collections		
Steps	Action	Comments
Step 0 – orientation What sticks out? First impressions? What is confusing, ambiguous? Assumed steps from here?	Came here from home	Finally, I get information what the portal is about. Wow, a pan-European union catalogue (language reminds me at the good old austro-ungarian monarchy ☺) Do you really need marketing speak "offering unrivalled access …" Browse by partner: I am confused. I want to limit my search on Slovenian resources. Will "find partner" do the trick or will I find more information on Slovenian partner instititutions

	6a. collections	
Steps	Action	Comments
Step 0 – orientation What sticks out? First impressions? What is confusing, ambiguous? Assumed steps from here?	Came here from map	A lot to read. I don't want to read this just now.

7. Europeana Research collections		
Steps	Action	Comments
Step 0 – orientation	Came here	Everything is collection. I am confused. I

	from home	better understood exhibition for items just to look at
What sticks out? First impressions? What is confusing, ambiguous? Assumed steps from here?		

8. collection		
Steps	Action	Comments
Step 0 – orientation What sticks out? First impressions? What is confusing, ambiguous? Assumed steps from here?	Came here from collections	Easy to get orientation: clear title, supported by map navigation Carousel increases my curiosity I would definitely need some help what to search for. Advanced search with music specific search fields could help. I used recently viewed records to get a first impression of what is in the collection

9. Europeana Research collection		
Steps	Action	Comments
Step 0 – orientation What sticks out? First impressions? What is confusing, ambiguous? Assumed steps from here?	Came here from home	If this were called "exhibition" I had no problems. However, I get completely confused with the different types of collections.

2. Case: exact search - search for a "known" item (The Divine Comedy by Dante).

As a researcher you are searching for editions of "The Divine Comedy" by Dante – preferably in the original language and an English translation. We take that this persona is impatient and wants quick results.

Correct sequence of actions:

> 1. Entering the search term
> 2. Refining results by applying filters
> 3. Choosing of the results
> 4. Inspecting group results
> 5. Choosing individual results and reading result page

Steps	Action	Comments
Step 1	Find a search slot and entering "Divine comedy"	Simple search found, would probably rather use advanced search and enter Dante Alighieri and divine comedy to exclude items about the divine comedy. Will system also find translations? → Chosen language and original language would be preferable
Success story		
The user will be trying to achieve the right effect	X	
The user will notice that the correct action is available	X	
The user will associate the correct action with the desired effect	X	
If the correct action is performed, the user will see that progress is being made	X	Amount of results will make filtering necessary. However one federated result list is much better than the national result lists in the current version.
Failure Story		
The user will **not** be trying to achieve the right effect		

The user will **not** notice that the correct action is available		
The user will **not** associate the correct action with the desired effect		
If the correct action is performed, the user will **not** see that progress is being made		

Step 2	Applying filters	Success will depend on whether real drill down → applying various filters successively is allowed
Success story		
The user will be trying to achieve the right effect	X	
The user will notice that the correct action is available		
The user will associate the correct action with the desired effect	X	
If the correct action is performed, the user will see that progress is being made	x	
Failure Story		
The user will **not** be trying to achieve the right effect		
The user will **not** notice that the correct action is available	x	Will the user understand two types of filters: refine by and on bar below results?
The user will **not** associate the correct action with the desired effect		
If the correct action is performed, the user will **not** see that progress is being made	X	

Step 3	Choosing of the results	
Success story		
The user will be trying to achieve the right effect	X	

The user will notice that the correct action is available	X	
The user will associate the correct action with the desired effect	X	
If the correct action is performed, the user will see that progress is being made	X	New window with detailed data would appear.
Failure Story		
The user will **not** be trying to achieve the right effect		
The user will **not** notice that the correct action is available		
The user will **not** associate the correct action with the desired effect		
If the correct action is performed, the user will **not** see that progress is being made		

Step 4	Inspecting group results	Can only be guessed from the wireframes
Success story		
The user will be trying to achieve the right effect	x	
The user will notice that the correct action is available	x	
The user will associate the correct action with the desired effect	x	
If the correct action is performed, the user will see that progress is being made	X	
Failure Story		
The user will **not** be trying to achieve the right effect		
The user will **not** notice that the correct action is available		
The user will **not** associate the correct action with the desired effect		
If the correct action is performed, the user will **not** see that progress is being made		

Step 5	Inspecting individual item	Can not be interpolated from wireframes
Success story		
The user will be trying to achieve the right effect	X	
The user will notice that the correct action is available	X	
The user will associate the correct action with the desired effect	X	
If the correct action is performed, the user will see that progress is being made		

Failure Story		
The user will **not** be trying to achieve the right effect		
The user will **not** notice that the correct action is available		
The user will **not** associate the correct action with the desired effect		
If the correct action is performed, the user will **not** see that progress is being made	X	It is not possible to save whole record, picture and data to your computer.

3. Case – specific domain digital humanities

As a medievalist you are looking for a specific tool for an electronic tool for viewing, transcribing and manipulating manuscripts because you want to compare several works

Correct sequence of actions: sorry I am lost

I would expect some information either after having navigated to type of materials: "manuscripts and rare books" or under services for researchers.

Steps	Action	Comments
Step 1	Browsing by category "manuscripts and rare books" or "Services for researchers"	
Success story		
The user will be trying to achieve the right effect		
The user will notice that the correct action is available		
The user will associate the correct action with the desired effect		
If the correct action is performed, the user will see that progress is being made		
Failure Story		
The user will **not** be trying to achieve the right effect	x	
The user will **not** notice that the correct action is available	x	
The user will **not** associate the correct action with the desired effect	x	
If the correct action is performed, the user will **not** see that progress is being made	x	

4. Case: specific tool search in the digital humanities field (i.e. new media encounter implies video surveillance usage).

A student wants to find a set of background books to support his studies in the field of video surveillance across Europe. Can TEL help him/her?

Correct sequence of actions:

1. Type in the words "video surveillance"
2. Interpreting results page. Recognizing default is "everything"
3. Recognizing the filter options on top of Results for media types
4. Recognizing the filter option on the left side
5. Choosing the filter Content language
6. Choosing the filter location
7. Choose first result, by clicking on the link
8. Retrieving and understanding individual results

Steps	Action	Comments
Step 1	Simple Search: type in "Video surveillance"	
Success story		
The user will be trying to achieve the right effect	X	
The user will notice that the correct action is available	X	
The user will associate the correct action with the desired effect	X	
If the correct action is performed, the user will see that progress is being made	X	
Failure Story		
The user will **not** be trying to achieve the right effect		
The user will **not** notice that the		

correct action is available		
The user will **not** associate the correct action with the desired effect		
If the correct action is performed, the user will **not** see that progress is being made		

	Interpreting the results page	
Step 2		Rather complex site.
Success story		
The user will be trying to achieve the right effect	X	"Also found in" is a useful feature
The user will notice that the correct action is available		
The user will associate the correct action with the desired effect	X	The user will understand she has various filter options and at least recognize some.
If the correct action is performed, the user will see that progress is being made		
Failure Story		
The user will **not** be trying to achieve the right effect		
The user will **not** notice that the correct action is available	x	The abundance of filter options is quite a cognitive overload: Will the user understand the different types of filters? Why do you not group all filters on the left underneath "Refine by"?
The user will **not** associate the correct action with the desired effect		
If the correct action is performed,	x	The usability of the SERP depends on

the user will **not** see that progress is being made		clear link to **direct access** to resources. Maybe look at best practice libraries for further clues. I tested the current version for the Catalogue of the German National Library.

Step 3-6	Recognizing filter option on top of results	
Success story		
The user will be trying to achieve the right effect	X	
The user will notice that the correct action is available		
The user will associate the correct action with the desired effect	X	
If the correct action is performed, the user will see that progress is being made	X	
Failure Story		
The user will **not** be trying to achieve the right effect		
The user will **not** notice that the correct action is available	x	Will the user be able to understand the different types of filter option?
The user will **not** associate the correct action with the desired effect		
If the correct action is performed, the user will **not** see that progress is being made		

Step 7	Recognizing the filter option on the left side	
The user will be trying to achieve the right effect	X	
The user will notice that the correct action is available	X	
The user will associate the correct action with the desired effect	X	
If the correct action is performed, the user will see that progress is being made	X	
The user will **not** be trying to achieve the right effect		
The user will **not** notice that the correct action is available		
The user will **not** associate the correct action with the desired effect		
If the correct action is performed, the user will **not** see that progress is being made		

Step 8	Retrieving and understanding group record and identifying individual record (11.)	Clear sequence – user can decide which records are the most useful to him
The user will be trying to achieve the right effect	X	

The user will notice that the correct action is available	X	
The user will associate the correct action with the desired effect	X	
If the correct action is performed, the user will see that progress is being made	X	Catalogue record British Library is an entry an academic user would expect (state of the art). Link to (associated) subjects useful
Failure Story		
The user will **not** be trying to achieve the right effect		
The user will **not** notice that the correct action is available		
The user will **not** associate the correct action with the desired effect		
If the correct action is performed, the user will **not** see that progress is being made		