



## M3.2.3 Personas Catalogue

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This catalogue contains 7 personas developed for use in the Europeana projects.

The Royal Library, National Library of Denmark and Copenhagen University Library

## **Kolofon:**

### **Contents:**

Katja Guldbæk Rasmussen

Rie Iversen

Gitte Petersen

### **Layout:**

Sandie Primdahl Sørensen

### **Workshop participants:**

Martin Gordon, Rundfunk Berlin-Brandenburg

Karin Heijink, Europeana v.1

Kirubel Legasion, The German National Library

Georg Petz, The Austrian National Library

Veronika Prändl-Zika, The Austrian National Library

Lars Svensson, The German National Library

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## 1. Introduction

This catalogue contains 7 personas developed for use in the Europeana projects.

The premise of this work has been to find already existing personas within the domains of archives, museums and libraries in Europe. These have then been pared down to their essentials and rebuilt, using input from Europeana partners and research on behavior and search patterns.

If you have never worked with personas before, please take the time to read the short introduction in the chapter about method.

The personas, and a brief “How To” is the central issue in this catalogue and therefore placed at the front. For those wanting to dig a little deeper into how the personas were created, more in-depth material can be found in the chapters at the back.

## 2. Personas

### Sarah

#### Personal:

Sarah is 21 and works in a clothes shop as a sales assistant. She lives with her parents in a large town. Sarah dropped out of school at the age of 15 but is currently trying to make up ground. Twice a week she attends evening classes at a Centre for Adult Education. Her aim is to go on to a teacher training college in order to become a primary school teacher. Apart from her own language she speaks a bit of English.

#### Interests:

Sarah is very interested in fashion, and one of the things she really likes about her job is to dress up the Mannequins. She loves to spend hours chatting with her girlfriends, and go to the cinema with them. Sarah really likes children, expects to have some herself, and will often babysit for family and friends. Because she was unhappy at school herself, she wants to learn how to teach children with different needs.

#### Media use:

Sarah is not interested in or confident with technology as it makes her feel insecure. She has no access to the internet at home, but at the education center they have a few computers that she can use (if they are not taken up by other students). Her internet skills are limited to sending emails and some internet browsing, using the most common tools. She has an old mobile phone passed on to her from her boyfriend and she uses it for texting and calling her friends. Once in a while she buys fashion magazines, which she reads and exchanges with her girl friends.

#### Search Strategy:

Sarah feels very insecure using the internet and prefers someone to guide her through the process. She has learned a few tricks from her teacher, using simple search and sometimes filters. Mostly, this is what she sticks to when she is on the internet on her own. From her teacher

(and her boy friend) she knows that there are smarter ways to go about things, and that nothing can “be broken” (not the computer, nor the internet). Still, she considers every step carefully and uses the back button of the browser frequently.

**Relationship to Europeana:**

During her evening classes, her teacher directed her to Europeana in order to get information for an assignment. Sarah assumes that there will be a lot of interesting stories, pictures and videos, but she is not sure whether she will be able to use the service. There seems to be so much information and too many ways to go about using the site.

**Jukka****Personal:**

Jukka is 43 and works at a university as an ethnomusicologist. He is divorced, has no children, but about to marry his current girlfriend, who he met two years ago on one of his frequent journeys. He is very good at all sorts of electronic devices and heavily into online social networking. In his current job he works with automatic music analysis of Hindustani classical music.

**Interests:**

Jukka’s main interest is Hindustani classical music (which was the topic of his PhD thesis) and he moderates a forum on this topic. At least once a year, he travels to participate in music festivals and conferences related to his job. He always looks for concerts in the towns and countries he visits. He spends most of his free time doing things related to his music interest and to his job, and it is difficult for him to separate job and free time. He is part of both professional and social networks related to his interests and job, with a lot of friends and contacts. Jukka is member of the society for ethnomusicology, and has previously held a position as a visiting professor at the University of Bombay.

**Media use:**

Jukka is technically literate, working with specialist databases and he will write a new search application or macro if the existing possibilities don’t work well enough for his purposes. He is an early adopter of mobile technologies, and is always on his iPhone, talking, texting, browsing the web and listening to mp3s downloaded from P2P-sites. Jukka downloads music from his favourite websites and whenever he gets a new lead on something interesting. He gets a lot of information from magazines specialised in internet technology or electronic media. He is heavily into social networking (500+ contacts on LinkedIn) and shares the newest information with his professional social network - if possible, in real time.

**Search strategy:**

Jukka is confident in his ability to use all kinds of search. He likes to explore search results and to pull in any new information he can find on his way. If a website looks promising he will explore all its corners, just in case something might prove interesting or entertaining. He shares his findings with his students and although in his classes he is strict about relevance and credibility of sources, he encourages them to go out and explore the internet for themselves.

### **Relationship to Europeana:**

He found out about Europeana from a link on a blog.

He read about Europeana in a blog, and thinks it could be interesting to follow. For him as an ethnomusicologist there might be new possibilities in the sound archives from all over Europe. Even if the site doesn't have Hindustani music as such, there might be an opportunity to dig into musical influences across Europe.

## **Maria**

### **Personal information:**

Maria is 25 years old, and she lives in the suburbs of a large city, working as a teacher at a public school. It is her first job as a teacher after she finished her education. Her major subject is the local language and history. She teaches secondary school, and she loves it. Maria is very enthusiastic about her teaching, and her ambition is to make her lessons as exciting for the pupils as possible. She doesn't mind spending a lot of time preparing lessons and it makes her happy when she can feel her pupils responding and getting engaged in class.

### **Interests:**

Maria is very social and spends a lot of her spare time with family and friends. She often meets with friends at cafes and sometimes they go the theatre, or to a museum or an exhibition. She loves travelling in Europe and goes on holidays at least twice a year – typically with a couple of friends who share her interest in European culture and history. When she needs some time alone, she will curl up on the sofa with a good book, she particularly likes historical novels. Or she might go for a walk somewhere quiet.

### **Media use:**

Maria spends a lot of time on the internet preparing lessons, buying books, or networking on Facebook, Myspace and other social network places. She has set up several Facebook groups together with her pupils and her friends, but is careful to keep the two networks separate.

Maria doesn't go anywhere without her mobile phone, and she only turns it off when she is teaching. On occasion she updates her Facebook status from her mobile phone, but otherwise she mainly uses the mobile for talking, texting and for checking her e-mail.

She uses her iPod to listen to music on the train or bus when she goes to work, and shares her playlists with her friends. They often recommend music to each other.

She reads the newspapers at work, often focusing on specific articles that her colleagues have pointed out to her. She will watch the news and historical programmes on TV, and when she can she will find a local angle to bring to class.

### **Search strategy:**

Maria feels very comfortable searching the internet and using all sorts of social networks as she grew up with computers. She is aware that different search strategies are suitable for different situations and needs. Personally, she prefers to do a "quick and dirty" search in Google. She will spend a long time on a site if it has useful or entertaining content. She finds it interesting to see



what other people have done (“People who have bought this, have also bought ...”) and often checks out recommendations and context relevant links.

**Relationship to Europeana:**

Maria came across Europeana in one of her searches for new material for her class. She was googling for pictures to use in one of the home assignments, but clicking from the Google image to the Europeana website, she discovered there might be a lot more interesting stuff for her there – both in relation to her job and privately. None of her pupils had ever heard about Europeana, but it is Maria’s plan to integrate the service in a couple of tasks, so her pupils will become familiar with the online service. She really likes the idea of a common portal to cultural material from all over Europe, not least because it saves her time.

**Terese****Personal information:**

Terese is 60 years old and a professor in history at a university. She is married and has two sons. She is a highly intellectual person with very strong opinions on quality in academic work. She is very serious about everything she does, especially her work. Beside her own language, she speaks fluent French and English

**Interests:**

Terese likes to go hiking with her husband and also enjoys going to the theatre and listening to classical music. She doesn’t always distinguish between work and free time, and is always reading articles and new publications within her field of interest. During her many years at the university, she has developed a small network of academics with the same interests as herself.

**Media use:**

Terese uses internet research for his work at the university to find references of new publications within her field of research. She mainly visits web pages of other universities and some topic specific databases. She uses the desktop computer in her office. Apart from work, she occasionally uses the internet to order classical music CDs, but she prefers to buy them in a shop. She has never tried to download music from the internet. Her assistant prints her emails for her to read, and quite often the assistant will also do the search and download of articles according to Terese’s instructions.

She prefers to read scientific literature on paper. She uses a mobile phone only for making calls if no landline is available and has never sent a text message with it.

To get the latest news she reads three newspapers every day. In the morning she listens to the radio and in the evening she watches the news on TV.

**Search strategy:**

Terese prefers to let her assistant do the internet searching, although she has very clear theoretical knowledge about how to do it. When she does the searching herself, she - if at all possible – uses the advanced search facilities so she can define her search as precisely as possible. Long lists of results make her feel she’s wasting her time. She avoids using general

search engines (like Google) for scientific search and she will primarily search in databases she is familiar with and where she knows that the likelihood of relevant results is high. She has developed a couple of search procedures that she always uses and has instructed her assistant to do the same. She visits a couple of web sites frequently (scientific societies, for instance) to keep updated with the research of specific well-respected colleagues.

Privately she has collected a number of high quality websites: a couple of sites for her music interests and some museum sites relevant to her travel plans.

**Relationship to Europeana:**

Europeana came to Terese's attention because the service was recommended on one of her favourite websites. The link text described very precisely what kind of historical material she could find in Europeana. She finds the service too general to use for her work, but has found additional material to her favourite pieces at a major art museum, where they also link to Europeana.

**William****Personal information:**

William is 53 years old and lives in a small village with his family. He is married to Anne, who has a part time job as a nursing home assistant. They have a daughter and a son. The house they live in is two streets away from where he grew up, and he feels comfortable knowing everyone in the neighborhood. He works as an office manager in a small business where he has been working for 25 years. He is very devoted to his job and he rather comes sick to work, than let the work undone or - worse - leave it to others.

He is not really proficient in other languages, but has learnt enough terminology to manage within the context of his interests.

**Interest:**

William has always been interested in local history and joined the local history association early on. The last few years his interest for genealogy has increased and now he spends a lot of his (and his wife's) free time travelling around checking church books and archives. Previously the whole family used most of their holidays relaxing in a summer house he took over from his parents. The last couple of years William and his wife, to Williams regret, have had to go there without the children who find the house too old and generally lacking in modern conveniences such as internet and TV.

**Media use:**

Every morning William reads the national newspaper while he eats his breakfast, and listens to the morning radio while he drives to work. At work William only uses his computer for work related tasks, emails, spreadsheets and word processing. At home he uses the internet almost every day after dinner to check out his usual websites – most of them related to local history and genealogy. From one of his friends, another genealogy enthusiast, he heard about different internet groups and forums, and now he often enters into online discussions with other enthusiasts. He has his own website where he writes guidelines to genealogy, and links to relevant sites and databases. He likes to watch the news on TV in the evening and read the local newspaper to keep up with local events.

**Search strategy:**

William is not easy to impress with new fancy web stuff and websites that claim to offer new “indispensable” facilities. He prefers to visit websites he trusts, and only visits new sites if they are recommended in a discussion forum or a trusted network. Williams field of interest is focused on local history and genealogy, and he is not really interested in other content on the internet. His children advise him to use Google, and he does try now and then, but he much prefers to know what sort of results he will get, and that they will be relevant for his purpose.

**Relationship to Europeana:**

In spite of his initial reservation, he finds it very useful that he can search pictures from many countries at once, even though he usually prefers to refine his search by country or by language. William finds several of the facilities in Europeana to be too eager to cater to the popular, and thinks that the Timeline and the ThoughtLab could be dispensed with.

## Peter

**Personal information:**

Peter is 15 years old and goes to school. He is the youngest child in his family and he lives in an apartment in the capital together with his parents and two older siblings. Peter is not bad at school, but he often gets restless and prefers subjects where he can be creative. He has a job in the local supermarket a few hours a week.

**Interest:**

Peter’s main interest is computer games and role playing. In the evening and after school he likes to play computer games (especially World of Warcraft) and during the weekends he sometimes meets with others in the woods for role playing in full costume. He spends a lot of time preparing the games and developing his costumes. He loves to draw models of costumes and battle scenes on every piece of paper he has. Peter likes to listen to music (mostly heavy metal) and watch his favourite TV show.

**Media use:**

Peter spends more than 20 hours a week on the internet - most of the time gaming or looking for inspiration to his role playing costumes. Before, he didn’t read any books except from what he had to in his school, but after they had a fantasy theme in school he got interested in fantasy literature. For the money he earns he buys magazines about computer games and role playing. Peter doesn’t go anywhere without his mobile phone and he sends a lot of texts to his friends and class mates. He never turns his mobile phone off, unless told to by his teacher. He has set up his mobile phone to be able to keep up with online events and to be notified whenever one of his gaming friends goes online.

Peter finds most TV boring, and he never reads any newspapers. He prefers to spend his time at the computer where he chats, skypees and plays computer games.

**Search strategy:**

Peter is quick on the computer and he would rather click than think. When he wants to find something on the internet he always starts (and often also ends) with Google. He rarely bothers to find out how a website is structured, he simply does a new search. On one hand he willingly spends hours exploring interesting role playing sites, on the other hand he soon gets impatient

and restless if something interesting doesn't turn up almost immediately. Peter has a collection of specific sites to keep him updated with new stuff about role playing, computer games and music, but will just as often check out tips he get from his friends or through his network and Myspace/Facebook groups.

**Relationship to Europeana:**

Peter had never heard about Europeana before his teacher told him about it and asked him and his class mates to use it for an assignment. He might find Europeana through Google, starting with an image search. Instead of returning to [www.europeana.eu](http://www.europeana.eu) another time, he will simply do a Google search and add "Europeana" to his search words.

**Julia****Personal information:**

Julia is 22 years old and a university student majoring in humanities and the arts. She is currently working to get her bachelor degree. She is quite proficient in foreign languages. She lives in the university town in a hall of residence. She comes from a small village where her family still lives. Julia would like to do a year as an ERASMUS student in another European country.

**Interests:**

Julia is very social and spends a lot of time with her friends. She is very interested in music and she plays guitar twice a week with a band. Afterwards, they often find somewhere to listen to music or go out dancing. Once a week she works out at the student sports centre. She is interested in student politics and is on the student council. After lessons she often hangs out together with her friends at a cafe in town.

**Media use:**

Julia spends most of the day on campus and in the library where she meets her friends and class mates. At the library they can read and work together, and use the computers or their own laptops to prepare for their lessons or do assignments. They use the student platform for e-learning. They often arrange to meet by sending e-mails or texting each other. Julia uses Facebook to communicate with her friends, also those from her home village as it is a good way to keep in touch. She reads newspapers from a social point of view and to check out reviews of concerts.

**Search strategy:**

Julia always starts her search on Google, unless her teacher has asked her to use a specific website or database. When she finds a page she finds relevant, she skims from page to page to find any relevant information. She will often follow links she thinks look interesting and frequently goes on detours during her searches. Now that she is writing her first major assignment, she knows she needs to be more focused.

**Relation to Europeana:**

Julia wants to use Europeana for her bachelor assignment on European Architecture in the 50's. She found out about the site from a Google search where she saw a link to it from another website, and thought it could be interesting for her.

### 3. 9 steps - How to work with personas

- 1) Have a clear definition of what it is you want to test or develop.
- 2) Consider who will be affected by this new (or changed) system. Who are the primary and/or secondary target groups? What do you know about them qualitatively as well as quantitatively?
- 3) Choose from the Europeana personas.
- 4) Consider the personas – should any details in the personas descriptions be changed to secure the designers / developers engagement with the personas? It's crucial that the personas are so vivid that developers can engage with the personas and imagine their needs and behavior. If possible, get feedback from colleagues, users or other relevant people.
- 5) Consider the needs each persona has for using the system and in which situations the persona will use the system. Make a list.
- 6) Let each persona “experience” all the listed situations and write scenarios for each situation – i. e. realistic stories of what personas with different needs would (or wouldn't) do, and how they would (or wouldn't) do it. If you have 5 different personas and 3 different situations, you will end up with 15 scenarios. There are different kinds of scenarios: Problem scenarios, idea generating scenarios and idea testing scenarios. If possible, get feedback from colleagues, users or other relevant people.
- 7) Discuss each of the scenarios and extract ideas:
  - a) Possible needs and potential obstacles.
  - b) Possibilities for improvement – both functionally and design related.
  - c) Improved user guidance, filters, lists etc.
  - d) Transparent and coherent workflows.

Stay in your most creative mood during these considerations and always let discussions lead towards how to develop/improve the feature/site to the advantage of this persona – this kind of user.

- 8) Consider the list with all the ideas for improvement and split the ideas up into categories: easy to do, should be done, will not be done. If possible, get feedback from the affected user groups.
- 9) Integrate the personas in your daily work, “ask” them for advice, and let them influence your decisions.

## 4. Scenarios

### What is a Scenario?

A scenario is a creative tool to investigate ideas related to technical functionality, design and marketing.

A scenario is a short story describing a use situation where a fictive user, a persona, interacts with the web page.

A scenario is a “vision of the future”.

A scenario can be either problem scenarios, idea generating scenarios or idea testing scenarios.

### Why Scenarios?

They make it easier for the developing team to evaluate ideas from a user’s point of view.

It supports communication between team members.

### How are Scenarios Made?

Create your personas.

Consider the needs each persona has for using the website and in which situations the persona will use the site.

Make a list of possible use situations for each persona.

Let a persona enter into a use situation, and tell the story of what will happen – what the persona will do, not do, or wish to do. This story is one of your scenarios.

Let all relevant personas enter all (relevant) use situations.

### The Outcome

While you work through your scenarios, write down all potential obstacles and new ideas for improvement that turn up.

### Scenario – An Example:

Maria is preparing next week’s assignment for her class and she wants her pupils to use Europeana in their homework. They need to find visual material about Rembrandt and analyse it. When the assignments have been graded, the pupils must do a presentation for the rest of the class.

Maria prepares her own MyEuropeana account, so she can show the pupils how to save items for continued work and to share with the other members of their group. She also wants them to think about how to visualize their findings for the presentations with the aid of the timeline/map tools. They might also want to transfer search results or images to the school system where they work on the assignment.

## 5. Method

### 5.1 Introduction

There are many ways to create personas but basically the form and level of details depend on the context in which the personas are to be used.

Personas are not descriptions of actual people, but rather a sort of archetypal users – typical and to a certain extent representative. Personas are typically created by combining statistical information, knowledge of users, use patterns, tasks, habits, etc. So personas are done in a specific context, for a specific purpose and with regional characteristics. This dependency of context makes it a special challenge to create personas that can be used across the European countries.

The central issue has been how to develop personas that are, on one hand usable for all the Europeana partners, and on the other hand detailed enough for all countries to recognize their users in these profiles. This has been a particular challenge and is the reason why the catalogue has its particular form. It is the result of a pragmatic approach to the great variety in already existing personas, statistical material and other forms of relevant information which have been part of the research.

### 5.2 The Form of the Personas Catalogue

The catalogue consists of 7 personas, varying in levels of skills and search approach – both parameters with significant influence on use of a website, regardless of any regional and national differences. These 7 personas have the kind of details characteristic for personas, such as name, age, gender, profession, interests, level of education, etc. The details were discussed and added to the person profiles during a workshop with Europeana partners, held in Copenhagen the 12.-13. October 2009. Following the workshop the personas team developed the personas and added further details. We also, motivated by the Europeana Survey, created a 7<sup>th</sup> persona, a student.

In addition to the personas, the catalogue contains 4 fact sheets, explaining the parameters used to secure variation of basic characteristics.

### 5.3 Approach

#### Approach part 1

We arrived at 8 basic profiles like this:

- 1) We asked around for information about any work done on personas within the archive, library or museum domains. The call for information was sent to all the networks we, or any of our contacts, could think of, including the Europeana mailing list.
- 2) We made a broad literature information search and query for literature about, examples of and methodology for constructing personas used in the domain area of museums in Europe (Google, databases, ISI, Network of Europeana, and The Network for Danish Museums).
- 3) This resulted in a great amount of methodical and theoretical material about personas, as well as a large number of existing personas (76), created and used in different contexts and mainly from Central or Northern Europe. The lack of material from South and East Europe

was difficult to remedy, due to a lack of feedback from these areas, as well as our own language barriers.

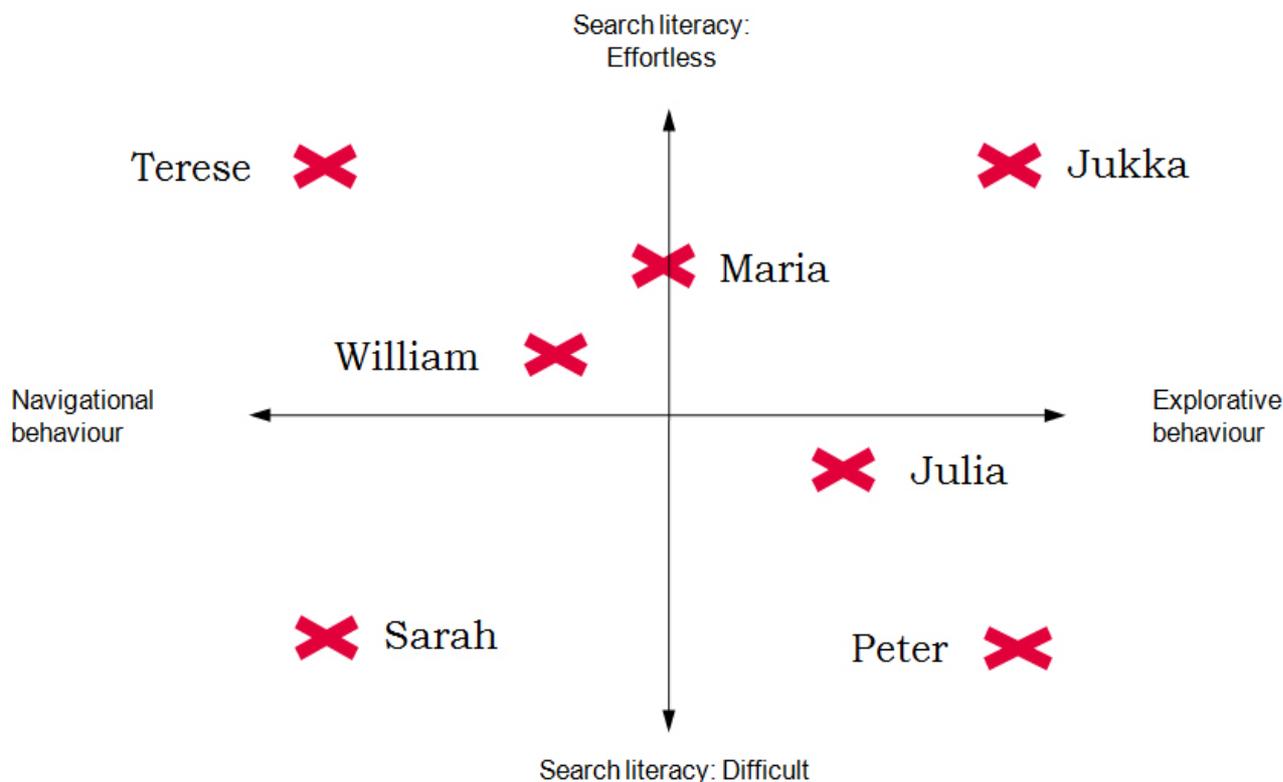
- 4) We looked up available statistical information to help us select the relevant personas and evaluate the systemization of details, as for example statistics from the Europeana Online Visitors Report (June 2009), EUROSTAT and European Year of Intercultural Dialogue. Please note that the personas in this catalogue are not statistically representative, but rather based on statistics where pragmatically possible.
- 5) All personas were systematized and analyzed in order to get an overview of their variations of individual details and characteristics, such as personality, tasks, education, domain knowledge, etc.
- 6) 18 particularly relevant personas were then chosen, all from museums or archives.
- 7) We consulted personas experts, with a lot of experience working with this methodology, and on their advice we removed all national, regional, local and personal details from the personas, condensing them to 8 basic profiles and placing them in a profile matrix.

### **Approach part 2**

Method used to get from 8 basic profiles to the 7 personas in this catalogue:

- 8) The 8 basic profiles were presented to Europeana partners at a workshop facilitated by a personas expert. At this workshop, participants were asked to discuss the initial divisions of profiles in the matrix, consider whether any profiles might be missing. Details were then added to the profiles so they would become personas, and the personas' details were agreed upon by the whole group. The personas were created during several iterations and during the process 4 of the personas were merged into 2.
- 9) On the second day of the workshop, participants were asked to make lists of possible use situations for each of the (now) 6 personas, and to develop scenarios for them. Several of the use situations were used for more than one persona. These scenarios were discussed by all the workshop participants and developed during several iterations.
- 10) After the workshop the personas were aligned, checked against the matrix, further described and validated through relevant statistics and reports.
- 11) During the validation process we found it necessary to "re-invent" one of the profiles which during the workshop had been merged with another profile. This was motivated by the Europeana Survey indicating that students are a significant user group. The 7th persona was placed in the Matrix according to theory and statistics.
- 12) Finally, the personas catalogue will be reviewed.

## 5.4 Profile Matrix



## 5.5 "Navigators" and "Explorers"

(The horizontal axis of the profile matrix)

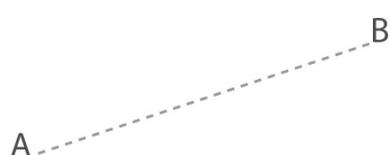
"Navigators" and "Explorers" form each extreme of the scale we have used to describe users' behavior on the internet<sup>1</sup>. This behavior may vary according to personality and individual tasks.



At one end of the scale are the "strongly explorative" users. These users have an extremely varied behaviour, and hardly ever do things the same way a second time. Their search for information on the internet is far from linear, but instead branches out in

all directions, to many different domains and with a lot of digressions along the way. Frequently, several aspects of the task are investigated at the same time and the search is easily distracted (or inspired) by interesting links and new information. Although "strongly explorative" users may be considered extreme, most people use a similar approach when looking for inspiration or when the goal is undefined.

<sup>1</sup> Ryen W. White, Steven M. Drucker (2007). Investigation Behavioral Variability in the Web Search. *International World Wide Web Conference archive. Proceedings of the 16th international conference on World Wide Web* p. 21–30.



At the other end of the scale we find the “strongly navigational” users. They are characterized by a remarkably consistent interaction pattern, almost always using the exact same method for searches on the internet, regardless of the task. They mainly

use well-known websites and follow a relatively straight trail from search to completion of task, with hardly any of the deviations typical of users who are more explorative. Although “strongly navigational” users may be considered extreme, most people use a similar approach when their goal is well-defined or their task knowledge is good.

We have used these descriptions of level in order to place the profiles in the matrix:

2	Strongly explorative	Almost always uses a lot of explorative digressions, regardless of task.
1	Explorative	Will typically choose an explorative approach but may on occasion use a navigational approach.
0	Explorative / navigational	Equal use of explorative and navigational approach.
-1	Navigational	Will typically choose a navigational approach but may on occasion use an explorative approach.
-2	Strongly navigational	Almost always uses a very structured approach, regardless of task.

In a 2009 user study at Birmingham Museums and Art Gallery<sup>2</sup>, the results, although from museum websites only, support our basic assumptions about users:

**90% of users need a lot of information about a few subjects:**

- Browsers – browse around until an object catches their attention, prompting them to look for more detailed information
- Followers – prefer museums to draw attention to objects or subjects attended by narrative information

**10% of users need detailed information about whole collections:**

- Searchers – seek knowledge about specific objects
- Researchers – have expert knowledge and expect professional access to information

<sup>2</sup> The research carried out by Birmingham Museums and Art Gallery gave a picture of user behavior at the museums websites. The research was described in: Nørskov, Vinnie & Larsen, Ane Hejlskov (2009): “Samlingen i en teknologisk tidsalder”. I Digital museumsformidling – i brugerperspektiv. Copenhagen: Kulturarvsstyrelsen.

## 5.6 Search Literacy

(The vertical axis of the profile matrix)

One of the parameters used for placing the profiles in the matrix is “search literacy”. Use of this term is inspired by (among others) various Danish studies of ICT skills. In order to place profiles appropriately in the matrix, we have defined their search literacy this way:

### IT Skills

IT skills is how we describe how experienced a person is in the use of IT, mobile phones and the internet. We have divided IT skills into four types of users: Uncertain user, capable user, experienced user and professional user.

### Digital Literacy

A person’s ability to effectively perform a task in a digital environment, combined with IT skills.

### Task knowledge

Task knowledge describes a person’s knowledge and information about a subject and their ability to perform a task in a known or unknown domain. The person may have an educational, professional or hobby supported approach to the task.

### Language qualifications

A persons’ ability to use one or more foreign languages for a task. The person may know more than their local and national language, or be part of the growing group of ethnic minorities in Europe and therefore have a first language different from the local and national language of the country they live in.

### Models of the Information Search Process

In our matrix the horizontal axis is about who the users are, whereas the vertical axis is about what they know. This means that personas, as well as “real” users, may improve their search literacy if they better their IT skills, their digital literacy and/or their task knowledge. According to Carol Collier Kuhlthau<sup>3</sup>, the placement on the vertical axis also depends on where in the (re-)search process a user might be.

#### Stage 1 - Initiating a Research Assignment

The information seeker becomes aware of a lack of knowledge or understanding and the search is initiated with no clear idea of the task, subject or information need. The search is initiated and takes the shape of a brainstorm. Feelings might be of uncertainty and apprehension.

#### Stage 2 – Selecting a Topic

A general area, topic, or problem is identified and the information seeker begins to decide where to get the information needed. Some information retrieval may occur at this point and initial uncertainty often gives way to a brief sense of optimism and a readiness to begin the search.

#### Stage 3 – Exploring Information

A lot of – often inconsistent and incompatible - information is gathered and explored, with the aim of finding a specific focus. The process is often not characterized by a step-by-step-forward

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<sup>3</sup> Kuhlthau, Carol C.: Seeking Meaning: A Process Approach to Library and Information Services. Norwood, NJ: Ablex, 2004. (Second ed. Libraries Unlimited)

movement towards enlightenment, but rather a movement back and forth. Often one subject is substituted with another. Uncertainty, confusion, and doubt might increase and information seekers find themselves “in the dip” of confidence.

#### Stage 4 - Formulating a Focus

The information seeker begins to evaluate the information that has been gathered. At this point, a focus begins to form and a “turning point” gives direction to the continued search. Uncertainty diminishes as confidence begins to increase.

#### Stage 5 – Collecting Information

The information seeker knows what is needed to support the focus. At this point, the search is more effective because the focus is clear. The information seeker feels their self confidence growing.

#### Stage 6 – Preparing to Present

In the final stage, the information search is completed, information is analyzed, summarized and in other ways prepared so the communication of findings can take place.

## 6. Statistical validation

In our work with personas we have used EUROSTAT and the Europeana Survey to support the personas. They are not statistically significant, but have given us a context and an overview of the distribution of users in the EU, generally, regionally and by country. The local and regional distribution is not shown here, but tables and figures can be found in the publications we refer to in our documentation.

### 6.1 Population, Age and Education in EU

In 2007, the EU-27 (European members’ country) populations were around 495 million inhabitants, with a broad range of cultural, social and linguistic diversity between groups and countries<sup>4</sup>. With this diversity in mind, we know that how you define culture varies according to age, length of education and occupation<sup>5</sup>. Below is a table of the population by age group, as a percentage of the total population of Europe.

	0 to 14 years	15 to 24 years	25 to 49 years	50 to 64 years	65 to 79 years	80 years and more
<b>EU-27</b>	16, 0 %	12,7 %	36,4 %	18, 1%	12,6 %	4,1 %
<b>Euro Area</b>	15,6 %	11, 9%	36,8%	18, 0%	13,2%	4,5%

**Table 1:** Population by age group in the EU, % of total population, 2006 (Source: Europe in Figures – Eurostat yearbook 2008, Table SP.5, p 27)

In 2006 there were 18.783.000 students at ISCED levels 5-6 in Europe. Of these students 2, 6 % were studying in another EU-27 country (27 European members country, and in the future

<sup>4</sup> Statistical portrait of the European Union 2008 – European Year of Intercultural Dialogue.

<sup>5</sup> European Cultural Values p.7, 18

mentioned as EU-27) and 13, 2 % were studying humanities and the arts. This group would be likely potential users of Europeana<sup>6</sup>.

In the EU-27 the whole participation rates in tertiary education for 2006 were higher for women than for men in almost every member state<sup>7</sup>. Below you see the tertiary education students by age and gender.

EU-27	Aged 18		Aged 20		Aged 22		Aged 24	
	Male	Female	Male	Female	Male	Female	Male	Female
	12,5	18,6	29,5	40,7	26,2	32,8	18,1	19,8

**Table 2:** Education by age and gender, students (ISCED level 5-6) of the specified age as a proportion of population of the same age, 2006 for the 27 European Countries, (Source: Consumers in Europe p. 324)

How an individual considers the importance of culture is demographically dependent on country as well as whether that individual lives in an urban or a rural area<sup>8</sup>. The highest rate of cultural participation is found in North Europe and the Baltic countries. According to the Europeana online survey, participation is highest amongst the young, educated and urbanised respondents. Below you can see the participation rate for selected culture activities analyzed by age<sup>9</sup>.

Age	15-24	25-39	40-54	55 +	Difference: youngest-oldest
Public library	55%	38%	33%	24%	+31
Book	82%	72%	74%	63%	+19
Historical monuments	61%	59%	59	45%	+16
Concert	52%	43%	37%	27%	+25
Museums/ galleries	48%	42%	45%	34%	+14

**Table 3:** Participation rate by age for selected cultural activities (Source: Cultural Values 2007, p. 17)

## 6.2 Gender

Gender plays a role in both education and cultural participation. If you compare the age group 18-24 in 2006 and in EU-27, there are more women than men in the education system in Europe, and more women than men are active in cultural participation – generally speaking. Unfortunately we only have general information about these factors<sup>10</sup>. More specific information related to

<sup>6</sup> Consumers in Europe p.325-326

<sup>7</sup> Consumers in Europe p. 324

<sup>8</sup> European Cultural Values – 2007, p. 18

<sup>9</sup> European Cultural Values - 2007, p. 17

<sup>10</sup> European Cultural Values - 2007, p. 16

gender will require more analyses of national and local statistics. Further information about museum visitors can be found in EGMUS European Group of Museums Statistics.

### 6.3 Digital Literacy, Search Strategy, and Information Literacy

Digital literacy and information literacy is not the same thing<sup>11</sup>. People behave in different ways when they interact with digital information resources. The main search patterns among those born after 1993 – who are likely to interact with digital resources in five to ten years' time – is horizontal information searching, so-called “skimming”. Users spend time navigating or trying to find their way around virtual environments and will only spend a short time viewing or reading<sup>12</sup>. From previous research into user behaviour<sup>13</sup>, we know that users can be described as navigational or explorative searchers, a premise we have added in our matrix for the personas. 89 % of college students use a search engine when they begin an information search, only 2% starts from a library web site<sup>14</sup>. They search by native language, and will not spend time evaluating information or source while online. They have different attitudes and communication behaviour and different information “literacies” compared to previous generations of students.

### 6.4 IT Facilities and ICT Skills

The use of communication technologies in households and by individuals is growing, but there is a generation gap in the use of the internet. Non-usage of internet in Northern Europe is 15% below the EU27 average, and Southern Europe is more than 15% above the EU27 average. Low digital literacy is more evident among women and older people, as well as the ability of the latter to perform tasks on the internet<sup>15</sup>. People's education is important for how their basic ICT skills. Below, you can see how many individuals used the Internet at least once a week – by age and gender.

Age	Male EU27	Female EU 27
16-24	79%	77%
25-54	61%	55%
55-74	31%	19%

**Table 4:** Individuals use of the Internet once a week, by age and gender in EU-27, 2007 (Source: Smihily, Maria (2007) *Internet usage in 2007: Households and Individuals, Data in Focus (23)*, p. 2)

<sup>11</sup> An overview of information literacy in Europe regarding lifelong learning can be found in Europe's Digital Competitiveness report Vol. 2: i2010 – ICT Country profiles.

<sup>12</sup> The Google generation: the information behaviour of the researcher of the future / Ian Rowlands, David Nicholas, Peter Williams, Paul Huntington, Maggie Fieldhouse, Barrie Gunter, Richard Withey, Hamid R. Jamali, Tom Dobrowolski, Carol Tenopir, 2008, p. 295.

<sup>13</sup> Investigation Behavioral Variability in the Web Search / Ryen W. White, Steven M. Drucker, 2007.

<sup>14</sup> The Google generation: the information behaviour of the researcher of the future / Ian Rowlands, David Nicholas, Peter Williams, Paul Huntington, Maggie Fieldhouse, Barrie Gunter, Richard Withey, Hamid R. Jamali, Tom Dobrowolski, Carol Tenopir, 2008.

<sup>15</sup> Virkus, S. Information literacy in Europe: a literature review. 2003, p. 5.

More than one in four reads the news on the internet. In relation to Europeana visitors, this is an important information because the Europeana users have typically found out about Europeana from newspapers<sup>16 17</sup>.

## 6.5 Mobile Phones

95 % of young people in Europe aged 12 to 18 have their own mobile phone<sup>18</sup>. The rate is highest in Italy with 98% and lowest in France with 87%. It is an important communication media for this group in their everyday life. They use mobile phones to communicate with friends, both for calling and for text messages. There are variations depending on which country they come from, but it is a growing communication media for this group.<sup>19</sup>

## 6.6 Cultural Use of the Internet

More than half of all EU citizens use the internet in their free time, which plays an important role for the cultural life. Usage is highest among the educated, young men, and those living in urban areas. Below you can see leisure-time internet use for the categories of EU-citizens relevant for Europeana.<sup>20</sup>

Purpose of Leisure Time Internet Use:	EU-27
Searching for cultural events and products	42%
Visiting museums/ library websites	24%
Preparing for travels	42%
Newspaper articles	39%

**Table 5:** Leisure-time Internet use for selected EU-Citizen categories relevant for Europeana. (Source: European Cultural Values - 2007, p. 24-30)

## 6.7 Language Skills

The European Union is multilingual. People use their native language, national language, regional language, and foreign languages. We know from EUROSTAT, that in 2007 28% of the EU population aged 25 to 64 said they spoke two or more foreign languages, 36% spoke one foreign language, while 36% said they did not speak any foreign languages. English is the most commonly studied language in 2/3 of the member states. The highest share of those speaking no foreign languages were found in Hungary (75%), Portugal (51%), Spain (47%), Bulgaria (44%)

<sup>16</sup> Loöf, A. (2008). Internet usage in 2008: Households and Individuals. *Data in focus* (46), pp. 1-4. The reasons why people, do not have internet access is also described here.

<sup>17</sup> More general information about ICT use by households or individuals and broadband by country in EU from 2004 to 2008 can be found in the Europe's Digital Competitiveness report Vol. 2: i2010 – ICT Country profiles. [http://ec.europa.eu/information\\_society/eeurope/i2010/docs/annual\\_report/2009/sec\\_2009\\_1060\\_vol\\_2.pdf](http://ec.europa.eu/information_society/eeurope/i2010/docs/annual_report/2009/sec_2009_1060_vol_2.pdf).

<sup>18</sup> The media use of the youths is described in the publication "The appropriation of new media by youth", a survey completed by 7393 students in the age 12 to 18 years from 9 European countries of the European Union (Belgium, Denmark, Estonia, France, Greece, Italy, Poland, Portugal and the United Kingdom)..

<sup>19</sup> The Appropriation of New Media by Youth : A European Research Project, 2006, p.14-15.

<sup>20</sup> European Cultural Values - 2007, p. 24-30.

and Greece (43%). The highest share of the population, who spoke two or more foreign languages, were found in Slovenia (72%), Slovakia (68%), Finland (68%), Lithuania (66%), Estonia (56%) and Latvia (55%). Countries with the highest declaration on one foreign language are United Kingdom (65%), Cyprus (59%), Austria (50%), Greece (45%) and Sweden (45%).<sup>21 22</sup>

## 6.8 Europeana Survey

In 2009, Europeana conducted an online survey<sup>23</sup>. This showed that the largest number of respondents came from Spain, France and Italy<sup>24</sup>. Below you can see the division of the respondents by profession. The heaviest group of Europeana users is “Others”. Unfortunately it is not possible from the survey to say anything more specific about who they are, except that they do not belong to any of the specified academic groups. Librarians, information specialists and managers make up the largest groups of Europeana users, along with teachers and students.

Profession	Responses	
	Manager / administrator	406
Librarian/ information specialist	297	9,3%
Student of College / university	275	8,6%
Teacher	254	7,9%
Researcher	223	7,0%
Not employed / not in education	174	5,4%
Lecture / professor	148	4,6%
Student at school	81	2,5%
Writer	79	2,5%
Curator / Archivist	60	1,9%
Other	1207	37,7%
<b>Total</b>	<b>3,204</b>	<b>100,0%</b>

**Table 6:** Survey respondents by profession. (Source: Europeana Online User Survey, IRN Research May 2009 Table 2, p. 6).

From the Europeana survey an interesting picture appears of the age of the users (or the users who participated in the survey). There is a very clear tendency that use of Europeana increases

<sup>21</sup> Eurostat newsrelease 137/2009

<sup>22</sup> Further information and link to language and Multilanguage in Europe, can be found at the European Commission Languages Pages. [http://ec.europa.eu/education/languages/languages-of-europe/doc139\\_en.htm](http://ec.europa.eu/education/languages/languages-of-europe/doc139_en.htm)

<sup>23</sup> Europeana Online User Survey, IRN Research May 2009

<sup>24</sup> Europeana Online User Survey, IRN Research May 2009 Table 2, p. 6.



with age. The smallest group of users is under 15, and the biggest group of users is between 45 and 54. For users older than 55 years the use of Europeana decreases significantly.

In relation to our personas one might argue that the distribution of the personas' age should mirror the age distribution of Europeana's real users, so the main part of the personas are given an age between 45 and 54. However, the main part of our personas is from a younger segment. The reason for this priority is that the younger segment of the European population is the segment that Europeana wants to focus on and so personas from this segment will be needed. Other research about the use of culture in general has shown<sup>25</sup> that this younger segment of the European population (15-24 year-olds) are heavy users of culture. This makes it very interesting to Europeana to focus on reaching this target audience.

Users of Europeana typically found out about Europeana by reading about the project in a paper or journal, or via a link from other websites. Most of the users did not use My Europeana, which is a personal account in Europeana . Further information will come from upcoming Europeana log analyses that will supplement information from the survey, about which part of Europe users come from, nationality and geographical location, whether its home or institutional use, and what platform they use. The log file analysis is, however, not going to be finished in time to be included in this catalogue.

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<sup>25</sup> "European Cultural Values - 2007"..... p. 8 and p. 17.

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