

D3.4 – Final Report on Europeana Labs Network Sustainability Plan and Generic Business Models

‘Europeana Labs’ is a service developed by the Europeana Creative project. The initial version of the website (the alpha release) was delivered on January 23, 2014 at <http://labs.europeana.eu>. This document from Europeana Creative Work Package 3 provides a sustainable business model to ensure Europeana Labs’ future.

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D3.4 – Final Report on Europeana Labs Network Sustainability Plan and Generic Business Models

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Executive Summary

It has become very clear that the market of Cultural and Creative Industries (or CCIs) is booming and an important driver for both social and economic growth in Europe. It represents 4.2% of the overall GDP in Europe, but more importantly, it is a growth market. Perhaps even more significant is the fact that CCIs are the third largest employer in Europe (after construction and food and beverage) and employ a higher than average percentage of young people. The question is therefore not if we should enter this market, but how? What does it take to fuel this industry? How can the digital cultural heritage that we have painstakingly assembled, standardized and enriched contribute to the further development of this market? How can Europeana continue to play a role in helping young creative entrepreneurs develop their skills?

During the Europeana Creative project, we have learnt some important lessons:

Lesson # 1: Make the data fit for purpose. We are catering to a much more demanding audience that requires direct access to preferably rights-cleared content (that meets significantly higher quality criteria than we have been used to), intelligently wrapped in relevant metadata. This is the number one thing that they expect from us, so we're providing access to our [best datasets](#). We are investing in mechanisms to automate the provision of this type of data through critical components, such as the media file checker integrated into the API, a content caching service using the IIIF image serving protocol, and a Publishing Framework to guide Europeana's data partners. These instruments should make it much easier for our audience to surface the material that they want from the vast collection that we make available.

Lesson # 2: Co-creation doesn't stop at ideation. From the start, we have aimed to integrate [physical co-creation spaces](#) into the service offering of Europeana Labs as this was seen to be an important element for getting creatives, other users and data providers to co-create useful applications. We have experienced that just having rooms available in nice working spaces across Europe is not sufficient to ensure co-creation is actually taking place. Co-creation seems to work particularly well when the physical lab also has expertise in a particular area, such as Platoniq who are experts in crowdfunding processes or Aalto Media Factory. When expanding the network of physical labs, this needs to be a serious consideration. We also learned that to be successful we should not stop after the ideation process is finished and a prototype is delivered, as happened with most of the Pilots. We need to take the process further - all the way from its first vetted idea until we have brought it to market. A good example is [VanGoYourself](#), which showed considerable potential as a Pilot and which we needed to support further during the product life-cycle. Here, the work of crowdfunding specialists Platoniq is currently bearing fruit.

Lesson #3: We need a tighter focus on audience. Perhaps the most important lesson has been that it is impossible to cater to every audience. The creative industries are composed of all kinds of organisations with very different needs and we simply cannot address them all. In this plan, we distinguish six different audiences ranging from Smart City initiatives and large game companies like Rovio all the way to an often underestimated community of semi-professionals, or so-called ‘makers’. All of them have their own characteristics and needs, not all of which Europeana is well positioned to cater for at this point in time. While the large game companies can usually source their digital content and expertise through their own means, the makers (who do need quality content at low cost) are often hard to reach.

We have chosen to focus our efforts on the middle segments: the culturally minded developers who are tech savvy enough to interact with our technology stack and find the content they need are our primary audience. With over 2,500 API keys handed out, we are already making progress here. We are also starting to find out what makes them tick, and what we can do to support them.

Our second target group comprises the digital innovators - creatives with less technical knowledge but an appetite for cultural heritage and the vision to design and develop new things with it. We see a large potential here, but will need to make it much easier for them to find what they are looking for without in-depth knowledge of our APIs.

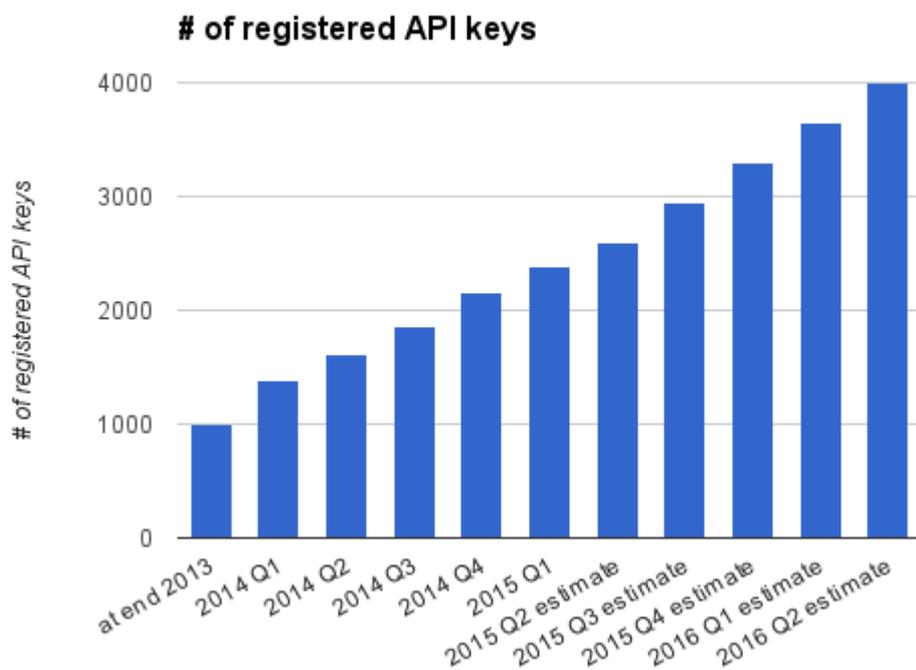
Our final target group is made up of the intermediaries, such as Etsy, with whom we can forge partnerships and through which we can develop a relationship with the maker community.

These are the customer segments we believe we can make a difference in, helping them to achieve their goals and dreams. How do we do this? By making it easier to find content of sufficient quality to suit their needs. By providing inspiration and a thriving network of like-minded people. By giving the very best people the chance to develop their ideas to the next level.

This will require a continued level of investment after Europeana Creative ends in July 2015. We will continue this investment as Europeana progresses as a Digital Service Infrastructure (DSI), providing the basic infrastructure, the means to maintain and develop the website and the APIs, and develop new partnerships. During the next 18 months, we will strengthen our relationships in particular with the sister projects [Europeana Food & Drink](#) and [Europeana Space](#), who have some budget to contribute to the further development of Europeana Labs and expand our relationship with the [European Network of Living Labs](#) (ENoLL) to increase our impact.

Introduction

Europeana Labs (labs.europeana.eu) launched in April 2014 as a deliverable of the Europeana Creative project. Its aim was to create an attractive platform for ‘creatives’, a playground that would engage them with the collections in Europeana and inspire them to create new things. Since launch (still in beta) we have enjoyed some success: we now have over 2,500 signed-up API key holders; we have a Labs mailing list reaching over 2,200 subscribers; we showcase over 100 applications on the Labs website and we have run enough hackathons and Challenges to establish that there is demand for quality cultural content, code and support.



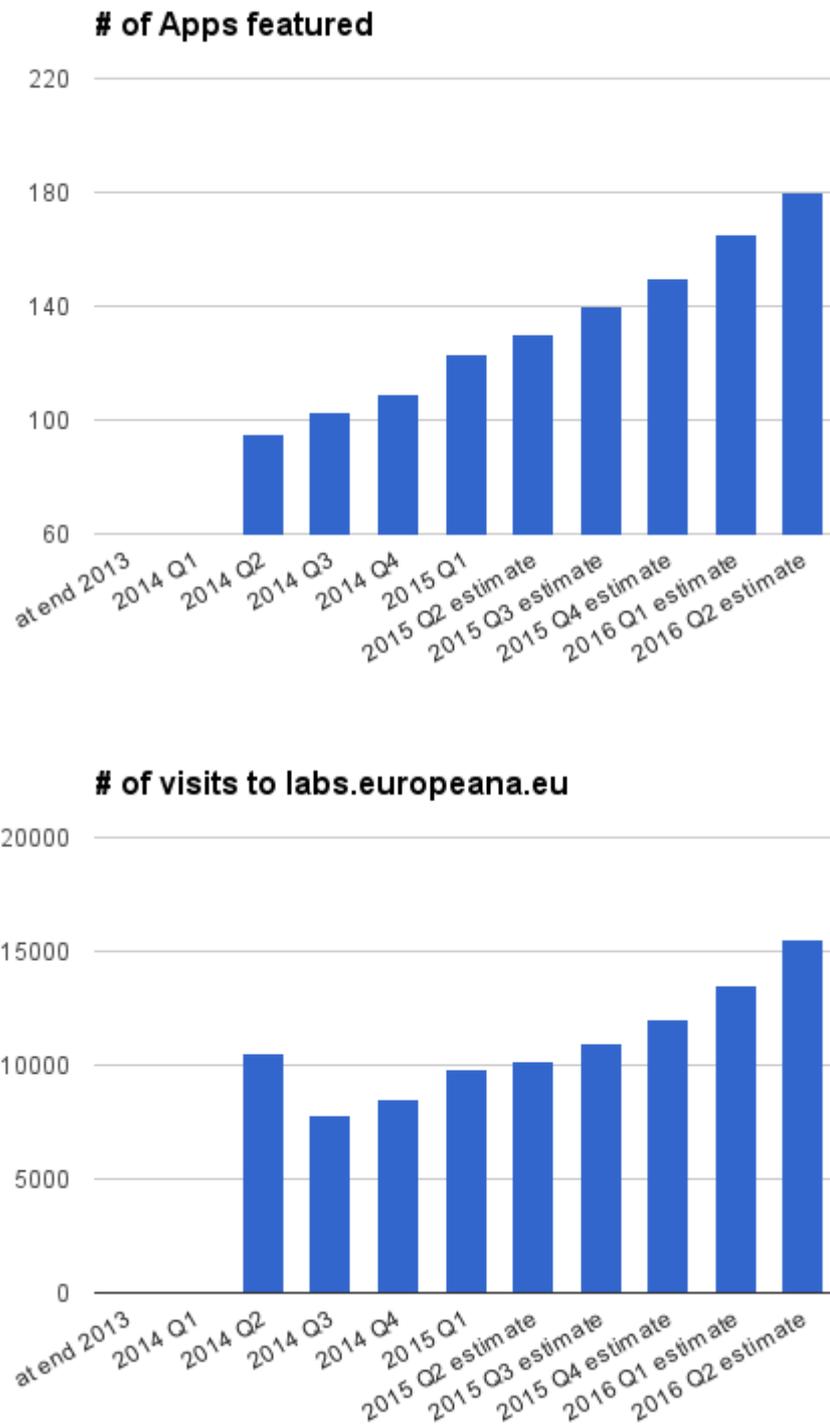


Fig. 1: Graphs showing historical and projected progress for Europeana API key requests, featured apps and visits to Europeana Labs

We also know that we are not where we want to be yet. The market of ‘creatives’ is very heterogeneous and requires us to make choices in who we can best cater to. The quality of the results of the [Challenges](#) is not in line with the investments we are making, and more often than not the winners do not get past the Pilot stage. To be successful, we need to be better attuned to our ‘engine of growth’, understand better who our audience is and how to cater to their needs. The good news is that we have accumulated important feedback that will help us to improve our service beyond this first ‘minimal viable product’ when the Europeana Creative project ends in July 2015.

To be sustainable, Europeana Labs needs a robust business model. This document outlines all aspects of the business model of Europeana Labs, and investigates how it can improve our value propositions to specific audiences of creatives so that we can continue to play a role in this important market for cultural content beyond the lifetime of Europeana Creative as a project.

Europeana Labs Business Model

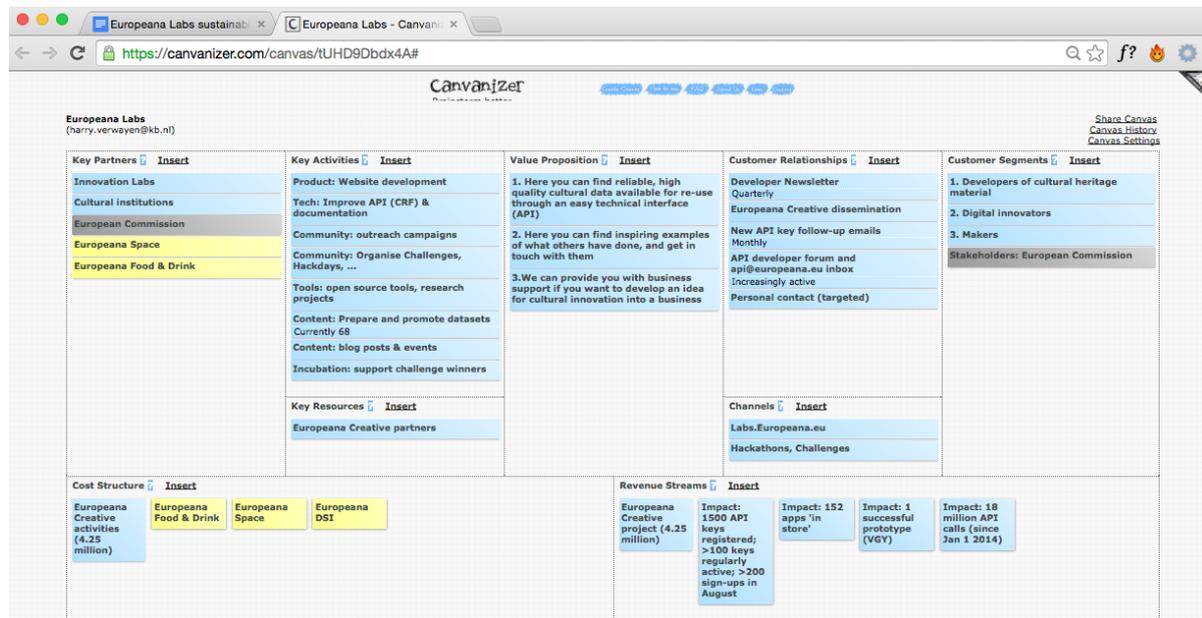


Fig. 2: Developing the Europeana Labs business model. See <https://canvanizer.com/canvas/tUHD9Dbdx4A#> for a more detailed view

To ensure that Europeana Labs is sustainable beyond the lifetime of the Europeana Creative project, we have evaluated its original business model and developed it, giving us a sharper focus on who we target, what their needs are and how Labs can meet them.

Our key value proposition: Europeana Labs provides easy access to 're-usable' digital cultural heritage to a primary audience of culturally minded developers, and two secondary audiences of digital innovators and intermediaries.

We will continue to investigate whether we can serve the growing 'maker' community at one end of the spectrum and Smart Cities at the other, but we are currently best positioned to cater to the developer audience who have the technical skills to interact with Europeana's technology stack and find the things that they want. In the next six to twelve months, we will invest primarily in making the product better for this audience, by introducing a media file checker, making the website more structured and community driven as well as relevant to improve our level of support to get the most promising ideas to market.

At the same time, we will investigate the needs of the digital innovators and intermediaries so that we can provide solutions for these markets. We will work more closely with Europeana Food & Drink and Europeana Space, which operate in the same markets, to optimise the impact of the investments they can make in this area.

We anticipate that targeting these three audiences will result in a higher conversion of API keys to prototypes and eventually working applications and businesses. While we are never sure what people are doing once they have requested an API key, we can track the activity of the keys and will be more actively engaging with that audience to see how we can help them. Because of the nature of the markets that we are serving (small businesses and semi-professionals), we believe that the social and economic impact will be substantial and lead to a multiplier-effect, but direct income streams are likely to be low to non-existent.

The Europeana Labs business model is made up of eight building blocks. Each subsequent section of this document looks at a different block. They are:

1. Audiences and Markets
2. Value Propositions
3. Channels
4. Relationships
5. Partners
6. Activities
7. Costs
8. Benefits

1. Audiences and Markets

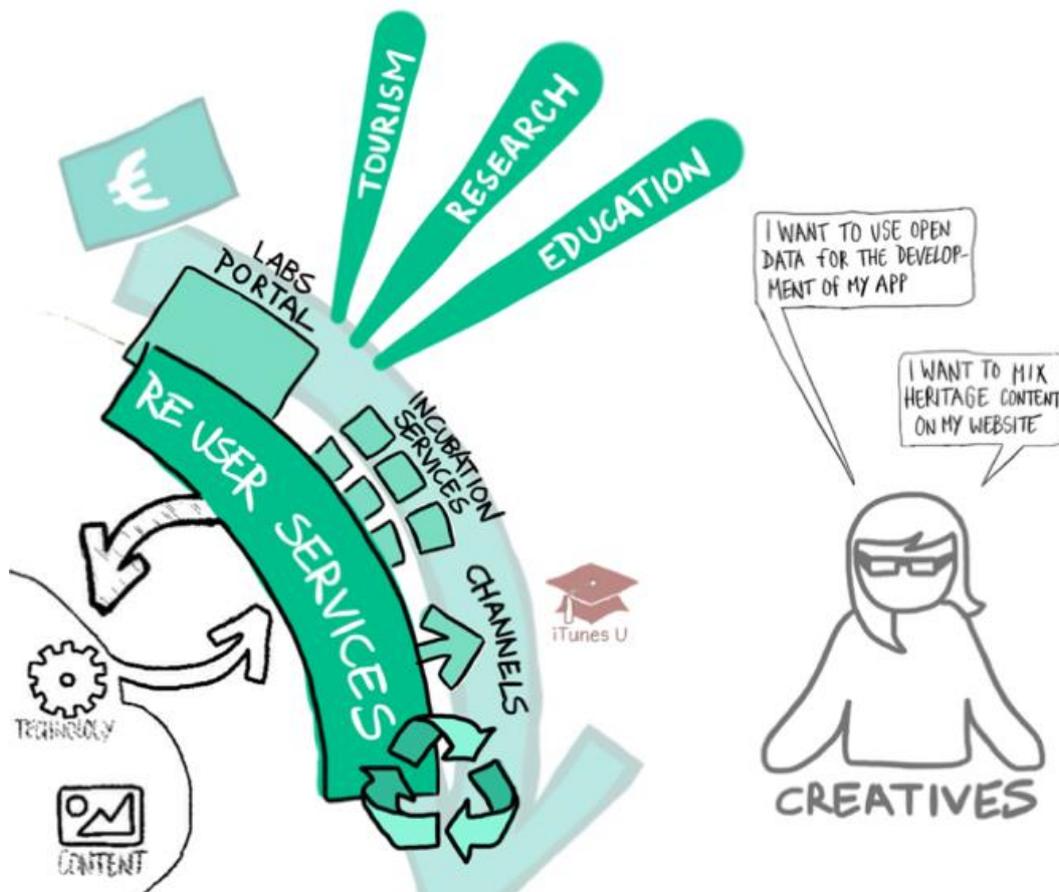


Fig. 3: Europeana's re-user services

As a platform, Europeana (of which Europeana Labs is a part) serves three interdependent markets: end-users, cultural institutions and professional re-users. The re-user market in turn has four main target market segments: research, education, tourism and the creative industries. Europeana Labs' audience sits within the last of these, the creative industries.

A bespoke front end to the central Europeana platform is being developed specifically for the research audience. So far, 434 researchers have signed up to use [Europeana Research](#). The site will carry editorial tools and services that cater for their needs and allow them to build a community.

Europeana has also decided to target education and tourism through direct partnerships with key players in these markets with big, already established audiences and well-known services and platforms. By making Europeana data available in their online environments, we will be

able to reach their audiences easier, faster and at much larger scale. For example, as Europeana develops as a DSI (in the period 2015 - 2016), we will work together with powerful associations such as European Schoolnet, a network of 31 European Ministries of Education, based in Brussels, Belgium. We are venturing into the more commercial education markets via work with iTunes U and others. We will apply the same approach for the tourism market.

Europeana Labs aims to engage the creative industries, a term covering everything from publishers, to music producers to SMEs producing, for example, apps or innovative design. This is a very large and growing market, as demonstrated in the following section on the creative industry landscape.

1.1 Our API Users

'We develop an application to teach history in digital classrooms and we are looking to integrate some of the material at Europeana into our platform. Also, we allow teachers to create their own lessons through our platform and we want to promote the usage of public domain imagery by offering an interface to include media from Europeana'. Yoran Brondsema, Chief Technology Officer of Hstry, a startup in education technology.

In November 2013 we conducted a survey of our then 700+ API users to find out what they were using and where they faced difficulties. The results of that survey were that our audience had a desire for more documentation, more contact with Europeana and more contact with others in the API community. The greatest problem they were looking to solve seemed to be lack of time. Curiosity had led developers to access the API and start playing with it but very few went on to develop something, the notable exceptions at the time being Kringla's use of the API to show Swedish Cultural Heritage from around the world and the Royal Museum of Central Africa, Belgium.

Our current API user data does not break down the profession of the user. It gives their field of work, listing whether they are in research, from a gallery, a commercial company etc. We need a better breakdown of their profession according to standard identification systems and then within the profession the 'industry' in which they work. A new sign up procedure on the improved site will rectify this.

So what do we know? Of the 2,229 registered API users, 434 identify themselves as belonging to research/education with the second largest category characterising themselves as individual developers. A significant number are working in the cultural sector (libraries 130, museums 33, archives 36 and galleries 41). Overall, the assumption is that all are developers within their designated field of work. This knowledge has informed our decision to focus our efforts most on attracting the cultural heritage developer community.

1.2 The operating landscape of creative industries

The market for culture and creative industry in Europe is bucking the current trend in other markets and is growing significantly. A variety of reports from the EU endorse this market and seek to support it, such as the *Creating growth* report, in which Martin Schulz says:

'[C]ulture is one of Europe's greatest assets. To say nothing of their immense nonmaterial value, the creative and cultural industries account for 4.2% of the GDP of the Union, nearly 7 million jobs, primarily in small businesses.'

Financial Revenues and Employment

According to the *Creating growth* report, the cultural and creative industries (CCIs) have an annual revenue of €535.9 billion, employ more than 7 million workers, and are seen to be central to Europe's economy and competitiveness. Their importance and potential to create jobs and fuel economic growth are recognized by the European Commission in their 2010 report, *Europe 2020, a Strategy for Smart, Sustainable and Inclusive Growth* and Green Paper *Unlocking the Potential of Cultural and Creative Industries* from the same year.

From the same report we can learn that the creative industries are dynamic and growing fast, even in tough economic times. Their resilience proven during the economic crisis when job creation in CCIs grew on average by 3.5% a year from 2000 to 2007, and continued to grow at 0.7% annually between 2008 and 2012, even as the number of jobs in the rest of the economy fell 0.7% in 2013. Even more interesting is the fact that the creative and cultural sectors employed, on average, more 15 to 29-year-olds than any other sector (19.1% of total employment in CCIs versus 18.6% in the rest of the economy). In eastern and central Europe, the trend is even more pronounced. Here, young people account for 1.3% more jobs in the creative economy than in the rest of the economy.

Global Leadership and Entrepreneurialism

The *Creative growth* report and that of the European Creative Industries Alliance - *Create, Innovate, Grow: A new policy agenda to maximise the innovative contributions of Europe's creative industries*, both emphasize the importance of CCIs to Europe in terms of visibility and leadership. Many of Europe's CCIs are world leaders in their fields (e.g. Rijksmuseum, Random House, Reed Elsevier, Thomson-Reuters, Spotify, Ubisoft, Rovio, Universal, Endemol).

Relevant Trends

Other interesting research from the *Creating growth* report relates to the use of mobile devices. Europeans are changing the way they access media and culture. More than 50 million Europeans now go online on tablets and 68% own an internet-enabled mobile phone - up 46%

since 2010. This is facilitating a change in the way people read, watch and listen to media, culture and much else. This new ecosystem is driven by cultural content.

Europe will be transformed by the increasing availability of technology, free wifi and digital content. It can capitalize on its cultural wealth, which is the second most important reason given by tourists for choosing places in Europe as their holiday destination (after value for money). The cultural and creative industries have an important role to play in making our heritage available digitally on the devices that people use to plan their trips.

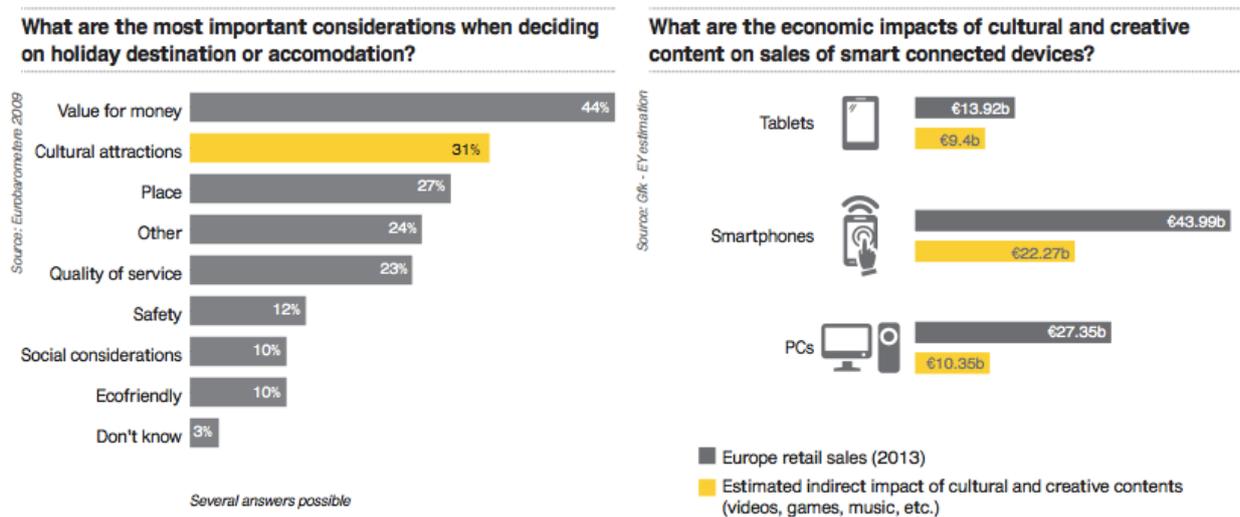


Fig. 4: Survey questions from the ‘Creating growth’ report

1.3 Our Target Markets

Further analysis of the cultural and creative industries has led us to break it down into the areas in which we can be most effective, that is, those that can be fuelled by our digital cultural heritage material.

One important characteristic of the CCI market pointed out in the report *The Entrepreneurial Dimension of the Cultural and Creative Industries, 2014* (page 7) is that the creative industries lack medium-sized businesses:

'The number of large-scale enterprises is marginal at less than one percent, but they are responsible for more than 40% of the annual turnover. [...] medium sized enterprises seem to be almost absent.'

That means there is a lot of focus and attention on the large successful companies such as Rovio and Ubisoft. While this is understandable, this leaves out the huge potential for the many

small businesses that exist. Increasingly, growth seems to be fuelled by these small businesses and individuals referred to as the ‘maker’ community. While Europeana has little to offer the large successful game companies like Rovio who can buy content and expertise through their own resources, and want one-off access to an image or video, Europeana has a very big role to play with the small businesses for whom market failure in terms of copyright or online access to other nationalities cultural heritage provides sometimes insurmountable obstacles.

We have therefore adopted the often used small-large business segmentation and adapted it into six identifiable market segments.

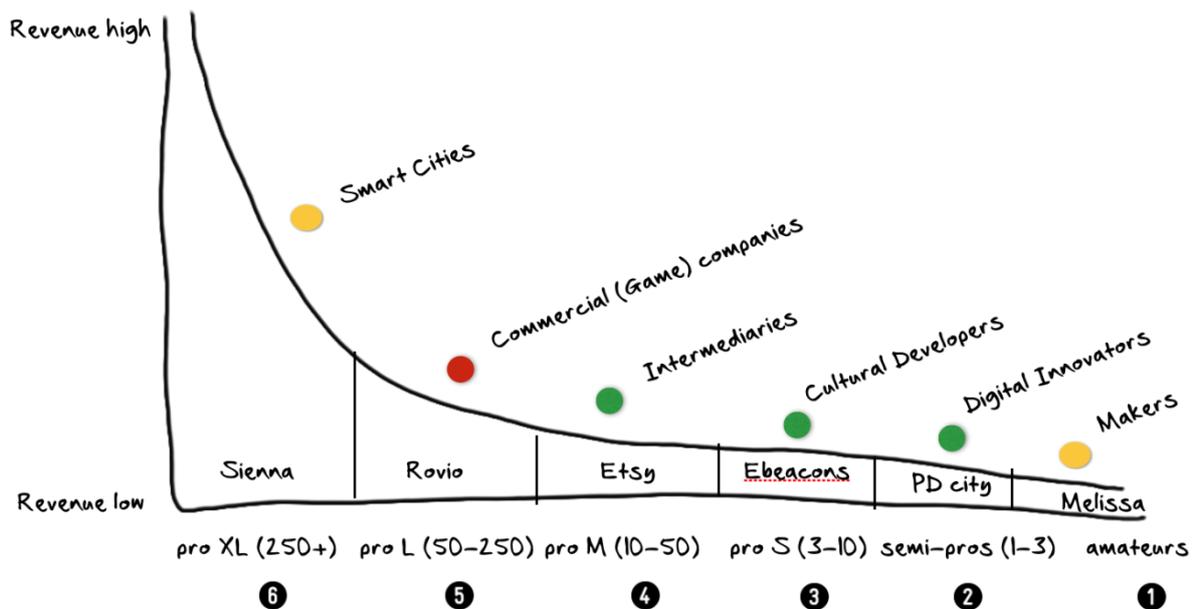


Fig. 5: Europeana Labs’ target markets

We believe that our strongest market sits in the long tail and relates to the **cultural heritage developer community (3)** who are creating apps for discovery (e.g. Culture Cam, Culture Collage), for education (e.g. Hstry) or for cultural tourism (e.g. Europeana Beacon, Timepatch, Zeitfenster). Linked to this is the community of people we call **digital innovators (2)**, usually a one or two person start-up with good ideas and potential (e.g. Public Domain City). Lastly, the **intermediaries (4)** (Etsy, Artstack) who serve the maker communities but who are easier to connect to than the makers directly.

We know that we cannot serve well the mid-range and large companies such as the **games companies or publishers (5)** as they need very particular bespoke material and a level of consultancy that their margins do not allow payment for. However, we are optimistic about the market that relates to **Smart Cities (6)** and the **maker community (1)**, but these need further investigation.

Europeana Labs will start by serving markets 2-4, concentrating on accessing the developers who contribute to them. Over the course of the second half of 2015, we will investigate the potential in the Smart Cities and makers community. We will look into the best way to serve these, which may not be via Europeana Labs.

1.3.1 Primary Market: The Cultural Heritage Developer

A Europeana Labs developer wishes to use the API and view the datasets. They would like to become part of the community, showcase their product or service, link to other Europeana services where appropriate and enjoy being part of cultural heritage, finding ways of making it more accessible to the user. This group likes to participate at the start of projects and to be part of their co-creation. Access to the activities of physical labs that link to Europeana, such as a new form of hackathon, will increase their engagement with cultural heritage.

1.3.2 Secondary markets: The Digital Innovator and the Intermediary

The Digital Innovator

In the context of Europeana Labs, unlike the cultural heritage developer, members of this community may not have strong developer skills but they do know what technology can do and have strong ideas on how to make use of it to create new business in the cultural sector. They can lack both business knowledge and access to finance. To help them, Europeana Labs will give advice on starting up, crowdfunding and investment capital as part of its incubation funnel.

The Intermediary

Intermediaries emerge wherever there is a proliferation of small businesses with similar markets and purposes. In the offline world it would be impossible to serve these large, often dispersed niche audiences, but in the online world all this requires are platform organisations who can connect buyers and sellers and whose primary job it is to ease the transactions.

Organisations like Etsy show that while most individual makers are very engaged in their activities but don't make a lot of money (in comparison to large organisations in the creative industries like Rovio), and certainly not enough to be able to buy content or services, their combined revenue, and therefore their impact on the economy as a whole, can be substantial.

Working with intermediaries, Europeana may be able to broker the relationship between makers who need raw materials for their creative work and cultural institutions who have digital heritage to share.

1.3.3 Tertiary Markets: Smart Cities and Makers

Smart Cities

'A Smart City is a city seeking to address public issues via ICT-based solutions on the basis of a multi-stakeholder, municipally based partnership'. EU's ['Mapping Smart Cities in the EU'](#) (Jan 2014), page 9.

Smart cities are a relatively new phenomenon but with a lot of potential for innovation and growth. There are Smart Cities in all EU28 countries, but these are not evenly distributed. Smart City initiatives are most active in the UK, Spain, Italy, Austria, Denmark, Norway, Sweden, Estonia and Slovenia.

Good examples of Smart Cities (with populations ranging from 60,000 to over 2.5 million) include: Southampton, Amsterdam, Chicago (which saved \$400,000 by moving to cloud-based productivity tools), Barcelona, Stockholm (€70 million investment in Smart City technology projects across all city departments), and Santa Cruz in California.

In 2012, the EC launched the *European Innovation Partnership on Smart Cities and Communities* as part of its Digital Agenda, to 'bring together European cities, industry leaders, and representatives of civil society to smarten up Europe's urban areas'. Until now, over 3,000 partners from 31 countries have submitted around 370 commitments, with most of the lead partners being public authorities (36%), businesses (26%) or academic/research institutions (16%).

To date, we have not been able to establish a market size for the use of cultural heritage data and indeed may not have one until more experimentation has taken place. We will use the next 18 months to dig deeper into how we can service this new and exciting market.

Makers

Maker culture is all about creating new things by remixing and repurposing existing material. From the worlds of electronics, programming, computer-aided design and digital content come new works like collages, fabrics and 3D printed objects. Maker culture is now being adopted in education as a way of providing a more engaging and participatory approach to learning, bringing core subjects like science, technology, engineering and maths to life. Wikipedia tells us that:

'The rise of the maker culture is closely associated with the rise of hackerspaces, Fab Labs and other "maker spaces", of which there are now many around the world, including over 100 each in Germany and the United States.'

And according to Atmel technologies:

‘In the United States alone, there are approximately 135 million adult Makers - that’s well over half (57%) of the American population ages 18 and up - not including children and teens both interested in STEM and tinkering. Evident by the plethora of Maker Faires, makerspaces and other hubs spanning across the nation, this segment is expanding rapidly in size and economic heft. In fact, did you know the Maker Movement pumps roughly \$29 billion into the economy each year?’

The market size statistics we have gathered are North American, but can be seen as indicative of a global trend. There seems to be enormous potential in this market using cultural heritage as an inspiration and our network of physical labs to encourage participation.

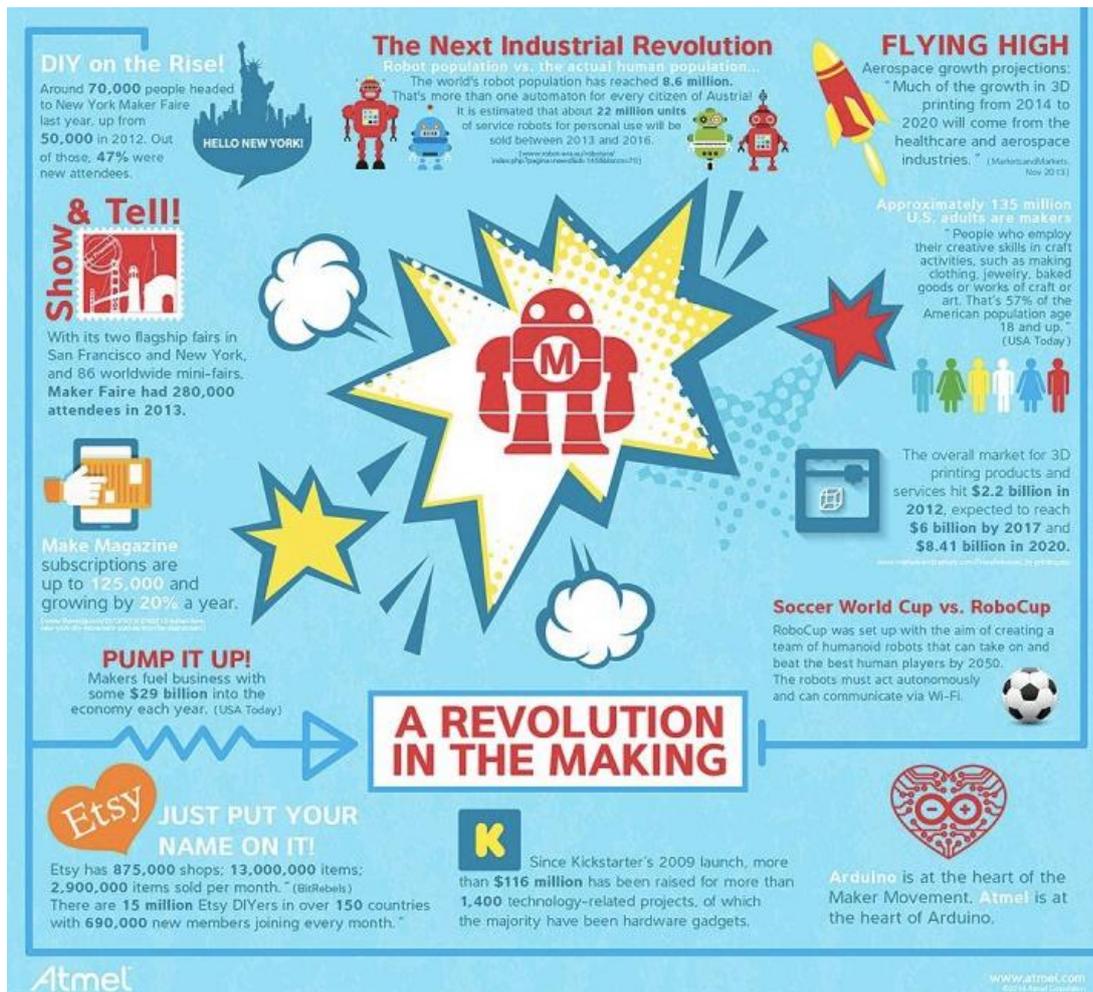


Fig. 6: Maker culture - the next industrial revolution

2. Value Propositions

At the start of the Europeana Creative project we made a number of assumptions on the value that Europeana could provide to the creative industries. The primary assumption was that a revenue stream could be built from the creative industries because we believed there was real demand for the data that we collect from our data partners. While this has proven to be the case, it has also become very evident that finding the material needed, in the right quality and with the correct licence, is still much harder than it should be.

We have chosen to invest in the short term in mechanisms to make it much easier for people to find the material that they are looking for.

We also know now that the types of creative industries we can attract do not earn enough to be able to pay for data. Europeana can therefore be their digital service infrastructure, providing free fuel for this growing sector of the economy. As their businesses flourish, the EU receives improved tax receipts that pay for underlying infrastructures such as Europeana.

Value proposition 1: Europeana Labs gives you reliable, high-quality cultural data and open source tools available for re-use through an easy technical interface (API)

‘Some feedback from the dev team: they love the new Labs site! Once I pointed them there for EDM and API docs, they were extremely happy, and the development of our service got much faster at that point.’ Breandán Knowlton, Executive Director of Historypin

Our research has shown us that good technical interfaces alone are not enough to spur on innovation. Developers also need to be inspired by the work of others and want to get access to others who are toying with similar ideas so that they can share knowledge and ideas. This led us to the refinement of our second value proposition.

Value Proposition 2: Europeana Labs inspires you with examples of what others have done, and puts you in touch with them

‘The Europeana API and datasets containing large numbers of diverse, openly licensed images allowed us to create a playful and interactive space which proved to be a very tactile and engaging experience for audiences of all ages - exactly what we wanted to achieve with Culture Cam.’ Christina Holm from Danish design agency Spild af Tid on their interactive installation Culture Cam, exhibited at ‘SMK Fridays’ in the National Gallery of Denmark.

To better fulfill this second value proposition, we are changing the way we present ourselves on the website and beyond for developers of cultural heritage. Visible examples of this in the next iteration of the site include changing the language we use from

sometimes dry and technical to more exciting and inspiring. We will present the best apps more prominently on the homepage and, in line with the recommendations of the reviewers, split what is currently the 'apps' section into two: a tools area and a showcase of inspiring apps.

We will encourage the formation of a developer community by bringing together a group of people to form a 'Developers of Cultural Heritage Editorial Board'. This group will direct and shape the content of the Europeana Labs website.

Value proposition 3: Europeana Labs provide you with (business) support if you want to develop an idea.

'The business support that I was given as a Challenge winner really helped me to define and structure our ideas and plans. It has meant we were able to organize our short and long term business plans. However, it also allowed us to keep just enough flexibility in the process, which is so necessary.' Jennemie Stoelhorst, founder of Europeana Creative Challenge winning project Buitenplaats Mobiel, Tourism Challenge.

This third value proposition needs further refining. While we have experimented with providing 'incubation' support during the Europeana Creative project and have been able to help a number of Challenge winners to move on to the next stage, it has also proven to be quite difficult to make this scalable. The best results have been achieved with the development of co-creation methodologies in close collaboration with the physical labs, so these will be continued. Business model support and legal advice are harder to provide for us. We will provide some quick video guides for basic level support but will only occasionally provide full support on an individual basis. We have also dipped our toes into crowdfunding via Goteo.org and will integrate this more into the incubation funnel over the coming months. We have discovered that potential backers, business angels or other investors take a service much more seriously if it has already attracted crowdfunding.

3. Developing the Europeana Labs Website

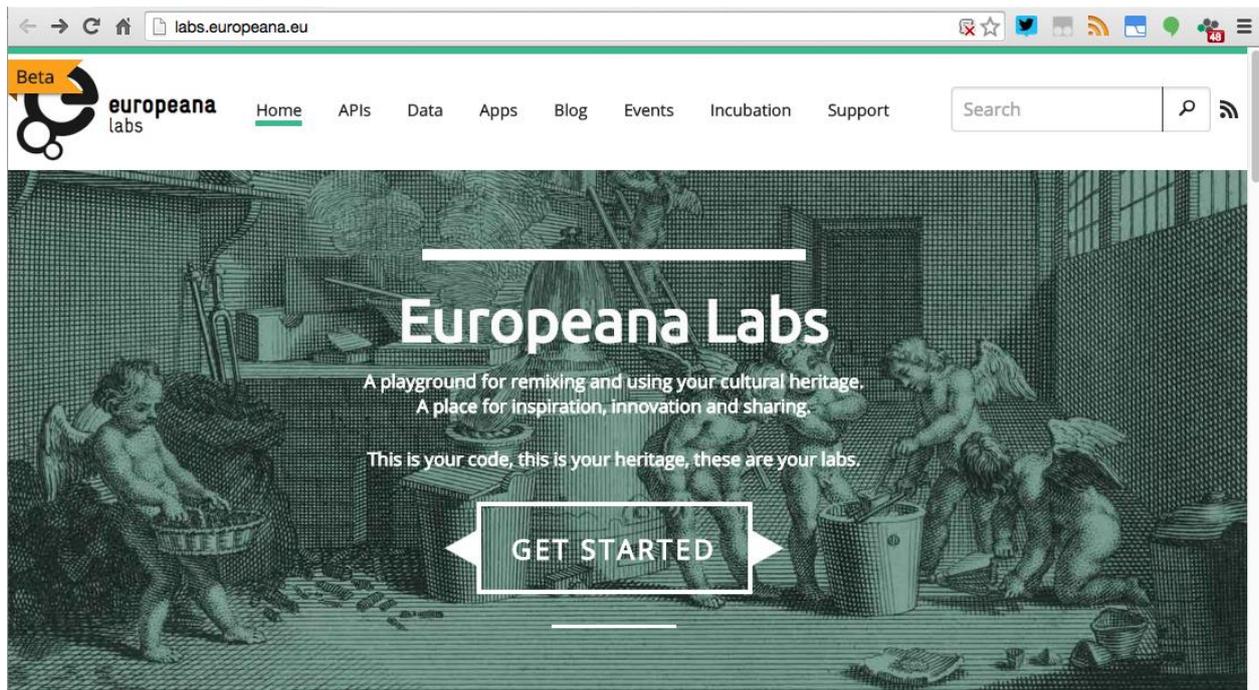


Fig. 7: Europeana Labs homepage

Our primary way of reaching our cultural heritage developer and digital innovator audiences is through the [Europeana Labs website](#).

Our message to our audience has always been clear from the homepage of our Beta site: Europeana Labs is 'A playground for remixing and using your cultural heritage. A place for inspiration, innovation and sharing. This is your code, this is your heritage, these are your labs.'

Europeana Labs is intended to be the go-to place for culturally minded developers and digital innovators. It provides practical resources to get people started as quickly and easily as possible, but also gives inspiration in the form of example applications, and invites users to become part of a growing community through blog posts, events and direct support, and gives them the opportunity to share and promote their work.

3.1 Personae

During the course of the Europeana Creative project, we have come to understand more about the audiences we are catering to, and have therefore altered the personae we have in mind when further developing our services for the cultural heritage developer and digital innovator. The intermediary is a particular audience still under investigation and may be better served through direct partnerships than via Labs.

The Cultural Heritage Developer

	<h3>Albin</h3> <p>Age:35</p> <p>Occupation: Developer</p> <p>'I want to create an educational tool for my client using cultural content to showcase cultural differences across Europe, exploring and curating diverse content in an innovative way.'</p> <p>Albin is a freelance software developer who has prior experience building education apps for the culture sector. Albin has been tasked with creating a web application that takes cultural themes (e.g. food, fashion, architecture) and uses cultural content to allow teachers to create educational resources that compare their local culture with those created by teachers elsewhere in Europe.</p> <p>He is very familiar with APIs and likes to learn by experimentation, using documentation and searching forums as a back-up.</p>	
<p>Motivations</p> <p>He is being paid to develop this app, but as a specialist in this sector he is keen to show users the full richness of Europeana content and develop a compelling app; he likes to feel part of a community and show off what he has created.</p>	<p>Goals</p> <p>He wants to grow his business and build a reputation as a specialist in delivering apps and tools based on cultural heritage content; he is keen to give feedback so that the service can be improved for other developers too.</p>	<p>Pain points</p> <p>He wants clear documentation and quick responses to questions; he needs easy to understand licensing; he thinks the API and underlying metadata structure and quality can make it very difficult to narrow down searches to return specific content.</p>

The Digital Innovator

	<p>Olivia Age:30 Occupation: CEO & Creative Director of her own digital agency</p> <p>‘I want to create products that build sustainable, profitable, fulfilling relationships between cultural heritage organisations and their audiences.’</p> <p>Olivia runs her own small creative agency delivering branding and physical products in partnership with museums and galleries.</p> <p>Her team includes a marketer and a front-end designer with experience of mobile apps and e-commerce.</p>	
<p>Motivations</p> <p>Her key motivation is to get people engaged with cultural sector content whilst building a successful business for herself and her clients.</p> <p>Although driven by success, her key goal is to use her passion and expertise to support the entire sector and engage the public with cultural heritage.</p>	<p>Goals</p> <p>She has her own ideas for end-user, cross-sector products that she would like to turn into successful businesses, to shift her company away from just being an agency working on bespoke products for individual organisations.</p>	<p>Pain points</p> <p>She would like it to be easier to access content - re-usable, high res, high quality images. She has difficulty building business models and accessing finance for her more entrepreneurial cultural heritage projects.</p>

3.2 Site Development

After a successful beta phase (43,600 visits in 14 months from April 2014) and greater understanding of who our primary audience is, we are changing the site to properly reflect the increasingly dynamic nature of the content and create a more engaging feel. A new home page structure and design (aligning the user experience with other Europeana sites) will surface recent and selected content, whilst an editorial calendar is being implemented to ensure that there is a regular flow of timely and interesting content that sufficiently highlights the full spectrum of activity within Europeana Labs and the cultural heritage developer community. Throughout the site, cross-promotion of related content will display the wealth of material that is offered. The next stage of development will be in closer partnership with Europeana Food & Drink and Europeana Space to gather their requirements and use the funding they have assigned to its further development.

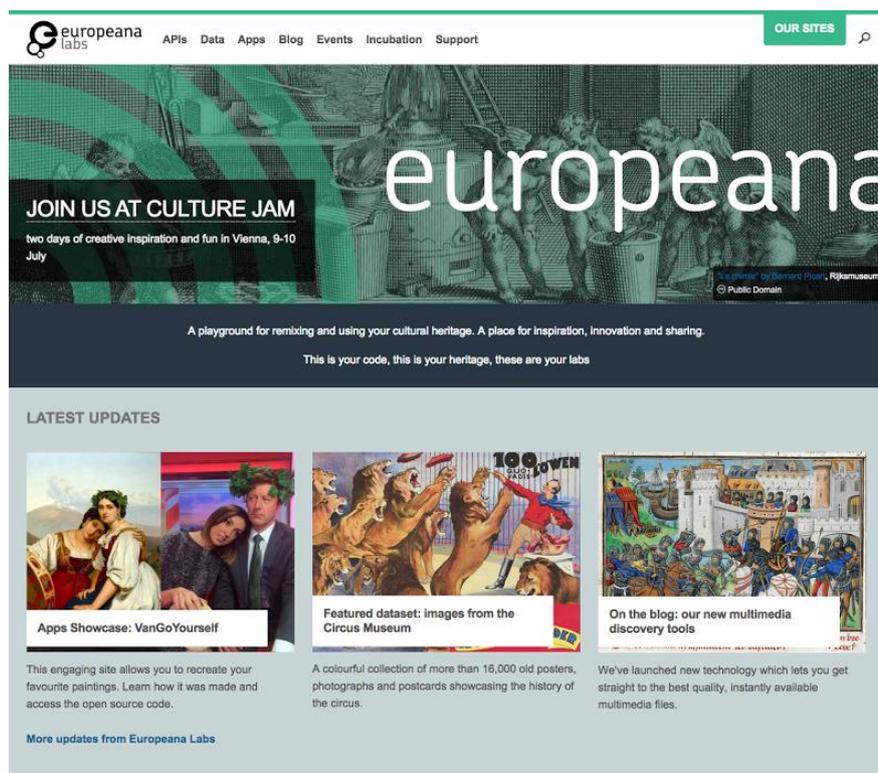


Fig. 8: The new-look Europeana Labs homepage I

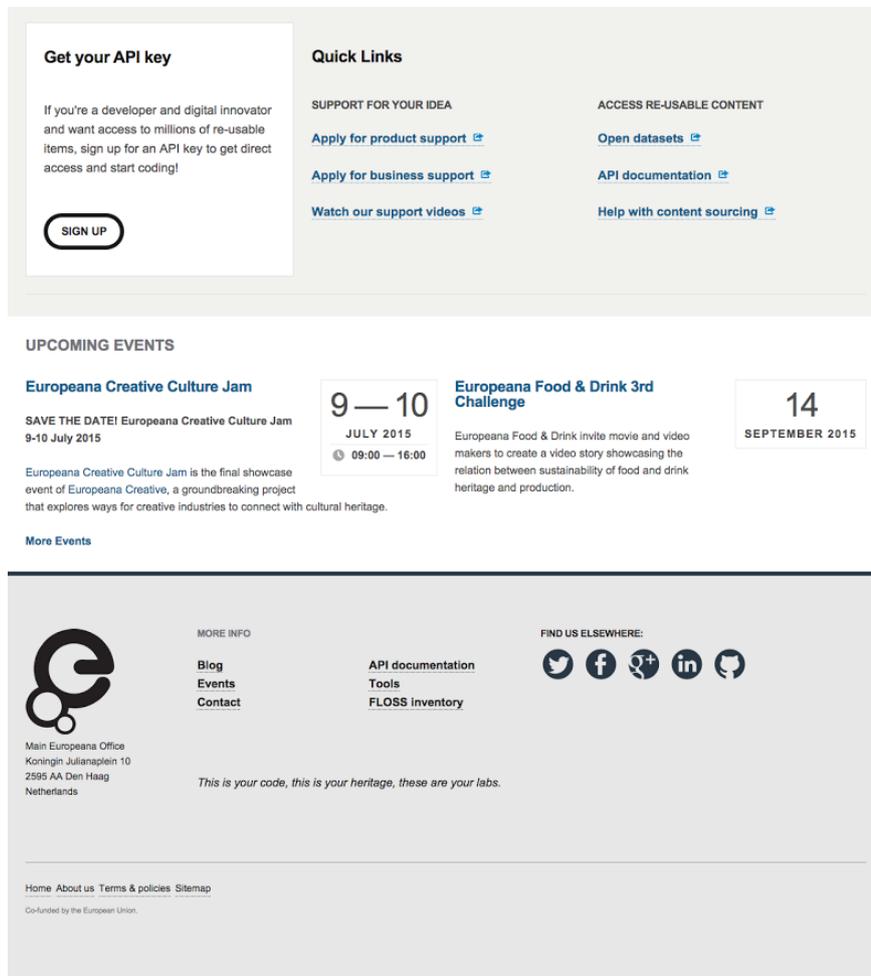


Fig. 9: The new-look Europeana Labs homepage II

Some exciting new developments include:

Improved API Documentation based on Feedback from our Developer Community

For developers, comprehensive API documentation helps them quickly understand what is available and how to access it, then to quickly build dynamic applications. These pages include information about all technologies (e.g. REST, OAI-PMH, Linked Open Data) and API methods (search, record, suggestions, query translation, MyEuropeana etc). As new features are added to the API (for example the Media File Checker) the documentation is updated to reflect these new opportunities.

Developing and Highlighting Re-usable Datasets

For those looking to explore and discover Europeana content, the open dataset entries highlight some of the most interesting and diverse collections, based on the requirement that they must

be openly licensed and have directly available media. As of June 2015, there were 81 such datasets collectively containing well over one million re-usable items. All entries provide direct links to access the collections both via the portal and the API. To better present their content and potential uses, each dataset entry is being enhanced to give overall statistics on the numbers and types of records provided, and also more detailed descriptions of the content and what it might be used for, together with previews for visual-based media. Further user research will be undertaken to establish the most effective name for this section.

This pool of high quality source material is being significantly enhanced. Each month new and revised datasets are reviewed to see which now meet these criteria and new entries are added to the Labs website (for example, recently this has included collections of [over 16,000 circus-related posters and photographs](#) and [over 2,000 historical fashion drawings and prints](#)). The forthcoming methods to search content via technical metadata will unlock many more items and provide cross-collection discovery directly based on optimum criteria for re-use. For example, an initial estimate has shown that there are more than one million images with a size greater than 1 megapixel (around 1,200 x 800 px). To complement this, work being undertaken to develop Channels for Europeana, starting with Art History and Music, will surface additional high quality, re-usable content that will be strongly featured for use by those using Europeana Labs.

The combination of all the above will mean we can start to offer and promote a potentially unlimited number of highly user-focussed, cross-collection datasets based on subject, license and availability of directly accessible media files. Examples could include high resolution, public domain paintings from Dutch collections; or all high quality media available for re-use related to World War 1.

Stronger Apps Showcase

The showcase of existing applications illustrates the wide range of things that can be delivered using re-usable Europeana content. This both inspires users and provides them with the possibility to build collaborations. We have learnt that users are building applications and re-using content in a wide variety of ways, from developers coding directly with the API through to individuals wanting to manually take small numbers of carefully selected media files. To address this, the showcase is now being restructured to provide greater differentiation and audience focus, as well as enhanced documentation for each to show their status and potential use. For example, a developer should be able to find code to make interaction with the API simpler and speed their development process, whilst an artist should be able to be inspired by creative examples that others have built. There are also opportunities for enterprises such as [Public Domain City](#), the winner of the Design Challenge, an application that takes large quantities of content and curates it, then prepares derivative images targeted at the design community.

The current apps section is being split up to provide clear distinction between i) the showcase of end-user applications and creations, ii) tools for directly working with the Europeana API and content (for example client libraries); and iii) wider open source tools in the form of the FLOSS (Free Libre Open Source Software) directory. Audience research will then be undertaken to evaluate this approach and refine it.

New Incubation Section

Rather than building a separate business for incubating start-ups and taking a percentage of the profit, we are playing more to our known strengths of brokering across networks and providing showcases for work as well as supporting the process from ideation, via co-creation and crowdfunding to finding investment opportunities. See section 6 below for more information on our incubation services.

Improved Support Section

Support is available to users in the form of technical guidance for using the API, and via video tutorials that help on legal and business aspects. The site and team aim to provide business support to help take ideas through to market.

3.3 Editorial Board

An Editorial Board, comprising members of the developer community, working for the benefit of the community, will be put in place by September 2015. This Board will be responsible for the editorial calendar, commissioning editorial on a six-month rolling programme and making sure that the future developments of the site are prioritised to meet the needs of the community. The Editorial Board will also help link Europeana Labs to their own networks and communities.

The editorial calendar will extend to partner projects such as Europeana Food & Drink and Europeana Space, providing them with a platform through which they can reach an established audience, and giving Labs' users further opportunities to work with Europeana content.

4. Relationships

4.1 Community Building

To make Europeana Labs work, its incipient community needs to lead it. Labs needs to be an instrument that solves their needs and is therefore driven by them. So far, efforts to build this community have been a bit scattergun, so the next phase will concentrate on our primary audience - cultural heritage developers. We will reach them through our new Editorial Board, relevant mailing lists (Code4Lib, Museums Computer Group), news sites and platforms (StackOverflow) and communities (e.g. Open Knowledge Foundation, Wikipedia chapters).

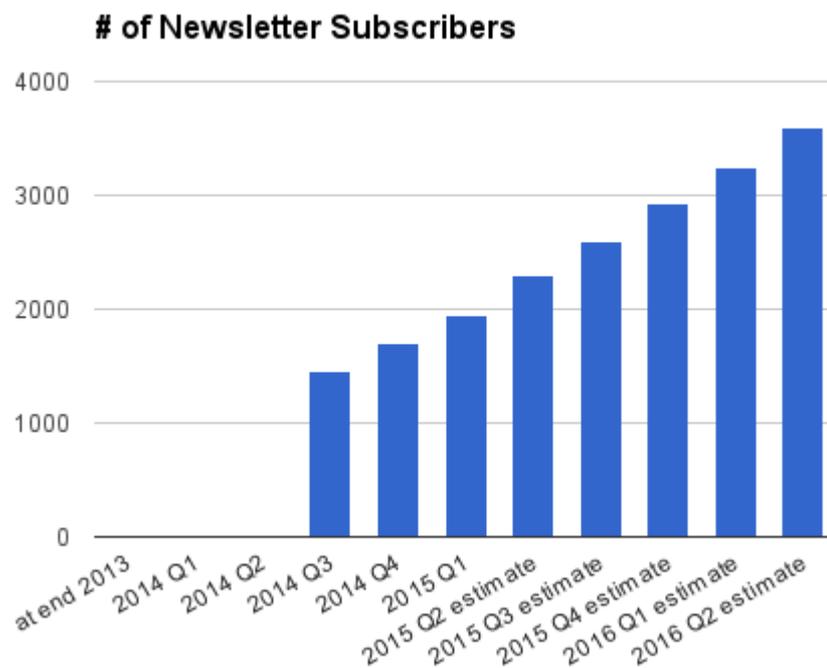


Fig. 10: Historical and forecasted numbers of Labs newsletter subscribers

We will use direct communication methods: Twitter, events and a quarterly Europeana Labs newsletter that brings together the work undertaken by developers, describes the tools and services of interest to the community and showcases their apps and other developments. We will use our own developers in the Europeana Network to talk about what they have done in all areas relating to the development of cultural heritage. We will make use of our mailing list which is constituted from our API holders and Europeana Labs site sign ups. We will also further develop the site with tools that help create and nurture this community.

The mailing list is made up of all new API key holders, plus direct sign-ups from the Labs site, minus anyone who has opted out. Each new sign-up is sent an email thanking them and giving support contact details as well as telling them about the site and what it has to offer them.

Following on from community building for developers, we will work on how to reach and interact with our second target market of digital innovators.

4.2 Events

Together with Europeana Space and Europeana Food & Drink, a couple of events will be staged in the next 12 months that reinforce a sense of community and interaction, linking developers with creatives. A programme is being constructed to work with ENoLL to tie the activities of the Living Labs more closely to the possibilities offered by Europeana Labs. The first concrete step will be taken at the OpenLivingLab Days in August where we will conduct a workshop.

5. Partners

Increasingly, the success of Europeana Labs will depend on the partnerships we are able to forge for mutual benefit. Europeana is well positioned to deliver cultural data to creative industries; we have a very extensive network of data partners, a network of engaged members with specific technical, legal and business expertise and, increasingly, a presence in the markets of developers and digital innovators interested in cultural heritage. Our success will depend on strengthening these networks, initially through the other Europeana projects and then through the expansion of the innovative labs across Europe.

5.1 Current Partner Landscape

During the Europeana Creative project, we focused on collaboration with physical innovation labs as they already have access to existing and active creative industry communities and can effectively complement Europeana Labs' online services with their onsite offering (co-creation spaces and tailored services).

We chose to work with three physical labs with a diverse geographical, competence and network profile:

- **Location** - Co-creation spaces are situated in Spain (Barcelona and Palma de Mallorca), Belgium (Brussels) and Finland (Helsinki) (<http://labs.europeana.eu/locations/>).
- **Specialisation** - Aalto Fabab in Helsinki specialises in media, 3D-print and electronic prototyping; Platoniq offers extensive expertise and experience in ideation and co-creation and Future Classroom Lab is a fully equipped, reconfigurable, teaching and learning space.
- **Communities** - Designers, entrepreneurs (Aalto), developers, entrepreneurs (Platoniq) and teaching and learning professionals (Future Classroom).
- **Network affiliation** - All three partner labs represent well-known innovative networks: FabLab (fabrication laboratory) started by MIT (Aalto), European Network of Living Labs and European Schoolnet (Future Classroom Lab).

This small but rich partner network helped us reach diverse creative communities across Europe and work successfully on [Pilot development and business modelling](#). The Schoolnet lab in Brussels was involved in the testing of Europeana Creative Pilots for education in 2013. The Media Labs Aalto in Helsinki accommodated the Europeana Creative Design Pilot workshop in May 2014. And the co-creation spaces of the Spanish lab Platoniq hosted the Social Networks Pilot in Palma de Mallorca in November 2013 and Europeana Labs business model workshops in Barcelona in September 2014. The labs in Helsinki and Barcelona also hosted the Europeana [Creative Culture Jam pre-events](#) in May and June 2015, at which

creative professionals designed and prototyped ideas for new ways to use and experience cultural heritage.

The collaboration with the three featured labs proved successful in reaching out to creative audiences across Europe and making them aware of the potential of cultural content re-use. Europeana Creative Pilots and Challenge winners showed various possible applications of cultural resources and some of them can serve as excellent case studies to inspire further re-use of digital cultural content by the creative industries. We tested various potential markets (education, tourism, design) and received valuable feedback on the market entry feasibility and Challenges. We have identified successful approaches to working with creatives, such as Platoniq's ideation and co-creation methodology, and thus have decided to integrate them further into the Europeana incubation services.

5.2 Future Partnerships

To support Europeana Labs' short term focus to become a well-known virtual playground for cultural heritage developers and digital innovators, Europeana envisions partnerships with four three types of stakeholders:

- a. **Innovation labs** - extend the partnerships with the existing labs networks and investigate collaboration models with new labs
- b. **Innovation programmes** - establish and develop partnerships with other creative network associations and formal innovation initiatives on a European level (example: 'Smart Cities' initiatives)
- c. **EU-funded projects** - use EU-funded projects to develop partnerships with others interested in the re-use of digital cultural heritage by creative industries
- d. **Crowd funding platforms** - integrating Goteo.org and similar platforms into the offering of Europeana Labs

These stakeholders have a multiplier effect on Europeana Labs' outreach to creative communities and help refine its positioning and services through constant feedback. In return, partners benefit from access to new digital resources, relevant contacts and projects in the (often untapped) cultural sector. Their communities will be able to browse and play with digital datasets which are of a rather rare type (cultural heritage), of high quality, rich (in terms of theme coverage and sheer item number), openly licensed and thus free for re-use. They will also be fully equipped to experiment with these datasets through the Europeana API and related technical services (such as the API console). And the combination of new resources and tools can easily feed the creative process and help generate new product/service ideas.

Europeana Labs' partners will gain more visibility within the Europeana Network and cultural sector in a broader sense. As more and more heritage organisations are looking for

partnerships which support the innovative re-use of their collections, and deliver stronger engagement with their audiences, partners can potentially start various projects and exploit a new market.

5.2.1.1 Innovation Labs

We have investigated the current innovative labs landscape to build on the positive experience with the three Europeana Creative partner labs and establish new distribution partnerships.

Two trends emerged:

1. **The establishment of smaller, specialised labs** - these are often the labs of a cultural heritage institution. Focus is on content - either own content (e.g. the datasets of the particular institution) or type of content (for instance, audio-visual content). Examples include [Rijksstudio](#) and [Sound and Vision Labs](#).
2. **The growth of global labs** - a (usually) global network of labs under one brand umbrella. They franchise a set of services and focus on development themes. A very good example is ENoLL (European Network of Living Labs) which is an international network of 370 recognised Living Labs defined as 'Public-Private-People Partnerships (PPPP) for user-driven open innovation'. Another example is [Impact Hub](#) which has 67+ labs on five continents with 11,000+ members in total.

Learning from past activity and research findings, Europeana Labs will improve the 'physical labs' component of its offer by leveraging its facilitation role and promoting active, impact-driven partnerships. In particular, this means:

- **Creating a virtual network of specialised labs** - these labs will contribute mainly with high-quality content and/or specific products/services. In return, Europeana Labs will facilitate cross-domain collaboration, feature them on Europeana Labs and help with outreach and promotion to global (user and partner) networks. In the long term, Europeana will consider the introduction of the Europeana Labs certificate which will recognize the partner lab's (service and content) quality as well as its affiliation with Europeana and its network.

As a first step, we will explore partnerships with the following specialized labs:

[Sound and Vision Labs](#) - Sound and Vision Labs showcase tools, demos and prototypes developed by the Research & Development department of the Netherlands Institute for Sound and Vision, alone or in co-production. The lab also features Sound and Vision's open audiovisual datasets and links to the code on GitHub.

[British Library Labs](#) - an initiative funded by the [Andrew W. Mellon Foundation](#) that invites researchers and developers to work with the British Library and their digital collections for their research projects.

[Rijksstudio](#) - allows access and re-use of 200,000 (digital) masterpieces from the collections of the Rijksmuseum.

- **Developing strong network partnerships with global labs** - Europeana Labs doesn't have the resources to develop a wide network of physical spaces. Its strength lies in the quality and diversity of content and technical services it can offer. Therefore, Europeana Labs can successfully work with global labs which are looking for new resources to offer to their communities. As a first step, Europeana Labs will extend the partnership with ENoLL (European Network of Living Labs) and investigate partnership opportunities with the Impact Hub and Fab Lab networks.

[ENoLL](#) is an international network of 370 recognised Living Labs. A Living Lab employs four main activities:

- Co-creation: co-design by users and producers
- Exploration: discovering emerging usages, behaviours and market opportunities
- Experimentation: implementing live scenarios within communities of users
- Evaluation: assessment of concepts, products and services according to socio-ergonomic, socio-cognitive and socio-economic criteria

We have worked closely and effectively with both the ENoLL headquarters and individual labs. Platoniq, the Living Lab with spaces in Barcelona and Palma de Mallorca, has played an active role during the whole Europeana Creative project through their co-creation spaces and methodology. In the last project months, we piloted a collaboration with two more Living Labs in the ENoLL network, Knowle West Media Centre (KWMC) in Bristol, UK, and Krakow Technology Park in Krakow, Poland, which hosted the Europeana Culture Jam pre-events for creative professionals and young people. Europeana will also introduce Europeana Labs and explore ways for beneficial collaboration with Living Labs in a workshop during the ENoLL annual event, [Open Living Lab Days](#), 25-28 August 2015 in Istanbul, Turkey.

[Impact Hub](#) represents a unique ecosystem of resources, inspiration, and collaboration opportunities to increase impact. Currently, there are 67 open impact hubs on five continents with 11,000+ members in total. A representative of the Impact Hub Barcelona participated in the Europeana Labs business model workshop on 23 September in Barcelona and confirmed their interest in a future partnership with Europeana.

[Fab Labs](#) started as the educational outreach component of MIT's Center for Bits and Atoms (CBA), an extension of its research into digital fabrication and computation, and became a collaborative network for 542 Fab Labs worldwide to support invention, innovation and learning. Europeana has worked with Aalto Media Labs within Europeana Creative and has had initial discussions with Fab Labs in the Netherlands and will investigate the potential partnership, in particular with regard to the outreach and offer to maker communities.

- **Developing active, impact-driven partnerships** - this applies to the co-operation with both specialized and global labs. Europeana Labs will look for partners with an excellent track record (outcomes of their lab activities) and/or who are actively building their lab and continuously improving their services. Growth and quality are key. Together, we will create a pipeline of joint projects/campaigns and define desired impact. At the end of each year, the partnership will be reviewed with regard to the lab's participation and results, and will only continue when there are positive outcomes. Essential for the long term success of such a co-operation will be the establishment of a governance structure which sets out rules and regulations so that any lab can understand the level of commitment required under the umbrella of Europeana Labs.

5.2.1.2 Pan-European Innovation Programmes

We have been exploring a few formal innovation initiatives and programmes on a European level related to innovation and creative industries.

Smart Cities

A Smart City is a place where digital technologies translate into better public services for citizens, better use of resources and less impact on the environment. The European Commission is investing in ICT research and innovation and developing the necessary supporting policies. The EU has initiated the [European Innovation Partnership on Smart Cities and Communities](#) that will bring together European cities, industry leaders, and representatives of civil society to smarten up Europe's urban areas.

So far, the European Innovation Partnership (EIP) on Smart Cities and Communities has received some 370 commitments to fund and develop smart solutions in the areas of energy, ICT and transport. These commitments involve more than 3,000 partners from across Europe and create a huge potential for making our cities more attractive, and create business opportunities.

During the Europeana Creative project, we had initial conversations with [Amsterdam Smart City](#), the innovation platform of the Amsterdam Metropolitan Area. It challenges businesses, residents, the municipality and knowledge institutions to suggest and apply innovative ideas

and solutions for urban issues. Based on these conversations, tourism and online learning emerged as possible areas of collaboration with Europeana. This possibly lucrative area will be further investigated over the next 12 months.

Other EC Innovation Initiatives

We will also explore partnerships with other formal initiatives of the European Commission designed to support innovation with digital cultural heritage. Examples are the [European Capital of Culture](#) (a city designated by the European Union for a period of one calendar year during which it organises a series of cultural events with a strong European dimension) and the [Innovation Union](#) (a Europe 2020 Initiative).

5.2.1.3 EU-funded Projects

Naturally, we will connect to relevant partners in the EU-funded project environment, such as [Europeana Food & Drink](#) and [Europeana Space](#). These projects and Europeana Creative share:

- the same goals - all projects aim to boost creativity and business development across Europe through wider re-use of digital cultural resources by the creative industries.
- the same resources - all projects make use of Europeana collections but explore different cultural heritage themes
- the same technology - all projects promote Europeana Labs and the Europeana API in particular as a key platform and tool for creative industries

Europeana Creative's legacy can certainly be beneficial for these and similar projects in the future. Cross-project exchange of best practices and knowledge has happened at various Challenge events and will be celebrated during the Europeana Creative final project conference in July 2015 in Vienna. Next steps are assuring the planning and funding from these projects on the developments needed for Europeana Labs.

5.2.1.4 Crowdfunding Platforms

Together with Platoniq and their open source crowd funding platform Goteo.org we have recently experimented with obtaining crowd funding for two Europeana sponsored Pilots Van Go Yourself and Europeana Beacons. The lessons we have learned from these campaigns will be integrated into the offering towards our communities on Europeana Labs as part of our facilitation of incubation from co-creation to product and service.

As well as offering an interesting model for our target audience the tax redemption example of Goteo is maybe replicable across Europe where similar platforms can also take advantage of tax breaks from their countries to nurture creative industry start up.

6. Activities

6.1 Tools and Service Development

‘Unbubble searches over 20 sources and Europeana is really useful to enhance all this with a cultural perspective.’ Tobias Sasses, CEO and founder of Unbubble.eu, a generic meta-search engine aiming to provide neutral search results.

The Europeana Labs site should incorporate tools and services that have been built by other projects and by external developers that allow better understanding and visualization of the data. The Media Checker File will vastly improve the accuracy of the API, leading to a refinement of results according to the need of the product or service being built. Tools and services that work with the data will be actively researched and incorporated as a set of community benefits. The site will continue the tradition of open source software and publish its code on Github.

6.2 Incubation Services

Europeana Creative has been a great learning experience with regard to the incubation of products and services using digital cultural resources. We have tested and understood better our strengths and limitations and have designed an incubation process for cultural heritage products.

Below are a few key things we’ve learned:

Need for a simpler and automated incubation process

Europeana Creative designed a [business incubation support package](#) customised according to the needs of the Europeana Creative Challenge winners. The incubation support combined the expertise of many partners across Europe which ensured the depth and breadth of the support but turned out to be challenging in terms of scheduling and coordination, in addition to being time-consuming for all participants and often delivered by too many cooks.

Incubation success lies in incubatees’ hands

Europeana Creative partners committed their time, expertise and other resources to help incubatees develop their ideas further. However, we came to understand that we can play only a facilitator role, and that incubation success depends to a large extent on an incubatee’s clear vision for the concept and commitment to the project and process.

Redefining service scope and relevance

During the project we gained valuable knowledge about the feasibility of some approaches and the effectiveness of the various incubation services. For example, we faced difficulties in attracting traditional investment, which forced us to look for alternative financing strategies. On the other hand, the positive experiences with the co-creation workshops made us consider them as a new incubation service.

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Europeana Labs New Incubation Services

The future development of Europeana Labs incubation services takes into consideration these findings and will focus on three key components:

1. A 'pipeline' - leveraging our partner network (see section 5) to find high-quality candidates for incubation
2. An incubation funnel - further develop the process and service packages to guide and nurture incubatees from ideation to a market-ready product
3. Promoting the value of Europeana incubation services - mainly through incubation case studies e.g. real-life examples of successful incubation

Europeana aims to inspire, motivate and help our primary target audiences to the incubatee in their growth by creating access to processes and services. As a facilitator rather than an investor, we are not in a position to commit to an incubatee number of people helped but rather

consider quality indicators such as number of used services (performed crowdfunding campaigns or co-creation workshops) as success criteria.

Developing the ‘Pipeline’

Recent incubatee candidates for incubation of ideas and funding came from the hackathons organised by Europeana, local business lounge events of Apps4Europe and online competitions of the Europeana Creative and Apps4Europe projects. With the end of these projects in July 2015, Europeana Labs won't be able to make use of these avenues anymore. We will therefore promote and market the incubation services we can offer, with the aim of receiving applications from:

- Europeana outreach campaigns to creative industries which result in prototypes re-using Europeana collections and API
- Prototypes developed in the partner innovation labs
- App contests organised by/within the partner innovation programmes (Smart Cities, European Capital of Culture initiatives, etc.)
- Winners of partner project Challenges (for example Europeana Food & Drink, Europeana Space)

To structure the process, applications will be reviewed on a monthly basis and, if approved, assigned specific incubation support.

Incubation Services Funnel

Europeana Labs will have integrate a well-defined funnel or process with various levels of incubation support and services depending on the incubatee needs. For example, those interested in developing a prototype product and testing its feasibility can apply for co-creation workshops or advanced consultancy on the Europeana API. Those who would like to move ahead and bring their prototype to market can make use of business modelling resources or create a crowdfunding campaign. The applications for various types of incubation support will be encouraged through online submission and offline promotion.

Europeana Labs will provide the following incubation related services:

- Technical services - consultancy on technical models/services/components and support with content selection/re-use
- Product development - co-creation workshops
- Legal - consultancy on the legal aspects of Europeana data re-use
- Business - focus mainly on business modelling
- Brokerage e.g. access to relevant networks
- Access to finance e.g. crowdfunding workshops

Many of these services are provided internally by Europeana, however, for some we will work with partner companies. A key partner is Platoniq, who will support incubatees with their market-validated co-creation methodology and crowdfunding platform, Goteo.org.

Incubation Case Studies

Having well-documented and presented incubation success stories is vital for the future development of Europeana Labs incubation services. A case study gallery will validate Europeana Labs incubation service capabilities and help with our outreach campaign by attracting more applicants. It will also indirectly support the crowdfunding campaigns (and potentially attract alternative public or private funding) and thus foster future incubation.

To ensure representation consistency and easy review by external parties, all case studies will comply to an online case study template.

6.4 Challenges and Pilots

Within the Europeana Creative project, we developed Pilots and organised Challenges (app contests and incubation support) to demonstrate the potential for creative re-use of Europeana resources. These activities aimed to explore the re-use possibilities and limitations, creating innovative services and products and developing new, viable business models for the re-use of cultural content.

Both the Pilots and the Challenges centred around five themes: history education, natural history education, tourism, social networks and design. The project produced Pilot applications for each theme whereas the app contests combined topics in pairs (history and natural history, tourism and social networks, design).

Pilots

The Pilots were coordinated and developed by the project partners with relevant expertise (for instance, Historiana is an app created by EUROCLIO, the European Association of History Educators) and showcased a variety of prototype services and products - games, apps, web services, visual and sound installations.

Each Pilot followed the same development cycle:

Step 1. Co-creation workshop - ideation, concept design and evaluation of viable prototypes with project partners and selected external participants. All co-creation workshops were facilitated by Platoniq and used their ideation and co-creation methodology.

Step 2. Business model workshop - focus on the development of a viable business model for the Pilot application. The business canvas served as a main tool for exploring and developing the business models for Pilots.

Step 3 - Implementation - the real work toward creating a live Pilot.

Below are two successful Pilot examples.

[Historiana](#) is the Europeana Creative History Education Pilot and was developed by EUROCLIO - European Association of History Educators, along with Webtic Consultancy and history educators from across Europe. The Historiana Learning Section is an online environment where educators can find sources and learning activities and create their own learning activities in their own language. It is a digital learning resource designed for use in history lessons aimed at students (14+) and their educators.

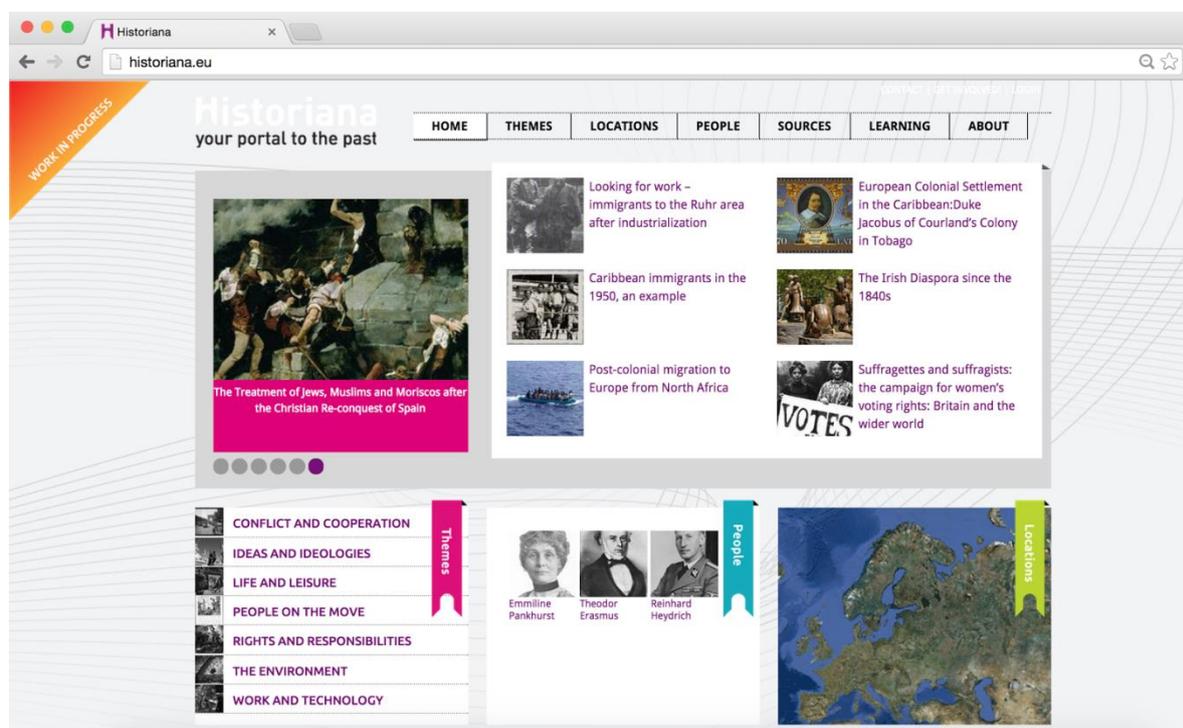


Fig. 11: Historiana homepage

[VanGoYourself](#) (VGY) is the Europeana Creative Tourism Pilot and was created by [Culture24](#) and [Plurio.net](#). It is a responsive web application based on WordPress in which the user recreates a painting or historic photo with their friends, then uploads and shares their photograph, twinned with the original, for others to enjoy. The service can be used by tourism offices, museums, cities, tour guides, etc. to promote specific destinations, sites and events.

VanGoYourself.com was successfully launched during the Museums at Night / International Museums Day on May 15, 2014, and introduced to the world through three VanGoYourself events organised with the help of Culture24 and Plurio.net in the UK and in Luxembourg.

At the time of launch, users could recreate more than 50 paintings from 12 collections, most of them from Europeana. The media response was overwhelming (BBC, Telegraph, Newsweek, artsnet, etc.) with around 40 articles on VGY. It also went viral on social media with, according to tweetbinder stats, a Twitter reach of around 5 million potential users during the launch weekend.

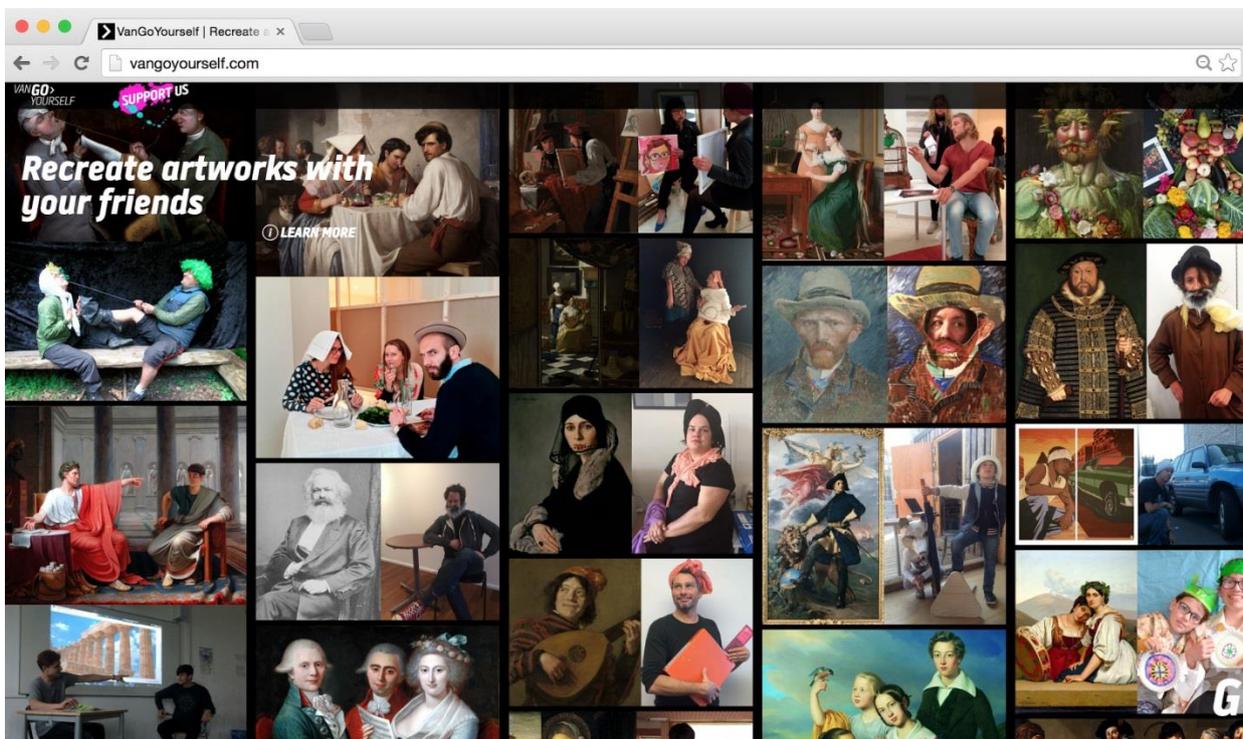


Fig. 12 Van Go Yourself homepage

Lessons Learned

The Pilot co-creation workshops allowed us to proactively and collectively explore different possibilities for building new products and services using digital cultural heritage content. Following an innovative and effective methodology developed by [Platoniq](#), based on real needs and opportunities in the digital heritage sector, participants had the opportunity to generate new scenarios in agile ways, to learn about and discuss trends and to prototype solutions based on their own goals, backgrounds and strategies.

Platoniq's co-creation methodology has been well accepted by all participants and proved as a successful collaborative prototyping tool. It has been applied both inside the project and outside, including in the [Culture Jam pre-events](#) and in the British Library and the Netherlands Institute for Sound and Vision. Therefore, we will integrate it into Europeana's incubation services and enable interested SMEs and GLAMs to order customised co-creation workshops via the special application form on Europeana Labs.

Generic Business Models

Part of the Pilot process was the development of an initial business model for the prototypes: if we would go live with such a service, where would we create value, and how could that value creation result in a sustainable income stream? The assumption was that these might be quite different depending on the service and the market we were designing the service for, varying from Natural History Education to Design.

The business models for each of the four Pilots can be found in Appendix II.

While it is too early to get to any real conclusions, we were able to take out a couple of important lessons.

The development of new business models for the creative re-use of digital content from the cultural heritage sector seems to be “double-edged” sword. On the one hand, they must allow wider access to cultural content (while respecting the copyrights and related intellectual property rights of third parties), on the other hand, they also need to create revenues to guarantee the long-term sustainability of projects and services exploiting the content.

With regards to the commercial sector as a target group, the Pilots have shown that the potential commercial users tend to be part of the long tail (small specialized services that primarily cater to dedicated niche audiences). This means that developing business models that generate income that exceeds the costs of providing the underlying services are uncommon (a large part of this is due to the fact that given the relatively small size of target audiences transaction costs make up a substantial part of the cost structure). This means that while commercial revenue to support the service is certainly possible, more often than not it will also require the support of the institution. A way to alleviate this is the development of shared services so that the development and maintenance costs of the service remain as low as possible.

As documented in the four attached white papers, value transfers to the cultural heritage institutions vary widely from sponsorships and co-branding (more prevalent in the design and social media sectors) to sharing project income (more prevalent in the education sector). While revenue generation from the provision of online services remains difficult to realize for the majority of institutions, the different Pilots have demonstrated that digital platforms such as Europeana enable cultural heritage institutions to serve commercial audiences that traditionally have been out of reach. Reaching out to these audiences likely has secondary effects in the fields of education, tourism and third party digital infrastructure services.

Challenges

Europeana Creative Open Innovation Challenges aimed to identify and incubate viable business ideas based on the re-use of digital cultural heritage content accessible via

Europeana. Each Pilot included a three-month online application contest for creative professionals across Europe, an award event and three-month incubation support package for the winners. The project ran three rounds of Challenges:

- Education Challenge, Feb- April 2014 (award event in Brussels)
- Tourism and Social Networks Challenge, June - Sept 2014 (award event in Barcelona)
- Design Challenge, Nov 2014 - Feb 2015 (award event in Manchester)

Below a few examples of the Challenge incubatees.

[TimePatch](#) (currently using an Estonian brand - Ajapaik) is one of the winners of the tourism and Social Networks Challenge. TimePatch is a crowdsourcing application for organizing historic view photographs geographically or otherwise and collecting re-photographs. The crowdsourced data is socially validated and for bigger engagement the process itself is gamified.

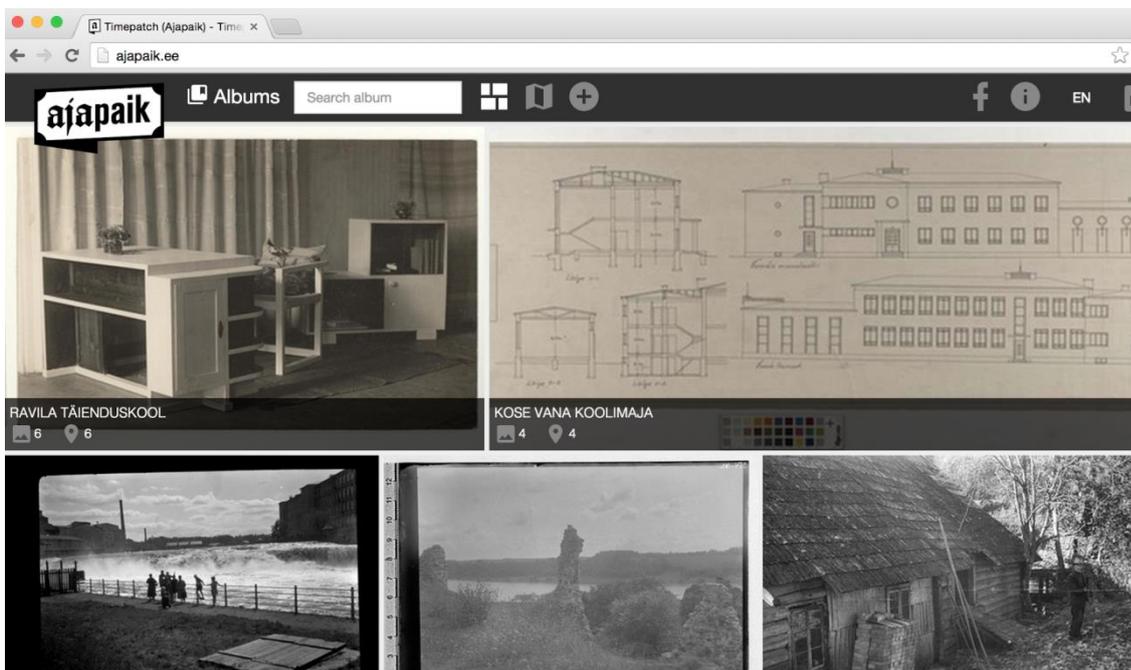


Fig. 13: TimePatch homepage

[Buitenplaats Mobiel](#) is another winner of the tourism and Social Networks Challenge. It is a hybrid, location-based game which can be played either with a smartphone or a tablet. It has two important parts: a digital online platform and location-based 'mini-games'. The location-based technology is BEACON. The inspiration comes from the Kennemerland region, where there are a lot of buitenplaats - summer residences for rich townspeople in the Netherlands. During the Dutch Golden Age of the 17th century, the Kennemerland region became very popular among people from Amsterdam and so the buitenplaatsen in this area have a shared

history, but also have their own unique stories to tell. By playing the game, families can explore, experience and discover these beautiful heritage sites and their intriguing life stories.



Fig. 14: Buitenplaats mobiel homepage

[Public Domain City](#), a winner of the third Europeana Creative Challenge - design, is the first platform for the cross-disciplinary exploration of illustrated archival books for use in new creative works. It is an online image stock of curious illustrations from digital archival book collections specializing in 15th to mid-19th century archival books on science, technology, medicine, flora and fauna from the main openly licensed collections.

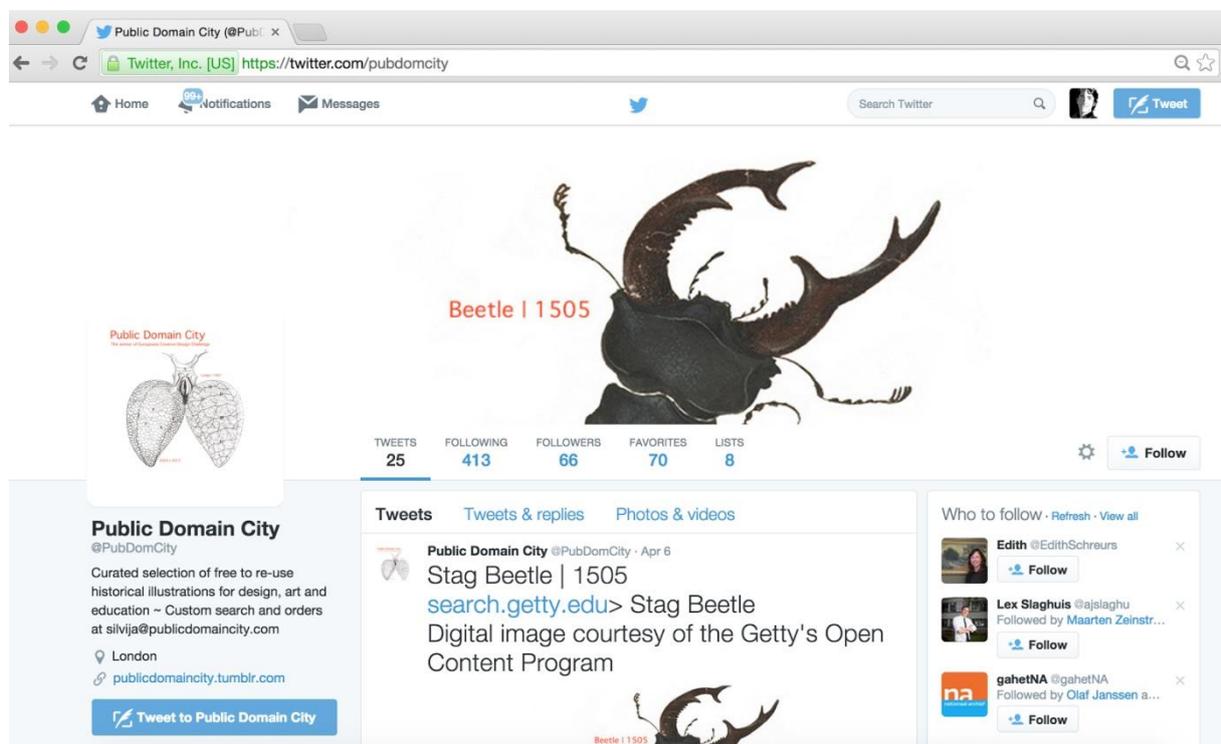


Fig. 15: Public Domain City on Twitter

Lessons Learned

The Europeana Creative Challenges once again validated the importance of high-quality data. Contest participants needed theme-relevant, openly licensed datasets for their creative projects and competition winners asked for extra support with content sourcing to be able to develop their products further. We have met these demands primarily by investing a lot of manual labour in sourcing [datasets](#) (over 100) from the Europeana repository on Europeana Labs and identifying additional content for Challenge winners' products during their incubation support period.

In the future we will be in a much better position to meet these demands in a more automated way. By Q3 2015, we will expect to have a couple of critical components available, such as the media file checker integrated in the API, a content caching service using the IIIF image serving protocol, and having the Europeana Publishing Framework adopted by Europeana's data partners. These instruments should make it much easier for our audiences to surface the material that they want from the vast collection of material that we make available.

Another critical issue is the availability of funding to support further product development. The Europeana Creative consortium provided extensive mentoring and business development training to the Challenge winners; however, their incubation support package did not include direct financing. The lack of funding negatively affected the level of commitment to post-incubation product development. The Challenge winners have been struggling to justify the required time and resource investment on their side, especially in cases where the incubated product was a side-project to their full-time job.

Our partner's research (see [Peacefulfish's presentation](#) during the Europeana Labs business model workshop in Barcelona, September 2014) has shown that classic investors are rather reluctant to invest in products using digital cultural content. It advised us to approach a different type of investors, the 'social' or 'impact' investors, and recommended a few strategies to attract more financing, such as setting up market/theme-specific project portfolios and illustrating project ability to raise funding, with crowdfunding considered an effective way to achieve the latter.

Future (app) Challenges

Taking into consideration these findings and recommendations, Europeana will integrate a crowdfunding component in the Europeana Labs incubation services. In particular, we will work with Platoniq's crowdfunding platform Goteo.org to help creators design and promote their crowdfunding campaigns and turn their ideas into viable projects, but will investigate others across Europe with a similar ethos.

Europeana will work with Europeana Space and Europeana Food & Drink over the next year to support their Challenges and Pilots while considering how to develop in this area to create a cost efficient and effective mechanism to attract new ideas and be able to nurture them to market.

7. Costs

Table 1: Costs & Benefits

Costs & Benefits	2015	2016	2017
Europeana DSI			
Personnel	€150,000.00	€250,000.00	€350,000.00
Co-creation & crowdfunding support	€70,000.00	€90,000.00	€120,000.00
Website maintenance & Development	€20,000.00	€20,000.00	€20,000.00
API development	€10,000.00	€10,000.00	€10,000.00
Marketing & Promotion	€10,000.00	€20,000.00	€30,000.00
Challenge organisation	€15,000.00	€25,000.00	€35,000.00
Editorial Board	€15,000.00	€20,000.00	€25,000.00
Prizes	€5,000.00	€10,000.00	€20,000.00
Total	€295,000.00	€445,000.00	€610,000.00

The Europeana Creative project has laid the foundations for a new line of business for Europeana Through Europeana Labs we are now able to cater to a whole new audience of professionals in the creative industries. The project has also shown that to provide a satisfying user experience we need to continue investing in improving our services. Most notably the website, the ability to find and retrieve high quality media through the (technical) interfaces; expanding our co-creation capabilities through a thriving network of Living Labs; and to a certain degree in providing business support.

The primary functions of Europeana Labs will be supported through the Europeana DSI. Europeana Foundation already employs a number of people whose work is dedicated to Europeana Labs, most importantly a *creative industries community co-ordinator* and several people in the product development department who dedicate part of their time on (UX) design and development of the service. Similarly we employ a junior level person to help to source and promote datasets and a business development manager who spends a good deal of her time creating new partnerships and marketing the service. In 2015 this totals 3.5 FTE and depending on the take up and success of the service we plan to expand this to 5-6 FTE by 2018. Co-creation and crowdfunding is covered by Platoniq under the DSI and the out of pocket

expenses for marketing, development and Challenge organisation are planned to grow in line with the growth of the service from around Eur 60.000 in 2015 to Eur 115.000 by 2017. Additional expenses are budgeted for the creation of an Editorial Board, consisting of representatives of our primary (developers) and secondary (digital innovators, intermediaries) audiences and Europeana Food & Drink and Europeana Space. Total expenditures are expected to double from Eur 300.000 to around Eur 600.000 by the end of 2017.

Additionally, more structural partnerships will be sought with sister projects Europeana Food & Drink and Europeana Space who are both investing in very similar markets. Joining forces by operating under the umbrella of Europeana Labs will amplify the efforts of each of the individual project.

8. Benefits

As outlined in section 1 (Audiences & Markets) the market for creative industries is booming: with over €535.9 billion in annual revenue and employing more than 7 million workers, this is a crucial market segment for the EU to invest in. Our first hand experiences and market research have shown that the Europeana Network can play a pivotal role in 'fueling' these creative industries, not only by delivering the raw materials of high quality digital media, but also by nurturing a smart ecosystem of co-creation infrastructures where end users, cultural institutions and creatives meet to develop new applications.

While we have already seen the first signs of how this can work for mutual benefit of all parties with initiatives like VanGoYourself, Europeana Beacon and lately with Public Domain City, we have learned through the project that we are only at the beginning. To be successful in this market it is crucial to make choices on who we cater to, and to understand our audience' needs better than we currently do. As we have shown in this plan, we believe our best product-market combination is found in the culturally minded developer community, a tech savvy audience who can interface with our APIs and who need easy access to high quality, re-usable metadata and content. We will therefore improve our services to this audience first (through CRF, API development, newsletters, site improvements and editorial board) before we expand into what we consider interesting secondary markets such as the digital innovators and intermediates, who are less tech-savvy and need to be addressed differently.

The nature of the markets that we are serving (small businesses and semi-professionals), will have substantial social and economic impact and lead to multiplier-effects, but direct income streams are likely to be low to non-existent. Europeana Labs allows us to play a strong role in supporting Cultural Heritage for the Creative Industry i.e.: the CCI's. As a platform it therefore can be seen to underpin this part of the Digital Single Market.

In the next 6-18 months we will work together with our growing network of partners including sister projects Europeana Food and Drink and Europeana Space, to convert ideas into prototypes and prototypes into sustainable products.

9. Literature

Create, Innovate, Grow: A new policy agenda to maximise the innovative contributions of Europe's creative industries; Recommendations from the Policy Learning Platform of the European Creative Industries Alliance (ECIA) (November 2014)

http://www.eciaplatform.eu/wp-content/uploads/2014/11/ECIA_report_Create-Innovate-Grow-1.pdf

Creating growth: Measuring cultural and creative markets in the EU (December 2014)

[http://www.ey.com/Publication/vwLUAssets/Measuring_cultural_and_creative_markets_in_the_EU/\\$FILE/Creating-Growth.pdf](http://www.ey.com/Publication/vwLUAssets/Measuring_cultural_and_creative_markets_in_the_EU/$FILE/Creating-Growth.pdf)

Entrepreneurial Dimension of the Cultural and Creative Industries, (2011)

<http://www.slideshare.net/rkooyman/entrepreneurial-dimension-creative-industries>

Good Practice Report on the Cultural and Creative Sectors' Export and Internationalisation Support Strategies, European Agenda for Culture Work Plan 2011-2014 (January 2014)

http://ec.europa.eu/culture/library/reports/eac-omc-report-ccs-strategies_en.pdf

Opportunities for CCSs to Access Finance in the EU - Short Analytical Report, report by the European Expert Network on Culture (EENC) (November 2014)

<http://www.eenc.info/wp-content/themes/kingsize/images/upload/EENC-CCSsAccesstoFinance-141118.pdf>

Supporting Cultural and Creative Industries, homepage of the EC's CCI policy, (accessed June 2015)

http://ec.europa.eu/culture/policy/cultural-creative-industries/index_en.htm

Unlocking the potential of cultural and creative industries, EC Green Paper (April 2010)

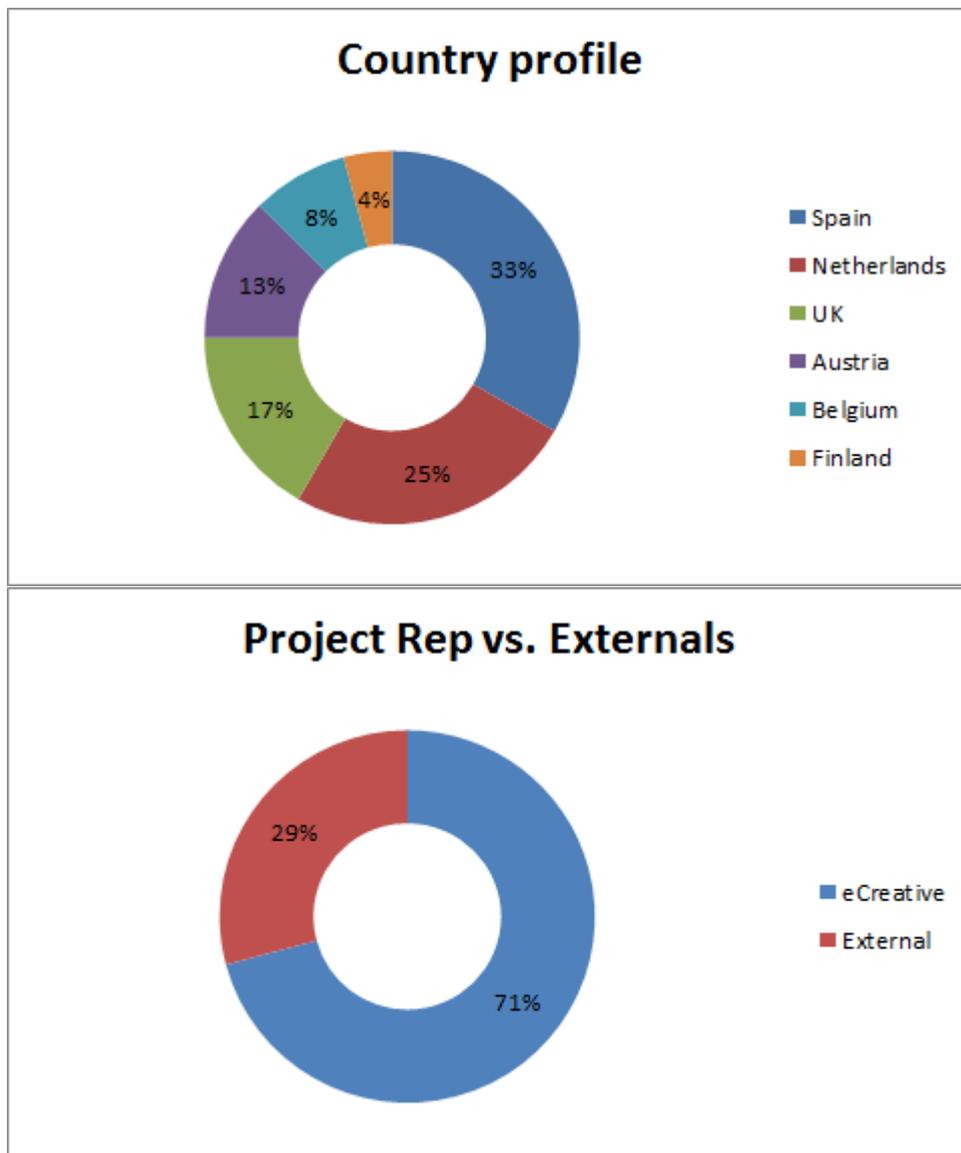
<http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52010DC0183>

Appendix I: Results Barcelona Workshop

Report on the Europeana Labs business model workshop 23 September 2014, Barcelona

Venue: [Platoniq office](#), Fabra I Coats, Barcelona, Spain

Participants profile: 24 people from 15 organisations (see a detailed participant list as appendix 2)



Workshop aim and scope: This one day workshop aimed to make recommendations for a sustainable business model for Europeana Labs (eLabs). Europeana Labs has been developed within WP1 of the Europeana Creative project as a virtual playground for remixing and re-using cultural and scientific heritage content. The eCreative partners' ambition is that eLabs continues to run long after the project end in July 2015 and to establish itself as a lively, well-visited space delivering clear value to its target groups.

The workshop was organised in three thematic blocks:

1. **Block 'Now'** which focused on the current status of Europeana Labs from a business and product point of view
2. **Block 'Future'** which aimed to definite long-term goals for eLabs
3. **Block 'Action'** which resulted in the formulation of recommendations for eLabs' sustainable business model

The workshop was co-facilitated by Platoniq and Kennisland and used the [Business Model Canvas](#) method to visualize facts, findings and ideas in blocks (a) and (b).

1. Block 'Now'

The workshop started with presentations about eLabs' strategic importance and goals (Harry Verwayen, Deputy Director, Europeana) and its current product offer (James Morley, eLabs product owner, Europeana). These presentations served as an introduction into the current business model canvas for Europeana Labs.

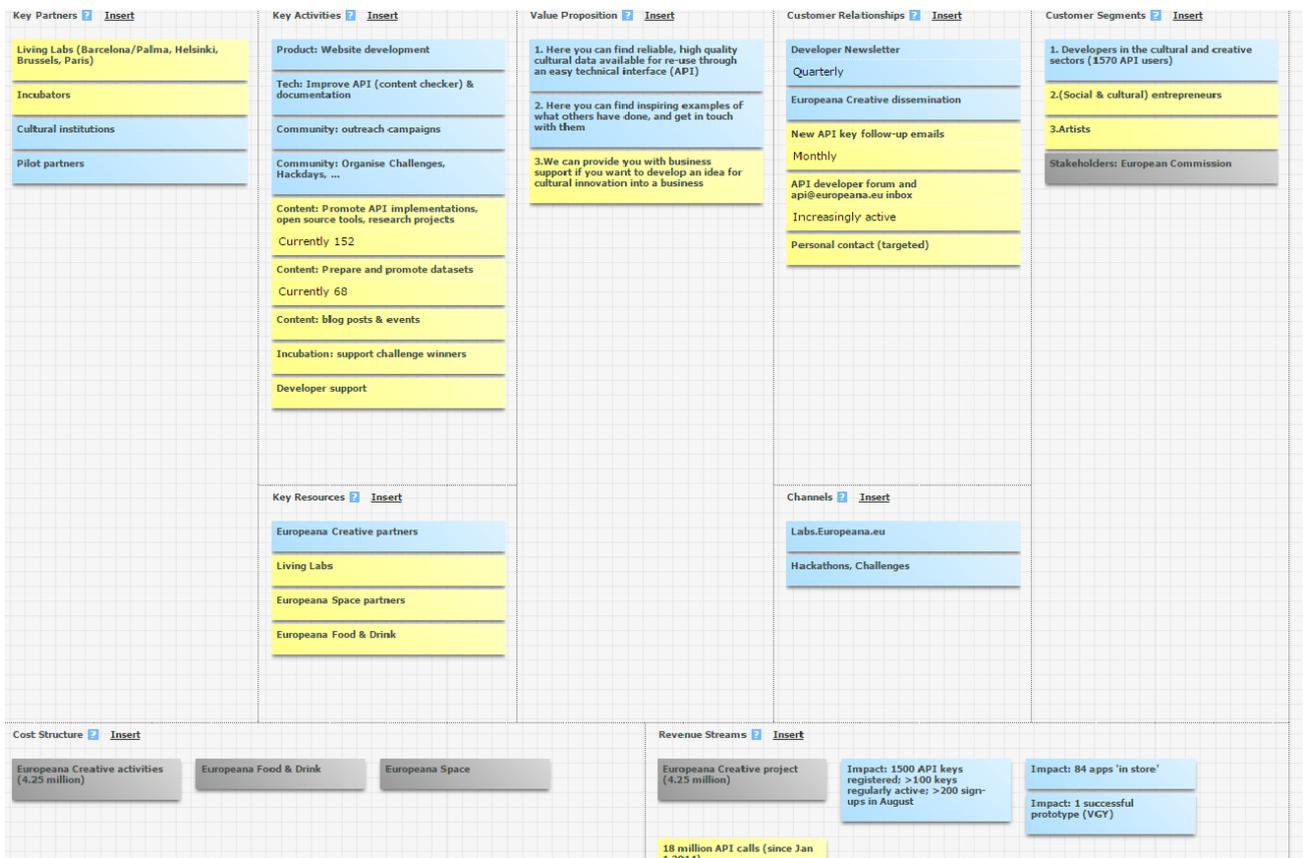


Figure 1. Current eLabs business model canvas (online version on https://canvanizer.com/canvas/4oQkb1h1VV0A7_CK9BMm1NIPVklfdg8)

2. Block 'Future'

As a next step, representatives of the main stakeholder groups in eLabs (developers, Living Labs and incubators) were invited to share their experiences and insights on how we can improve the eLabs service.

Developers

Anna Fuster and Daniel Julia of PimPamPum.net, a software company in Barcelona, gave a short overview of their creative projects and suggested education as a high potential target market for Europeana and eLabs. The following discussion outlined the potential and Challenges related to working with this domain:

- Challenges: big entry barriers, small or no revenue streams and, as a result, problems with sustainability
- Potential: worth exploring 'unstructured education' (i.e. education outside the classroom)

Living Labs

Sanna Marttila from Aalto Media Lab and Enric Senabre Hidalgo and Olivier Schulbaum from Platoniq gave the perspective of the next stakeholder group – the Living Labs. The following main points came out of the presentations and the Q&A session:

- Need for a bigger and pro-active role of users - Living Labs and, consequently, Europeana Labs can provide the opportunity for users and user communities to drive developments (from product design to finding funding)
- Emphasis on 'openness' – e.g. availability and usage of open source tools and open collaboration formats (for example, co-creation workshops)
- Revenue scenarios – commission (%) on the selling price of the spin-off projects developed within their own incubator programs has been a successful revenue strategy for labs/universities and can be applied for Europeana Labs
- Growth potential – libraries turning into labs can bring more partners into Europeana Labs

Incubators

The third stakeholder group was represented by Thierry Baujard, Peacefulfish and Jesus Iglesias, Impact Hub Barcelona.

Peacefulfish is a niche consultancy company specializing in the development of innovative financial instruments and strategies for the creative industries. They have an investment portfolio of 1 million EUR and operate in markets such as film, TV, animation, video games, music, digital art.

Peacefulfish outlined the following issues of relevance for cultural entrepreneurs in general and Europeana Labs in particular:

- Key role of finance for involving the creative industries (as finance is critical for developing and commercializing their project ideas)
- Top barriers for investment are the lack of revenue generation, scalability, 'exit' and skilled management teams (based on a survey with 250 investors)
- Need for new financial instruments, such as net revenues % and fair investment
- Possible roles of incubators in securing financing – they range from (a) developing a portfolio of pre-selected projects looking for finance to (b) micro seed-funding for project development, (c) coaching for business planning/IP valuation, (d) development of local investment eco-system, (e) education of local investors and involvement of international co-investors

Impact Hub is a social impact incubator network of 54+ hubs with 7,000+ members on six continents. They provide physical spaces, resources and collaboration opportunities for various creative projects (with focus on the private sector). Impact Hub Barcelona is a newly founded hub which is currently in their second investment round and is building up their project database.

Based on his experience in other impact hubs, Jesus Iglesias emphasized the importance of creators' active involvement and of mutual commitment (not only do the project creators get resources from the incubators but deliver back energy, resources, working products and services). Inspired by stakeholders' experiences and equipped with practical knowledge, the workshop participants split into three groups. Each group discussed how Europeana Labs can improve its value proposition to a respective stakeholder group – developers, Living Labs and investors – and developed its own business model canvas to present their ideas.

3. Block 'Action'

After an hour's discussion, each group reported back a few key recommendations for future development of Europeana Labs.

Group Developers /Communities

Lead: Enric Senabre Hidalgo

Reporting Sergiu Gordea

Group canvas: <https://canvanizer.com/canvas/N89Zbdc4fxM>

Main recommendations:

- Added value relates to improved re-use facilities (high-quality data for re-use, better APIs, better content filtering, good content re-use framework) and opportunity for rapid prototyping
- Collaboration with other developer communities and domain experts (example: music)
- Focus on (evaluating) user experiences
- Partnerships with selected impact hubs and influencers in tech communities (introducing ambassadors)

Group Living Labs

Leads: Olivier Schulbaum & Sanna Marttila

Group canvas: <https://canvanizer.com/canvas/FjZJJb5DxPs>

Main recommendations:

- Value proposition: Labs should be a community for doers and facilitate knowledge transfer for innovators
- Offer a repository of services and of knowledge based on the eCreative developments (for example, around crowdfunding, licensing, etc.) The services and knowledge packages can be offered in a freemium and a paid version
- Introduction of a Labs certificate
- Improve how Labs measure their impact

Group Incubators

Lead & Reporting: Harry Verwayen

Group canvas: <https://canvanizer.com/canvas/tJmHK-IHIYA>

Main recommendations:

- Approach a specific type of investor – impact investors
- Listen to these investors' needs – organise educational workshops and online consultations for them; provide them with a project portfolio of strategic fit (in specific markets, for example tourism), and with some track record (case studies/available crowdfunding)
- Offer flexible financial models, such as fair investment

All groups emphasized the mutual and active aspect of the partnership: all stakeholders should not only use Europeana Labs resources but also deliver back value (knowledge, services).

Resources

Presentation slides:

Harry Verwayen (Europeana Foundation)

<https://basecamp.com/1768384/projects/2156890/uploads/16871527?enlarge=1111...>

James Morley (Europeana Foundation)

<https://basecamp.com/1768384/projects/2156890/uploads/16871516?enlarge=1111...>

Daniel Julia (Pimpampum)

<https://basecamp.com/1768384/projects/2156890/uploads/16871494?enlarge=1111...>

Sanna Marttila (Aalto Media Lab) (new)

<https://basecamp.com/1768384/projects/2156890/uploads/17258681?enlarge=1139...>

Olivier Schulbaum (Platoniq)

<http://es.slideshare.net/platoniq/platoniq-at-europeana-labs-business-model...>

Thierry Baujard (Peacefulfish)

<https://basecamp.com/1768384/projects/2156890/uploads/17257860?enlarge=1139...>

Photos:

<https://basecamp.com/1768384/projects/2156884/attachments/tagged/2513377>

Participant List

Name	Organisation
Anna Fuster	Pimpampum.net
Andrew Kitchen	Ramulus
Breandán Knowlton	Historypin
Daniel Julia	Pimpampum.net
Dimosthenis Karatzas	Library Living Lab
Enric Senabre Hidalgo	Platoniq
Harry Verwayen	Europeana
James Morley	Europeana
Jesus Iglesias	Impact Hub Barcelona
Jill Cousins	Europeana
Johan Oomen	The Netherlands Institute for Sound and Vision
Katie Smith	Collections Trust
Lizzy Komen	The Netherlands Institute for Sound and Vision
Lorna Stokes	ENOLL
Max Kaiser	Austrian National Library
Menno Weijs	European Cultural Foundation
Milena Popova	Europeana
Nicola Mullenger	European Cultural Foundation
Nikki Timmermans	Kennisland
Olivier Schulbaum	Platoniq
Sanna Marttila	Aalto Media Lab
Sergiu Gordea	AIT
Susanne Tremml	Austrian National Library
Thierry Baujard	Peaceful Fish

Appendix II: Generic Business Models

- White Paper: Business Models for History Education and Natural History Education
- White Paper: Business Models for Tourism
- White Paper: Business Models for Social Networks
- White Paper: Business Models for Design

White Paper: Business Models for History Education and Natural History Education

Identifying business models for the educational re-use of cultural objects.

Co-funded by the European Union

The project is co-funded by the European Union, through the **ICT Policy Support Programme** as part of the **Competitiveness and Innovation Framework Programme (CIP)**.

http://ec.europa.eu/information_society/activities/ict_psp/



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Version: Final (December 2013)

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1. Introduction

This White Paper attempts to document the efforts to identify, implement and evaluate business models that are developed within the Europeana Creative project¹ for the re-use of cultural objects for Natural History Education and History Education by specifying the approach *how* the business models were developed as well as the business models *themselves*.

Europeana Creative is a European project which aims to enable and promote greater re-use of cultural heritage resources, aggregated by the online portal Europeana², by Europe's creative industries. Within the project, a number of Pilot applications focused on History Education, Natural History Education, Tourism, Social Networks and Design are developed. Building on these Pilots, a series of open innovation Challenges are launched with entrepreneurs from the creative industries to identify, incubate and spin off more viable projects into the commercial sector. The project goals will be supported by an open laboratory network, an on- and offline environment for experimentation with content, tools and business services, and a licencing framework where content holders can specify the re-use conditions for their material.

We reflect on the development of the business models for the re-use of cultural objects for the first two themes of the project: History Education and Natural History Education. This White Paper is the first in a series of four³ and must be seen as work in progress, inspiring and supporting the further development of the Pilots, the open innovation Challenges and development of the Europeana Labs Network. We aim to create collaboration in our efforts to develop new business models for the creative re-use of digital objects. We invite professionals from the creative industries as well as the cultural heritage domain to contribute to the evolving discussion and sharing of knowledge and best practices.

¹ See <http://www.europeanacreative.eu>; accessed February 19, 2014.

² See <http://europeana.eu>; accessed February 19, 2014.

³ The other White Papers will focus on the themes Tourism, Social Networks and Design.

2. Business Models for Digital Public Content

Public institutions set out to ensure that cultural heritage “can remain a living asset over time and that it is as widely shared as possible”⁴. Cultural institutions are non-profit-making organisations that develop their work to safeguard the public good and not to obtain profit.⁵ Over the past decade considerable public investments have been made in the digitisation of cultural heritage objects in the not-for-profit sector. New digital collections have emerged and enable innovative ways to explore its contents, from research projects to resources valued by the community.

However – and especially in the light of the economic uncertainties in Europe and decreasing governmental budgets – digital resource projects struggle in the transition from grant funding to a longer-term plan for ongoing growth.⁶ In such a framework, sustainability is a prime concern and challenge. As a result, the development of new business models for the creative re-use of digital content from the cultural heritage sector seems to be “double-edged”⁷. On the one hand, they *must allow wider access to cultural content* (while guaranteeing the copyrights and related intellectual property rights of third parties), on the other hand, they also need to *create revenues to guarantee the long-term sustainability* of projects and services exploiting the content.

Business models – meaning the way that value is created, delivered and captured within an organisation point of view⁸ – need to be seen in a wider sense as the way public organisations deliver content and the models they are implementing to create revenues. As producers and distributors of content, cultural institutions develop new (non-commercial) initiatives that guarantee the sustainability of projects and services and also serve as content providers for the commercial sector.

Recent research shows that the current most common business frame underlying these new projects is a contractual frame, where cultural heritage institutions contract creative industries parties (e.g., brand or web agencies, game developers) to develop services, backed by ad hoc

⁴ “The New Renaissance: Report of the ‘Comité des Sages’. Reflection Group on Bringing Europe’s Cultural Heritage Online”, available online at: http://ec.europa.eu/information_society/activities/digital_libraries/doc/refgroup/final_report_cds.pdf, p. 1; accessed February 19, 2014.

⁵ See Directorate-General for Internal Policies, written by Claudio Feijoo, Sven Lindmark, Juan Pablo Villar, Carlota Tarín, Javier Gelabert, Beatriz Matía, “Public and Commercial Models of Access in the Digital Era”, April 2013, requested by the European Parliament’s Committee on Culture and Education; available online at: [http://www.europarl.europa.eu/RegData/etudes/etudes/join/2013/495858/IPOL-CULT_ET\(2013\)495858_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/etudes/join/2013/495858/IPOL-CULT_ET(2013)495858_EN.pdf), p. 119; accessed February 19, 2014.

⁶ See Nancy L. Maron and Matthew Loy, “Funding for Sustainability: How Funders’ Practices Influence the Future of Digital Resources”, JISC Strategic Content Alliance, Ithaka, New York, June 2011; available online at: <http://www.jisc.ac.uk/media/documents/publications/programme/2011/sandrfundingforsustainability.pdf>; accessed February 19, 2014.

⁷ Directorate-General for Internal Policies 2013, p. 119.

⁸ See <http://www.businessmodelgeneration.com>; accessed February 19, 2014. See also Directorate-General for Internal Policies 2013.

public funding.⁹ It was suggested that both businesses and cultural heritage institutions want to exit the “contractual” frame and explore innovative funding models together. Especially cultural institutions expressed that they want new business models of profit sharing and gaining more benefits of the cooperation.¹⁰

However, there does not seem to be one single approach to achieve this. No study seems to be able to lay out a one-size-fits-all plan that any organisation can follow to reach the point of financial sustainability.¹¹ An important aspect of a strategy to achieve sustainability seems to be a shift in management on the side of cultural heritage institutions. Clear goals, accountability, measurable targets, reviewing processes and assessing the performance are proven elements in the business sector for creating successful companies, but are considered a weak spot in the way cultural heritage institutions operate.¹²

The educational re-use of cultural heritage objects has been subject to many new initiatives that have been initiated over the past years by both the cultural heritage sector as well as the creative industries (e.g., educational publishers). Access to and re-use of cultural sources for educational purposes can be seen as an important extension of the public mission of cultural institutions. Within Europeana Creative this has therefore been one of the major themes to experiment further with. The Pilot partners of both the History Education and Natural History Education Pilot confirm the challenge ahead as described above.

EUROCLIO¹³, the publicly funded European Association of History Educators, is leading the History Education Pilot in Europeana Creative and commits a strong interest in developing educational resources around key moments and developments in history. The Pilot seeks to stimulate the re-use of cultural heritage resources for history education through the development, testing and implementation of easy-to-find and free-to-use educational resources (sources, learning activities and tools) that are designed to stimulate historical thinking, multiperspectivity and active learning. The Pilot focuses on the First World War, a key moment in history, that is relevant in Europe and beyond and will contribute to the further development of Historiana¹⁴, an online educational multimedia platform that offers students multiperspective, cross-border and comparative historical sources to supplement their national history textbooks.

The History Pilot is developed by EUROCLIO in close collaboration with an international community of contributors (history education specialists from the EUROCLIO network), web developers (Webtic) and Europeana Network members. EUROCLIO seeks to continue to work

⁹ See Aubéry Escande, Hans de Haan and Louise Edwards, “Europeana Creative White Paper No. 1. Creativity, Technology and Management: Establishing Best Practices between Cultural Heritage Institutions and the Creative Industries”, June 2013, available online at: http://pro.europeana.eu/documents/1538974/1594727/eCreative_WP3_ST3.2.1_CreativityTechnologyManagement_v1.0; accessed February 19, 2014.

¹⁰ See Escande, de Haan and Edwards 2013, p. 16.

¹¹ See Kevin Guthrie, Rebecca Griffiths and Nancy Maron, “Sustainability and Revenue Models for Online Academic Resources: An Ithaka Report”, Ithaka, New York, May 2008.

¹² See Escande, de Haan and Edwards 2013.

¹³ <http://www.euroclio.eu>; accessed February 19, 2014.

¹⁴ <http://historiana.eu>; accessed February 19, 2014.

on the applications that will be developed within Europeana Creative, and one of their main questions is how this can be done in a sustainable way after the (financial) support of the European Union ends, and what this means for the cooperation of EUROCLIO with the partners in the Pilot.

The Natural History Education Pilot follows the same principle of demonstrating the creative re-use of Europeana resources by developing viable applications and tools, with a clear focus on the field of natural history. The leader of this Pilot is the Natural Museum in Prague¹⁵, the largest museum in the Czech Republic and a leading institution in sciences, PR, and database technologies. The core team of the Pilot also consists of other representatives of natural history museums (Museum für Naturkunde, Berlin), natural history scientists, education specialists, application and serious game developers (Exozet Games, Semantika).

Within this Pilot, two products are being developed, both making use of the gaming aspect for variable audiences and with different implementations. The main aim of these products is to present natural history resources to users in an attractive and interactive way, by allowing the usage of the products in private (family) and public (museums, schools) environments.

The first product is developed by Exozet Games (XZT) in collaboration with the Museum für Naturkunde, Berlin (MfN) and the National Museum, Prague (NMP) and is an adventure game situated in a museum environment; it is designed as a mix of a point-and-click and a hidden-object game. The second product is developed by Semantika in collaboration with the National Museum in Prague and follows the principle of a memory game. Both products face the question of how to be continued and further developed after the end of the project. How can their sustainability, especially in form of financial support, be ensured?

In the next section we will (1) discuss the approach that was chosen to develop business models for educational re-use in Europeana Creative, and we will reflect on the design of the process and formulate some guidelines that we developed for the development and incubation of the models. Furthermore, (2) we will elaborate on the specific business models that were identified for educational re-use and dive deeper into the strengths and weaknesses of the models and application for the Pilots in Europeana Creative.

¹⁵ <http://www.nm.cz>; accessed February 19, 2014.

3. Business Model Development Approach

The starting point for the development of the business models in Europeana Creative was to get a shared understanding of what a business model is and how it could be used in the context of the project. Therefore, a concept that everyone could easily understand and apply was needed. Within the Europeana Creative context, several stakeholders, especially those dealing with education issues, are not particularly familiar with business modelling. A simple but robust concept and methodology was needed. Since the business model canvas developed by Alexander Osterwalder and Yves Pigneur had proven to be a successful methodology,¹⁶ allowing an individual or group of individuals to discuss and develop business models by using a simple but effective canvas as a working tool, the decision was made to use this methodology.

Osterwalder and Pigneur explain “how value is created, delivered and captured within an organisation point of view”. Value takes several forms such as cultural, economic, social, environmental, thus not being limited to a common perspective that refers to business per se for profit. A business model can also be developed not only around organisations but also around specific projects, products or services. Putting it in another way: It’s about which pieces are necessary and how to put them together so that your organisation, product, service or project is built in a sustainable way.

The business model canvas can be used in teams as a shared language, for better strategic conversations and as a tool to structure thinking. Inspiration for the design of the business development was also taken from the BMICE Step-by-Step Plan, a seven-step plan that was designed and implemented by heritage institutions to embed new or existing digital service concepts in their business model, and was shared to be repeated on a long-term or occasional basis by heritage institutions.¹⁷

The conversation about business models was started at two business model workshops that were organised: a Natural History Education Business Model Workshop on May 8, 2013 in Prague (see Annex I for a full report) and a History Education Business Model Workshop on May 15, 2013 in The Hague (see Annex II for a full report) with representatives from cultural institutions, educational organisations (school teachers, students), web agencies and representatives from the business sector. Prior to the business model workshops, a co-creation workshop was held for each theme. This workshop made use of co-creation tools to facilitate the concept development of the Pilots through the co-creation of possible software applications. At the end of each co-creation workshop, the three application ideas with the best potential were chosen to be further explored in the business model workshop to assess their business potential. The co-creation workshop thus provided the basis for the business model workshop.

¹⁶ See <http://www.businessmodelgeneration.com>; accessed February 19, 2014. See Alexander Osterwalder and Yves Pigneur, *Business Model Generation*, Wiley, Hoboken, NJ, 2010. See also Stichting Nederland Kennisland, Stichting DEN, TNO, Stichting E30, “BMICE Step-by-Step Plan”, 2011, available online at: http://www.den.nl/art/uploads/files/BMICE-Step-by-step_EN.pdf; accessed February 19, 2014.

¹⁷ See “BMICE Step-by-Step Plan” 2011.

Based on the results of the co-creation workshop, the goal of the business model workshop was to trigger a discussion on how a business model can be developed for each of the results. After the workshop the discussion was continued via online conference calls and supported by an online tool.¹⁸

The following steps were taken to develop the business models. Together the steps sketch out the services that facilitated the business model development.

Identifying Business Models

Following Osterwalder and Pigneur, “[b]usiness models are designed and executed in specific environments. Developing a good understanding of [the] environment helps you conceive stronger, more competitive business models.”¹⁹ This was the reason why an analysis of the existing environment was seen as an important first step for the business model workshop. Only by understanding the complex economic landscape, the technological innovations and the market needs, one can effectively work on business models. To better analyse the existing business models environment, the four main areas suggested by Osterwalder and Pigneur – market forces, industry forces, key trends and macroeconomic forces – were discussed, visualised and mapped out.

Osterwalder and Pigneur consider that a business model can best be explained and used through nine basic building blocks that cover the four main areas of business: customers, offer, infrastructure and financial viability. With their Business Model Canvas we sketched out and visualised new business ideas for the three selected ideas.

¹⁸ See <https://bmfiddle.com>; accessed February 20, 2014.

¹⁹ Osterwalder and Pigneur 2010, p. 220.

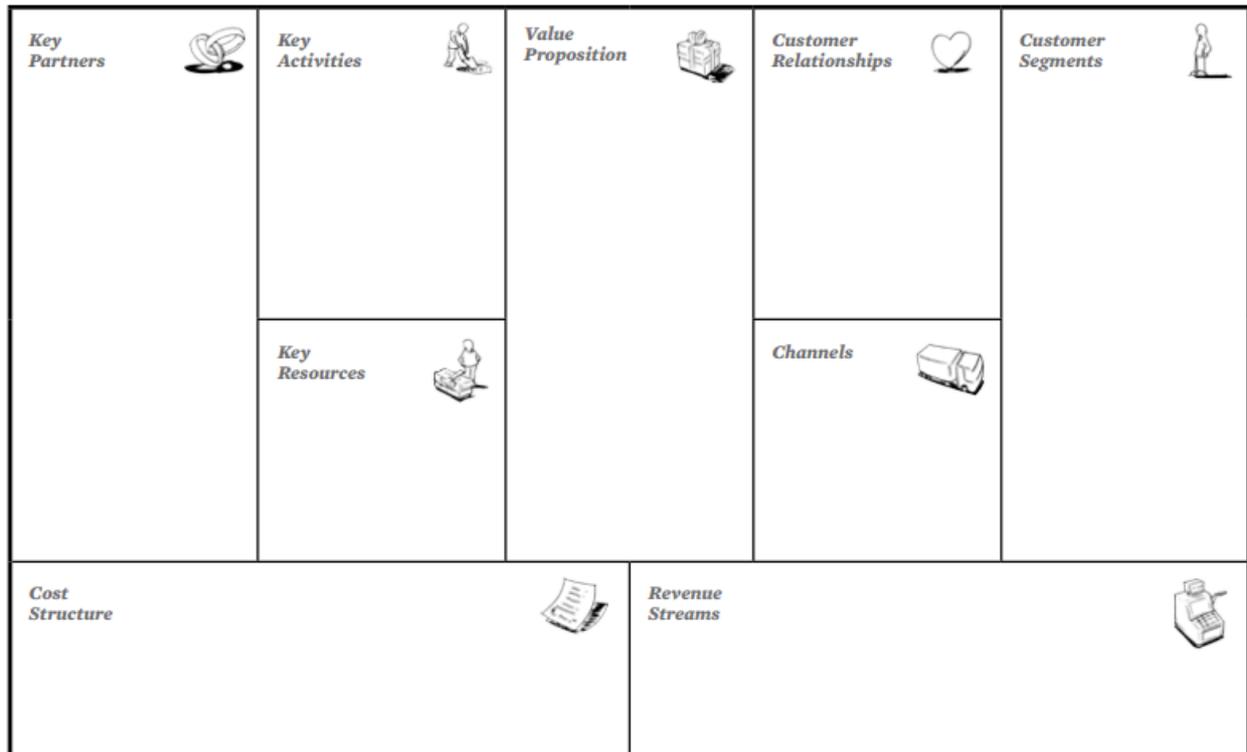


Fig. 1: Business Model Canvas by Osterwalder and Pigneur

The nine building blocks:

1. **Customer Segments:** The different groups of people or organisations a business aims to reach and serve. The target audience for the products and services of a business.
2. **Value Proposition:** A business seeks to solve customer problems and satisfy customer needs with value propositions. The products and services a business offers.
3. **Channels:** Value propositions are delivered to customers through communication, distribution and sales channels. The means by which a company delivers products and services to customers.
4. **Customer Relationships:** Customer relationships are established and maintained with each customer segment. The link a company establishes between itself and its different customer segments.
5. **Revenue Streams:** Revenue streams result from value propositions successfully offered to customers. The way a company makes money through a variety of revenue flows.
6. **Key Resources:** Key Resources are the assets required to offer and deliver the value proposition to the customer segments.

7. Key Activities: The activities a business needs to perform in order to bring value propositions to its customer segments.

8. Key Partners: Some activities are outsourced and some resources are acquired outside the enterprise.

9. Cost Structure: The business model elements result in the cost structure. The monetary consequences of the means employed in the business model.

At the end of the business model workshops, the developed business models for the three application ideas were presented, discussed and published via the online tool.

Natural History Education:

- Night at the Museum: <https://bmfiddle.com/f#/C2Wd7>
- Fossil Hunter: <https://bmfiddle.com/f#/vnW82>
- Card Game: <https://bmfiddle.com/f#/hP5v6>

History Education:

- My Newsreel: <https://bmfiddle.com/f#/rpjq4>
- Newspaper as a Tool for Multiperspectivity: <https://bmfiddle.com/f#/Z5h64>
- A Tool for Critical Analysis of Sources: <https://bmfiddle.com/f#/V9qG7>

After the workshop, the best Pilot applications were selected to be developed. Not only business aspects, but also technical feasibility played a role in making this decision.

Implementing Business Models

The next step was to further develop the product concept, specifically the underlying value proposition(s) of the chosen application idea. Value proposition is a term commonly used in business economics that refers to the argument over which an organisation or company tries to communicate and convince the client of the value of the product or service as far as his or her needs and desires are concerned. Why would people be interested in the product or service? What needs does it meet or what problems does it resolve for the customer? How can revenue be generated to be able to cover the costs of running such a service after the Pilot development period?

As a consequence, further advice on the access of content (and related IPR issues) and guidelines for the re-use of this content in educational resources was given, and options for generating revenue to be able to deliver the value propositions were researched. The strengths

and weaknesses of each revenue option were identified. Based on the developed value propositions, a final decision on whether or not to continue to work with a specific business model for the product or service concept was made.

Evaluating Business Models

The development is also supported by a continuous evaluation of the implementation of the business models throughout the duration of the project. The business model itself is an incremental part of the product concept. This concept and the working prototype will be discussed and evaluated in online focus groups consisting of relevant representatives from creative industries and memory institutions.²⁰ A discussion about success indicators was started that can be assessed on a regular basis. Another important aspect for a successful business model is the acceptance by end users. Usability tests carried out by Europeana Creative will help to get feedback from potential end users.

²⁰ See http://pro.europeana.eu:9580/documents/1538974/1601973/eCreative_D6.1_MFG_v1.0; accessed November 7, 2013.

4. Capturing Value

4.1 Critical Analysis Tool

The goal that was set out for the History Education Pilot is to stimulate the re-use of cultural heritage resources for history education through the development, testing and implementation of easy-to-find and free-to-use educational resources (sources, learning activities and tools) that are designed to stimulate historical thinking, multiperspectivity and active learning. This fits well with the mission of Pilot leader and product owner EUROCLIO, who has a long-term commitment concerning the further development of the tool and wants to act as a central hub for an international community of history educators.

In the History Education Co-Creation Workshop and Business Model Workshop three concepts were developed. The concept of a “Tool for Critical Analysis of Sources” was selected as the concept with the highest potential of all three, although some elements of the other concepts were also selected to integrate them in the chosen concept. More information about the other two concepts, “Pupils Research – Newspaper as a Tool for Multiperspectivity” and “My Newsreel”, can be found in Annex I. The Tool for Critical Analysis of Sources is meant to give students a critical tool to analyse key moments in Europe (World War I was chosen as a first key moment to be further developed). The Historiana platform gives access to content that is aggregated by Europeana within specific themes and gives access to a suite of tools (e.g., a tool to create a simple page, to do image analysis, to compare and contrast sources, to create a newsreel and to zoom in on sources). Educators can create lessons as well as new tools with these tools, and they can publish and share these lessons on the Historiana platform where students (and other educators) can access them.

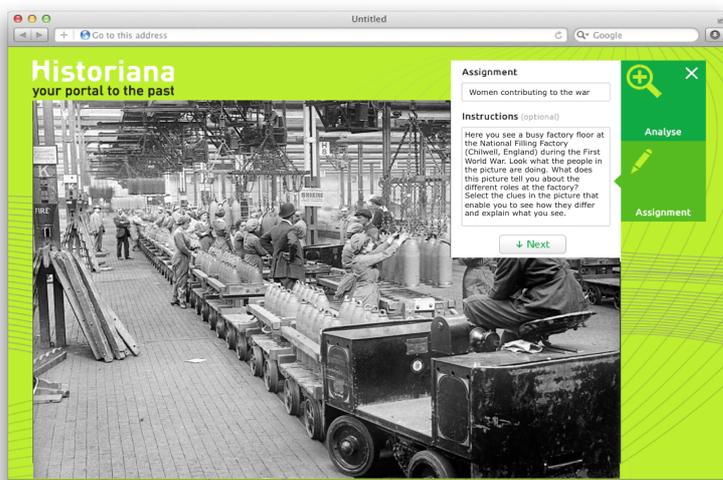


Fig. 2: Sketch of the Tool for Critical Analysis of Sources

The following business model canvas was developed and fine-tuned for the Tool for Critical Analysis of Sources:

1. Customer Segments

- History educators
- Students
- Memory institutions
- Educational publishers
- Ministries of Education / governmental organisations

2. Value Proposition

- Improve analytical skills and get high-quality online and visually attractive education (which is better than a traditional book).
- Access to preselected, curated and trusted source material of various content providers.
- Access to free learning tools and resources that engage students and are tailored for use in history education.
- Access to training services that can support educators in their professional development.
- Increase of the use of collections by an international community of schools (history educators and students).
- Gain visibility and recognition to safeguard/increase public funding opportunities that contribute to an organisation's public mission.
- Participate in an effort to deliver IT services for an international educational community of history educators.
- Offer schools and educational organisations state-of-the-art online learning resources for history education.

3. Channels

- The Historiana web portal
- Training services
- Professional partner networks for history education (e.g., HEIRNET, Anna Lindh Foundation, EUROCLIO Foundation)
- Social media (Twitter, LinkedIn, Facebook)

4. Customer Relationships

- Community-driven
- “Open” sharing of knowledge and resources
- Trusted and credible (e.g., approved by UNESCO, Council of Europe)

5. Revenue Streams

- Partner fees/contributions
- Training services
- Public funding / projects: European Commission, Ministries of Education
- Philanthropic funding
- Crowdfunding donations
- Corporate sponsoring
- (Online) advertising
- Selling audiences

6. Key Resources

- EUROCLIO organisation and international trainee pool
- Network of pilot schools
- Community of contributors
- Content providers and heritage content/collections (e.g., Imperial War Museum, International Institute of Social History)

7. Key Activities

- Preselect and curate collections from memory institutions.
- Create learning resources for history students.
- Train educators to work with the learning tools and resources.
- Disseminate learning resources to schools.
- Promote the tool and resources in the professional history education and digital heritage field (e.g., Europeana Network Annual General Meeting, DISH conference, Museums and the Web conference).

8. Key Partners

- EUROCLIO
- EUROCLIO member organisations
- Memory Institutions: Europeana, Imperial War Museum, International Institute of Social History
- Web developers: Webtic, UseMedia
- Educational publishers

9. Cost Structure

The development of new tools and learning activities and the selection of adequate sources is mainly dependent on the work done by the community of contributors, supported by EUROCLIO staff and trainees. In order for this work to be continued, some costs for human resources and travel cannot be avoided. In the minimum scenario, the work would be continued with the core team and supported by a part-time staff member and a full-time trainee. This would result in the development of one new online tool and two modules (consisting of ten to twenty learning activities each). With more financial resources, it would be possible to scale up the development: to develop more tools, select more content and develop more modules.

Annual Costs (Minimum Scenario)

- Hosting: € 1,000
- Human resources: € 15,000 euro (2 fte staff + 1.0 fte trainee)
- Editing meetings: € 9,000 euro (2 × 6-person editing meeting)
- Web development: € 5,000 euro (1 new tool; estimated)
- Total costs = € 30,000 euro per year

At the core of the canvas is the question of the value proposition. What kind of customer problems can be solved and how can the customer needs be satisfied with value propositions? The Critical Analysis Tool is considered to be valuable for a lot of different stakeholders in the educational field.

For EUROCLIO the tool is valuable because of their long-term commitment to develop engaging online learning activities for and with an international community of history educators. The tool gives EUROCLIO the opportunity to increase access to quality (enriched) content, to increase their services for the members by creating learning activities (tools and resources) and to increase their visibility on a non-commercial basis. The following value propositions for educational re-use were specified for each of the stakeholders that were identified as important in delivering the central value proposition:

1. For **students**, the Critical Analysis Tool is a tool to improve their analytical skills and to get high-quality online and visually attractive education. Students can contribute to the development of the tool by giving feedback to improve the service. For **history educators** who are not so confident in the use of IT, who are limited in their time and find it challenging to engage students, the Critical Analysis Tool offers free access to preselected, curated and trusted source material, free learning activities that engage students and are tailored for use in history education and paid (offline) training services that can support them in their professional development. History educators can contribute to the development of the tool by giving feedback to improve the service and by giving voluntary donations. For **history educators that are highly IT-skilled** and are willing to contribute actively to the development of the tool (e.g., the international community of educators that has been involved with EUROCLIO for years), the Critical Analysis Tool offers the possibility to join an exclusive community of contributors and to help with the selection of sources and the development and testing of learning activities; in return, they benefit from contact with and recognition by peers, access to professional development and equipment and travel opportunities. They can contribute to the development of the tool by donating their time and professional expertise.

2. **Memory institutions** (archives, libraries and museums) want to see return on investment on their efforts in digitising their collections and justify themselves to the public. The Critical Analysis Tool offers them an opportunity to increase the use of their collections by an international community of schools (history educators and students), to get access to curated collections of various content providers and free learning resources (tools and resources) and to increase their visibility and recognition to safeguard/increase public funding opportunities that contribute to their public mission. The Critical Analysis Tool attributes the content providers for their contribution of sources whenever the sources are searched, selected or re-used in one of the tools by end users, leading to an increase of their visibility.

Memory institutions can in return contribute to the development of the tool by providing their content (public domain and openly licenced content) for ingestion in Europeana. They can also

contribute by co-developing online tools and commit resources from their educational departments to creating learning activities on the platform.

As central aggregator of cultural heritage resources in Europe, **Europeana** plays an important role. The History Education Pilot offers Europeana an opportunity to cooperate with history educators, stimulate re-use of content and demonstrate added value via real-life use cases. In return, Europeana can help campaigning for developing open access policies at memory institutions within their network, recommend Europeana Network partners to partner up with and get recognition to safeguard/increase public funding opportunities with the European Commission.

3. More and more educators, students and educators in Europe and beyond have access to information technologies and the Internet. There is a consensus that IT will play an increasingly important role in education. However, most online learning activities are based on testing knowledge, not on stimulating historical or transversal competences. Experiments with IT schools have not led to promising results. IT is one of the top-ranking and most profitable businesses globally.

For **technology providers** the Critical Analysis Tool offers an opportunity to participate in an effort to deliver IT services that have a good chance to be adopted by an international educational community of history educators, which will lead to recognition, a growing reputation in the history education sector and more business and sales of their products and service contracting. The Critical Analysis Tool attributes the technology providers for their contribution to developed tools (e.g., the TimeMaps) whenever the tools are used, leading to an increase of their visibility. IT providers and software developers can in return contribute with in-kind software, hardware and hosting, prototyping and mock-ups. They can also contribute by co-developing new online tools.

Within the Europeana Creative project all partners have committed themselves to publish the software developed with public money by the European Commission under an open GNU/GPL licence. This means that within the scope of the project the commercial exploitation of software (tools) cannot be permitted as a legitimate business model.

4. Another creative industries stakeholder group that is an important for the Critical Analysis Tool are **educational publishers**. They mostly have experience in the development of printed educational material and struggle with achieving profits, especially in smaller countries in Europe. The Critical Analysis Tool allows educational publishers to offer their clients (schools) state-of-the-art online learning resources for history education by inviting them to become a partner in the network. In return for offering this professional service, as “professional users” they pay a partner fee to be able to re-use the learning resources commercially, they can contribute to the co-development of new tools and commit resources from their educational departments to creating learning activities on the platform.

5. Lastly, the Critical Analysis Tool creates value for (public) organisations with the mission to provide high-quality and accessible education for all citizens, e.g., national **ministries of education**, local educational authorities, universities and foundations. Large investments have been made in online databases for learning activities which vary in their success, and with budget cuts education, both on a European and national level, there is hardly space for more of such large-scale projects.

The Critical Analysis Tool offers public educational organisations an opportunity to become a partner in an international public–private partnership where costs and risks are shared, and teachers and students get free access to high-quality learning resources, in return for financial support (subsidies) for the platform and/or the development of more online tools. The partnership will be explicitly mentioned on the website of the Critical Analysis Tool to support the visibility of the partner organisations.

4.2 Museum Adventure Game

The goal of the Natural History Education Pilot is to demonstrate the creative re-use of Europeana resources by developing viable applications, in the form of (serious) games, with a clear focus on the field of natural history education.

The first application that is being developed within this Pilot theme is a Museum Adventure Game called “The Secret Legacy”. In and after the Natural History Education Co-Creation Workshop and Business Model Workshop, the game concept was slightly modified several times (see Annex II for more information). The game takes place at the Museum für Naturkunde (MfN) and various other locations in Berlin, at the National Museum in Prague (NMP) and a secret island close to the Antarctic.

The game tells the story of the secret legacy of the historical figure Alexander von Humboldt, including a mystery which needs to be discovered by his great-great-great-granddaughter Sara. Sara is a PhD student in natural history science. One day she finds a package including some notes and documents from her ancestor Alexander von Humboldt and a piece of a mysterious map. This is the beginning of her adventure. Sara wants to discover the secret legacy of Alexander. The adventure game consists of two chapters, the first taking place in Berlin and the second one in Prague.

During her adventure Sara needs to solve educational puzzles and tasks to get all the hints where to find the map and collect all of the pieces of the map to discover the great secret at the end. For this application, the Pilot leader and product owner is the National Museum in Prague – the largest publicly funded museum in the Czech Republic and a leading institution in sciences, PR and database technologies with collections and exhibitions in more than fifteen public museums. The “Museum Adventure Game” is a valuable learning tool for museum visitors and users to virtually explore MfN’s and NMP’s collections, and is therefore an important step to increase the visibility and audience of the museums.

The game is developed by Exozet Games, a company that specialises in delivering pioneering online and mobile applications, having realised more than two hundred gaming projects. For

Exozet Games, as a representative of the creative industries, the game is a valuable exercise on how to collaborate with cultural institutions and to make innovative use of cultural heritage content. In other words, it is an opportunity to explore a new market.

The following business model canvas was developed and fine-tuned for the “Museum Adventure Game”.

1. Customer Segments

- Museum visitors (children, families)
- Teachers and students
- Museums
- Educational institutions
- Game developers
- Technology providers

2. Value Proposition

- Offers museum visitors, children and parents (informal education) and teachers (formal education) an application that is both fun and entertaining, socially engaging, as well as educational in a way that they can learn something about natural history.
- Offers museums an attractive game application via which visitors can experience their collections and exhibitions in a new way (digitally) and stimulate them to visit the museum.
- Offers public educational institutions an attractive game application that educates in natural history themes.
- Offers game developers the opportunity to participate in an effort to deliver successful gaming applications for the museum sector that have a chance of being adopted by museum visitors (reaching new markets).
- Offers technology providers a chance to promote their software and hardware solutions to relevant customer segments.

3. Channels

- App Store (also for dissemination)
- Europeana and museum (online) PR
- Museum space for direct offline engagement
- Social media
- Business sector networking

4. Customer Relationships

- Direct and personal
- Fun and entertaining
- Educational

5. Revenue Streams

- There is a basic version of the game that can be downloaded for free; additional items, the full version of the game and extra levels can be purchased (freemium model).
- Adaptation for other museums/institutions (consulting and projects)
- Museum ticket sales
- Public–private partnerships with tech companies
- Governmental/public funding
- Philanthropic funding
- Corporate sponsorships (e.g., via sponsoring hardware)
- Crowdfunding
- Advertising
- Selling audiences to businesses

6. Key Resources

- Museum experts/professionals (co-developing the stories) and network of museums
- Game developers/programmers
- Project management / organisation
- Tech infrastructure
- Content delivered by content providers (museums, galleries etc.)

7. Key Activities

- Operation / project management
- Exploitation
- Expansion/scalability
- Maintain contact with museum experts
- Marketing and promotion
- Technical development

8. Key Partners

- Europeana
- Europeana Creative consortium
- Libraries, natural history museums, archives
- Technical library and tool providers
- Web developers
- Apple (App Store)
- Music and sound studio

9. Cost Structure

- Tech infrastructure maintenance
- Taxes/fees
- Overheads
- Sound and music production
- Software/licences

- Human resources
- Promotion

As already stated for the History Education Pilot, the focus of the business model for the Museum Adventure Game lies on the value proposition, as this is the reason why customers decide to have one product over the other. It solves the customer's problems or satisfies his or her needs. Some value propositions may be innovative and can therefore represent a new offer. Others may be similar to existing offers on the market but need to have added features and/or attributes²¹ to be able to establish themselves on the market.

There are several examples for applications and services for natural history education, like the Evolution app of the Natural History Museum in London,²² which offers the possibility to explore more than 650 million years of Earth history. However, this is rather an exploration tool with no game aspect. The same museum offers different games for children, accessible on their website, like the "Mission: Explore" game, where users can collect specimens and preserve them at the museum.²³ In comparison with these examples, the Museum Adventure Game application combines both the exploration tool and the gaming aspect by using Europeana content.

Furthermore, the Museum Adventure Game will be available as a download on the App Store. The app is fun and entertaining, having at the same time an educational aspect; therefore, it can be considered to be valuable for a lot of different customer segments, as well as for the project partners involved in this Pilot.

The following value propositions for educational re-use were specified for each of the stakeholders identified as important in delivering the central value proposition:

1. Museum Visitors: The Museum Adventure Game offers a new way of experiencing the museum and its collection for **all types of visitors**, even the ones that have not heard of the museum yet. A frequent or first-time visitor can use to game to deepen his or her knowledge of the collection and therefore feel the urge to revisit. For someone who is not visiting the museum anymore, it can re-awaken the interest in the collection after playing the game and convince him or her to visit the museum again. The same situation applies also to the "not-yet visitor", as this is a way of attracting new audiences who might be liking this kind of theme and content, but are not feeling the urge to visit a museum yet.

Last but not least there is the non-visitor, who is the most difficult user to reach. By combining fun and entertainment with ICT and education, this type of user might be interested in the

²¹ See Osterwalder and Pigneur 2010, p. 22.

²² See <http://www.nhm.ac.uk/business-centre/publishing/books/evolution/evolution-app/evolution-app.html>; accessed February 20, 2014.

²³ See <http://www.nhm.ac.uk/kids-only/fun-games>; accessed February 20, 2014.

theme and may be convinced to visit the museum and its collection, in order to see the places he or she experienced in a virtual way. The Museum Adventure Game offers an interesting experience specifically for (young) museum visitors that have an interest in new media and gaming (e.g., iPad users, adventure gamers, etc.). The game can support teachers in teaching natural history themes to children, and families in their informal education of their children.

2. For **content providers** (museums, archives and libraries) the Museum Adventure Game can contribute to an extension of their public mission by giving access to and providing possibilities of re-using cultural sources/content for educational purposes. They can use this game to justify the need to digitise their collections, as this gives the public wider access to their cultural heritage content.

Furthermore the tool increases the use and awareness of the collections of the institutions by addressing a bigger community (students, teachers, families, gamers, etc.) through the combination of fun and education, and this gives a greater visibility to the institutions, supporting the justification for public funding to keep these kinds of services/tools ongoing. The tool can also contribute to an increase of museum visits and ticket sales.

3. The Museum Adventure Game creates value for **public educational institutions**, like ministries, schools, foundations and universities. The mission of these institutions is to provide and improve educational services for people or institutions and to make education accessible. This is what the Museum Adventure Game accomplishes and therefore this kind of application would be suitable to get public funding.

4. The role of ICT in education is becoming more and more important. Also the use of ICT in museums and cultural institutions in general is growing. However, the development of gaming concepts for (museum) education is still at an early stage. The Museum Adventure Game offers **technology providers** and especially **game developers** the opportunity to participate in this growing market, which will finally lead to a greater acceptance of the embedding of ICT in the education sector and finally to more business and sales opportunities based on these kinds of products and services.

Software developed within the Europeana Creative project will be licenced under an open GNU/GPL licence. Technology providers can get inspiration to create their own applications and versions of apps and games; they can re-use the content-rich software for their own purposes; besides participating via the re-use of content-rich software, they can also participate with hardware solutions (e.g., tablets).

4.3 Memory Card Game

The concept of the second application was refined several times, starting from the project proposal, through the Natural History Education Co-Creation Workshop and Business Model Workshop and subsequent Pilot team Scrum calls. Four different concepts were considered until the final concept was agreed upon. The final chosen concept is an educational Memory Card Game in which the user plays against another user to find matched pairs on the board.

The game includes predefined sets of cards according to several attractive themes, and those sets will be unlocked according to the user's achievements and game progress. The sets will be built from preselected content on Europeana and content from the content providers MfN and NMP. The game is a regular memory card game as it is already well represented on the market, with several unique options that improve the added value.

The first additional option is to allow users to build their own sets from Europeana content (user-generated content). Users will search Europeana via the Europeana API and tag content for their own sets. Via a predefined template, users can create a quiz for each specimen or tagged content to extend the memory game also to a knowledge game. This option allows parents, teachers, students but also museum lecturers to use and modify this game as an educational tool.

The other extension is that museums can use this app for their exhibitions, creating sets according to their exhibition collections and displaying the game on touch panels directly in the exhibition room. The additional information on the cards can include, for example, information about where the object is located in the room, exhibition or museum building.

NMP is Pilot leader and product owner of this application. The Memory Card Game is developed by Semantika, a software development company based in Slovenia, with more than ten years of experience in software development, web solutions, mobile and multi-touch applications. The company is specialising in natural user interfaces and human-computer interaction. Given the vast experience of Semantika in software development, museums, heritage and new technologies, they have a great interest in continuing their work in the field of cultural heritage.

The following business model canvas was developed and fine-tuned for the Memory Card Game:

1. Customer Segments

- Pre-school and elementary-aged children
- Teachers and students
- Parents/families
- Museums / content providers
- Game developers
- Technology providers

2. Value Proposition

- Collect your favourite species from a curated and preselected set of quality content about species.
- Access to a fun and educational game application with which children, teachers and parents can build their own quiz; museum educators can build quizzes for their exhibitions.
- Increase of the use of natural history collections by children, teachers and parents and additional marketing intelligence about these target groups.
- Increase of the chance that children, teachers and parents who play the game will also visit the museum in which the object is exhibited (via the inclusion of location information about the exhibited objects).
- Offers game developers the opportunity to participate in an effort to deliver successful gaming applications for the museum sector that have a chance of being adopted by museum visitors (reaching new markets).

3. Channels

- Game environment
- Classroom
- Museum exhibition
- Social media channels

4. Customer Relationships

- Socially engaging
- Addictive brain training
- Viral
- Trusted (content for learning)

5. Revenue Streams

- Merchandising
- Freemium
(The basic version is for free. For additional features, editions, more possibilities for users to interact [more players], choose content, etc. you have to pay.)
- Selling the app to museums
- Governmental funding
- Philanthropic funding
- Corporate sponsorships
- Advertising

6. Key Resources

- Metadata in Europeana
- Content providers
- Europeana Network
- Game developers

7. Key Activities

- Marketing
- Legal clearance
- Manage/build partnerships/relationships with museums
- Content aggregation/curation
- Support users

8. Key Partners

- Game developers
- Game producers
- Museum experts/professionals

9. Cost Structure

- PR and marketing
- Software development
- User support
- Merchandise

The focus of this business model lies – in this case as well – on the value proposition, as this is the reason why customers decide to have this product over another. It needs to be pointed out again that the online Memory Card Game is not an innovative product per se, as there are already a lot of memory games for children on the digital market; however, it offers some extra options which extend its value. The application is considered to be valuable for the following stakeholders:

1. For **pre-school and elementary-aged children** the Memory Card Game offers an attractive and free educational app about the topic of natural history. The app market has become a significant one for children. A study has shown that over 80% of top-selling paid apps in the educational category of the iTunes Store target children. From this number, 72% target pre-school or elementary aged children.²⁴ This shows that there is a general interest for this kind of apps, as especially **parents** search for applications with good and trusted content, combining a game with a learning experience. The Memory Card Game fulfils these conditions and the fact that it will be a freemium game makes it even more attractive on the app market.

The game can also be of added value for schools, as complementary teaching tool for **teachers** and as additional learning tools for **students**. However, there is the concern that it is extremely difficult to enter the classroom, as devices in general are primarily consumer and not institutional-focused, meaning that they will not be tailor-made for existing educational programmes.

²⁴ See Carly Shuler, "iLearn II: An Analysis of the Education Category on Apple's App Store", Joan Ganz Cooney Center, New York, January 2012, p. 3, available online at: <http://www.joanganzcooneycenter.org/publication/ilearn-ii-an-analysis-of-the-education-category-on-apples-app-store/>; accessed February 20, 2014.

Distribution, awareness and access are significant issues, therefore the Museum Card Game should not only target the school market, but rather the consumer market, as this is the way to assure a multiple use of this application in the classroom, at home or on the go.²⁵ The Museum Card Game is a good additional learning tool to practice the knowledge on natural history in a playful way, giving teachers also the opportunity to choose their own content for the game according to the topics dealt with in the classroom.

2. For children's museums, the Museum Card Game can be used as a collaborative tool while visiting the exhibition. For **museum educators** it can be very useful to use the app on borrowed devices from the museum in order to guide a group and at the same time to offer them some excitement and diversification in experiencing the exhibition. The other extension is that museum and gallery professionals or other professionals from institutions with exhibitions can use this app for their exhibitions, creating sets according to their exhibition collections and displaying the game on touch panels directly in the exhibition room. The additional information on the cards can include, for example, information about where the object is located in the room, exhibition or museum building.

3. The Museum Card Game is interesting for **technology providers** and **game developers** because they can promote their services in new growing markets (children, museums). Since 2009, the percentage of apps for children in general has risen; especially the toddler and pre-school age category saw the greatest growth. Because the software developed within the Europeana Creative project will be licenced under an open GNU/GPL licence, they can get inspiration to create their own applications and versions of apps and games; they can re-use the content-rich software for their own purposes; besides participating via the re-use of content-rich software, they can also participate with hardware solutions (e.g., tablets).

In the following sections we will elaborate on the strategies that we develop to *allow wider access to cultural content* (while guaranteeing the copyrights and related intellectual property rights of third parties) and on the opportunities to *create revenues to guarantee the long-term sustainability* of projects and services exploiting the content.

²⁵ See Shuler 2012, p. 20.

5. A Content Re-use Framework for Education

Over the past decade a tremendous effort was made to make digital content in Europe more accessible, usable and exploitable. At the moment of writing, around 20% of heritage materials has been digitised; 31% of that material is available on cultural institution websites and an estimated 6,2% is accessible online. This means that this material is made accessible through the website but without explicit rights of use or re-use.²⁶ One of the goals of Europeana Creative is that the works are offered online in a complete form (with metadata) and the rights policy is explicit so other parties know what they can or cannot do with it. A lack of (good quality) metadata and especially rights labelling information of digital objects is a big obstacle for third partners to search for and re-use the materials that they are looking for.

To allow parties from the creative industries and wider stakeholders like EUROCLIO and NMP to develop products and services with digital resources from cultural heritage institutions aggregated by Europeana, work has been undertaken in the Europeana Awareness²⁷ project to build a Europeana Licensing Framework that gives a unified set of terms of use that enables access to metadata and thumbnail images on Europeana.

In January 2013, Europeana launched a Rights Labelling Campaign²⁸ to reduce the amount of metadata records without rights statements on Europeana; at the end of 2012, 36% of all metadata records were still missing rights information. Because of the demand for access to high-quality re-usable content via Europeana,²⁹ this framework is currently being extended with a Content Layer within the Europeana Creative project. This *Content Re-use Framework* will allow content providers to voluntarily make available content for specific re-use scenarios³⁰ in a (digital and physical) environment called the Europeana Labs.

The following process steps from access to the re-use of content are defined within the Natural History Education and History Education themes:

²⁶ See Directorate-General for Internal Policies 2013, p. 117.

²⁷ See <http://pro.europeana.eu/web/europeana-awareness>; accessed February 20, 2014.

²⁸ See <http://pro.europeana.eu/pro-blog/-/blogs/1494947>; accessed February 20, 2014.

²⁹ See Maarten Zeinstra, Paul Keller and Antoine Isaac, “D3.1 – Specifications for Implementing the Content Layer of the Extended Europeana Licensing Framework”, August 2013, available online at: http://pro.europeana.eu/documents/1538974/1601973/eCreative_D3.1_KL_v1.0; accessed February 20, 2014.

³⁰ For an overview of all issues related to the extension of the existing Europeana Licensing Framework we refer to the Discussion Document ‘Extending the Europeana Licensing Framework’ (Keller, 2013).

1. Filtering and Adding New Content to Europeana

Via the Content Re-use Framework digital objects are filtered based on three technical and IP-related specifications:

- The metadata for the Cultural Heritage Object contains at least one direct link to a Digital Object itself (as opposed to a page where the object is available).
- The Digital Object meets minimum technical quality requirements.³¹
- The Digital Object is provided with a rights statement that allows re-use of the object. (as opposed to rights statements that only allow access).³²

In addition, a content inventory of other sources that are relevant for the purpose of the Pilot is made. In the case of the Critical Analysis Tool, World War I was identified as an important theme for the sourcing of content, and the Museum Adventure Game will source content that highlights specimens/objects and are suitable for the game application. For each of the identified content sources an agreement must be made with the data owner of the source, in which conditions for the re-use of the content are specified. Content can then be ingested in Europeana and accessed by specified re-users (e.g., educational services like EUROCLIO). To be able to participate in one of the three developed applications as partner, it is important that each content partner contributing content agrees on the conditions to deliver content to Europeana via this Content Re-use Framework.

2. Re-using the Content in Educational Resources

Once the content can be accessed, the content will be enriched with new metadata and content. In the case of the Critical Analysis Tool, history educators will create learning objects based on the content of cultural heritage institutions and contextualise the content in an educational context (adding historic contexts, questions, etc.). For the Memory Card Game users build their own sets from Europeana content (user-generated content). They can search Europeana via the Europeana API and tag content for their own sets. Via a predefined template users can create a quiz for each specimen or tagged content to extend the memory game also to a knowledge game.

³¹ See Zeinstra, Keller and Isaac 2013 for the exact technical requirements list.

³² Content that is identified by cultural heritage institutions as in the public domain or is licenced under an open licence that allows re-use.

3. Publishing Educational Resources for the Educational Community

For end users to be able to access the educational resources, the educational resources should be published on the Historiana platform. Because the Europeana Creative project wants to stimulate creative re-use of cultural heritage objects for history education, it was identified that – also considering the community spirit of the teachers active on the Historiana platform in the case of the Critical Analysis Tool – the open licencing of educational lessons should be promoted in Europeana Creative:

- For educational resources that are based on (a combination of) content in the public domain (PDM), under CC0 or CC BY (attribution), educational resources should be licenced under an open licence (CC BY).
- For educational resources based on copyright or a licence that does not allow commercial re-use (CC BY-NC or more restrictive), permission of the data owners should be asked for publication under an open licence (CC BY).

To support this open licencing strategy of educational resources and encourage the open sharing of sources by the educational community, a simple and easy-to-understand standard agreement should be crafted and signed by end users once they have registered to make use of the service or tool.

6. Business Models for Educational Re-use

This chapter outlines the requirements for the business models developed for applications that re-use cultural resources in Europeana for educational purposes:

- **Open access:** The vision of the European Commission’s Comité des Sages that “public domain material digitised with public money should be freely available for non-commercial re-use by citizens, schools, universities, non-governmental and other organisations”³³ is considered as the most widely held view among heritage institutions in Europe, and most access models rely on open access.
- **Open source:** In the case of all the Pilots the product owners (EUROCLIO and NMP) are publicly funded organisations that also receive public funding in Europeana Creative to develop their applications, which will be licenced under an open source licence which permits the (commercial) re-use of the developed software by other parties;
- **Revenue from (in)direct beneficiaries:** EUROCLIO already offers free direct access to their learning resources for teachers and students that can be re-used non-commercially. In our search for strategies to generate revenue for the Critical Analysis Tool it was key that the revenues cannot be generated by the direct beneficiaries of the service (teachers and students). We therefore decided to focus more on indirect beneficiaries that value the service but do not directly use them. For the Pilot applications in Natural History Education, also commercial revenue models generated directly from the consumers were explored.
- **Additional services and goods:** Another strategy to generate revenue while keeping access to the application for free for direct and indirect beneficiaries is to focus on transaction-dependent revenues generated by charging fees for specific additional services (e.g., charging fees for tutorship) or additional unspecified services (e.g., membership fees, donations)³⁴ or goods (e.g., fan merchandising) from direct beneficiaries.

³³ Directorate-General for Internal Policies 2013, p. 121.

³⁴ See Gabriela Hoppe and Michael H. Breitner, “Business Models for E-Learning”, Discussion Paper No. 287, Universität Hannover, Hannover, October 2003, available online at: http://diskussionspapiere.wiwi.uni-hannover.de/pdf_bib/dp-287.pdf, p. 9; accessed February 20, 2014.

6.1 Critical Analysis Tool

Following this line of reasoning, we propose the following business model taxonomy (including revenue models) for the re-use of public content for the History Education Pilot.³⁵

1. A **crowdsourcing** scheme entails the outsourcing of tasks, allowing the public to contribute and add information, and is increasingly getting popular. Initiatives range from Oxford University's Anglo-Saxons archive that asks the public in the project Worldhord to upload stories, poems, writing, art or songs they have composed or heard that relate to Old English and the Anglo-Saxons,³⁶ to providing free access to publicly available eLearning contents made by teachers by the Virtual School platform of Fuse³⁷. Teachers feed in the material and the sessions can be accessed by mobile devices or YouTube. In exchange, their schools gain access to the resulting eLearning materials. Eight of the top ten UK teaching schools are now on board.³⁸ The crowdsourcing business model, which does not generate revenue but creates a core value of the service for educators and students, applies to the goals of the History Education Pilot and Critical Analysis Tool.

- Strengths and weaknesses: Crowdsourcing empowers end users to be in charge of the design of their ideal online learning environment themselves (instead of IT professionals), but the model also relies on active participation by highly IT-skilled history educators who are still a minority in the educational community. The Critical Analysis Tool can count on the extensive network of educators run by EUROCLIO.
- Short- and long-term viability:³⁹ The core of the value proposition of this application is about teachers creating online learning materials on the Historiana platform. It was decided that this business model should be followed up on the short term.

³⁵ See Guthrie, Griffiths and Maron 2008; European Commission 2011; Hoppe and Breitner 2003. See also Peter B. Kaufman, "Marketing Culture in the Digital Age: A Report on New Business Collaborations between Libraries, Museums, Archives, and Commercial Companies", Intelligent Television, Library of Congress, Washington, 2005; Peter B. Kaufman, "Assessing the Audiovisual Archive Market: Models and Approaches for Audiovisual Content Exploitation", Intelligent Television, PrestoCentre Foundation White Paper, 2013, available online at: https://www.prestocentre.org/system/files/library/resource/assessing_the_audiovisual_archive_market_-_peter_b_kaufman_white_paper_3.pdf; accessed February 20, 2014.

³⁶ See <http://projects.oucs.ox.ac.uk/worldhord>; see also www.galaxyzoo.org as an effort of crowdsourcing the classification of galaxies; accessed February 20, 2014.

³⁷ See <http://www.thevirtualschool.com> and <http://www.fusion-universal.com>; accessed February 20, 2014.

³⁸ See Balch 2012. However, the Fuse platform is also dependent on corporate sponsorship to support running costs.

³⁹ We defined short-term viability as viable for the project period of the pilot (before August 2015), and long term for after the project period (after August 2015).

2. In a **public–private partnership** organisations support a project or organisation because it is instrumental to the mission or to the institution’s image as an inclusive place of learning; it can increase the organisation’s reputation and can attract and engage students. The Massachusetts Institute of Technology (MIT) initiative OpenCourseWare⁴⁰ and Apple iTunes U initiative⁴¹ are examples of partnerships with universities that provide online courses free of charge for end users. The partnership can be structured around a partner fee, the pooling and sharing of resources and services (e.g., the JISC Digitisation Programme⁴² is a joint venture that aims at creating “a unique digital collection of BBC cultural broadcast assets”⁴³ and integrates academic libraries, UK research councils and the BBC archives) or redeployment of resources. The partnership model, which can generate revenue (e.g., educational publishers, technology providers, public organisations) and/or reduce funding needs via indirect beneficiaries (e.g., technology providers, memory institutions), is seen as a qualified model to support the goals of the History Education Pilot and Critical Analysis Tool.

- Strengths and weaknesses: The opportunity to create a broad support from key stakeholders for the platform in which partners contribute to their respective strengths. In this model it will take some time until the envisioned benefits will be visible to end users and for the technology to evolve from a Pilot application to a product that is market-ready; expectation management will be key to keep early partners satisfied (in opposition to a contractual model between a memory institution and a technology provider).
- Short- and long-term viability: It was decided that on the short term it is most important to develop partnerships with memory institutions to get quality content as building blocks for teachers to build new resources with, and also get resources from their educational departments to work on the platform. On the longer term, when the basic tools prove to be valuable for the market, the focus can broaden to establish partnerships with technology providers (and maybe also some memory institutions that want to join) to build more tools in partnership with educational publishers.

3. Although maintaining the core business free of charge for students, the organisation can engage itself in business resulting in direct sales of **additional goods or services and consulting**. According to Hoppe and Breitner, some service-based revenue models include the sale of eLearning products and services and revenues by brokerage, i.e., from bringing

⁴⁰ See <http://ocw.mit.edu/index.htm>; accessed February 20, 2014.

⁴¹ See <http://www.apple.com/education/ipad/itunes-u>; accessed February 20, 2014.

⁴² See <http://www.jisc.ac.uk/whatwedo/programmes/digitisation.aspx>; see also Sarah Fahmy, “Towards the ‘Research Education Space’ (RES)”, January 2013, available online at: <http://www.jisc.ac.uk/blog/towards-the-research-education-space-res-07-jan-2013>; accessed February 20, 2014.

⁴³ <http://www.jisc.ac.uk/about/partnerships>; accessed February 20, 2014.

interested parties together and facilitating transactions.⁴⁴ Examples are museum stores and services like Stanford University's HighWire Press⁴⁵ and Johns Hopkins University's Project MUSE⁴⁶ that offer paid access to its electronic journal collections for non-students. You can also think of mobile apps that connect learning communities⁴⁷ or paid side services that leverage a network effect like *The Guardian* offers. *The Guardian* offers a side service of a dating site which charges membership fees and a "Comment is free" blogging site, which has largely contributed to the average reader's "length of visit" times.⁴⁸ The goods and services model is seen as a qualified model to support the goals of the History Education Pilot and the Critical Analysis Tool and concentrates on training services and seminars for teachers.

- Strengths and weaknesses: It can create high value for end users and improve the overall quality of contributions by teachers and students to the platform. However, you will need active marketing and sales power to engage enough demand in the market for the trainings, which might not be skills that are available at the organisation at the moment.
- Short- and long-term viability: EUROCLIO is already offering training services to their community, but does not promote this very explicitly yet. It was decided that on the short term it is worthwhile to use the Pilot period to see if a training model for the new application can be developed, and EUROCLIO can promote this more explicitly into their community, so this business model can mature throughout the project

4. Governmental funding relates to centralised investment/loans, sustained by a variety of income sources. This can be European, national or regional public funds. However difficult to make the case for grants from the public sector in times of hardship, in Europe this is still the most common way of funding educational platforms (e.g., the Dutch educational platform ED*IT⁴⁹ or Wikiwijs⁵⁰).

In the United States, there is an example coming from the Obama Administration of a pledge of grant funding for the open source cause for career and training programmes to be administered and overseen largely through local colleges. The condition that was given by the Obama Administration was that all associated material should be produced under an open Creative

⁴⁴ See Hoppe and Breitner 2003. Other revenue sources based on services and consulting is advertising and sale of customer information. These have been referred previously. Membership fees and subscription were not considered.

⁴⁵ See <http://highwire.stanford.edu/>, "ePublishing solutions for the Scholarly Community"; accessed February 20, 2014.

⁴⁶ See <http://muse.jhu.edu>; accessed February 20, 2014.

⁴⁷ See Nancy Proctor, "Introduction", in: Mobile Apps for Museums, American Alliance of Museums, August 2013, available online at: <http://mobileappsformuseums.wordpress.com>; accessed February 20, 2014.

⁴⁸ See Guthrie, Griffiths and Maron 2008.

⁴⁹ See <http://www.ed-it.nu>; accessed February 20, 2014.

⁵⁰ See <http://www.wikiwijsleermiddelenplein.nl>; accessed February 20, 2014.

Commons licence, so students and teachers could re-use the materials freely. The governmental funding or subsidies model, which generates revenue from indirect beneficiaries, is seen as supportive to the goals of the History Education Pilot and the Critical Analysis Tool.

- Strengths and weaknesses: Financial commitment of governmental organisations who have a shared mission to improve the quality of (online) education will raise the credibility of the platform for end users. Decreasing public funds make it hard to fully rely on this business model; a lot of pre-investments in time should be made before the grants can be made effective.
- Short- and long-term viability: Since this business model requires a long breath, it was decided that it would be good to start with this on the short term by promoting the Pilot and results at conferences, to develop a network of public funders and make an analysis of which funding cycles are interesting and when they are open.

5. Philanthropic funding or donations are a very frequently used source for funding and can be sourced from both individuals (e.g., teachers who are very committed) as well as organisations. There are a number of channels that can be used, for example, fundraising events or grant contests. In the United States the endowment model has been applied to a large extent. It implies that donors give enough capital that enables the organisation to run their operation with investments or interests without actually having to tap that fund.⁵¹

As it results from a tradition of large private funding, the endowment model is clearly substantiated in a different mindset in comparison with the European mindset. However, the philanthropic business model, which generates revenue from indirect beneficiaries (e.g., public organisations, technology providers) and is optional for direct beneficiaries (teachers, students), is seen as a qualified model to support the goals of the History Education Pilot and and Critical Analysis Tool.

- Strengths and weaknesses: Highly committed end users and organisations are actively engaged to contribute to the platform and play a special role in the development. But, in times of crisis, generating enough donor money to enable living from funding in the endowment model seems highly questionable.
- Short- and long-term viability: For this model to work, a very good tool and an enthusiastic community of users are needed to be able to promote this to donators. On the short term this is not established yet, so it was decided that this is something for the long run to try out. As this model is highly dependent on the current economic climate, it was also noted that this model should not be considered as a standalone revenue source.

⁵¹ See Guthrie, Griffiths and Maron 2008, p. 47.

6. **Corporate sponsorships** can support a non-profit project by offering the opportunity to disseminate products or services or be positively associated within the non-profit organisation's brand and/or audience. The manner in which a sponsorship can be translated into practical terms varies greatly, but one can relate to paid advertising (product placement, branding) and special facilities for corporate members.

An example of this model is HathiTrust whose contributors include a range of universities, but also commercial partners such as Google.⁵² The corporate sponsorship model, which generates revenue from indirect beneficiaries, is seen as a qualified model to support the goals of the History Education Pilot and the Critical Analysis Tool (e.g., technology providers can sponsor interactive whiteboards or hardware).

- Strengths and weaknesses: This is a strong model to engage corporate partners because brands can mutually benefit from each other's reputation and existing services and products. This model entails private sector investment in public services and therefore there is a risk of conflicting intentions.
- Short- and long-term viability: Like with the philanthropic model, a very good tool and an enthusiastic community of users are needed to be able to promote this to sponsors. On the short term this is not established yet, so it was decided that this is also something for the long run.

7. **Crowdfunding** can be traced back to 2005, when Kivawas first launched in micro-financing cultural production.⁵³ Since then a number of platforms have been developed,⁵⁴ which arguably have changed the way entrepreneurs and (cultural) organisations look at sources of funding their projects.

There are four basic models of crowdfunding: donation-based (funders donate to a project without any expected compensation), reward-based (non-financial rewards are offered to funders), lending-based (funders expect repayment and interest) and equity-based (funders receive equity, revenue or a share of the profits).⁵⁵ Examples are Wikipedia (in-kind contributions) and CrowdCulture⁵⁶, a Swedish crowdfunding platform that pools private and public money where members control how the money is spent.

⁵² See <http://www.hathitrust.org>; accessed February 20, 2014.

⁵³ See <http://www.kiva.org>; accessed February 20, 2014.

⁵⁴ For further reading, see David Röthler and Karsten Wenzlaff, "Crowdfunding Schemes in Europe", EENC Report, September 2011, available online at: <http://www.eenc.info/wp-content/uploads/2012/11/DRöthler-KWenzlaff-Crowdfunding-Schemes-in-Europe.pdf>; accessed February 20, 2014.

⁵⁵ See Sara Bannerman, "Crowdfunding Culture", in: *Wi – Journal of Mobile Media*, vol. 7, no. 1, March 2013, available online at: <http://wi.mobilities.ca/crowdfunding-culture/>; accessed March 20, 2014.

⁵⁶ See <http://crowdculture.se>; accessed February 20, 2014.

The crowdfunding model is seen as a model that can support the goals of the History Education Pilot and the Critical Analysis Tool in funding the development of new eLearning tools and modules, e.g., in cooperation with technology partners. As more ideas for tools have been developed in the co-creation workshops than can be built within the scope of the Europeana Creative project, this is an alternative way to fund the ideas that have not been realised yet.

- Strengths and weaknesses: You will get very direct feedback on whether a project idea is relevant to the community you are targeting; if the crowdfunding is successful, it will be very likely that the tool/project will be used. Crowdfunding is a successful example of a scheme that needs ongoing efforts and investment to be sustainable; it works better for clearly defined projects than for organisations as a whole.
- Short- and long-term viability: It was decided that the crowdfunding model is interesting on the longer term, when the product is mature enough, the community is enthusiastic and can play a role in obtaining funding, and there is a need to build the product with specific features or add-ons.

8. As a result of considerable cuts on government subsidies and dwindling corporate contributions, **straightforward advertising** is getting in the spotlight as an alternative way of funding public causes. An example is the Musée d'Orsay in Paris which had a deal with a perfume company that allowed the placement of sizeable billboards on the museum's walls. Online advertising is also growing: advertising can be published by a supplier of eLearning products whereas eLearning services can remain free.⁵⁷ Search ads (advertisers create ads related to keywords in search providers), display ads (advertisers pays for a fixed placement on a page) and classified ads (advertisers rent a space in a for-purpose website) can be distinguished.⁵⁸ The advertising model is not seen as supportive to the goals of the History Education Pilot and the Critical Analysis Tool because it will turn schools and learning environments in commercial spaces.

- Strengths and weaknesses: Financial commitment of commercial partners to a shared mission to improve the quality of (online) education. The weakness of this model lies in the fact that schools are positioned as commercial spaces.
- Short- and long-term viability: It was decided that this model has no viability for the History Education Pilot.

⁵⁷ See Hoppe and Breitner 2003.

⁵⁸ See Guthrie Griffiths and Maron 2008.

9. **Selling audiences to businesses** is a business model in which customer-related information is sold to data-mining agencies whereas the core service of the platform can remain free to access for end users. This online mode is a considerable source of revenue to some well-known global corporations like Google. In the last few years, Google's tools have radically transformed dissemination value for businesses: from a basic mission of connecting with buyers to supplying customer data and consequently delivering tailored ads for targeted customers. The advertising model is not seen as supportive to the goals of the History Education Pilot and the Critical Analysis Tool because it will turn schools and learning environments in commercial spaces.

- Strengths and weaknesses: The model aims at a deeper knowledge of users or viewers which caters the increased needs of (public) organisations to develop content that interests their public most. The weakness of this model lies in the fact that schools are positioned as commercial spaces.
- Short- and long-term viability: It was decided that this model has no viability for the History Education Pilot.

6.2 Museum Adventure Game

For the Museum Adventure Game we propose the following business model taxonomy / revenue models (based on the findings in chapter 5) for the re-use of public content for the Natural History Education Pilot:

1. The first chapter of the Museum Adventure Game (set in Berlin) will be distributed for free via the Apple App Store market. The second chapter (set in Prague and other locations) will be payable content, as well as all other following chapters, so the users need to pay to be able to access them. Revenue will be created by additional chapters, full versions but also by additional items that can be purchased (**freemium business model**).

- Strengths and weaknesses: The fun and entertainment component of the game can create an “addiction” for the user. By making the first chapter available to play and leaving the solving of the mystery uncompleted, the interest of the users in the game can be stimulated, so they purchase the next chapter to continue the quest.
- Short- and long-term viability: Offering more versions or chapters of the game requires more resources and especially more content. At least for the second chapter of the game, additional funding is needed to finance the development and programming; especially after the end of the project funding, new means have to be found to keep this project going.

2. The game can be adapted for other museums and institutions (**consulting and projects**). The product owners can generate revenue by consulting offers from museums and/or project funding that are acquired from other (public) funds that align with the mission to make cultural heritage accessible in new ways.

- Strengths and weaknesses: The game can contribute to an increase of museum visits because it offers a tailor-made experience of the collection in ways that museums have not offered yet. To get a good result, there needs to be a productive relationship between museum professionals and game developers, which will cost time and money to invest in. As public funding is decreasing, it can be very difficult to find the right financial resources.
- Short- and long-term viability: For the Pilot period this model is out of scope, but this can be explored as a model on the long term, to be repeated for other museums in either a standard service model offer or on a project basis. It is advised to start already within the project period to search for new funding opportunities.

3. **Merchandise:** While maintaining the basic version of the Museum Adventure Game free to use, the organisation can engage itself in business resulting in direct sales of additional goods. Because the game is targeted at consumers and tries to create a community of fans and players, fan merchandising can be an interesting way to bind the community and generate revenue. An example is the hugely successful merchandise strategy of Rovio's Angry Birds game.⁵⁹ For the Museum Adventure Game one can think of action figures or plush items that reflect the riddles that the user has to solve.

- Strengths and weaknesses: A strong community-building element. However, this cannot be the core business model of the game and relies heavily on an active fan community. Also, specific merchandising expertise in the team is needed which is not available at the moment.
- Short- and long-term viability: It is advised to explore this model on the long term, once a strong fan base is created around the game.

⁵⁹ See <http://www.thinkwaystrategies.com/content/lessons-angry-birds>; accessed February 20, 2014.

4. Philanthropic funding: This is a frequently used method which could generate revenue to further develop the application. Revenue would mainly be generated from indirect beneficiaries (e.g., organisations, technology providers, companies, etc.) and not so much from direct beneficiaries (e.g., teachers, families, gamers etc.).

- Strengths and weaknesses: This model is a very powerful way to bind a community of users and get direct support from them in the further development of the game.
- Short- and long-term viability: A very enthusiastic community of users is needed to be able to promote the game to donators. On the short term this is not established yet, so it is advised that this is something for the long run to try out. As this model is highly dependent on the current economic climate, it was also noted that this model should not be considered as a standalone revenue source.

5. Corporate sponsorships: Support of the product by corporate members through money or know-how. It is also very useful to associate the product with commercial partners like Apple; this would lead to a higher visibility of the product and would attract more sponsors.

- Strengths and weaknesses: This model offers a powerful way for technology providers to enter a growing market with their existing software and/or hardware solutions, but it also requires that they meet the company's professional expectations, which will be high in the case of bigger brands like Apple or Microsoft; they may be lower for smaller technology companies.
- Short- and long-term viability: It is advised to explore this model on the longer term if the product is mature enough to be presented to corporate sponsors.

6. Crowdfunding: A donation-based crowdfunding model seems to be the most suitable approach in this project. Especially families, online users and adventure game fans may have an interest in supporting the further development of the game. At the same time this means more control by the community, more feedback on the game and also direct feedback, if the game and the idea behind it are relevant to the targeted audience.

- Strengths and weaknesses: The benefits for the community of fans that are enthusiastic about the game are high. They can influence the further development of the game and be part of the product.
- Short- and long-term viability: It is advised to explore this model on the longer term if there is an established community to be targeted.

7. Advertising: Online advertising is widely spread and a good way of generating revenue. For this approach, the right partners have to be chosen. Serious advertising is needed to keep the quality of the application high; advertising partners that have the same customers as the application should be chosen (e.g., eLearning products, education products and offers, etc.).

- **Strengths and weaknesses:** A proven model to generate revenue, although, if used in formal educational contexts, it is too commercially driven. As the main customer of the Museum Adventure Game is more broadly focused on consumers, this might not be a problem.
- **Short- and long-term viability:** It is advised that this model is considered on the longer term because it is important to choose the right (thematically close) and serious partners for this. However, it is advised to develop this network of partners during the project period.

8. Public–private partnership: This model can be useful for the Museum Adventure Game as it can bring important new partners (e.g., Apple) and new resources, services and know-how. At the same time it can generate revenue (e.g., educational publishers, technology providers, etc.), and even reduce funding needs via indirect beneficiaries (e.g., technology providers).

- **Strengths and weaknesses:** This is an opportunity to create new alliances and to get support from other key stakeholders. However, it is very important to define targets, tasks, duties and limits of this partnership from the very beginning, to assure a good outcome and a long-running collaboration.
- **Short- and long-term viability:** It is advised to explore this model on the longer term if the product is mature enough to present it to potential private partners.

9. Selling audiences to businesses is, again, a business model in which customer-related information is sold to data-mining agencies, but maybe also museum marketing departments around Europe. The advertising model is seen as supportive to the goals of the Museum Adventure Game.

- **Strengths and weaknesses:** The model aims at a deeper knowledge of users or viewers which caters the increased needs of (public) organisations to develop content that interests their public most.
- **Short- and long-term viability:** It is advised to explore this model on the longer term if the product is mature enough and the community is big enough for the marketing intelligence to become valuable.

6.3 Memory Card Game

For the early version of the Memory Card Game we propose the following business model taxonomy / revenue models (based on the findings in chapter 5) for the re-use of public content for the Natural History Education Pilot:

1. **Crowdsourcing:** Crowdsourcing does not create revenue but rather value and a sense of community. In the Memory Card Game the users (parents, teachers, students, museum lecturers) can create a quiz from a predefined template for each specimen or tagged content to extend the memory game. Museums can also use this app for their exhibitions, creating sets according to their exhibition collections and displaying the game on touch panels directly in the exhibition room. To stimulate crowdsourcing activities for the application, competitions can be set up including winners' packages. For example, if a player completes a certain collection or are the best player for a certain quiz, he or she can pick up a prize at the museum and or get free admission to the museum.

- Strengths and weaknesses: This model empowers the end user to contribute to the application (e.g., design, scope) and to add information. However, the model relies on active user participation. For the Memory Card Game various schools and students from NMP's network are engaged, but there is a challenge if this community can grow (virally) during the project period.
- Short- and long-term viability: The success of the Memory Card Game is dependent on an active community of users that are enthusiastic about the product, want more and might even be willing to pay for premium services. It was decided that this business model should thus be followed up on the short term.

2. As with the previous application, revenue can be generated by offering the first version and deck of cards of the Memory Card Game for free, which is also in line with the open access requirement mentioned earlier. Additional versions or decks for the game can be purchased for a fixed prize afterwards, to help sustain the game after the project period (**freemium business model**). An example of such a freemium modelled card trading game is the recently released game "Hearthstone: Heroes of Warcraft" by Blizzard⁶⁰.

- Strengths and weaknesses: The game anticipates users that like to collect natural history objects which can create an "addiction" for the users. By adding new sets to the game, the interest of the users in the game can be stimulated, so they purchase new versions or components to continue to collect things that are available in the game environment until a collection is complete.

⁶⁰ See <http://us.battle.net/hearthstone/en/>; accessed February 20, 2014.

- Short- and long-term viability: Offering more versions or chapters of the game requires more resources and especially more content. At least for the second chapter of the game, additional funding is needed to finance the development and programming, meaning that especially after the end of the project funding, new means have to be found to keep this project going.

3. Projects and consulting: Like the previous application, this game can also generate revenue by customising the app for other museums for children to use it for their exhibitions. Together with the museum and according to their exhibition collections, a new set of cards for the game is made and offered on touch panels that can be lent for visiting the exhibition. The app will create interactive elements in the exhibition. The costs of such a project could be covered by the budget of the museum or external (governmental) project funding. An additional way of covering these costs would be to ask for a financial contribution by the direct beneficiaries in form of a rental fee for tablets that can be used to navigate in the museum and to play the game.

- Strengths and weaknesses: For the target group of natural history fans that like to collect things it would be very interesting to be offered a card deck that covers natural history collections from all over Europe, adding unfamiliar species to what they already know. Considering the major budget cuts in Europe, it is difficult to rely on public funding either directly from museums or from governmental sources with the goal to improve accessibility of digital heritage.
- Short- and long-term viability: For the Pilot period this model is out of scope, but this can be explored as a model on the long term, to be repeated for other museums in either a standard service model offer or on a project basis. It is advised to start already within the project period to search for new funding opportunities, especially by building a network of interested museums with natural history collections that are willing to be part of the game.

4. Merchandise: While keeping the basic version of the card game free to use, the organisation can engage itself in business resulting in direct sales of additional goods. Because the card game is targeted at consumers and tries to create a community of fans and players, fan merchandising can be an interesting way to bind the community and generate revenue. An example is the hugely successful merchandise strategy of Rovio's "Angry Birds" game.⁶¹ For the Memory Card Game one can think of special deck holders, T-shirts, geological gadgets or plush natural history items like fossils.

⁶¹ See <http://www.thinkwaystrategies.com/content/lessons-angry-birds>; accessed February 20, 2014.

- **Strengths and weaknesses:** A strong community-building element is needed. However, this cannot be the core business model for the game and relies heavily on an active fan community. Also, specific merchandising expertise in the team is needed which is currently not available.
- **Short- and long-term viability:** It is advised to explore this model on the long term, once a strong fan base has been created around the game.

5. Philanthropic funding: This is a frequently used method which could generate revenue to further develop the application. Revenue would mainly be generated from indirect beneficiaries (e.g., organisations, technology providers, companies, etc.) and also, if possible, from direct beneficiaries (e.g., teachers, families, gamers, etc.).

- **Strengths and weaknesses:** This model is a very powerful way to bind your community of users and get direct support from them in the further development of the game.
- **Short- and long-term viability:** A every enthusiastic community of users is needed to be able to promote the game to donators. On the short term, this is not established yet, so it is advised that this is something for the long run to try out. As this model is highly dependent on the current economic climate, it was also noted that this model should not be considered as a standalone revenue source.

6. Corporate sponsorships: Support of the product by corporate members through money or know-how. It is also very useful to associate the product with well-known commercial partners that also target pre-school and elementary-aged children. This would lead to a higher visibility of the product and would attract more sponsors.

- **Strengths and weaknesses:** This offers a powerful way for technology providers to enter a growing market with their existing software and/or hardware solutions, but it also requires that they meet the company's professional expectations, which will be high in the case of bigger brands like Apple or Microsoft; they may be lower for smaller technology companies.
- **Short- and long-term viability:** It is advised to explore this model on the longer term if the product is mature enough to present it to corporate sponsors.

7. Crowdfunding: A donation-based crowdfunding model seems to be a suitable approach in this project. Especially collectors and fans of natural history topics may have an interest in supporting the further development of the game. At the same time, this means more control by the community, more feedback on the game and also direct feedback, if the game and the idea behind it are relevant to the targeted audience.

- Strengths and weaknesses: The benefits for the community of fans that are enthusiastic about the game are high. They can influence the further development of the game and be part of the product.
- Short- and long-term viability: It is advised to explore this model on the longer term if there is an established community to be targeted.

8. Advertising: Online advertising is widely spread and a good way of generating revenue. For this approach, the right partners have to be chosen. Serious advertising is needed to keep the quality of the application high; advertising partners that have the same customers as the application should be chosen (e.g., eLearning products, education products and offers, etc.).

- Strengths and weaknesses: A proven model to generate revenue, although, if used in formal educational contexts, it is too commercially driven. As the main customer of the Memory Card Game is more broadly focused on consumers, this might not be a problem.
- Short- and long-term viability: It is advised that this model is considered on the longer term because it is important to choose the right (thematically close) and serious partners for this. However, it is advised to develop this network of partners during the project period.

9. Public–private partnership: This model can be useful for the Memory Card Game as it can bring important new partners (e.g., Apple) and new resources, services and know-how. At the same time it can generate revenue (e.g., educational publishers, technology providers, etc.), and even reduce funding needs via indirect beneficiaries (e.g., technology providers).

- Strengths and weaknesses: This is an opportunity to create new alliances and to get support from other key stakeholders. However, it is very important to define targets, tasks, duties and limits of this partnership from the very beginning, to assure a good outcome and a long-running collaboration.
- Short- and long-term viability: It is advised to explore this model on the longer term if the product is mature enough to present it to potential private partners.

10. Selling audiences to businesses is, again, a business model in which customer-related information is sold to data-mining agencies, but maybe also museum marketing departments around Europe. The advertising model is seen as supportive to the goals of the Memory Card Game.

- Strengths and weaknesses: The model aims at a deeper knowledge of users or viewers which caters the increased needs of (public) organisations to develop content that interests their public most.

- Short- and long-term viability: It is advised to explore this model on the longer term if the product is mature enough and the community is big enough for the marketing intelligence to become valuable.

6.4 Success Indicators

In the sections above we elaborated on the strategies to *allow wider access to cultural content* (while guaranteeing the copyrights and related intellectual property rights of third parties) and on the opportunities to *create revenues to guarantee the long-term sustainability* of projects and services exploiting the content for the History Education and Natural History Education themes.

Table 1: Success Indicators

Business Model	Critical Analysis Tool	Museum Adventure Game	Memory Card Game
Crowdsourcing	yes	no	yes
Additional content and services (freemium)	no	yes	yes
Consulting and projects	yes	yes	yes
Philanthropic funding	yes	yes	yes
Corporate sponsorships	yes	yes	yes
Crowdfunding	yes	yes	yes
Advertising	no	yes	yes
Public–private partnerships	yes	yes	yes

Additional goods: merchandising	no	yes	yes
Additional training services	yes	no	no
Governmental funding	yes	yes	yes
Selling audiences	no	yes	yes

In order to be able to evaluate the success of the implementation of the proposed business models, we developed an evaluation framework based on several key success indicators for each of the business models that was decided to be worthwhile to develop on the short term, i.e., within the project period of the Pilot projects.

For the History Education theme and Pilot, the following evaluation framework is relevant:

Table 2: Evaluation Framework History Education Pilot

Business Model	Stakeholder	Success Indicator	Evaluation
Crowdsourcing	History educators and students (end users) (B2C)	<i>Positive feedback of the end users (educators, students):</i> <ul style="list-style-type: none"> – increase of contributions by educators – increase in the use of resources and tools by students – increase of knowledge by students – increase of satisfaction by educators and students – etc. 	Focus groups, usability testing, website statistics

Partnerships	Memory institutions (B2B)	<p><i>Participation of memory institutions:</i></p> <ul style="list-style-type: none"> – growing network of partner institutions – agreements with partner institutions in using content / copyright clearance strategies for content – increase in number of sources included in the Historiana database – participation of educators working at the partner institution contributing to the platform – etc. 	Analysis, website statistics
Additional services	Educational publishers, educational/public organisations (B2B)	<p><i>Participation in training services (schools, publishers, etc.):</i></p> <ul style="list-style-type: none"> – increase of use of the training services – increase of income via training – etc. 	Analysis, focus groups, usability testing
Governmental funding	European Commission, national, regional and local governments	<p><i>Financial support via subsidies:</i></p> <ul style="list-style-type: none"> – subsidies for specific (community) projects – subsidies for new tools for the platforms – etc. 	Analysis

For the Natural History Education theme and Pilot (Museum Adventure Game), the following evaluation framework is relevant:

Table 3: Evaluation Framework Natural History Education Pilot (Museum Adventure Game)

Business Model	Stakeholder	Success Indicator	Evaluation
Freemium service	End users (B2C)	<i>Positive feedback of the end users:</i> <ul style="list-style-type: none"> – increase of free downloads of the game – increase of the time spent playing the game – increase of satisfaction in the use of the game – increase of museum visits by end users 	Focus groups, usability testing, website statistics, ticket sales
Consulting and projects	Museums and public funders (B2B)	<i>Financial support via project funding or consulting offers:</i> <ul style="list-style-type: none"> – line-up of museums that are interested in an adaptation of the game – project funding (opportunities) for new adaptations of the game 	Analysis

For the Natural History Education theme and Pilot (Memory Card Game), the following evaluation framework is relevant:

Table 4: Evaluation Framework Natural History Education Pilot (Memory Card Game)

Business Model	Stakeholder	Success Indicator	Evaluation
Crowdsourcing and freemium service	End users (B2C)	<i>Positive feedback of the end users:</i> <ul style="list-style-type: none"> – increase of free user registrations – increase of completed free collections / decks – increase of satisfaction in the use of the game – increase of museum visits by end users 	Focus groups, usability testing, website statistics, ticket sale
Consulting and projects	Museums, public funders (B2B)	<i>Financial support via project funding or consulting offers:</i> <ul style="list-style-type: none"> – line-up of museums that are interested in an adaptation of the game – project funding (opportunities) for new adaptations of the game 	Analysis

7. Conclusions and Next Steps

This White Paper documents the efforts to identify, implement and evaluate business models that are developed within the Europeana Creative project for the re-use of cultural objects for Natural History Education and History Education; it specifies the approach *how* the business models were developed as well as the business models *themselves*.

We have the following conclusions and recommendations for cultural heritage organisations and/or creative industries partners to consider when (jointly) engaging in the creative re-use of cultural heritage resources for the Natural History Education and History Education themes, which together can be seen as guidelines for the business development approach (including the design of a workshop) as well as for business models themselves.

1. Guidelines for a Business Development Approach

- Start the conversation with getting a **shared understanding** of what business model innovation and a business model is and how you could use this. The Business Model Canvas proved to be a simple and robust tool to trigger a discussion around business modelling and the development of business models for the concepts developed during the Pilot co-creation workshop.
- The **right people** must be involved. It is important to have a mixed group of in- and outsiders involved in the process from the beginning, with people representing different stakeholders and having different professional backgrounds. For this theme, we mixed representatives from the technology sector, business, content providers and end users (history educators and students).
- Spend enough time on introducing each other's **perspectives**. Do not take for granted that a cultural heritage institution understands the perspective of an educational publisher and vice versa. In the business model workshops we addressed this by having a presentation and discussion about Europeana and the relationship and collaboration between creative industries and cultural heritage institutions (based on the research from the Market Activity Analysis).
- In order to further develop and assess the viability of the developed business models, it is important to get a clear path how to turn each concept into a sustainable and relevant application as a result of the business model workshop. It is important to have a shared understanding of the **value proposition** of the business models, i.e., a clear idea of the added value, meaning that (1) the application concept developed during the co-creation workshop should be robust enough to be further assessed on its “business” potential and (2) to reach consensus on the relevance and potential of each concept of all stakeholders. To assess this, also a technological assessment is of importance.

- Once there is a clear path about the value propositions, this should be taken as a baseline for the implementation. When going from the drawing board to the actual implementation, **commitment of all partners** is key to the process. This means having clear roles and responsibilities in the process (in which the product owner is key), having regular conversations, defining concrete actions and also being prepared to change plans when basic conditions for certain areas in the business model are not met (for instance, when there is no interest of memory institutions to commit to the re-use of cultural resources according to the Content Re-use Framework).

2. Guidelines for Business Models for Educational Re-use

- Certain business models that are widely accepted in the creative industries (like straightforward advertising and selling audiences to businesses) seem to meet an important requirement for publicly funded organisations with a public mission, namely, free and open access to public content at all times, but might not be in line with the overall strategy of public organisations (they might, for instance, turn classrooms in commercial spaces). It is important to **openly discuss strengths and weaknesses** of these models and choose an approach that supports end users' needs as good as possible.
- We explored the basic requirements for the development of business models for the educational themes: For the business model for the History Education theme we found out that it relies on **open access** of public domain material digitised with public money, on open access to the **open-source**-licenced software developed within the project, on the assumption that, for the Critical Analysis Tool, revenue can only be generated by indirect beneficiaries. Regarding the business models for the Natural History themes, however, the scope for the Memory Card Game and Museum Adventure Game can be more commercially driven by generating revenue from both **direct and indirect** beneficiaries; additional revenues can be obtained from **additional services and goods**. We choose to focus on the short term (from the start of the Challenges until the end of the project period) and on the development of the following business models: crowdsourcing, freemium, consulting and projects, governmental funding and the development of partnerships with memory institutions and museums (that could eventually be extended with private partners from the IT sector, for instance).
- As we are just beginning to develop new business models for the creative re-use of cultural resources and are exploring fruitful relations between cultural heritage organisations and the wider creative industries, it is important that we share more **best practices** in the field and also reflect on failures.

3. Next Steps in Business Development

In conclusion, we also sketch out some next steps for the further development and implementation of the developed business models in the Europeana Creative project. We specify steps for each of the developed application.

The Critical Analysis Tool:

- Approach content providers to participate in a partnership and contribute to the Content Re-use Framework.
- Develop learning resources with pilot schools.
- Develop a training service and attract customers.
- Make an analysis of future funding rounds for public funding.

Museum Adventure Game:

- Approach content providers to participate in a partnership and contribute to the Content Re-use Framework.
- Build a growing network of natural history museums that are interested in adapting the game to their collections and exhibitions.
- Make an analysis of future funding rounds for public funding.

Museum Card Game:

- Approach content providers to participate in a partnership and contribute to the Content Re-use Framework.
- Build a growing network of natural history museums that are interested in adapting the game to their collections and exhibitions.
- Develop new collections and card decks with school teachers and students in pilot schools.
- Make an analysis of future funding rounds for public funding.

8. Resources

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Annex I: Report History Education Business Model Workshop

Europeana Creative

History Education Pilot – Business model requirements gathering workshop

15th May 2013, The Hague

Index

1. Introduction and context
2. Objectives of the workshop
3. Methodological approach
4. Workshop programme and participants
5. Business Model Canvas results
6. Final considerations
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1. Introduction and context

This report documents the activities and results regarding the discussion and development of a set of Business Model canvas for the “History Education Pilot” of the Europeana Creative project.

The Business Model canvas was discussed and developed during a workshop with the relevant stakeholders that took place on the 15th May, in The Hague. This report therefore provides the context, workshop objectives, methodological approach, workshop programme, participants, developed canvas and final considerations.

Co-Creation Workshop for the “History Education Pilot”

Prior to the “Business model requirements gathering workshop” for History Education, a co-creation workshop was held. This workshop made use of co-creation tools to facilitate the concept development of the History Education Pilot through the co-creation of possible software applications that make use of the Europeana and Historiana repositories.

At the end of the History Education Pilot co-creation workshop 6 different concepts for possible software applications were developed. Of these, 3 were chosen as having the most potential to be further explored. The co-creation workshop took place right before the business model workshop.

The 3 concepts were then picked-up to be explored for their “business potential” in the “Business model requirements gathering workshop”. This step must be underlined so that it is clearly understandable as the co-creation workshop thus provided the basis for the business model workshop – the other way around is not feasible.

It is therefore recommended that the reading of this report is completed with an analysis of the results of the correspondent (same theme) co-creation workshop. Nevertheless the 3 concepts as developed in the co-creation workshop are presented in the annex of this document.

Europeana Creative and the Pilots

Europeana Creative is a European project which will enable and promote greater re-use of cultural heritage resources by Europe's creative industries.

The project sets out to demonstrate that Europeana, the online portal providing access to more than 26 million digitised cultural heritage objects from Europe's libraries, museums, archives and audiovisual collections, can facilitate the creative re-use of digital cultural heritage content and associated metadata.

Partners will develop a number of pilot applications focused on design, tourism, natural history education, history education and social networks. Building on these pilots, a series of open innovation challenges will be launched with entrepreneurs from the creative industries to identify, incubate and spin-off more viable projects into the commercial sector.

The project goals will be supported by an open laboratory network (the Open Culture Lab), an on- and offline environment for experimentation with content, tools and business services, and a licensing framework where content holders can specify the re-use conditions for their material. The project will be supported by continuous evaluation and business modelling development.

2. Objectives of the workshop

Based on the co-creation workshop results for the “History Education” pilot, the Business model requirements gathering workshop will trigger a discussion on how a business model can be developed for each of the mentioned results.

The developed business model canvas in the workshop will provide a framework and a guideline on how the “History Education” pilot could be explored in a sustainable way, while at the same time providing “inspiration” for the challenges.

These objectives thus support the previously defined aims as laid out in the Description of Work of the project:

“Furthermore, this work package [2] will support the development of creative re-use scenarios (business models) supporting the applications and services developed within the different Challenges set out in the project. In order to do so requirement gathering workshops will be held with the aim of integrating the Challenge specific Business Models into the Content Re-use Framework.”

3. Methodological approach

A business model refers to how value is created, delivered and captured within an organization point of view (www.businessmodelgeneration.com). Value takes several forms such as cultural, economic, social, environmental, etc. (thus not being limited to a common perspective that refers to business per se for profit). A business model can also be developed not only around organizations but also specific projects, products or services.

Putting it in another way, it's about which pieces are necessary and how to put them together so that your organization/product/service/project is built in a sustainable perspective.

It is important to have such definition in mind to ensure to the best extent that a business model discussion is not limited or biased by misconceptions or any other perspectives that don't portray the whole picture.

How to develop a business model?

A quick online search on "how to develop a business model?" will provide thousands of responses back, thus making it difficult for a "non-expert" to know where to start. On the other hand this is a well-studied topic where several methodologies are available.

Within the European Creative context, several stakeholders, especially those dealing with education issues, are not particularly familiar with business modeling. As such a simple but robust methodology was needed.

The "Business Model Generation Canvas" (www.businessmodelgeneration.com) has proven to be a successful methodology by allowing an individual or group of individuals to discuss and develop business models by using a simple but effective canvas as a working tool.

This was the methodology chosen to discuss and develop 3 business models based on the co-creation workshop results. This methodology is explained next.

The Business Model Generation Canvas

This methodology describes a business model through nine building blocks covering the four main areas of a business: customer, offer, infrastructure and financial viability. Being a visual methodology ideas can be laid out in the canvas and discussed in groups and used as a tool to structure thinking.

"The business model is like a blueprint for a strategy to be implemented through organizational structures, processes, and systems." [from businessmodelgeneration.com].

The canvas is presented in the following image where the nine building blocks can be seen.



Customer Segments: The different groups of people or organizations a business aims to reach and serve.

Value Proposition: A business seeks to solve customer problems and satisfy customer needs with value propositions.

Channels: Value propositions are delivered to customers through communication, distribution, and sales Channels.

Customer Relationships: Customer relationships are established and maintained with each Customer segment.

Revenue Streams: Revenue streams result from value propositions successfully offered to customers

Key Resources: are the assets required to offer and deliver the value proposition to the customer segments¹⁶

Key Activities: The activities a business needs to perform in order to bring value propositions to its customer segments.

Key Partners: Some activities are outsourced and some resources are acquired outside the enterprise

Cost Structure: The business model elements result in the cost structure

The actual process of filling each of these blocks with relevant information is usually done by having a group of persons (ideally the ones that have developed an idea/concept that might translate into a viable product/service/...) using post-it's as a complementary tool.

A business model development expert is ideally necessary to have in such sessions to ensure all participants have the same understanding on how the methodology works and more importantly to provide guidance throughout all the process.

The process can take from hours to days, depending on the complexity of the issue and the refinement needed at a certain stage.

Participants' interaction

Such methodology implies, by its nature, to have an active participation of every individual in a workshop that envisage discussing and developing a business model.

This means that the participants in the workshop were divided in 3 groups (one per concept developed in the co-creation workshop), and as the groups were relatively small (3/4 persons) the discussion and interaction between them is more active.



4. Workshop programme and participants

The programme of the workshop mostly focused on the business model discussion and development. The whole workshop lasted 4 hours.

The programme for the workshop was as follows:

Introduction to the business model workshop (general presentation of the structure of the workshop, expectations and expected outcomes)
Presentation of the outcome of the Market Activity Analysis (presentation of the results from the Market Activity Analysis carried out within the Europeana Creative project)
Lunch Break
Business model canvas methodology (presentation of the business model canvas methodology as presented earlier in this report)
Business model canvas discussion and development (division by 3 groups to discuss and develop 3 business models for the 3 concepts developed in the History Education co-creation workshop)
Presentation of business models results (presentation by each group on the developed business models)
Wrap-up

Similarly to the Natural History Education business model workshop, the original programme for History Education also envisaged a slot for discussion the business environment (key trends, market forces, etc.) which was removed due to time constraints of the day. It should be noted however that the removal of this slot was not seen as critical as the results for the same discussion under the Natural History Education workshop were too vague/not focused on the theme. This is due to specific nature of the discussion which requires a reasonable amount of time to achieve concrete results, being therefore not a direct objective of this workshop.

Invited external expert

David Tee was the invited external expert both to provide a briefing on the methodology and how to use it and also to provide guidance to the groups during the discussion and development. David Tee is a senior consultant and experienced entrepreneur.

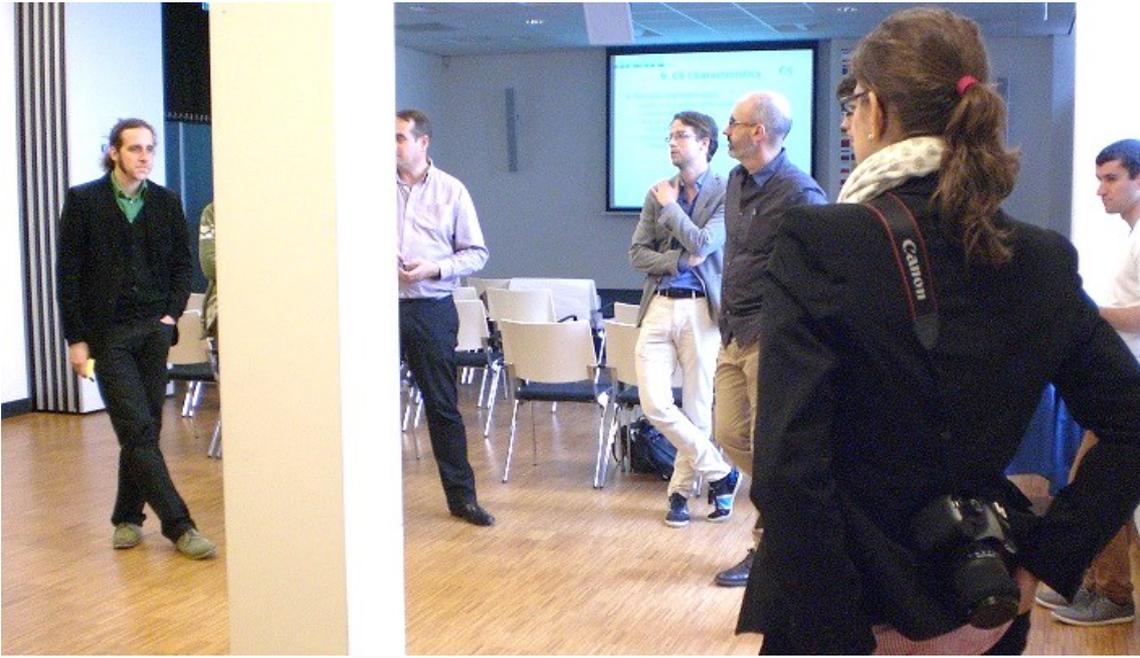
Participants

The workshop counted with the participation of a total of 12 individual, including the external expert, and covering either some project partners as well as some EUROCLIO members as representatives and experts of the “History Education” area.

The participants list is the following:

Nikki Timmermans	Breandan Knowlton	Rui Monteiro	Lizzy Komen
David Tee	Enric Senabre	Katharina Holas	Hans de Haan
Guy Counet	Francesco Scatigna	Louise Edwards	Jana Hoffmann





5. Business model canvas results

For each of the groups the results as is are presented below as a table format.

In the annex of this document can be found the description of each of these concepts as developed during the co-creation workshop.

1 – My Newsreal (online version - <https://bmfiddle.com/f/#/rpjq4>)

<p>Customer Segments <i>Who are we creating value for?</i> Students 13+ Middle school history teachers Government (national ministries; inter-gov) School leadership (public; private) WWI amateur historian Content institutions (local libraries; history institutions; regional archives) Museum/heritage educator</p>
<p>Value Propositions <i>What value do we deliver to our customer?</i> School promotion Value of digitization Saving time Compelling way to present trusted sources Learn subject material (meets curriculum standards) Relevant and timely (during WWI centenary) Browse international resources (multiperspective) Social reinforcement Teaching IT skills (editing; media) Tool for source analysis (teaching method) “Sexy” creative way to teach/learn fact based topic Exposure through education usage (reinforces public mission)</p>
<p>Channels <i>How do we reach our customer segments?</i> Browsing video interface My Newsreal app Labs Historiana In-service training Social web</p>
<p>Customer Relationships <i>What type of relationships do our customer segments expect?</i> Accounts (hosting contents) Euroclio EUN/School network</p>
<p>Revenue Streams</p>

What value are our customers willing to pay for?

Public investment

Training services (teachers)

Customisation (?)

Adds

Private investment

Key Resources

What key resources do our value propositions require?

Teachers (as curators/selectors)

Mozilla web platform

Historiana assets

Digitised assets (video; images; sound; text)

Key Activities

What key activities do our value propositions require?

Community building

Evaluation

Curation

e-popcorn integration

e-historiana

UX design

Software development

Marketing

Key Partners

Who are our key partners?

Data providers

Mozilla foundation

Europeana

Schools (school network)

Ministries (culture; education; defense)

Cost Structure

What are the important costs inherent in our business model?

Licensing

Curation

Development

Management

Marketing

Hosting

Tech development

<p>Educational institutions (EUN) Social networks Historiana website Europeana Schools</p>
<p>Customer Relationships <i>What type of relationships do our customer segments expect?</i> Quality assurance/watchdog Community of users (sense of engagement)</p>
<p>Revenue Streams <i>What value are our customers willing to pay for?</i> Government subsidies Sponsorship Training for institutions</p>
<p>Key Resources <i>What key resources do our value propositions require?</i> Quality board Software development (open source) Content Admin users/ Super users/ Community leaders</p>
<p>Key Activities <i>What key activities do our value propositions require?</i> Clearing of rights Translation of basic information (by teachers or students) Selection of sources Community facilitation</p>
<p>Key Partners <i>Who are our key partners?</i> Teachers Euroclio Content partners (newspapers + images?) Publishers of educational resources</p>
<p>Cost Structure <i>What are the important costs inherent in our business model?</i> Hardware storage Human resources</p>

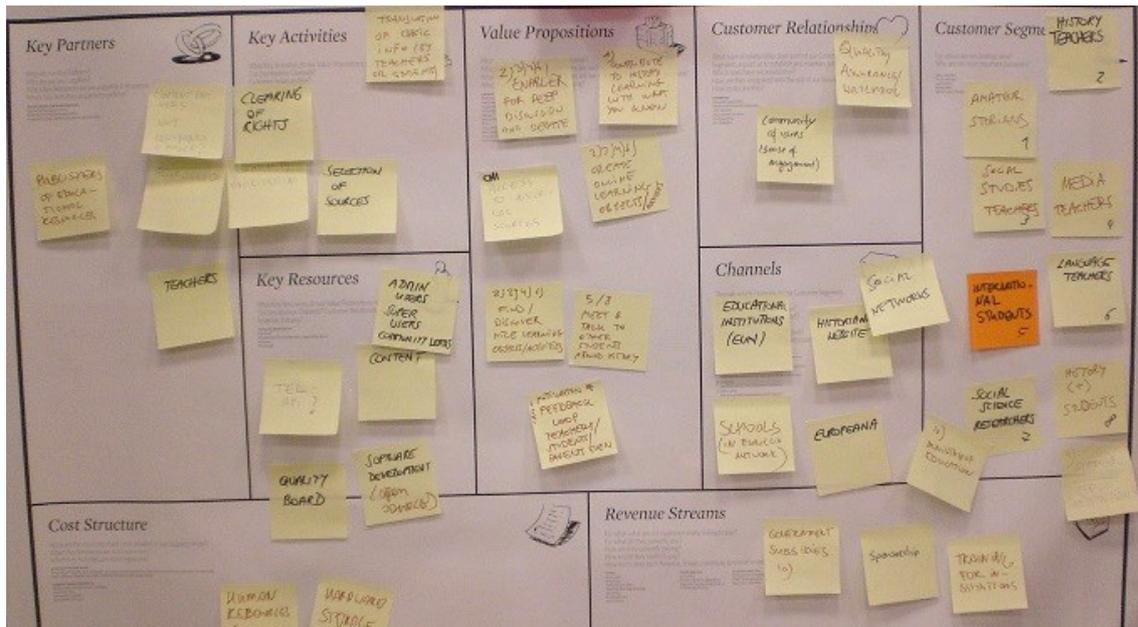


Figure 2 – Photography of developed business model canvas for “Pupils research”.

3 – A tool for critical analysis of sources (online version - <https://bmfiddle.com/f/#/V9qG7>)

Customer Segments

Who are we creating value for?

- Visitors of museums
- Students high school
- Any researcher seeking to understand meaning/usage of pics/photos
- Teacher
- Ministry education
- Universities
- Content providers
- Parents

Value Propositions

What value do we deliver to our customer?

- Educational material to work on together
- Additional exhibition info
- Make history through meaningful pictures (much better than book)
- Support in their [teacher] work
- Research used in society through history education
- Improvement in quality of education
- Trustworthy/ curated content/ info
- Improve analytical skills (critical evaluation of pics/photos/paints)
- More direct way to “read” and understand past events/costumes/culture
- Give interesting insights on pictures/photos contents
- Allow dissemination of their [content providers] collection in an educational way

Channels

How do we reach our customer segments?

Customers (website, promotion within universities/schools)
Partners (extensive use of personal contacts; networks Euroclio)
Students (facebook; pinterest – social media)

Customer Relationships

What type of relationships do our customer segments expect?

Organize trainings and workshops
Providing content for source analysis exercises
Loyalty (subscription: periodic news/news pictures)
Communities in social media (facebook; pinterest)

Revenue Streams

What value are our customers willing to pay for?

Partnerships (museums; cultural institutes (adverts))
Future visitors of museums
Sponsorship advertising on the website (companies interested in young audiences)
Grants
Subscription fees to database
Possibility to order replicas

Key Resources

What key resources do our value propositions require?

Content (people)
Teaching material
Web space

Key Activities

What key activities do our value propositions require?

Be complement of museums activities (not competitors)
Building a network of content providers
Network of teachers
Make collections curate

Key Partners

Who are our key partners?

Media/ documentary makers
Content providers of sources
Teachers (ministry education)
Research institutions
Museums (show where the pictures are “stored”)
Publishers (content; network)
Web developers

Cost Structure

What are the important costs inherent in our business model?

App development
Website management (design...)
Digitization
Rights clearance

Meetings within network
Licensing

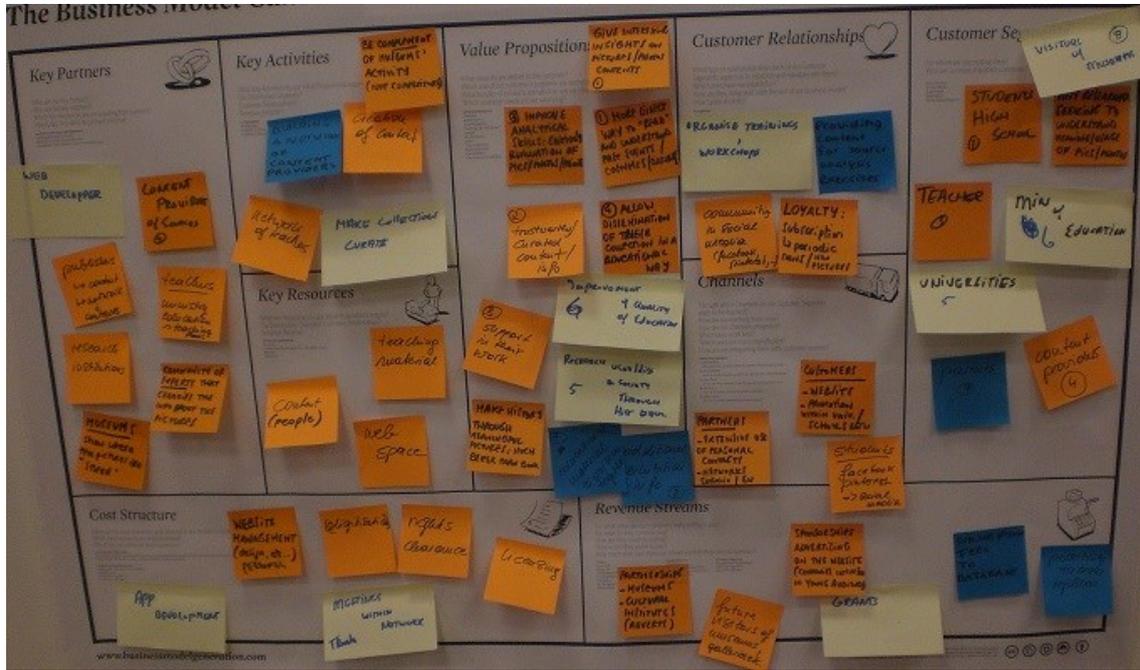


Figure 3 – Photography of developed business model canvas for “A tool for critical analysis of sources”.

6. Final considerations

- The Business Model Canvas methodology proved to be a simple and robust tool to trigger the discussion around business modeling and the development of business models for the concepts developed during the co-creation workshop and as such it should be used in the remaining pilots.
- It is important to ensure the group contains from the beginning (co-creation workshop) a mix of individual backgrounds while prevailing individuals with a background on the theme of the pilot.
- The developed models still naturally have to be revised and discussed even further to fully assess their viability, however it is sure to say that at this moment the models provide a more or less clear path on how to turn each concept into a sustainable and relevant app.
- A particular reference to the Value Proposition of the three developed models should be made as for all of them it is clear that exists a clear idea on the added value by each concept, meaning that 1) the app concept developed during the co-creation workshop is robust enough to be further assessed on its “business” potential and 2) there was a consensus on the relevance and potential of each concept.
- On this it should also be noted as mentioned earlier in the report that the 3 concepts explored during the business model workshop were selected among 6 originally developed as the ones that were assessed as the most “robust” according to the evaluation indicators used – the point here is that it is certainly of great usefulness to go to the “business model development stage” after having a more or less clear technological proposal (thus following the best methodological approach).
- Comparing the three business model canvas it can also be said that each group of participants filled in each building block in a quite concrete way thus pointing a direction to be further explored and also pointing out ways that other app can potentially explore too.
- The discussions/conclusions around the development of business models should therefore be taken as a baseline for the implementation of the pilots and therefore refinement as further discussion should take place.

7. Annex

This annex contains the descriptions of the concepts developed during the History Education co-creation workshop which were then further developed on a business perspective on the “Business model requirements gathering workshop” for History Education.

The descriptions below are a direct transcript from the History Education Co-Creation Workshop Report (developed by Platoniq).

1 – My Newsreal

The concept would be that students and users could create their own newsreal based on WW1 video material from Europeana. The webpage could let them choose videos, add their own voice, publish and share the results. It would be an opportunity to search for basic data (propaganda, news, etc.) and in connection with the Mozilla project popcorn.js remix together videos with voice over, news narrator, pictures, backgrounds, links to webpages, etc. Its seen as an iterative process between sourcing media content and editing it to final product. It would have the possibility to embed the newsreal in any webpage like Historiana or other eLearning ones where more interactions (such as questions, exercises, forums, etc) would help to expand all its learning potential. Narration and/or subtitles could be in different languages too, and it will be interesting to use image assets to appear them over the video, as well as offering more narration options. This opportunity to remix historical content could connect as a source with remix.europeana.eu (European film project) as a set of creative activities of sound and film and multimedia in general to experience past.

2 - Pupils research (newspaper as a tool for multiperspectivity)

Oriented to students of around 14-16 years, and following the example of studying the subject of WWI Versailles treaty, the core idea is if you could look at a certain newspaper in your country and find out what was the actual opinion at that time, then tell something about the social or political background based in the information and opinions from the newspaper. Students based on that original piece of news should explain (generating content oriented to that specific object) points of view, for example at the moment when the contract was signed. Ideally the pilot should allow for the possibility to choose the country of the newspaper, where the assignment will be always focused on the opinion in the newspaper. Another important feature would be the possibility of translating the source by the student and also his/her comments, so other students from other schools or countries could see and discuss the differences, comparing news about the same event. The teacher could make new assignments looking at another newspapers in other countries have done around the same event and tasks.

3 - A tool for critical analysis of sources

It was presented as a development oriented as well for students activities, where they must be critical, as a broad tool that can be used everywhere. The initial information about content will be given by teacher or Historiana (what its all about) or also given by Historiana in a specific theme. It will focus around 5 historic key moments in Europe (for example the end of WW1). In the case of this conflict, Historiana gives a source, and students work on it asking questions about the source. Hidden there's extra info curated by experts, that its highlighted only if the question is pertinent (option to zoom in and search for specific information) and addresses the interesting/important issues around the content. Students have to think, for example in the case of words of art, about the intention of the artist. Question that have not been answered should allow to get more sources and (unsatisfying information in the first step) it should help to create a toolset designed for answered or not answered questions. A tool like a "lectionary" for history (different topics that belong to entities that enable a deeper information) with 3 layers (space, time, things that belong to the area). Technically layers could be adjusted to requirements (hide or choose layers), results could be compared with the content (or a timeline), and finally teacher could manipulate different hidden layers, with the possibility to share layers with other teachers.

Annex II: Report Natural History Education Business Model Workshop

**eCreative
Natural History Education Pilot – Business model workshop**

8th May 2013, National Museum Prague, Czech Republic

Participants:

- Partners from institutions with natural history content (Museum für Naturkunde and National Museum Prague)
- Developers/programmers of applications
- Selected consortium members from WP1, 2 and 3
- External expert

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<i>Market Activity Analysis</i>	4
<i>Concept used for the business model workshop</i>	6
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<i>Results from the workshop: the different models</i>	17
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One of the main objectives of the project:

To identify business models that allow key stakeholders within the Europeana ecosystem to develop their own applications and services based on the Europeana Content Re-use Framework.

Main objective of the business model workshop in Prague:

To support the Natural History Education Theme with identifying, implementing and analysing one or more business models via interactive activities and discussions.

Rationale:

There are no clear business models that demonstrate sustainable relationships between key customers, channels, resources, partners and costs for re-use projects. The wider relevance and adoption by the (creative) industry will depend on the creation of these models.

Key stakeholders:

Key stakeholders for the project are cultural heritage institutions and the creative industries.

For this workshop following important stakeholders were identified: content providers (in this case the two partners: MfN and NMP), technical partners, partners from the creative industries/gaming sector, end-user, business model experts and last but not least consortium members from WP1, 2 and 3.

List of participants

Subtask partners:

- Nikki Timmermans – Kennisland (WP3 Lead)
- Corina Suceveanu – MFG (Subtask 3.2.3 Lead)
- Jiri Frank – NMP (Subtask 3.2.3 Partner and host of the BMW)

WP3 partners:

- Harry Verwayen – EF (Presentation of Europeana and the Open Labs)
- Louise Edwards - EF (presented the Market Activity Analysis)
- Breandan Knowlton - EF
- Rui Monteiro – EBN (Subtasks 3.2.2 Lead – History Education Theme)
- Jana Hoffmann – MfN (Content Provider)
- Rebekka Knutzen – XZT (Development partner)
- Felix King – XZT (Development partner)
- Sašo Zagoranski – SEM (Development partner)
- Lizzy Komen – NISV (WP4 Lead)

WP1 partners:

- Enric Senabre – Platoniq (organizer of the Co-Creation Workshop)
- Olivier Schulbaum – Platoniq (organizer of the Co-Creation Workshop)

WP6 partner:

- Nico Kreinberger – MFG (Evaluation)

External Expert:

- Juliane Schulze – Peacefulfish (Expert in business models)

End-user: educators, students from the co-creation workshop

- Vasilis Teodoridis - proff. on Faculty of Education, Charles University
- Tereza Odchazelova - PhD on Faculty of Education
- Lukas Liabl - education specialist and lecturer

General introduction: Presentation of Europeana and the vision of the Open Labs context by Harry Verwayen from Europeana Foundation



The workshop began with a short general introduction on Europeana by Harry Verwayen. This was considered to be an important part of the program as the participants of the workshop had different backgrounds, and were therefore more or less familiar with the Europeana project.

Europeana was launched in 2008 with 2 million objects from 27 EU countries. During the next year Europeana worked on an operational service and created a strong network of museums, archives and libraries.

Europeana can be seen as an aggregator aiming to give access to all of Europe's digitised cultural heritage. To achieve this, more collaboration is needed, also with other aggregators of content. The ambition is to give new forms of access to culture, to inspire creativity.

For this Europeana identified four strategic tracks to focus on in the years to come:

- **Aggregate** content to be able to build an open trusted source of European cultural heritage
- **Facilitate** knowledge transfer, innovation and advocacy in the cultural heritage sector
- **Distribute** heritage/content to users whenever, wherever
- **Engage** users in new ways to participate in (their) cultural heritage¹



¹ http://www.pro.europeana.eu/c/document_library/get_file?uuid=c4f19464-7504-44db-ac1e-3ddb78c922d7&groupId=10602, p. 5.



Market Activity Analysis by Louise Edwards from Europeana Foundation

The Market Activity Analysis plays a major role within task 3.2 on Business Models for Themes. The analysis identifies characteristics of successful collaborations between cultural heritage institutions, creative industries and other external stakeholders.

During the business model workshop first results coming from the desk research, the survey and in-depth interviews with key people were presented. However this were not the final results, as the analysis was not finished.

Who answered the survey?

- Business
- No Strings (NL)
- Doklab (NL)
- Frontwise (NL)

- Public/business
- MFG Innovation Agency for ICT and Media (GER)
- MainRaum (GER)

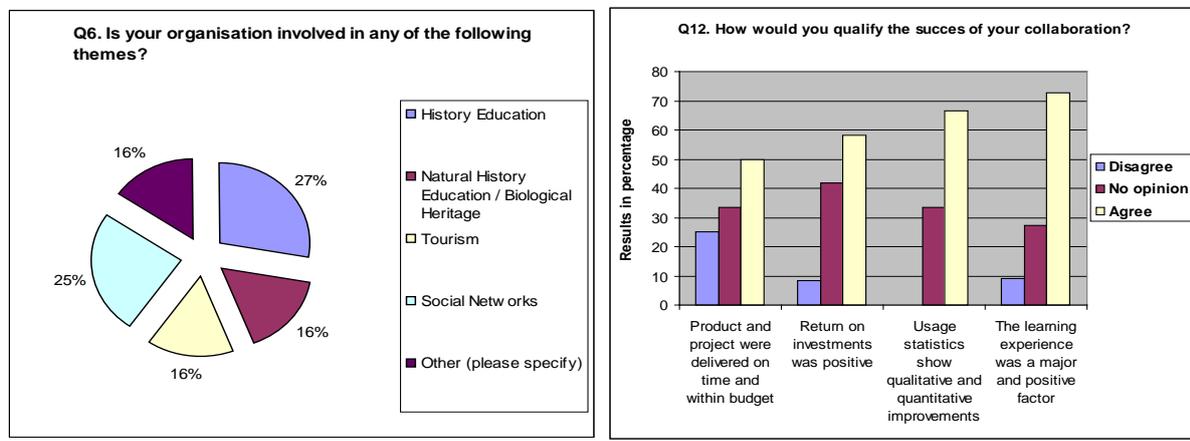
- Library
- National Library of Spain
- National Library of France
- The Electronic Library
- National Library of Finland

- Archives/library/heritage/culture/museum
- The Society of Swedish Literature in Finland
- Cité de la Musique
- Rijksmuseum Amsterdam

- Education
- Hochschule Luzern – Design & Kunst

In-depth interviews with:

- EYE Film Institute (NL)
- Rijksmuseum Amsterdam (NL)
- Salterbaxter (GB)
- Heritage in Motion (Europa Nostra/European Museum Academy)
- Wikimedia Nederland (NL)



Charts from the presentation of Lousie Edwards

Some results

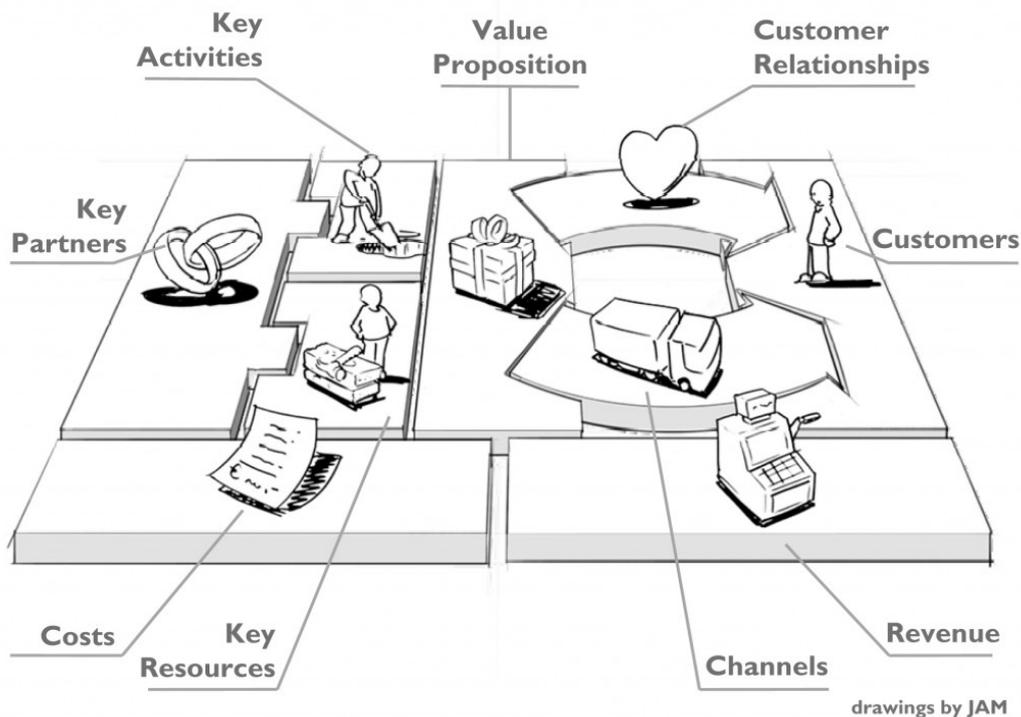
- Many cultural institutions regard themselves as part of the creative industries
- Many think creativity applies to both digital and non-digital
- Businesses and cultural institutions play to their respective strengths e.g. libraries clear rights and does curation, business does marketing and selling
- Cultural institutions want new business models of profit sharing and gaining benefits of the cooperation
- Have a clear idea of the end result, otherwise cost and time escalate
- Understand the project and its scope
- Start to cooperate at an early stage
- Have good project management
- Have clear and transparent decision-making
- Branding matters and is seen as an asset on both sides
- Positive learning experience for both

Concept used for the business model workshop

The starting point for a good discussion and for a successful workshop on business models is a shared understanding of what a business model is and how it can be used. Therefore a concept is needed that everyone can easily understand and apply. The concept must be simple, relevant and understandable.

For the workshop in Prague the decision fell upon the business model concept of Alexander Osterwalder & Yves Pigneur from their famous book called "Business Model Generation".

They consider that a business model can best be explained and used through nine basic building blocks, that cover the four main areas of business: customers, offer, infrastructure, and financial viability. With their Business Model Canvas new business ideas can be sketched out and visualized. The Canvas can be used in teams as a shared language, for better strategic conversations and as a tool to structure thinking.



Source: <http://customerdevelopment.org/wp-content/uploads/2013/04/bmcanvas-basic-model3.jpg>

Business model environment

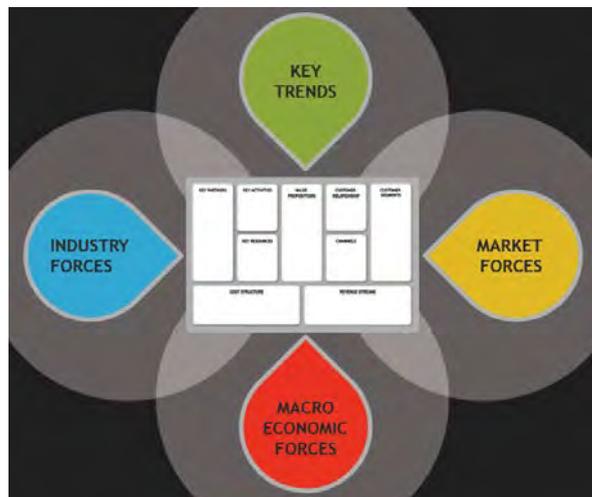
„Business models are designed and executed in specific environments. Developing a good understanding of [the] environment helps you conceive stronger, more competitive business models“²

This is the reason why an analysis of the existing environment around the Natural History Education Theme was seen as an important step for the workshop. Only by understanding the complex economic landscape, the technological innovations and the market needs, one can effectively work on business models.

² A. Osterwalder & Y. Pigneur (2010): Business Model Generation, p. 220.

To better analyse the business model's environment the four main areas suggested by Osterwalder and Pigneur were used for this workshop:

- Market Forces // Industry Forces // Key Trends // Macroeconomic Forces



Objective

To visualize and map out everything that is going on in the business model's environment and that can influence the development of the business model(s)

Why is this exercise important?

- No individual alone could map a holistic picture of the business model's environment. Therefore a diverse group of people, each with his specialist's knowledge, is needed to be able to develop a shared understanding and a complete map of the environment
- This visual map can help discover new associations, new patterns, and also new ideas
- It is last but not least a good preparation for the next step: designing the business model(s)

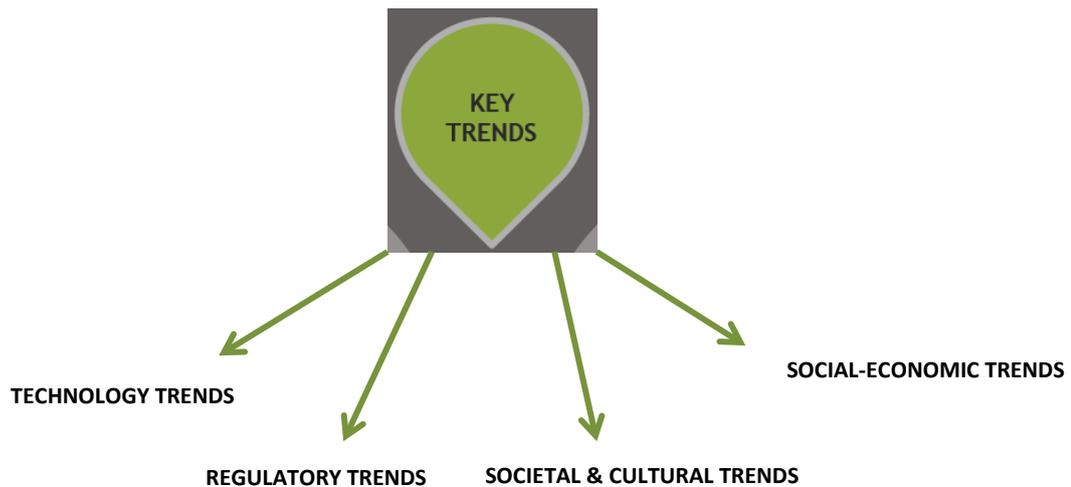
Expected outcome

- A visual map
- Deep discussions about the business model's environment
- A shared understanding of the environment & the needs for the business model
- A starting point for the business model

After a short presentation on this approach, the participants of the workshop were asked to choose one of the areas and to map their own environment accordingly. They also received instructions for this task, containing helping questions for the different areas. Afterwards each group was asked to explain their findings in the plenary.

In the following all four main areas will be briefly introduced together with selected questions from the instructions handed in during the workshop. At the end of each the results of the groups will be presented.

Key Trends: Foresight



Technology Trends:

- What are the major technology trends both inside and outside the market?
- Which technologies represent important opportunities or even threats?
- Which emerging technologies are peripheral customers adopting?

Regulatory Trends:

- Which regulatory trends influence your market?
- What rules may affect your business model?
- Which regulations and taxes (if it is the case) affect customer demand?

Socioeconomic Trends:

- What are the key demographic trends?
- Describe spending patterns in your market
- Describe incomes/wealth distribution

Societal and Cultural Trends:

- Describe key societal trends – cultural and societal values
- Which trends might influence buyer behaviour?

Group 1: Results from the Business Model Workshop

Technology Trends:

- (Open) Hardware
- Cloud Computing
- Convergence of Devices
- Big Data
- 3D Printing
- Extract Knowledge
- Constant technological innovations (Google glasses)
- Bioinformatics
- Semantic Elements

Regulatory Trends:

- Content Abuse – cost of autonomy
- Cost/Gain of attribution
- Crowd sourcing
- © Content
- Piracy
- Tax regulation
- Open Data

- Privacy issues – open IP
- Licensing closed/open

Socioeconomic Trends:

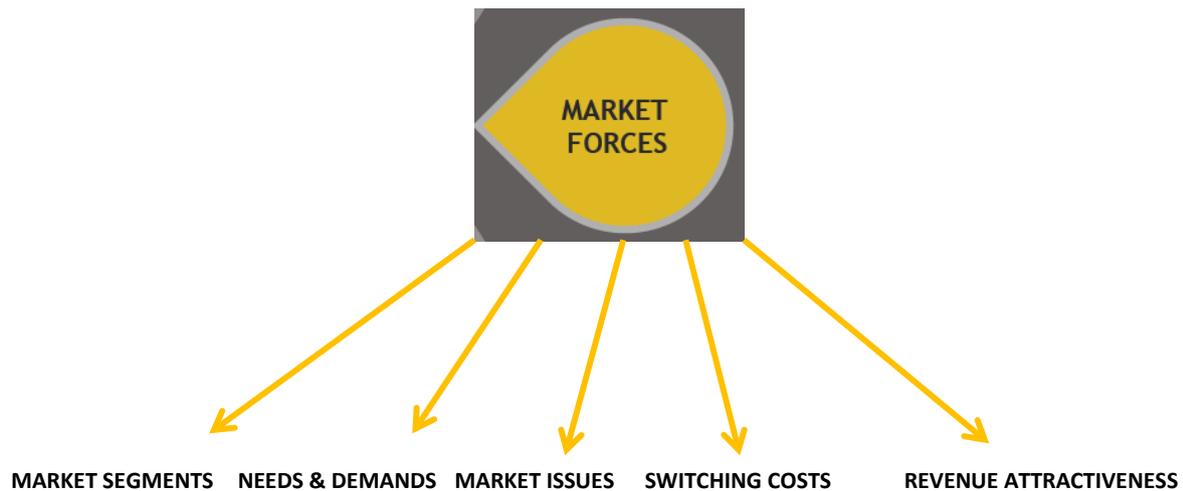
- New Protocols
- Private Public Partnership funding
- Crowdfunding
- Collaborating Economy
- Citizen Science
- Sharing Economy
- P2P
- Open Educational Formats

Societal and Cultural Trends:

- Demographic Change: living longer, retiring later
- Digital Museum
- Virtual Exhibition
- Spending Patterns



Market Forces: Market analysis



Market Segements:

- What are the most important Customer Segments?
- Where is the biggest growth potential?
- Which peripheral segments deserve attention?

Needs & Demands:

- What do customers need?
- Where are the biggest unsatisfied customer needs?
- Where is demand increasing? Declining?

Market Issues:

- Who are our competitors?
- Who are the dominant players in our particular sector?
- What are their competitive advantages / disadvantages?
- What is their main offer?

Switching costs:

- What binds customers to a company and its offer?
- How important is brand?
- What switching costs prevent customers from defecting to competitors?

Revenue attractiveness:

- What are customers really willing to pay?
- Where are the biggest unsatisfied customer needs?
- Where is demand increasing/declining?

Group 2: Results from the Business Model Workshop

Market Issues:

- Educational publishing
- Some big museums
- New apps (from the gaming industry)
- American & UK products

Market Segments:

- Triangle: Teacher-pupils-parents
- Influencers
- Ministry of Education
- EDU Games
- Free riding "gamers" (by social influences)
- Save the planet – government, NGO, charity

Needs & Demands:

- Enterprise / Personal
- Demands for "ready to use" teaching material (structured)
- Entertainment
- Local content ?
- Engagement & Fun for attracting 10-16y to knowledge
- Parents: need to find educational pasttimes → orientation

Switching costs:

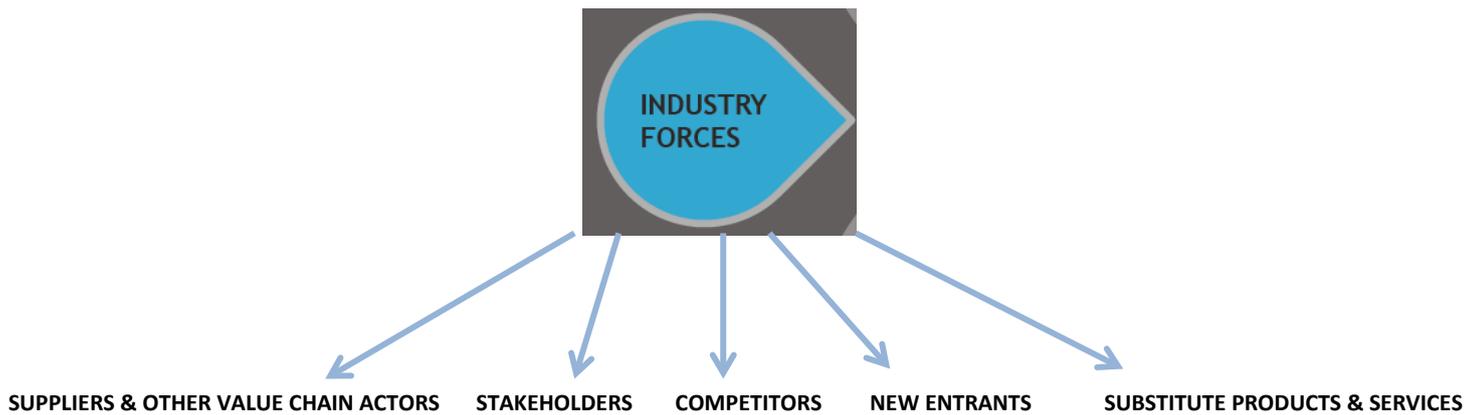
- From free to paid
- Nagging: market to kids → they ask parents
- Teachers: paid better than free (perception)

Revenue attractiveness:

- Connect to museum visits/entrance
- Already paid (through taxes)
- High perceived (badge) value
- Optional modular payment (if it works)
- Productivity (teachers)



Industry Forces: Competitive analysis



Suppliers & other Value Chain Actors / Stakeholders / Competitors / Substitute products & services:

- Who are our competitors?
- Who are the dominant players in our particular sector?
- What are their competitive advantages or disadvantages?
- Describe their main offers
- Which Customer Segments are they focusing on?
- What is their Cost Structure?
- How much influence do they exert on our Customer Segments, Revenue Streams, and margins?

New Entrants:

- Who are the new entrants in your market?
- How are they different?
- What competitive advantages or disadvantages do they have?
- What is their Value Proposition?
- Which Customer Segments are they focused on?

Group 3: Results from the Business Model Workshop

Suppliers & other Value Chain Actors:

- Competitors for content provider
- BHL, NMP, MfN
- Europeana
- Publishers
- Public scientists

Stakeholders:

- Cultural industry; memory institutions
- Higher Education sector
- Classic industries
- Community (citizens etc.)
- Policy makers

Competitors:

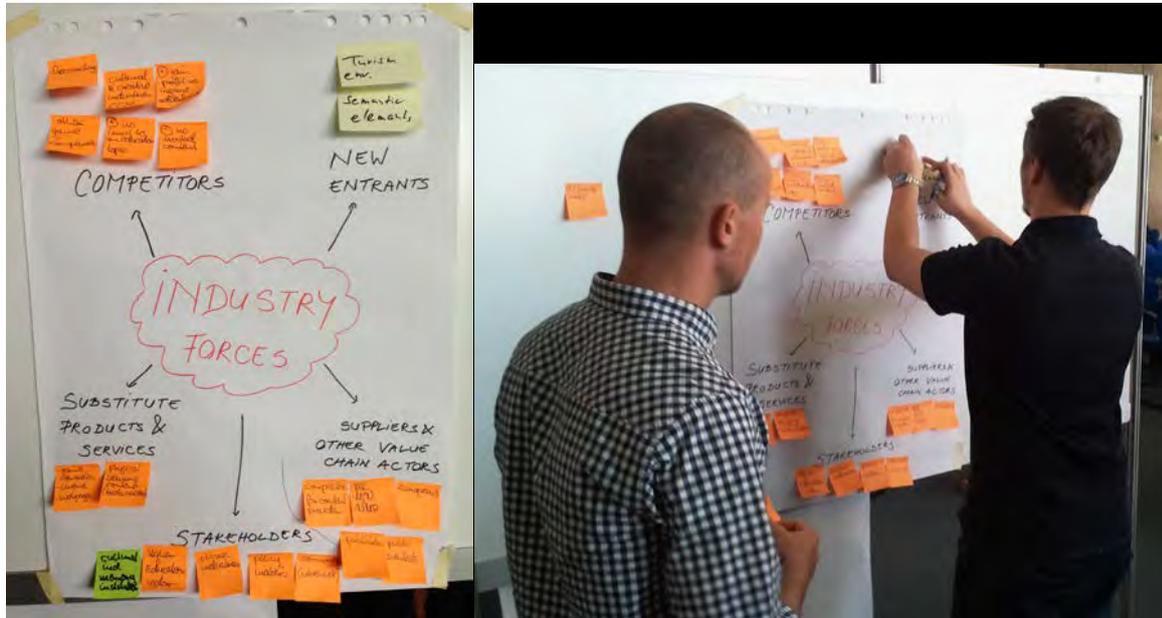
- Other game companies
- Geocoaching
- Cultural & Creative Industries
- (+) no limit to an education topic
- (+) gain profile via in-game advertising
- (-) no trusted content

New Entrants:

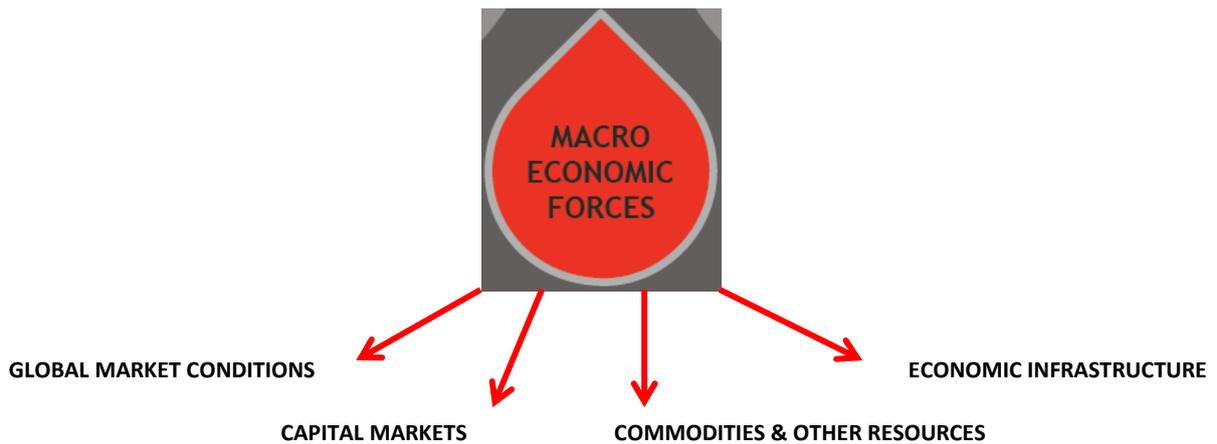
- Semantic elements
- Tourism environment

Substitute products & services:

- Physical learning content (books, museum)
- Games consoles, cinema, webpages



Macro Economic Forces: Macroeconomics



Global Market Conditions:

- Is the economy in a boom or bust phase?
- Describe general market sentiment

Capital Markets:

- How easy is it to obtain funding in your particular market?
- Is seed capital, venture capital, public funding, market capital or credit really available?

Commodities & other Ressources:

- How easy is it to obtain the resources needed for your business model?
- How costly are they?

Economic Infrastructure:

- How good is the public infrastructure in your market?



Results from the BMW presented by Juliane Schulze:

Global Market Conditions:

- Game = very strong industry
- High demand & growing
- Lots of talent = lower prices?

Capital Markets:

- Eco Crisis
- More ++ equity sources
- Funds? Not easy but possible

Commodities and other Ressources:

- Costly programming
- Labor costs ok – outsourcing possible

Economic Infrastructure:

- Established infrastructure
- Shelf life for EDU games?

Discussion after the four presentation:

After the presentation of the four main forces a discussion started on the roles, requirements and objectives of both the cultural heritage institutions and the creative industries.

Here are some of the outcomes:

- Creative industries: are making something for a cultural institution (on contractual agreement)
- Cultural institutions: the collaboration with the creative industries is new, still has to be explored, it´s an investment, they expect a good return of investments

→ *Cultural institutions want a fair deal out of it vs. return on investment on collaboration is good*

Business Model Canvas

Definition: A business model describes the rationale of how an organization creates delivers, and captures value.

The nine Building Blocks

Customer Segments: The different groups of people or organizations a business aims to reach and serve.

→ The target audience for a business´ products and services.

Value Proposition: A business seeks to solve customer problems and satisfy customer needs with value propositions.

→ The products and services a business offers.

Channels: Value propositions are delivered to customers through communication, distribution, and sales Channels.

→ The means by which a company delivers products and services to customers

Customer Relationships: Customer relationships are established and maintained with each Customer segment.

→ The link a company establishes between itself and its different customer segments.

Revenue Streams: Revenue streams result from value propositions successfully offered to customers

→ The way a company makes money through a variety of revenue flows.

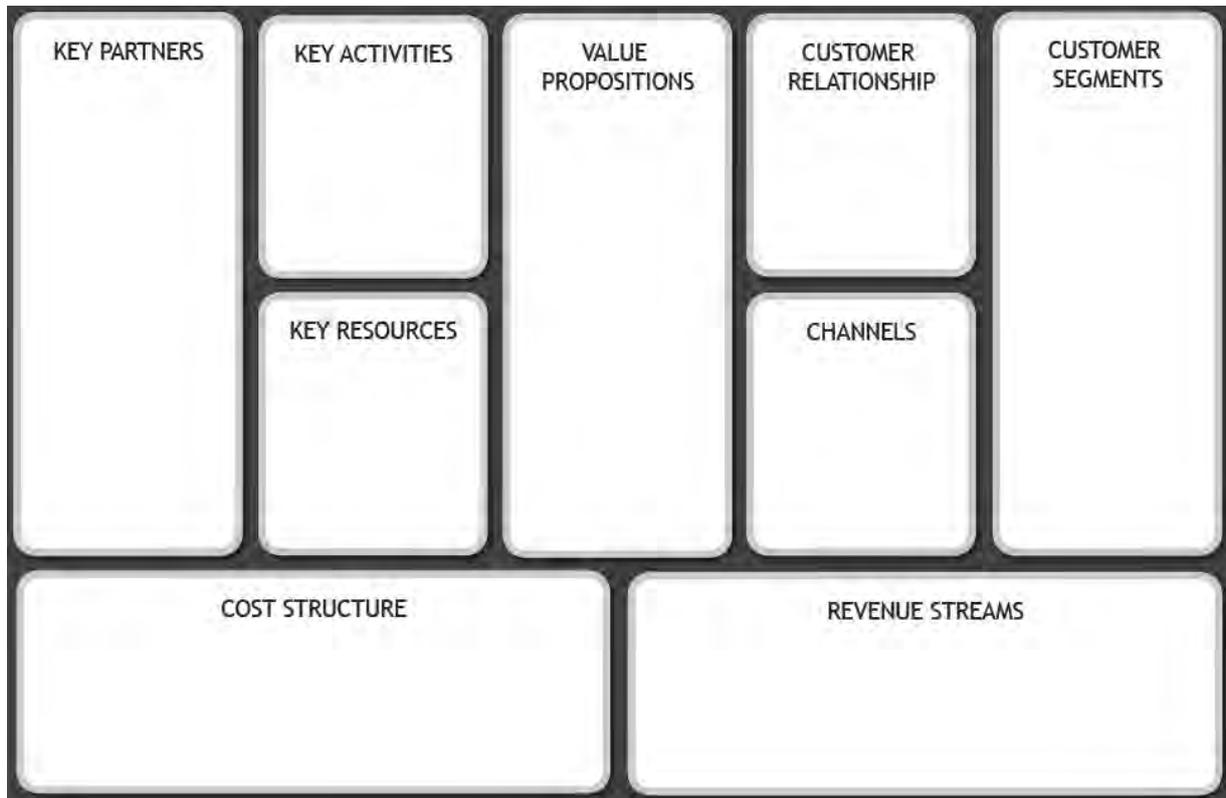
Key Resources: are the assets required to offer and deliver the value proposition to the customer segments

Key Activities: The activities a business needs to perform in order to bring value propositions to its customer segments.

Key Partners: Some activities are outsourced and some resources are acquired outside the enterprise

Cost Structure: The business model elements result in the cost structure.

→ The monetary consequences of the means employed in the business model



The business model canvas by Osterwalder and Pigneur

After a short presentation on this approach, the participants of the workshop were asked to work on their own business model canvas. The groups were the same as during the co-creation workshop. All the participants agreed that it would be useful to continue working on the design already created. They also received instructions for this task, containing helping questions for the different blocks (to be found in the printed versions of the canvas). Afterwards each group was asked to explain their results in the plenary.

Results from the workshop: The different models

Group 1 – Night at the museum



For a better view of the canvas: <https://bmfiddle.com/f/#/C2Wd7>



Group presentation by Eric Senabre

Value proposition: fun, entertainment, brain training, museum visit, social recognition
Revenue streams: extra level of the game, additional items that one can get via the game, possibility to achieve the full version via download, visitors in the museum, iTunes account, adaptation to other institutions

Question & Answer Session asked after the presentation:

- *What is the USP of your product?*

Trusted content, fun, authentic experiences from the museum

- *Which building block was the hardest to fill in?*

Customer relationship (this is mostly what other partners do like Apple or the museums - different perspectives of the cultural institutions and creatives)

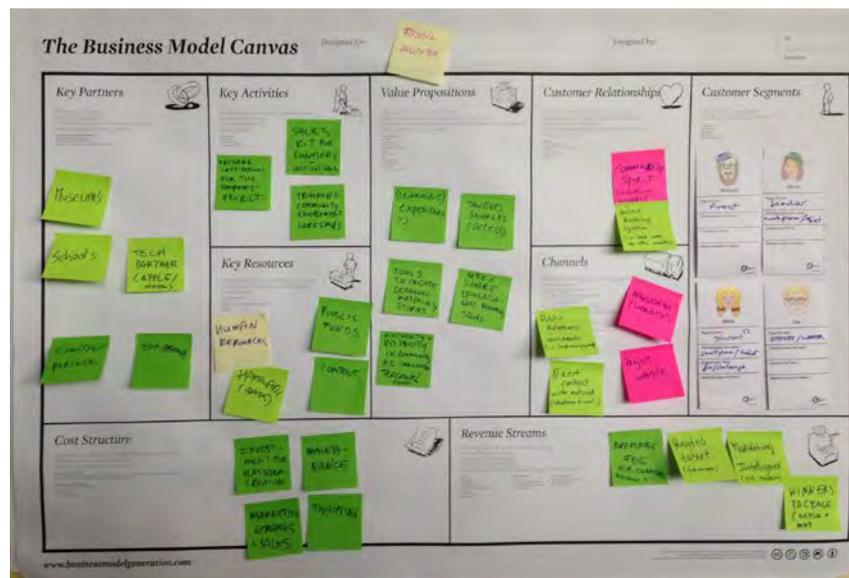
- *How much does this cost?*

Not clear yet

- *If you want to sell than this will be deducted from your project budget. What is the market potential?*

Not all the code can be produced under an open license, so this is something to consider when we make the decision on what to produce

Group 2 – Fossil Hunter



For a better view of the canvas: <https://bmfiddle.com/f/#/vnW82>



Group presentation by Rui Monteiro and Felix King

Value proposition: (learning) experience, trusted sources, tools to create learning stories/ tours, use/share educational resources

Revenue streams: visitors of the museum as a revenue stream, creators will get a percentage of the revenue of the museum ticket sale

Question and Answer Session after the presentation:

- Which building block was the hardest to fill in?

Revenue streams

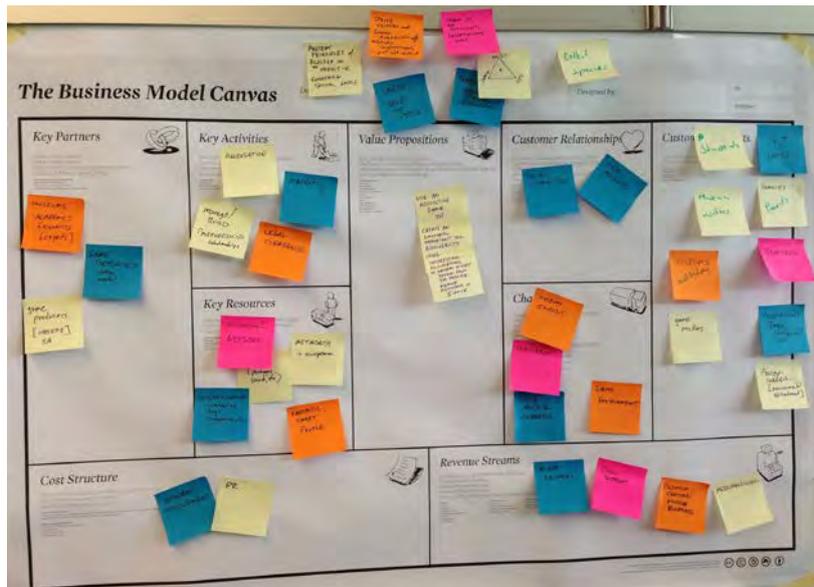
Channels: advertisement in spaces that are nearby, on places that are on the map (local partnerships)

- What is the USP of your product?

Still not clear what you can do with the app - geological layers of the place that you are in, "hidden geological layers" in Prague

→ print your own fossil with a 3-d printer

Group 3 – Card Game



For a better view of the canvas: <https://bmfiddle.com/f/#/hP5v6>

Due to an unexpected issue on open source and licensing, a part of the workshop members left the room to be able to discuss this. Therefore the last group did not get the chance to present the outcomes of their work. It was also not possible to have a final, summing-up discussion.

Learnings from the workshop

- It is important to have a mixed group, with people representing different stakeholders and having different professional backgrounds. It is also crucial to have experts, for the theme itself and for the business models.
- The general presentation on Europeana was very useful, as not all the participants had previously worked with it, or had enough knowledge about it.
- The presentation on the Market Activity Analysis was interesting in order to know about the relationship & collaboration between the creative industries and the cultural heritage institutions – it was only a pity that it was not finished before the workshop – it can be also used for further workshops, as it can lead to very interesting discussions between the different stakeholders, maybe also leading to new outcomes and ideas.
- The discussion about the business model environment can also be regarded as an useful exercise. It can be seen as an exercise on a “meta level”, for a better understanding and consideration of the environment, as this definitely can influence the design and the outcome of the business model(s).
- The exercise on the business model environment can also lead to interesting discussions between the participants of the workshop (especially if they have different backgrounds, and represent different stakeholders). During this exercise there were also discussions on the requirements and objectives of the cultural heritage institutions and the creative industries. Therefore point four of the program was seen as obsolete, as the discussion already took place.
- However this exercise can last for a longer time than expected, due to discussions, which might put the exercise on the business model canvas and the time allocated for it in danger.
- Using the concept of Osterwalder and Pigneur proved to be a good one, as it is a very interactive and easy to use exercise. The groups were small and everyone had the chance to participate and to bring in his/her ideas.
- It was a pity that there was no summing up of the workshop – due to unexpected circumstances. For the future this would be an important part of the program, because it can be used to define further steps and needs. Also a general feedback would be useful to be able improve the workshop accordingly.

White Paper: Business Models for Tourism

Identifying business models for the re-use of cultural objects for tourism.

Co-funded by the European Union

The project is co-funded by the European Union, through the **ICT Policy Support Programme** as part of the **Competitiveness and Innovation Framework Programme (CIP)**.

http://ec.europa.eu/information_society/activities/ict_psp/



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Version: Final (July 2014)

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1. Introduction

This White Paper attempts to document the efforts to identify, implement and evaluate business models that are developed within the Europeana Creative project¹ for the re-use of cultural objects for Tourism by specifying the approach *how* the business models were developed as well as the business models *themselves*.

Europeana Creative is an European project which aims to enable and promote greater re-use of cultural heritage resources, aggregated by the online portal Europeana², by Europe's creative industries. Within the project, a number of Pilot applications focused on History Education, Natural History Education, Tourism, Social Networks and Design are developed. Building on these Pilots, a series of open innovation Challenges are launched with entrepreneurs from the creative industries to identify, incubate and spin off more viable projects into the commercial sector. The project goals will be supported by an open laboratory network, an on- and offline environment for experimentation with content, tools and business services, and a licensing framework where content holders can specify the re-use conditions for their material.

We reflect on the development of the business models for the re-use of cultural objects for the theme Tourism. This White Paper is the second in a series of four³ and must be seen as work in progress, inspiring and supporting the further development of the Pilots, the open innovation Challenges and development of the Europeana Labs Network. We aim to create collaboration in our efforts to develop new business models for the creative re-use of digital objects. We invite professionals from the creative industries as well as the cultural heritage domain to contribute to the evolving discussion and sharing of knowledge and best practices.

¹ See <http://www.europeanacreative.eu>; accessed February 19, 2014.

² See <http://europeana.eu>; accessed February 19, 2014.

³ The other White Papers are focused on the themes History and Natural History Education, Social Networks and Design.

2. Business Models for Digital Public Content

Public institutions set out to ensure that cultural heritage “can remain a living asset over time and that it is as widely shared as possible”⁴. Cultural institutions are non-profit-making organisations that develop their work to safeguard the public good and not to obtain profit.⁵ Over the past decade considerable public investments have been made in the digitisation of cultural heritage objects in the not-for-profit sector. New digital collections have emerged and enable innovative ways to explore its contents, from research projects to resources valued by the community.

However – and especially in the light of the economic uncertainties in Europe and decreasing governmental budgets – digital resource projects struggle in the transition from grant funding to a longer-term plan for ongoing growth.⁶ In such a framework, sustainability is a prime concern and challenge. As a result, the development of new business models for the creative re-use of digital content from the cultural heritage sector seems to be “double-edged”⁷. On the one hand, they *must allow wider access to cultural content* (while guaranteeing the copyrights and related intellectual property rights of third parties); on the other hand, they also need to *create revenues to guarantee the long-term sustainability* of projects and services exploiting the content.

⁴ “The New Renaissance: Report of the ‘Comité des Sages’. Reflection Group on Bringing Europe’s Cultural Heritage Online”, available online at: http://ec.europa.eu/information_society/activities/digital_libraries/doc/refgroup/final_report_cds.pdf, p. 1; accessed February 19, 2014.

⁵ See Directorate-General for Internal Policies, written by Claudio Feijoo, Sven Lindmark, Juan Pablo Villar, Carlota Tarín, Javier Gelabert, Beatriz Matía, “Public and Commercial Models of Access in the Digital Era”, April 2013, requested by the European Parliament’s Committee on Culture and Education; available online at: [http://www.europarl.europa.eu/RegData/etudes/etudes/join/2013/495858/IPOL-CULT_ET\(2013\)495858_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/etudes/join/2013/495858/IPOL-CULT_ET(2013)495858_EN.pdf), p. 119; accessed February 19, 2014.

⁶ See Nancy L. Maron and Matthew Loy, “Funding for Sustainability: How Funders’ Practices Influence the Future of Digital Resources”, JISC Strategic Content Alliance, Ithaka, New York, June 2011; available online at: <http://www.jisc.ac.uk/media/documents/publications/programme/2011/sandrfundingforsustainability.pdf>; accessed February 19, 2014.

⁷ Directorate-General for Internal Policies 2013, p. 119.

Business models – meaning the way that value is created, delivered and captured within an organisation point of view⁸ – need to be seen in a wider sense as the way public organisations deliver content and the models they are implementing to create revenues. As producers and distributors of content, cultural institutions develop new (non-commercial) initiatives that guarantee the sustainability of projects and services and also serve as content providers for the commercial sector.

Recent research shows that the current most common business frame underlying these new projects is a contractual frame, where cultural heritage institutions contract creative industries parties (e.g. brand or web agencies, game developers) to develop services, backed by ad hoc public funding.⁹ It was suggested that both businesses and cultural heritage institutions want to exit the “contractual” frame and explore innovative funding models together. Especially cultural institutions expressed that they want new business models of profit sharing and gaining more benefits of the cooperation.¹⁰

However, there does not seem to be one single approach to achieve this. No study seems to be able to lay out a one-size-fits-all plan that any organisation can follow to reach the point of financial sustainability.¹¹ An important aspect of a strategy to achieve sustainability seems to be a shift in management on the side of cultural heritage institutions. Clear goals, accountability, measurable targets, reviewing processes and assessing the performance are proven elements in the business sector for creating successful companies, but are considered a weak spot in the way cultural heritage institutions operate.¹²

The Tourism Pilot is led by PLURIO.NET in close cooperation with Culture 24. PLURIO.NET is a project of Agence luxembourgeoise d’action culturelle asbl (AC), a non-profit association supported by the Ministry of Culture of Luxembourg and the City of Luxembourg with a mission to execute specific cultural projects for these two entities. PLURIO.NET is an infrastructure for the collection and dissemination of event information in the Greater Region funded by a partner consortium consisting of the public cultural

⁸ See <http://www.businessmodelgeneration.com>; accessed February 19, 2014. See also Directorate-General for Internal Policies 2013.

⁹ See Aubéry Escande, Hans de Haan and Louise Edwards, “Europeana Creative White Paper No. 1. Creativity, Technology and Management: Establishing Best Practices between Cultural Heritage Institutions and the Creative Industries”, June 2013, available online at: http://pro.europeana.eu/documents/1538974/1594727/eCreative_WP3_ST3.2.1_CreativityTechnologyManagement_v1.0; accessed February 19, 2014.

¹⁰ See Escande, de Haan and Edwards 2013, p. 16.

¹¹ See Kevin Guthrie, Rebecca Griffiths and Nancy Maron, “Sustainability and Revenue Models for Online Academic Resources: An Ithaka Report”, Ithaka, New York, May 2008.

¹² See Escande, de Haan and Edwards 2013.

administrations and ministries of the Greater Region Luxembourg (LU), Wallonia (BE), Lorraine (FR), Saarland (DE), Rhineland-Palatinate (DE). PLURIO.NET wants to create a European Grouping of Territorial Cooperation with the mission to develop projects in the framework of “Culture and Creativity” in the Greater Region and on a European level. The Europeana Creative tourism pilot fits well into this development; it is an opportunity to offer a service that promotes events for the Greater Region and collaborate across borders. This is where Culture24 comes into the picture and adds experience with developing business to consumers’ experiences. Culture24 is an independent charity that exists to support the cultural sector in the UK to reach audiences across digital platforms. They collect, curate and distribute content from and about museums, galleries and other cultural institutions and lead and coordinate the successful Museums at Night campaign in the UK. The tourism pilot fits the activities of Culture24 well; it offers the opportunity to offer a service to support GLAM’s in the UK and let them collaborate across sectors and borders.

The tourism pilot aims to demonstrate creative re-use of Europeana resources by developing a test application that integrates Europeana content into a touristic service. After developing various ideas for such a service, the prototype called VanGoYourself (VGY) was chosen to be developed. VGY basically is a responsive web application that helps to recreate a painting with friends and family for virtually everyone with access to the Internet, then upload and share the photograph, “twinned” with the original, for others to enjoy. The “twinning tool” for the pairing of images was built by AIT, the web application was developed by the external service provider Surface Impression and the design of VGY by Spild af Tid (SAT). The service was developed in close collaboration with the tourism and online publishing sector, with whom both Plurio.net and Culture24 have been working together closely over the past years. In the co-creation phase representatives of the local or regional tourism sector of Verdun in France and Mons in Belgium (tour guides, tourist office managers and regional tourism strategists), local and regional museums and collections organisations, and creative industries have been sharing their demands for the service to be developed.

The product faces the question of how to be continued and further developed after the end of the project. How and who will continue the service and in what kind of form? How can their sustainability, especially in form of financial support, be ensured? In the next section we will (1) discuss the approach that was chosen to develop business models for tourism re-use in Europeana Creative, and we will reflect on the design of the process and formulate some guidelines that we developed for the development and incubation of the models. Furthermore, (2) we will elaborate on the specific business models that were identified for tourism re-use and dive deeper into the strengths and weaknesses of the models and application for the Pilots in Europeana Creative.

3. Business Model Development Approach

The starting point for the development of the business models in Europeana Creative was to get a shared understanding of what a business model is and how it could be used in the context of the project. Therefore, a concept that everyone could easily understand and apply was needed. Within the Europeana Creative context, several stakeholders are not particularly familiar with business modelling. A simple but robust concept and methodology was needed. Since the business model canvas developed by Alexander Osterwalder and Yves Pigneur had proven to be a successful methodology,¹³ allowing an individual or group of individuals to discuss and develop business models by using a simple but effective canvas as a working tool, the decision was made to use this methodology.

Osterwalder and Pigneur explain “how value is created, delivered and captured within an organisation point of view”. Value takes several forms such as cultural, economic, social, environmental, thus not being limited to a common perspective that refers to business per se for profit. A business model can also be developed not only around organisations but also around specific projects, products or services. Putting it in another way: It’s about which pieces are necessary and how to put them together so that your organisation, product, service or project is built in a sustainable way.

The business model canvas can be used in teams as a shared language, for better strategic conversations and as a tool to structure thinking. Inspiration for the design of the business development was also taken from the BMICE Step-by-Step Plan, a seven-step plan that was designed and implemented by heritage institutions to embed new or existing digital service concepts in their business model, and was shared to be repeated on a long-term or occasional basis by heritage institutions.¹⁴

The conversation about business models was started at a business model workshops that was organised on 27 November 2013 (see Annex I for a full report) with representatives from cultural institutions, tourism organisations and representatives from the business sector. Prior to the business model workshops, a co-creation workshop was held. This workshop made use of co-creation tools to facilitate the concept development of the Pilots through the co-creation of possible software applications. At the end of the co-creation

¹³ See <http://www.businessmodelgeneration.com>; accessed February 19, 2014. See Alexander Osterwalder and Yves Pigneur, *Business Model Generation*, Wiley, Hoboken, NJ, 2010. See also Stichting Nederland Kennisland, Stichting DEN, TNO, Stichting E30, “BMICE Step-by-Step Plan”, 2011, available online at: http://www.den.nl/art/uploads/files/BMICE-Step-by-step_EN.pdf; accessed February 19, 2014.

¹⁴ See “BMICE Step-by-Step Plan” 2011.

workshop, the application ideas with the best potential were chosen to be further explored in the business model workshop to assess their business potential. The co-creation workshop thus provided the basis for the business model workshop. Based on the results of the co-creation workshop, the goal of the business model workshop was to trigger a discussion on how a business model can be developed for each of the results.

The introduction to the business model workshop was guided by a statement that „the easiest, most straightforward way to create a great product or service is to make something you want to use.“¹⁵ This approach allowed the participants to get an initial understanding of their task during the workshop. When participants are convinced of a product by themselves it becomes much easier to know, e.g.:

- What is your value proposition?
- Who will be your potential customer?
- How / through which channels you would like to get access to the product?
- How much are you willing to pay for this service?
- What you will request from the product to keep being attracted for a longer period?

Starting from these assumptions the participants have begun to develop a first draft of business models for the concepts that evolved during the co-creation workshop. After the workshop the discussion was continued via online conference calls.

The following steps were taken to develop the business models. Together the steps sketch out the services that facilitated the business model development.

Identifying Business Models

Following Osterwalder and Pigneur, “[b]usiness models are designed and executed in specific environments. Developing a good understanding of [the] environment helps you conceive stronger, more competitive business models.”¹⁶ This was the reason why an analysis of the existing environment was seen as an important first step for the business model workshop. Only by understanding the complex economic landscape, the technological innovations and the market needs, one can effectively work on business models. To better analyse the existing business models environment, the four main areas suggested by Osterwalder and Pigneur – market forces, industry forces, key trends and macroeconomic forces – were discussed, visualised and mapped out.

¹⁵ Jason Fried & David Heinemeier Hansson, 2010: Rework. Crown Business 1. edition.

¹⁶ Osterwalder and Pigneur 2010, p. 220.

Osterwalder and Pigneur consider that a business model can best be explained and used through nine basic building blocks that cover the four main areas of business: customers, offer, infrastructure and financial viability. With their Business Model Canvas we sketched out and visualised new business ideas for the three selected ideas.

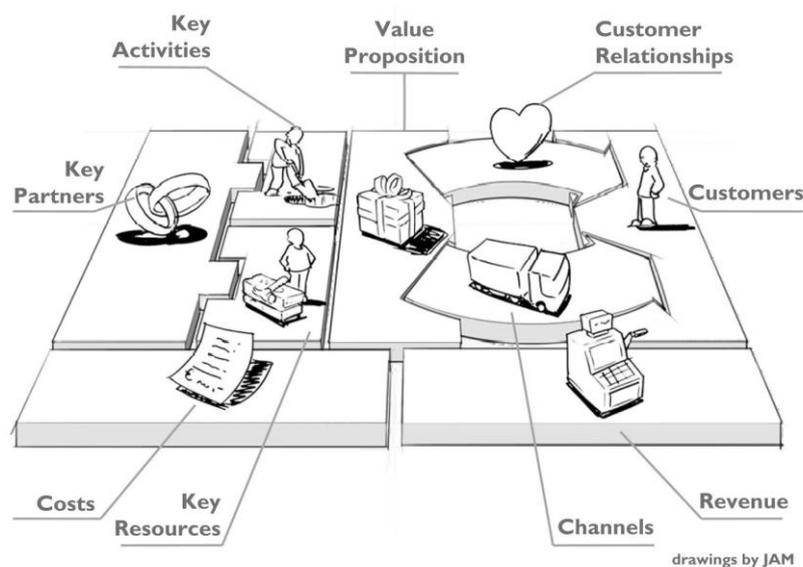


Fig. 1: Business Model Canvas by Osterwalder and Pigneur

The nine building blocks:

1. Customer Segments: The different groups of people or organisations a business aims to reach and serve. The target audience for the products and services of a business.
2. Value Proposition: A business seeks to solve customer problems and satisfy customer needs with value propositions. The products and services a business offers.
3. Channels: Value propositions are delivered to customers through communication, distribution and sales channels. The means by which a company delivers products and services to customers.
4. Customer Relationships: Customer relationships are established and maintained with each customer segment. The link a company establishes between itself and its different customer segments.
5. Revenue Streams: Revenue streams result from value propositions successfully offered to customers. The way a company makes money through a variety of revenue flows.
6. Key Resources: Key Resources are the assets required to offer and deliver the value proposition to the customer segments.

7. Key Activities: The activities a business needs to perform in order to bring value propositions to its customer segments.
8. Key Partners: Some activities are outsourced and some resources are acquired outside the enterprise.
9. Cost Structure: The business model elements result in the cost structure. The monetary consequences of the means employed in the business model.

At the end of the business model workshops, the developed business models for the application ideas were presented, discussed and published in a report. After the workshop, the best Pilot application was selected to be developed. Not only business aspects, but also technical feasibility played a role in making this decision.

Implementing Business Models

The next step was to further develop the product concept, specifically the underlying value proposition(s) of the chosen application idea. Value proposition is a term commonly used in business economics that refers to the argument over which an organisation or company tries to communicate and convince the client of the value of the product or service as far as his or her needs and desires are concerned. Why would people be interested in the product or service? What needs does it meet or what problems does it resolve for the customer? How can revenue be generated to be able to cover the costs of running such a service after the Pilot development period?

As a consequence, further advice on the access of content (and related IPR issues) and guidelines for the re-use of this content was given, and options for generating revenue to be able to deliver the value propositions were researched. The strengths and weaknesses of each revenue option were identified. Based on the developed value propositions, a final decision on whether or not to continue to work with a specific business model for the product or service concept was made.

Evaluating Business Models

The development is also supported by a continuous evaluation of the implementation of the business models throughout the duration of the project. The business model itself is an incremental part of the product concept. This concept and the working prototype will be discussed and evaluated in online focus groups consisting of relevant representatives from creative industries and memory institutions.¹⁷ A discussion about success indicators was

¹⁷ See http://pro.europeana.eu/documents/1538974/1601973/eCreative_D6.1_MFG_revised_v1.0; accessed July 31, 2014.

started that can be assessed on a regular basis. Another important aspect for a successful business model is the acceptance by end users. Usability tests carried out by Europeana Creative will help to get feedback from potential end users.

4. Capturing Value: Van Go Yourself

As mentioned earlier, the goal that was set out for the tourism pilot was to demonstrate creative re-use of Europeana resources by developing a test application that integrates Europeana content into a touristic service. This fits well with the mission of the pilot leader and product owner PLURIO.NET to collaborate and work on projects or services that can promote events in the Greater Region in new and attractive ways. During the Tourism Co-Creation workshops multiple concepts were developed. The three best concepts were chosen to further develop a business model around. VGY was later selected as the most feasible and promising scenario, a lightweight and simple concept that leaves room for improvement in the challenge phase. More information about the other two concepts, “Europeana Pro Tour – Research, Curate And Publish Your Tours” and “Local Value Of Cultural Routes”, can be found in Annex I of this White Paper.

VGY is a genuinely different and surprisingly deep way for visitors to engage with heritage, based on emotion, playfulness and curiosity. It is a responsive web application, a free and easy to use service, that helps to recreate a painting with friends and family for virtually everyone with access to the Internet, then upload and share the photograph, “twinned” with the original, for others to enjoy. The user can also then share it through his own existing digital channels such as Facebook, Twitter, Pinterest, Tumblr, etc. The re-use of Europeana content will be fostered through a “curation tool” that allows to tap easily into Europeana databases and to pull meaningful content into the service. The service can be used by tourist offices, museums, cities, tour guides, etc. to promote specific destinations, sites and events. Above all, the touristic sector seeks to provide a “great time” or a “great experience” to its clients / visitors in order to get them to return to a destination or to tell friends and family about it in a positive way. It can easily be integrated in existing marketing schemes and is very “light weight” in terms of costs and management.

The following business model canvas was developed and fine-tuned for Van Go Yourself:

1. Customer Segments

- B2C: digitally active smartphone users
- B2B: museum/cultural heritage staff and professionals in the touristic sector (e.g. tourist offices, tour guides, cities etc.)

2. Value Proposition

- Engage people that want more in a painting than just looking at it at a specific location, destination or event
- Engrossing people to have fun and re-experience historical events that happened at a specific place
- Provide the opportunity to create souvenirs and memories of a trip, for example recreate images that have been discovered during the trip with the family
- To give professional in the cultural heritage and touristic sector a tool to curate content (curation tool) and provide them with a great time or experience at their destination
- To give cultural heritage institutions a tool to promote their content and venue in a fun and engaging way, and increase their (online) visitors

3. Channels

- App stores (in case the application provides a mobile app)
- Websites that host the images (e.g. Tumblr, Pinterest)
- Sharing access link on social media channels (by users)

4. Customer Relationships

- Fun
- Socially engaging
- Emotional
- Playful
- Curious
- Enjoyment
- Inspirational
- Creating souvenirs and memories
- Provide a “great time” or a “great experience”

5. Revenue Streams

- Basic free web, mobile and tablet version that gives access to high quality and reusable images with the basic function to “Van Go Yourself”
- Paid extra services like filtering options for your images, image processing etc. where you pay something for each service
- Events as a service: VGY will produce events around the app to engage visitors to recreate paintings via the service
- Partnership model where cultural heritage organisations can open up their collection in the application
- Merchandise articles like canvas prints, cups or badges with user generated pictures (e.g. www.cafepress.com)

6. Key Resources

- CMS curation tool to provide relevant content (maintained by the provider)
- Pictures of paintings which are free copyright / Open content and have medium resolution (x50 in the beginning)
- Branding tool (lightweight)
- Production capacity for events and selling merchandise

7. Key Activities

- Platform development and maintenance
- Engaging with Mons 2015 and providing marketing materials for the launch
- Selecting and tagging relevant digital cultural heritage content
- Account management
- Development of a client that submits the pictures to photo communities (e.g. Tumblr, Pinterest)

8. Key Partners

- Content providers
- Europeana
- Europeana Creative partners
- Mons 2015
- B2B: Plurio.net
- B2C: Culture24 (Producer)

9. Cost Structure

- Costs for development: CMS, one app and its maintenance
- Costs for a permanent producer
- Costs for launching marketing campaigns

At the core of the canvas is the question of the value proposition. What kind of customer problems can be solved and how can the customer needs be satisfied with value propositions? The following value propositions for re-use in tourism were specified for each of the stakeholders that were identified as important in delivering the central value proposition:

1. For **digitally active smart phone users** (note: the prototype is web-based that proved a need for the development of a native mobile app) VGY offers a fun and easy to use service that they can use when visiting a museum or an event at a specific destination. They can access the paintings digitally and use the service to engage with them instead of just looking at them in the museum. They can have fun with their friends and family and re-experience certain historical events. The service also provides them with the opportunity to create souvenirs and memories of the visit or trip.

2. For **museum staff, cultural heritage and professionals in the touristic sector** VGY offers a tool to provide them with a great time or experience at their destination. They can easily select relevant content that is interesting for their customers with the “Curation Tool” or let them use an existing selection of content that is accessible via VGY.

3. For **content providers** VGY contributes to an extension of their public mission by giving access to and providing possibilities of re-using cultural sources/content. They can use the service to justify the need to digitise their collections, as this gives the public wider access to their cultural heritage content. Furthermore the tool increases the use and awareness of the collections of the institutions by addressing a bigger community and it gives a greater visibility to the institutions, supporting the justification for public funding to keep these kinds of services/tools ongoing. The tool can also contribute to an increase of museum visits and ticket sales.

5. A Content Re-use Framework for Tourism

Over the past decade a tremendous effort was made to make digital content in Europe more accessible, usable and exploitable. At the moment of writing, around 20% of heritage materials has been digitised; 31% of that material is available on cultural institution websites and an estimated 6,2% is accessible online. This means that this material is made accessible through the website but without explicit rights of use or re-use.¹⁸ One of the goals of Europeana Creative is that the works are offered online in a complete form (with metadata) and the rights policy is explicit so other parties know what they can or cannot do with it. A lack of (good quality) metadata and especially rights labelling information of digital objects is a big obstacle for third partners to search for and re-use the materials that they are looking for. To allow parties from the creative industries and wider stakeholders to develop products and services with digital resources from cultural heritage institutions aggregated by Europeana, work has been undertaken in the Europeana Awareness¹⁹ project to build a Europeana Licensing Framework that gives a unified set of terms of use that enables access to metadata and thumbnail images on Europeana.

In January 2013, Europeana launched a Rights Labeling Campaign²⁰ to reduce the amount of metadata records without rights statements on Europeana; at the end of 2012, 36% of all metadata records were still missing rights information. Because of the demand for access to high-quality re-usable content via Europeana,²¹ this framework is currently being extended with a Content Layer within the Europeana Creative project. This *Content Re-use Framework* will allow content providers to voluntarily make available content for specific re-use scenarios²² in a (digital and physical) environment called the Europeana Labs.

The following process steps from access to the re-use of content are defined within the Tourism theme:

¹⁸ See Directorate-General for Internal Policies 2013, p. 117.

¹⁹ See <http://pro.europeana.eu/web/europeana-awareness>; accessed February 20, 2014.

²⁰ See <http://pro.europeana.eu/pro-blog/-/blogs/1494947>; accessed February 20, 2014.

²¹ See Maarten Zeinstra, Paul Keller and Antoine Isaac, “D3.1 – Specifications for Implementing the Content Layer of the Extended Europeana Licensing Framework”, August 2013, available online at: http://pro.europeana.eu/documents/1538974/1601973/eCreative_D3.1_KL_v1.0; accessed February 20, 2014.

²² For an overview of all issues related to the extension of the existing Europeana Licensing Framework we refer to the Discussion Document ‘Extending the Europeana Licensing Framework’ (Keller, 2013).

1. Filtering and Adding New Content to Europeana

Via the Content Re-use Framework digital objects are filtered based on three technical and IP-related specifications:

- The metadata for the Cultural Heritage Object contains at least one direct link to a Digital Object itself (as opposed to a page where the object is available).
- The Digital Object meets minimum technical quality requirements.²³
- The Digital Object is provided with a rights statement that allows re-use of the object (as opposed to rights statements that only allow access).²⁴

Additional requirements for specific content items were formulated to fit touristic purposes and more specific the VGY service:

Legal criteria, format, metadata

- All the images of paintings must be licensed CC0 or CC-BY or be in the public domain. This is a subset of reusable content that will be available via the Content Re-use Framework that allows for commercial re-use
- Short URL (to retrieve painting) or the image as file
- Name of painting (if known)
- Name of artist (if known)
- Period of painting or date (if available)
- Name of collection / museum where painting can be found
- Fairly good resolution, high res if possible
- No B/W images of colour paintings

General criteria are:

- Great classics (impact = recognition of famous painter, famous painting, i.e. Last Supper from Leonardo Da Vinci)
- Famous scenes, people or "sujets" (impact = recognition of the scene, i.e. Last Supper, but from another painter than Leonardo; portraits of famous kings and queens, etc.)
- Lesser known images, painters or scenes / sujets with a surprising element that trigger an impulse to recreate it (because it's fun / weird / challenging)

²³ See Zeinstra, Keller and Isaac 2013 for the exact technical requirements list.

²⁴ Content that is identified by cultural heritage institutions as in the public domain or is licenced under an open licence that allows re-use.

Other significant aspects are:

- Different numbers of people, from portraits of 2 - 3 people, to larger groups of people.
- People of different ages, sex, ethnicity
- Great diversity in periods: antiquity, middle ages, renaissance, baroque, classical, romantic, symbolists, impressionists, expressionists, surrealists)
- Great diversity in provenance: from Italy to Scandinavia, from Spain to Greece, from Russia to the UK
- Great diversity in subject: interior, exterior, day, night, dawn, allegories, mythology, Christian, Pagan, European, extra-European.

Initially VGY set out the goals of having 40-50 images available for re-use in the service. Because the Content Re-use Framework was not yet in place during the pilot phase of VGY the content had to be 'handpicked'. For each of the identified content sources an agreement had to be made with the data owner of the source, in which conditions for the re-use of the content in the pilot are specified.

Content can then in the future be ingested in Europeana and accessed by specified re-users. To be able to participate in the developed application as partner, it is important that each content partner contributing content agrees on the conditions to deliver content to Europeana via this Content Re-use Framework.

2. Re-using the Content

VGY and Professionals using VGY (cultural heritage professionals and professionals in the touristic sector) can make their own content selection by tapping into the Europeana databases and pulling in meaningful content in VGY with the "Curation Tool". Once the content can be accessed, the content will be enriched with new metadata and content by the end-users. They will select their favourite painting and add an image of the recreated painting via VGY (user generated content). They will add relevant metadata to it (name of the photographer etc.). The VGY service will generate a "twinned image" in which the original painting is matched with the recreated one.

3. Publishing new content

For end-users to be able to access the recreated "twinned" images, the twinned images are published via the VGY website. Because the Europeana Creative project wants to stimulate creative re-use of cultural heritage objects for tourism, it was identified that the open licencing of new content should be promoted in Europeana Creative. As the pilot partners decided that they wanted to use only artworks that allow commercial re-use and are in the public domain or available under CC-BY or CC0, the following licencing structure was chosen:

- The original painting or digital object that is available in the public domain or under CC0 or CC-BY license is accessible as such via VGY;
- The recreated painting is available under an open license that allows commercial re-use. The options were CC0, CC-BY and/or CC-BY-SA. The CC-BY-SA license was chosen because the makers that recreate the images are asked to be attributed (their creativity and efforts will thus be recognised by VGY) and other (commercial) re-users will be asked to respect the same conditions for reusing.

To support this open licensing strategy of “twinned images” and encourage the open sharing of sources by the community, a simple and easy-to-understand standard agreement was crafted based on the Europeana Terms of Use for User Contributions (<http://europeana.eu/portal/rights/terms-for-user-contributions.html>) and agreed upon by end users once they have registered to make use of the service.

6. Business Models for Re-use

Especially in the tourism sector exists a broad variety of websites and applications that are re-using digital cultural heritage content. The most common approaches in providing products and services to a customer are based on two models.

A common model to run such services is the **Software as a Service**²⁵ model (**SaaS**). It allows the usage of an application with no need to download, install or update them. This model can be based on different payment conditions e.g., on a weekly, monthly or yearly basis. The service gets maintained by a provider and allows its customers an easy adjustment according to their requirements²⁶.

- Strength and weaknesses: The SaaS offers a low access barrier for cultural heritage institutions or the tourism sector. They can offer additional services for a specific period and avoid spending too many internal resources. Monetization models with regards to the end-user need to be developed.
- Short- and long-term viability: The long-term viability needs to be observed based on the user contribution rate.

Related to the SaaS model also the **Platform as a Service**²⁷ model (**PaaS**) can be of interest whereby the platform enables customers to develop and deploy their own application without additional costs for the underlying platform. For example customers use a fairly simple content management system that allows feeding an app interface with specific information or content²⁸. The payment modalities are basing on the same principles like the SaaS model.

- Strength and weaknesses: The PaaS model offers a low access barrier for cultural heritage institutions or the tourism sector. They can offer additional services for a specific period and avoid spending too many internal resources. Monetization models with regards to the end-user need to be developed.
- Short- and long-term viability: The long-term viability needs to be observed based on the user contribution rate.

²⁵ *Software As A Service: Strategic Backgrounder*. Washington, D.C.: Software & Information Industry Association. 28 February 2001. Retrieved 24 April 2011.

²⁶ Marko Jurisic, Dragutin Kermek 2011: Taxonomy of Digital Economy Business Models. IEEE Xplore Digital Library.

²⁷ William Y. Chang, Hosame Abu-Amara, Jessica Feng Sanford 2010: Transforming enterprise cloud services. p. 55. Springer Heidelberg.

²⁸ See e.g. <http://www.museumsapp.com/> accessed June 2nd, 2014.

With regards to Van Go Yourself which is the mobile website developed within Europeana Creative some specifics have to be taken into account. This chapter outlines the requirements for the business models developed for applications that re-use cultural resources in Europeana:

- **Open access:** The vision of the European Commission’s Comité des Sages that “public domain material digitised with public money should be freely available for non-commercial re-use by citizens, schools, universities, non-governmental and other organisations”²⁹ is considered as the most widely held view among heritage institutions in Europe, and most access models rely on open access.
- **Open source:** In the case of all the Pilots the product owners receive public funding in Europeana Creative to develop their applications, which will be licenced under an open source licence which permits the (commercial) re-use of the developed software by other parties;
- **Revenue from (in)direct beneficiaries:** In our search for strategies to generate revenue for the Van Go Yourself it was key that the revenues can be generated by both the direct beneficiaries of the service as well as indirect beneficiaries that value the service but do not directly use them. So also commercial revenue models generated directly from the consumers were explored.
- **Additional services and goods:** Another strategy to generate revenue while keeping access to the application for free for direct and indirect beneficiaries is to focus on transaction-dependent revenues generated by charging fees for specific additional services (e.g., charging fees for tutorship) or additional unspecified services (e.g., membership fees, donations)³⁰ or goods (e.g., fan merchandising) from direct beneficiaries.

²⁹ Directorate-General for Internal Policies 2013, p. 121.

³⁰ See Gabriela Hoppe and Michael H. Breitner, “Business Models for E-Learning”, Discussion Paper No. 287, Universität Hannover, Hannover, October 2003, available online at: http://diskussionspapiere.wiwi.uni-hannover.de/pdf_bib/dp-287.pdf, p. 9; accessed February 20, 2014.

6.1 Business Model taxonomy

Following this line of reasoning, we propose the following business model taxonomy (including revenue models) for the re-use of public content for Tourism.³¹

Van Go Yourself

The '*Van Go Yourself*' application is addressing two customer segments. On a B2C level it is focusing on smartphone users of every age that are interested in engagement with digital cultural heritage here especially famous paintings. The second segment is the B2B level that is aiming on the tourism sector. Business model taxonomy requires a clear distinction between both levels and is strongly depending on who will maintain the service at a later stage. In this section potential approaches to sustain applications in the tourism sector will be outlined.

Business to Business

The tourism sector has the objective to increase the offered value and to provide additional services for its customers. Despite this fact it is important that at this stage the tourism sector itself is the customer. The **B2B level** consists of creative industries that develop and provide a specific service for their customers from the tourism sector.

1. Service Based Business Model (Event Organising): In today's economies a fairly common model is the service based business model where companies sell specific services around a product rather than selling the product itself. Following the global service trend to activate additional value by providing service offerings that supplement a product, VGY could address the right needs by providing event organisations³². Here the value proposition of VGY is mainly based on the idea of selling events to cultural heritage institutions. For example museums could have their own VGY event organised at their museum. VGY will take care of the whole application adjustment, organisation and

³¹ See Guthrie, Griffiths and Maron 2008; European Commission 2011; Hoppe and Breitner 2003. See also Peter B. Kaufman, "Marketing Culture in the Digital Age: A Report on New Business Collaborations between Libraries, Museums, Archives, and Commercial Companies", Intelligent Television, Library of Congress, Washington, 2005; Peter B. Kaufman, "Assessing the Audiovisual Archive Market: Models and Approaches for Audiovisual Content Exploitation", Intelligent Television, PrestoCentre Foundation White Paper, 2013, available online at: https://www.prestocentre.org/system/files/library/resource/assessing_the_audiovisual_archive_market_-_peter_b_kaufman_white_paper_3.pdf; accessed February 20, 2014.

³² See <http://bschool.nus.edu.sg/Marketing/Jochen%20papers/WirtzEhret2013Service-basedBusinessModels.pdf> accessed June 15th 2014.

promotion of the event to the audience. VGY can offer for example all-inclusive packages, golden and silver packages with different options.

- Strength and weaknesses: this model is within the expertise of the current organisation. The current personal can do this and has the experience (it has been trialled in the pilot). There is expressed interest from parties outside the project and can be rewarding to do a further market analysis on the potential and growth of this market.
- Short- and long-term viability: this can be started up within the pilot period and further developed based on market demand

2. Service Based Business Model (Customization): is the idea to create customized versions of the product for other sectors, e.g. the educational sector. It has already become clear that museums are interested in an educational version of VGY to help them teach art to schools. In such cases the customer will pay for a version that is differing from the standard and tailored according to his needs. For example this would have to be a protected area where children can exchange (recreated) images amongst themselves, not publicly. This is because of privacy considerations for the children and the requirement to have this content password protected. E.g.: customized clothing or shoes, ERP customization (SAP modules).

- Strength and weaknesses: a large investment has to be made in the product to be able to deliver this service for educational purposes. So it is a relatively high risk to implement this now whereas the market demand still has to prove itself
- Short- and long-term viability: spin-off projects are very well fit for the longer run. Whereas the initial service will have a short life span, the service can have a longer life span in an educational context. However market potential can be tested in the conversations with museums during the project period

3. White Labelling: the White Label model is a common approach often used for transaction / trading services. A party uses a service through a provider by rebranding the product. The provider labels the product in way that shows the quotes related to the party³³. According to this white labelling is corresponding to a product or service that is delivered to a customer who rebrands the product or service to create the impression that it is part of his product or service³⁴. VGY can white label their service and customise it for museums with their own branding and look and feel. E.g.: Dell computers merchandise industries, foreign exchange (FX) trading services, etc.

³³ Massood Samii, Gerald Karush 2004: International Business and Information Technology. Interaction and Transformation in the Global Economy. Page 63 - 64. Routledge, London, UK.

³⁴ See <http://www.techopedia.com/definition/24401/white-label> accessed June 15th 2014.

- Strength and weaknesses: there will be costs involved in customizing the service because the current organisation has not the expertise in house to do this, so it will be a high cost investment. Another option could be to find a partner that is willing to join the organisation and deliver this development services. A secondary risk is caused by the requirement of providing the code open source what can inspire external parties to develop their own application instead of asking for white labelling.
- Short- and long-term viability: during the pilot it can be explored if museums are interested in investing in this, it has to be seen if it is worthwhile to pursue this further within the project period. It is seen as a high-risk investment.

4. Advertising Revenue Model: advertisement on the projects website is a traditional but very applicable revenue model. Websites or applications with high visitor traffic can monetize their attractiveness through such models. With respect for the different stakeholders that are relevant this can be done. E.g.: Blogs, Online-Newspaper.

- Strength and weaknesses: if you do it with respect to the different stakeholders and choose the advertisements carefully, this can be a low risk activity to pursue. The income that you are able to generate with advertisements however, is estimated as very low
- Short- and long-term viability: as it is not allowed to make any money from EU-funded projects, it wouldn't be possible to implement this within the project period, but can only start after.

5. The option of **Corporate Sponsorships** can be used when the product or service requires only mean resources, whereby the sponsor is providing support financially or through products and services. The sponsor pays partially or fully for the costs in exchange of recognition³⁵. Especially the alliance of the service with public cultural events can offer an appropriate approach to cover the infrastructure and personnel costs. Corporate sponsorship first starts becoming interesting when an outreach to a bigger audience is ensured. Two ways to supplement and deepen sponsorships are **partnerships** where cultural heritage organisations can open up their collection in the application (a hub solution from one brand perspective) and **crowdsourcing**. Both do not create revenue but increase the value through a sense of community and broadening the network. In VGY crowdsourcing is the essential part of the success of the application: user can recreate famous paintings and the platform crowd sources these user generated contributions. To stimulate crowdsourcing activities for the application, competitions can be set up (who has

³⁵ See <http://www.investopedia.com/terms/c/corporate-sponsorship.asp> accessed June 2nd, 2014.

the best interpretation of the artwork?) and offline events can be organised to feed the community. E.g.: Normandy Mining's involvement in the development of the Australian Aboriginal Cultures Gallery (AACG) at the South Australian Museum³⁶. In general corporate sponsorship is well established in most professional sports.

- Strength and weaknesses for *corporate sponsorships*: The lack of sponsorships sets the service as a whole at risk. This approach needs a strong commitment from both sides and should create value for both parties. The size of the sponsored amount is affecting the quality of relationship between the parties³⁷.
- Short- and long-term viability: Corporate Sponsorship needs a long-term commitment besides the sponsor to sustain the product or service.
- Strength and weaknesses of *partnerships with cultural heritage institutions*: this is a great way to add interesting new content to the application. Investments have to be made in maintaining a network of partners and possible partners. The museum sector is known for being quite slow to decide on new activities compared to the creative industries sector, so this might be an investment that is too expensive. Also, it is unlikely that museums can pay to be a member.
- Short- and long-term viability: talks with museums about partnerships can be started during the pilot period, from these talks it has to be seen what VGY has to do to service the museums best to be able to convince them to donate content or be even more active than that (e.g. organising events).
- Strengths and weaknesses of *crowdsourcing*: This model empowers the end user to contribute to the application and to add information. However, the model relies on active user participation. It has already become clear during the pilot that users love VGY and it has gone viral on the web.
- Short- and long-term viability: This business model already worked out very well on the short term. It was discussed that the life cycle of VGY will be very short, because the hype will eventually fade out. On the longer run it has to be investigated how the crowdsourcing can be stimulated further (e.g. in spin-off projects).

³⁶ See

http://arts.gov.au/sites/default/files/pdfs/The_Strategic_Direction_in_Corporate_Sponsorships_-_Implications_for_the_Arts.pdf page 18 - 19, accessed June 15th 2014.

³⁷ See

http://arts.gov.au/sites/default/files/pdfs/The_Strategic_Direction_in_Corporate_Sponsorships_-_Implications_for_the_Arts.pdf page 16 - 17, accessed June 15th 2014.

Business to Consumer

The second customer segment mentioned in the beginning is addressing the customer relationship-based model³⁸ which uses new technologies to facilitate traditional relationships. This model is clearly located on the **B2C level**. Here two possible scenarios are possible:

- A provider develops a service that is addressing the target audience directly.
- A provider develops a service for a customer who is addressing the target audience by himself.

In these models the revenue stream will be generated by the end-users demand. The end-user receives additional information, services or enjoyment in order to pay for it. Several business model taxonomies serve this purpose.

6. The **freemium model** allows users to get a free access to a service or product and offers supplementary features or services against payment³⁹. VGY offers a free webservice, but can offer a paid mobile application for extra services like filtering options for your images, image processing etc.. E.g.: City Maps and Walks⁴⁰, Elf Yourself⁴¹ available in the Android and Apple Store, which was also the inspiration for this pilot.

- Strength and weaknesses: The service offered can create an addictive potential for its users and a demand for more functions. The free access lowers the barriers of a first trial. On the other hand the service offered can satisfy the users already which set the revenue at risk. Another weakness is that it needs additional investments in the product to be able to deliver this service properly
- Short- and long-term viability: On the short term this model will not be viable as the product needs to be upgraded which is not within the scope of the project period. The long-term viability needs to be observed based on the user contribution rate.

7. Service Based Business Model (sell merchandise / fan products): can be another option for creating revenue streams. Merchandise articles with a strong relation to the

³⁸ Darren Peacock, Nhiem Lu, Paula Swatman 2007: Building a business model framework for digital heritage collections. CoolLECTer 2007, 9-11 December. Melbourne Australia.

³⁹ Jose Louis Marin de la Iglesia, Jose Emilio Labra Gayo: *Doing business by selling free services*. In: Web 2.0: The Business Model, 2008. Springer.

⁴⁰ See <https://itunes.apple.com/de/app/city-maps-walks-470+-cities/id417207307?mt=8> accessed June 17th 2014.

⁴¹ See <https://itunes.apple.com/us/app/elfyourself-by-officemax/id582486077?mt=8&ign-mpt=uo%3D4> and www.elfyourself.com/app accessed June 17th 2014.

application (e.g. posters, canvas prints, dishes, badges or user generated pictures) can be sold in cooperation with companies that provide such services. Collaboration can also be sought with museum shops that can be a possible channel for selling the products. A next step could be personalised merchandising, meaning that anyone can print his own recreated image on a mug. E.g.: Cafe Press (www.cafepress.com) and Culture Label (www.culturelabel.com) sells merchandise from different museums, retailer Hema sells Rijksmuseum merchandise in their shops, and an example of a museum that sells merchandise is the Van Gogh museum (www.vangoghmuseumshop.com).

- Strength and weaknesses: This additional service can strengthen the brand awareness and create customer loyalty. There is relatively little risk in implementing this as modest investments have to be made. The uptake potential besides the users needs extra market research efforts though. Also, the product span is considered to be short (fast moving consumer product) as the product is more or less based on creating a hype that will also be over quickly. So if you want to do this, you have to do it early in the project life cycle
- Short- and long-term viability: If the brand awareness raising is successful it can result in a long-term customer relationship.

8. Donation-Based Crowdfunding Model: is receiving resources from a community of users. Thereby the community gets no monetary return of investment. Instead the product or service can be used for free. Additionally gifts like brand merchandise can be an option to honour the support of the users. E.g. Wikipedia, Mozilla Firefox, the Obama election campaign in 2008.

- Strengths and weaknesses: The model supports products and services with a very high user engagement and number of contributors. Crowdfunding based models are often facing high risks based on a lack of commitment or a significant amount of donations.
- Short- and long-term viability: A long-term viability depends strongly on the uptake besides potential target audiences and their commitment. For the short-term a great effort is required to reach relevant audiences and engage them with the service or product in a way that increases their willingness to support VGY.

6.2 Success Indicators

In the sections above we elaborated on the strategies to *allow wider access to cultural content* (while guaranteeing the copyrights and related intellectual property rights of third parties) and on the opportunities to *create revenues to guarantee the long-term sustainability* of projects and services exploiting the content for the Tourism theme.

In order to be able to evaluate the success of the implementation of the proposed business models, we developed an evaluation framework based on several key success indicators for each of the business models that was decided to be worthwhile to develop on the short term, i.e., within the project period of the Pilot projects.

For the Tourism Pilot and theme, the following evaluation framework is relevant:

Table 1: Evaluation Framework Tourism

Business Model	Stakeholder	Success Indicator	Evaluation
Crowdsourcing and freemium service	End users (B2C)	Usability of the platform is demonstrated and users have recreated a considerable amount of paintings (500+)	Expert interviews, usability testing, user statistics
Partnerships	GLAMs (B2B)	5 GLAMs have partnered up with VGY and committed to make content available in VGY	Qualitative analysis
Events (additional services)	GLAM's (B2B)	2-3 GLAMs have expressed interest organising a VGY event	Qualitative analysis
Merchandise (additional goods)	Commercial organisations and GLAM's (B2B)	1 commercial organisation or museum has expressed interest in partnering up to sell VGY merchandise	Qualitative analysis
Customization (projects and consulting)	Commercial and public organisations (B2B)	2-3 organisations have expressed interest in customizing VGY for	Qualitative analysis

		their sector	
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7. Conclusions and Next Steps

The document provided an overview business models addressing the B2B and B2C level. Based on the actual characteristics of the product it is reasonable that a service-based business model seems the most promising approach for Tourism Pilot. Given the fact that the product is accessible for free and developed with open source software especially the ideas to commercialize a variety of service which supplement the product itself offer a lot of opportunities. It's rather the service than the product which can create revenue streams. Diverse target audiences (B2B, B2C) can be attracted (c.f. chapter 6) by offering customizations, event organizing or selling merchandise.

Within the upcoming months the Pilot development team will test the variety of potential approaches and identify the most successful one. With reference to the success indicators defined in chapter 6 a certain quantity of target audiences should be involved in the project to figure out which business model taxonomy serves best the objectives of the Pilot.

8. Resources

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Annex I Report business Model Workshop Tourism

Business Model Workshop November 27th 2013

Different from former eCreative co-creation workshops the one for the Tourism Pilot was processed twice. The first workshop was taking place in Verdun a place closely related to the history of the 1st World War while the second workshop was held in Mons which will become the European Cultural Capital in 2015. The relocation of the co-creation workshop and the related shift of external participants made several changes in the business model workshop design necessary. Accordingly in Mons the approach was slightly changed. In the beginning a short description of an internal start-up evaluation process applied by funding consultants at MFG Innovation Agency for ICT and Media and the business model canvas from Alexander Osterwalder & Yves Pigneur⁴² were introduced to the participants. To raise the participants focus on the economic part of the concepts the vision as a core element of a successful start-up was shortly described and supplemented by the idea of Basecamp founders that „the easiest, most straightforward way to create a great product or service is to make something you want to use.“⁴³

During the two days of co-creation workshops the quantity of concepts was higher than in past workshops and required an additional evaluation of concepts. Guided by the slogan “Scratch your own itch”⁴⁴ the participants have been asked to evaluate the concepts developed during the two days of co-creation and to choose the ones with the highest potential to be used by them and evolve into a sustainable product. All scenarios developed in the co-creation phase have been presented again to the attendees of the business model workshop. Finally three concepts have been chosen for the business model development.

During the exercise, in which participants have been asked to fill the business model canvas with information, sometimes not all required categories were finalized. The reason for this lack of information on the business model canvas itself is mainly occurring in the categories cost structure and key partners. Both categories are strongly bounded on the project set up in the sense of given circumstances.

Key partner are those who are part of a permanent relationship with the application / service provider in this case ONB, EF, Culture24, Plurio.net and AIT. These key partners can change in various directions once the product is released to the market.

⁴² See <http://www.businessmodelgeneration.com/canvas> accessed December 11th 2013.

⁴³ See Jason Fried & David Heinemeier Hansson, 2010: Rework. Crown Business 1. edition.

⁴⁴ See Jason Fried & David Heinemeier Hansson, 2010: Rework. Crown Business 1. edition.

The cost structure for the planned is Pilot is predefined by the project resources and comprise the cost of development including IT-infrastructure, personnel costs, building occupancy expenses and partially marketing costs. Following the business model concepts developed will be described in detail.

“Van Go Yourself”

The concept idea of “Van Go Yourself” is mainly focusing on engaging its users by having fun in recreating photos with historical arts and pictures to share it with a community or just keep it as a memory. Potentially the concept can address either the B2C (business to consumer) or / and the B2B (business to business) approach.

Value Proposition

The planned product related to this concept is addressing people who want more engagement than just looking at historical pictures. It engrosses people to have fun with an application and at the same time getting in touch with historical content. An easily usable interface and its freemium character offer a high level of attractiveness to potential users. The application provides the opportunity to create souvenirs and memories which could inspire a community. At the same time user get aware of a variety of cultural heritage content.

Customer Segments

- B2C: digitally active smartphone users
- B2B: museum staff and cultural heritage professionals

Customer Relationship

The relationship with customers can be supplemented by contributing produced photos and options to subscribe and link them with established photo communities (e.g. Tumblr). Additionally email newsletter will allow following up the activities.

Revenue Streams

According to the idea of the freemium model, which is based on a free version with basic functions and a with costs upgrade option, customers will be able to “Van Go themselves” on premium pictures in a paid version of this application. Another revenue stream can be created with the sale of merchandise articles like canvas prints, cups or badges with user generated pictures (e.g. www.cafepress.com). The application offers the chance to be set in different contexts (e.g. touristic organisations can enrich the visitors experience with gamification elements).

Channels (Distribution)

- App stores (in case the application provides a mobile app)
- Websites that host the images (e.g. Tumblr, Pinterest)

- Sharing access link on social media channels (by users)

Key Activities

- Platform development and maintenance
- Engaging with Mons 2015 and providing marketing materials for the launch
- Selecting and tagging relevant digital cultural heritage content
- Account management
- Development of a client that submits the pictures to photo communities (e.g. Tumblr, Pinterest)

Key Resources

- CMS curation tool to provide relevant content (maintained by the provider)
- Picture of paintings which are:
 - Free copyright / Open content
 - Medium resolution (x50 in the beginning)
- Branding tool (lightweight)

Cost Structure

- Costs for development:
 - CMS
 - One app and its maintenance
- Costs for a permanent producer
- Costs for launching an initial marketing campaign

Key Partners

- Content provider
- Europeana
- Mons 2015
- B2B: Plurio.net
- B2C: Culture24 (Producer)

“Europeana Pro Tour – Research, Curate And Publish Your Tours”

The “Europeana Pro Tour” concept would enable tour guides to create customer specific and tailored digital cultural heritage content which enriches the tour experience for tourist and deepens their knowledge regarding the cultural background of the sites visited. In the beginning the application will specifically focusing Mons 2015.

Value Proposition

The planned product would offer tour guides a single access point to high quality content to work with and resulting from this decrease the research effort for them. The gathered

content and information will be less expensive than traditional information materials. The platform provides options to rate and enhance material which enables interesting ways to enrich tours for customers. The tour guides can supply their customers with different presented information opportunities (digital and physical).

Customer Segments

- Basically it is for tour guides
- Museum guides
- Digital experienced people
- People who are knowing a lot about the city
- Professionals and semi-professionals from the tourist sector
- Bus and taxi driver

Customer Relationship

- B2B professionals
- Ongoing relationship between tour operator and provider
- Option to identify easily the right content and usability via drag & drop (images etc.)
- Sequential lists where users can choose items according to personal
- Possibility to print the curated content and provide to customers / tourists
- Augmenting the expertise
- Let the professionals access the content directly

Revenue Streams

- Freemium model
- Licensing for the professional version
- Public funding from Mons 2015 (philanthropic funding)
- With costs printing services
- Offer with costs training sessions

Channels (Distribution)

- Selling the CMS or licenses for it
- Europeana Iglu website

Key Activities

- Platform development and maintenance
- Project management
- Content curation and implementation of user generated content (UGC)
- Providing training sessions for users

Key Resources

- Need for a CMS which allows easy research on Europeana

- Software developers
- Tablets or mobile apps for the tourists to show the images on the spot
- Content with cleared copyright
- (Wikipedia)

Cost Structure

- Cost of development and maintenance
- Cost of marketing

Key Partner

- Mons 2015 foundation and related organisation
- Europeana Foundation
- Content provider
- Plurio.net
- Tour operators
- Local print shops

“Local Value Of Cultural Routes”

The concept developed will be a mobile application and have a strong focus on the local value of cultural routes with a priority on the area of Mons 2015. It enables users to plan tours according to advices from an application. They receive hints on events and historical places supplemented with additional context information.

Value Proposition

The application would enable customers to get personalized local guidance during the visit of a city.

It allows the visualization of European cultural routes e.g. basing on the life and stations of famous artists. Resulting from such a route the providing institution or city will reach visibility on the “EU cultural map”. The planned application shall connect digital cultural heritage with local exhibitions, events etc. Additionally it offers the chance to connect routes with different topics like e.g. 1st World War, Mons 2015, vine and painters.

Customer Segments

- Cultural interested tourists
- Local “visitors”
- (Art) students
- Primary school teachers
- “Alternative” tour guides
- Elderly people can be taken into account as a target audience but they would need assistance with the technology

Customer Relationship

The customer relationship will be established through automated, curated and personalised indications, stories and suggestions which can be chosen. An inclusion of cooperation with local businesses can provide additional services to customers (e.g. hotels, ticket services, restaurants etc.).

Supplementing several options for community feedback and ratings will help to improve the service permanently.

Revenue Streams

Potential streams are mainly focusing on the B2B (business to business) approach:

- Municipality & local business collaboration
 - Investment by administrations and local businesses
 - Use of the application for promotion purposes
 - Need for marketing to create revenue
- Online advertisement
- Guidance and training as a with costs service

Channels (Distribution)

- Displays with QR-Codes at restaurants
- (Mobile) websites for the digital routes (e.g. Van Gogh digital route)
- Broad online platforms (e.g. Mons 2015 Foundation)

Key Activities

- Platform development and maintenance
- Content curation
- Creating B2B alliances with businesses from the region
- Marketing activities

Key Resources

- Curators for contextualisation
- Content reviewers
- Local infrastructure
 - Hotels, Restaurants
 - Local GLAMs
 - ICT infrastructure

Cost Structure

- Cost of development and maintenance
- Cost of marketing
- Cost of paying curators and content reviewers,

White Paper: Business Models for Social Networks

Identifying business models for the re-use of cultural objects for social networks.

Co-funded by the European Union

The project is co-funded by the European Union, through the **ICT Policy Support Programme** as part of the **Competitiveness and Innovation Framework Programme (CIP)**.

http://ec.europa.eu/information_society/activities/ict_psp/



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1. Introduction

This White Paper attempts to document the efforts to identify, implement and evaluate business models that are developed within the Europeana Creative project¹ for the re-use of cultural objects for Social Networks. It specifies the approach *how* the business models were developed as well as the business models *themselves*.

Europeana Creative is a European project which aims to enable and promote greater re-use of cultural heritage resources, aggregated by the online portal Europeana², by Europe's creative industries. Within the project, a number of Pilot applications focused on History Education, Natural History Education, Tourism, Social Networks and Design are developed. Building on these Pilots, a series of open innovation Challenges are launched with entrepreneurs from the creative industries to identify, incubate and spin off more viable projects into the commercial sector. The project goals will be supported by an open laboratory network, an on- and offline environment for experimentation with content, tools and business services, and a licensing framework where content holders can specify the re-use conditions for their material.

We reflect on the development of the business models for the re-use of cultural objects for the theme Social Networks. This White Paper is the third in a series of four³ and must be seen as work in progress, inspiring and supporting the further development of the Pilots, the open innovation Challenges and development of the Europeana Labs Network. We aim to create collaboration in our efforts to develop new business models for the creative re-use of digital objects. We invite professionals from the creative industries as well as the cultural heritage domain to contribute to the evolving discussion and sharing of knowledge and best practices.

¹ See <http://www.europeanacreative.eu>; accessed February 19, 2014.

² See <http://europeana.eu>; accessed February 19, 2014.

³ The other White Papers focus on the themes History and Natural History Education, Social Networks and Design.

2. Business Models for Digital Public Content

Public institutions set out to ensure that cultural heritage “can remain a living asset over time and that it is as widely shared as possible”⁴. Cultural institutions are non-profit-making organisations that develop their work to safeguard the public good and not to obtain profit.⁵ Over the past decade considerable public investments have been made in the digitisation of cultural heritage objects in the not-for-profit sector. New digital collections have emerged and enable innovative ways to explore its contents, from research projects to resources valued by the community.

However – and especially in the light of the economic uncertainties in Europe and decreasing governmental budgets – digital resource projects struggle in the transition from grant funding to a longer-term plan for ongoing growth.⁶ In such a framework, sustainability is a prime concern and challenge. As a result, the development of new business models for the creative re-use of digital content from the cultural heritage sector seems to be “double-edged”⁷. On the one hand, they *must allow wider access to cultural content* (while guaranteeing the copyrights and related intellectual property rights of third parties); on the other hand, they also need to *create revenues to guarantee the long-term sustainability* of projects and services exploiting the content.

Business models – meaning the way that value is created, delivered and captured within an organisation point of view⁸ – need to be seen in a wider sense as the way public

⁴ “The New Renaissance: Report of the ‘Comité des Sages’. Reflection Group on Bringing Europe’s Cultural Heritage Online”, available online at: http://ec.europa.eu/information_society/activities/digital_libraries/doc/refgroup/final_report_cds.pdf, p. 1; accessed February 19, 2014.

⁵ See Directorate-General for Internal Policies, written by Claudio Feijoo, Sven Lindmark, Juan Pablo Villar, Carlota Tarín, Javier Gelabert, Beatriz Matía, “Public and Commercial Models of Access in the Digital Era”, April 2013, requested by the European Parliament’s Committee on Culture and Education; available online at: [http://www.europarl.europa.eu/RegData/etudes/etudes/join/2013/495858/IPOL-CULT_ET\(2013\)495858_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/etudes/join/2013/495858/IPOL-CULT_ET(2013)495858_EN.pdf), p. 119; accessed February 19, 2014.

⁶ See Nancy L. Maron and Matthew Loy, “Funding for Sustainability: How Funders’ Practices Influence the Future of Digital Resources”, JISC Strategic Content Alliance, Ithaka, New York, June 2011; available online at: <http://www.jisc.ac.uk/media/documents/publications/programme/2011/sandrfundingforsustainability.pdf>; accessed February 19, 2014.

⁷ Directorate-General for Internal Policies 2013, p. 119.

⁸ See <http://www.businessmodelgeneration.com>; accessed February 19, 2014. See also Directorate-General for Internal Policies 2013.

organisations deliver content and the models they are implementing to create revenues. As producers and distributors of content, cultural institutions develop new (non-commercial) initiatives that guarantee the sustainability of projects and services and also serve as content providers for the commercial sector.

Recent research shows that the current most common business frame underlying these new projects is a contractual frame, where cultural heritage institutions contract creative industries parties (e.g., brand or web agencies, game developers) to develop services, backed by ad hoc public funding.⁹ It was suggested that both businesses and cultural heritage institutions want to exit the “contractual” frame and explore innovative funding models together. Especially cultural institutions expressed that they want new business models of profit sharing and gaining more benefits of the cooperation.¹⁰

However, there does not seem to be one single approach to achieve this. No study seems to be able to lay out a one-size-fits-all plan that any organisation can follow to reach the point of financial sustainability.¹¹ An important aspect of a strategy to achieve sustainability seems to be a shift in management on the side of cultural heritage institutions. Clear goals, accountability, measurable targets, reviewing processes and assessing the performance are proven elements in the business sector for creating successful companies, but are considered a weak spot in the way cultural heritage institutions operate.¹²

The Social Networks Pilot is led by the Netherlands Institute for Sound and Vision (NISV). NISV maintains and provides access to 70% of the Dutch audio-visual heritage and is publicly funded by the Dutch Ministry of Education and Culture. Via the Open Images and Sounds of the Netherlands platforms, NISV gives access to reusable video and audio content and has experience with crowdsourcing content. NISV is interested in new innovative services via which end-users can access and re-use their content. The pilot fits well into the efforts of NISV to create these new services and builds upon the work that they have done earlier for audio content (sounds). For the pilot NISV works together with the British Library, the national library of the United Kingdom that holds the national collection of sound recordings and is also publicly funded. The BL makes their sound

⁹ See Aubéry Escande, Hans de Haan and Louise Edwards, “Europeana Creative White Paper No. 1. Creativity, Technology and Management: Establishing Best Practices between Cultural Heritage Institutions and the Creative Industries”, June 2013, available online at: http://pro.europeana.eu/documents/1538974/1594727/eCreative_WP3_ST3.2.1_CreativityTechnologyManagement_v1.0; accessed February 19, 2014.

¹⁰ See Escande, de Haan and Edwards 2013, p. 16.

¹¹ See Kevin Guthrie, Rebecca Griffiths and Nancy Maron, “Sustainability and Revenue Models for Online Academic Resources: An Ithaka Report”, Ithaka, New York, May 2008.

¹² See Escande, de Haan and Edwards 2013.

collection available via UK Soundmap, which is like the Sounds of the Netherlands also a crowdsourcing platform for audio content. Together with NISV the BL provides audio content for the pilot application.

The Social Networks pilot aims to create simple and flexible tools that existing community platforms can use to integrate (georeferenced) Europeana content in their services and to enrich the content with crowdsourcing efforts. After developing various ideas for such a toolbox on the social media platform Historypin (HP), the pilot partners chose to develop the pilot around three subthemes and according social communities: birdlife, aviation and cityscapes. The main reason was that there were reusable sounds available from NISV and BL within these themes. The Social Networks tool called Sound Connections will basically enable existing social networks/ content platforms (e.g. birdlife enthusiasts) to gather together audio files via a mapping interface, solicit information and enrich these with new information. It can be seen as a template for curating collections to a single community with the ability to improve the information. Technical partner Ontotext will support the pilot with geo-enrichment of the audio content. The non-for-profit organisation WeAreWhatWeDo (WAWWD), which runs the social media platform Historypin (HP), will lead the design of the pilot and ensures the integration of the content on HP via the Europeana API. HP is created in order to help bridge the divide between older and younger generations, offers a free and easy to use set of web and mobile tools and has an existing community of history enthusiasts. The pilot offers the opportunity for HP to feature geo-located content, in return HP provides a way for users to contribute data enrichment by crowdsourcing their community.

The product faces the question of how to be continued and further developed after the end of the project. How can their sustainability, especially in form of financial support, be ensured? In the next section we will (1) discuss the approach that was chosen to develop business models for social networks re-use in Europeana Creative, and we will reflect on the design of the process and formulate some guidelines that we developed for the development and incubation of the models. Furthermore, (2) we will elaborate on the specific business models that were identified for social networks re-use and dive deeper into the strengths and weaknesses of the models and application for the Pilots in Europeana Creative.

3. Business Model Development Approach

The starting point for the development of the business models in Europeana Creative was to get a shared understanding of what a business model is and how it could be used in the context of the project. Therefore, a concept that everyone could easily understand and apply was needed. Within the Europeana Creative context, several stakeholders are not particularly familiar with business modeling. A simple but robust concept and methodology was needed. Since the business model canvas developed by Alexander Osterwalder and Yves Pigneur had proven to be a successful methodology,¹³ allowing an individual or group of individuals to discuss and develop business models by using a simple but effective canvas as a working tool, the decision was made to use this methodology.

Osterwalder and Pigneur explain “how value is created, delivered and captured within an organisation point of view”. Value takes several forms such as cultural, economic, social, environmental, thus not being limited to a common perspective that refers to business per se for profit. A business model can also be developed not only around organisations but also around specific projects, products or services. Putting it in another way: It’s about which pieces are necessary and how to put them together so that your organisation, product, service or project is built in a sustainable way.

The business model canvas can be used in teams as a shared language, for better strategic conversations and as a tool to structure thinking. Inspiration for the design of the business development was also taken from the BMICE Step-by-Step Plan, a seven-step plan that was designed and implemented by heritage institutions to embed new or existing digital service concepts in their business model, and was shared to be repeated on a long-term or occasional basis by heritage institutions.¹⁴

The conversation about business models was started at a business model workshop that was organised on 13 November 2013 (see Annex I for a full report) with representatives from cultural institutions, tourism organisations and representatives from the business sector. Prior to the business model workshops, a co-creation workshop was held for the theme. This workshop made use of co-creation tools to facilitate the concept development of the Pilots through the co-creation of possible software applications. At the end of the co-

¹³ See <http://www.businessmodelgeneration.com>; accessed February 19, 2014. See Alexander Osterwalder and Yves Pigneur, *Business Model Generation*, Wiley, Hoboken, NJ, 2010. See also Stichting Nederland Kennisland, Stichting DEN, TNO, Stichting E30, “BMICE Step-by-Step Plan”, 2011, available online at: http://www.den.nl/art/uploads/files/BMICE-Step-by-step_EN.pdf; accessed February 19, 2014.

¹⁴ See “BMICE Step-by-Step Plan” 2011.

creation workshop, the application ideas with the best potential were chosen to be further explored in the business model workshop to assess their business potential. The co-creation workshop thus provided the basis for the business model workshop. Based on the results of the co-creation workshop, the goal of the business model workshop was to trigger a discussion on how a business model can be developed for each of the results. After the workshop the discussion was continued via online conference calls.

The following steps were taken to develop the business models. Together the steps sketch out the services that facilitated the business model development.

Identifying Business Models

Following Osterwalder and Pigneur, “[b]usiness models are designed and executed in specific environments. Developing a good understanding of [the] environment helps you conceive stronger, more competitive business models.”¹⁵ This was the reason why an analysis of the existing environment was seen as an important first step for the business model workshop. Only by understanding the complex economic landscape, the technological innovations and the market needs, one can effectively work on business models. To better analyse the existing business models environment, the four main areas suggested by Osterwalder and Pigneur – market forces, industry forces, key trends and macroeconomic forces – were discussed, visualised and mapped out.

Osterwalder and Pigneur consider that a business model can best be explained and used through nine basic building blocks that cover the four main areas of business: customers, offer, infrastructure and financial viability. With their Business Model Canvas we sketched out and visualised new business ideas for the three selected ideas.

¹⁵ Osterwalder and Pigneur 2010, p. 220.

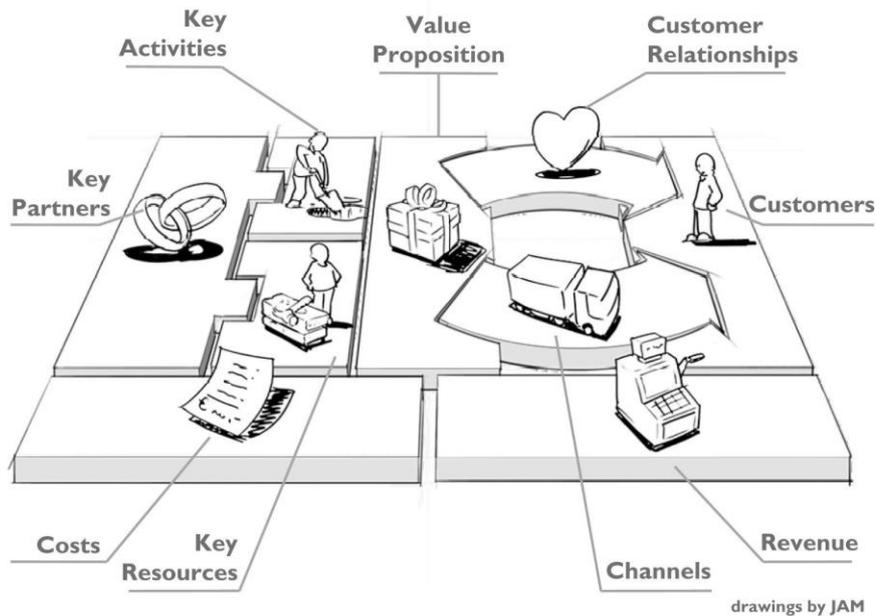


Fig. 1: Business Model Canvas by Osterwalder and Pigneur

The nine building blocks:

1. Customer Segments: The different groups of people or organisations a business aims to reach and serve. The target audience for the products and services of a business.
2. Value Proposition: A business seeks to solve customer problems and satisfy customer needs with value propositions. The products and services a business offers.
3. Channels: Value propositions are delivered to customers through communication, distribution and sales channels. The means by which a company delivers products and services to customers.
4. Customer Relationships: Customer relationships are established and maintained with each customer segment. The link a company establishes between itself and its different customer segments.
5. Revenue Streams: Revenue streams result from value propositions successfully offered to customers. The way a company makes money through a variety of revenue flows.
6. Key Resources: Key Resources are the assets required to offer and deliver the value proposition to the customer segments.
7. Key Activities: The activities a business needs to perform in order to bring value propositions to its customer segments.
8. Key Partners: Some activities are outsourced and some resources are acquired outside the enterprise.
9. Cost Structure: The business model elements result in the cost structure. The monetary consequences of the means employed in the business model.

At the end of the business model workshops, the developed business models for the application ideas were presented, discussed and published in a report. After the workshop, the best Pilot application was selected to be developed. Not only business aspects, but also technical feasibility played a role in making this decision.

Implementing Business Models

The next step was to further develop the product concept, specifically the underlying value proposition(s) of the chosen application idea. Value proposition is a term commonly used in business economics that refers to the argument over which an organisation or company tries to communicate and convince the client of the value of the product or service as far as his or her needs and desires are concerned. Why would people be interested in the product or service? What needs does it meet or what problems does it resolve for the customer? How can revenue be generated to be able to cover the costs of running such a service after the Pilot development period?

As a consequence, further advice on the access of content (and related IPR issues) and guidelines for the re-use of this content was given, and options for generating revenue to be able to deliver the value propositions were researched. The strengths and weaknesses of each revenue option were identified. Based on the developed value propositions, a final decision on whether or not to continue to work with a specific business model for the product or service concept was made.

Evaluating Business Models

The development is also supported by a continuous evaluation of the implementation of the business models throughout the duration of the project. The business model itself is an incremental part of the product concept. This concept and the working prototype will be discussed and evaluated in online focus groups consisting of relevant representatives from creative industries and memory institutions.¹⁶ A discussion about success indicators was started that can be assessed on a regular basis. Another important aspect for a successful business model is the acceptance by end users. Usability tests carried out by Europeana Creative will help to get feedback from potential end users.

¹⁶ See http://pro.europeana.eu/documents/1538974/1601973/eCreative_D6.1_MFG_revised_v1.0; accessed July 31, 2014.

4. Capturing Value: Sound Connections

As mentioned before the Social Networks pilot aims to create simple and flexible tools that existing community platforms can use to integrate (georeferenced) Europeana content in their services and to enrich the content with crowdsourcing efforts. Sound Connections enables the Historypin platform to gather together audio files via a mapping interface, solicit information and enrich these with new information. It can be seen as a template for curating collections to a single community with the ability to improve the information. This fits well with the ambition of pilot leader NISV to develop new innovative services via which end-users can access and re-use their content, especially sound recordings. For partner HP the pilot offers the opportunity to add geo-located content that their community of users can use and enrich with their information. As the future sustainability of the pilot application will be closely aligned with the (business model) of HP and how the tool or service fits into their general offer, we have developed these business models with HP / WeAreWhatWeDo as the main partner in the organisation behind the application. During the Co-creation and Business Model workshop various ideas for implementing such a toolbox on the social media platform Historypin (HP) were developed. The pilot partners chose to develop the pilot around three subthemes and according social communities: birdlife, aviation and cityscapes.

The following business model canvas, mainly focusing on a business to business approach, was developed and fine-tuned for Sound Connections:

1. Customer Segments

B2B: Memory institutions (e.g. Museums with a focus on Natural History (Ornithology), aviation, architecture) and/or commercial or social organisations

B2C: The main end-user can be defined as someone who is passionate about birds, aviation or cityscapes. He is representing a community which dedicates a lot of free time on this topic, looking for more information and possibilities to directly engage, prove his knowledge and exchange with others.

A closer exemplary look at the bird enthusiasts and their characteristics:

The bird enthusiasts / watcher: Bird watching is a fast growing nature-based tourism niche market.¹⁷ In the UK bird watching is the number one hobby, closely followed by the Netherlands:

¹⁷ CBI Product Fact Sheet Birdwatching tourism by EU residents, 2013:
http://www.cbi.eu/system/files/marketintel_documents/2013_pfs_birdwatching_tourism_from_the_eu_-_tourism.pdf

UK: is by far the largest source market in the EU+EFTA market for bird watching tourism and the second largest worldwide after the USA. The UK has the largest bird membership organisation in Europe, the Royal Society for the Protection of Birds (RSPB) with more than 1 million members

The Netherlands: is one of the most rapidly growing markets for bird watching tourism. Vogelbescherming Nederland (Dutch Association for the Protection of Birds) has 140 thousand members and is the 4th largest in the world. Around 40 thousand Dutch residents are estimated to be active birdwatchers on different levels.

General characteristics of birdwatchers are¹⁸:

- They mostly middle-aged and elderly people (40-70 years of age).
- They are generally relatively affluent and well educated.
- They are slightly more male.
- They are generally also interested in other wildlife.
- They are likely to be members of local bird or nature organisations
- They generally use bird/nature books or magazines, bird/nature organisations, national parks or recommendations from other birdwatchers when deciding where to go bird watching.

Forums: <http://www.surfbirds.com/>, <http://www.fatbirder.com/>; Bigg Bird Forum (UK): <http://forum.biggonline.co.uk/>, Birdforum (global): <http://www.birdforum.net/>, Birdtours (UK): <http://www.birdtours.co.uk/>, Birding UK (UK): <http://www.birding.uk.com/>, Birdpix (the Netherlands): <http://www.birdpix.nl/>, Chatter birds (UK), Surfbirds (UK and USA): <http://www.surfbirds.com/> .

Trends according to the CBI Fact Sheet¹⁹:

Social market drivers: bird watching as a hobby is becoming more popular; bird photography is a growing trend

Technology market drivers: Increased use of social media; rise in bird watching applications

Other types of customers:

- Another type of end-user is someone who is interested in one of the topics, but not passionate about it.

¹⁸ CBI Product Fact Sheet Birdwatching tourism by EU residents, 2013

¹⁹ CBI Product Fact Sheet Birdwatching tourism by EU residents, 2013

- A **researcher** with a special focus, e.g. on ornithology, aviation, architecture or urban development.
- **Schools e.g. for natural history classes**
- **Cities** - tourism
- **National Parks /Nature Reserves**
- **Aviation companies**
- **Wikipedia contributors**

2. Value Proposition

- The product offers a new way of approaching and analyzing sounds
- Generation, availability, and accessibility of high quality content and data on the platform for end-users
- Presented content will be made available for enrichment through end user - the user can share his knowledge on this topic by adding/completing information on the specific sound, or even by adding new sounds
- The content and the contribution of the user leads to generation of useful data on this topic and to a validation for niche knowledge
- The product offers a unique interactive exploration interface that allows geographical navigation
- Possibility of community building and communication over the information and content through a chat/comment/blog feature.

Main Value Proposition => **The product compiles already existing and new content in a uniquely and easily navigable platform, encouraging at the same time community engagement, outreach and interaction.**

3. Channels

- Social media - e.g. Facebook, Blogs, Forums
- Europeana

4. Customer Relationships

- Bird/aviation/cityscapes enthusiasts: co-designing of the platform + contribution to the content selection and enrichment + close ongoing cooperation between the product/content owner and community
- Build communities and offer mutual help
- Online support for user

5. Revenue Streams

- Paid curation
- Brand marketing
- Donation/philanthropic funding

- Corporate sponsoring
- Event driven revenue
- Public funding
- Membership/subscription model
- Crowdfunding

6. Key Resources

- Content (sound & images)
- Expertise (programming & design)

7. Key Activities

- Content research, implementation
- Content enrichment
- Community management outreach

8. Key Partners

Project partners:

- NISV and BL as content provider;
- We Are What We Do responsible for the design of the prototype
- Ontotext as technical partner

Other key partners:

- Content providers like Europeana, Wikipedia, Flickr, and any institution with a relevant collection of audio content.
- Developers & Designers

9. Cost Structure

Short term:

- Development & Design
- Research

Long term:

- Maintenance Platform
- Community Management

At the core of the canvas is the question of the value proposition. What kind of customer problems can be solved and how can the customer needs be satisfied with value propositions? The following value propositions for re-use in social networks were specified for each of the stakeholders that were identified as important in delivering the central value proposition:

Value proposition with a special focus on the main identified stakeholders:

- **For memory institutions, like museums:** According to the 2013 Museum Edition NMC Horizon Report²⁰ the dichotomy between the physical and the virtual museum visitor is disappearing. The challenge is now on how to offer comprehensive information and services to satisfy the expectations of both audiences. At the same time there is the acknowledgment of a paradigm shift within this sector to more openness, collaboration and exchange with the user. This tool can therefore be used to achieve more interaction with the visitor/user, and also to awaken his interest and engagement.

- **Commercial and social organisations, e.g.:**
 - **Cities:** Cities are interested in promoting their assets. Therefore this tool might be very useful for touristic objectives, but also for animating citizens to find out more about their own city.
 - **Aviation companies:** They can use it to as a supplement to better promote their own products and services. (e.g. KLM)
 - **National Parks /Nature Reserves:** The main interest would be for bird sounds. They can use this product for awareness raising and for getting more support for their work.
 - **Schools:** This product can be used in classes as a supplement to classical teaching methods. Studies²¹ show that ICT is providing educators, teachers with a lot of opportunities to use innovative tools and resources during classes and for teaching purposes. The most frequently used tools are digital tools, textbooks and multimedia tools, like audio-visual materials. However this potential is still not sufficiently exploited.

- **Specialist communities (e.g. bird/aviation/cityscapes enthusiasts):** The product offers the possibility of participating on the platform to define and improve content related to sounds (maps, tags, pictures, other/own sounds etc.). This means that the content can be enriched through the end user. He can share his knowledge on this topic by adding/completing information on the specific sound, or even by adding new sounds or pictures. This gives the opportunity of proving specific knowledge and of exchanging with other like-minded.

²⁰ <http://www.nmc.org/pdf/2013-horizon-report-museum-EN.pdf>

²¹ European Schoolnet Observatory: Innovative Tools in the Classroom: Implications for Learning Styles and Gender, Briefing Paper No. 6, March 2014, http://www.eun.org/c/document_library/get_file?uuid=c47531fc-5d3f-41ab-86c9-f19cf8858a55&groupId=43887

Value proposition with a focus on other identified stakeholders:

- **The “normal” user:** For this type of user the platform would have a simple viewing function, in order to get some more information on this specific topic. There is less to no engagement, only pure curiosity.
- **The researcher:** The platform offers a lot of possibilities to get access to useful and trusted content to integrate in the scientific work.
- **Wikipedia contributors:** Might be interested to also contribute with information and with other content to the already existing one on the platform.

5. A Content Re-use Framework for Social Networks

Over the past decade a tremendous effort was made to make digital content in Europe more accessible, usable and exploitable. At the moment of writing, around 20% of heritage materials has been digitised; 31% of that material is available on cultural institution websites and an estimated 6,2% is accessible online. This means that this material is made accessible through the website but without explicit rights of use or re-use.²² One of the goals of Europeana Creative is that the works are offered online in a complete form (with metadata) and the rights policy is explicit so other parties know what they can or cannot do with it. A lack of (good quality) metadata and especially rights labeling information of digital objects is a big obstacle for third partners to search for and re-use the materials that they are looking for.

To allow parties from the creative industries and wider stakeholders to develop products and services with digital resources from cultural heritage institutions aggregated by Europeana, work has been undertaken in the Europeana Awareness²³ project to build a Europeana Licensing Framework that gives a unified set of terms of use that enables access to metadata and thumbnail images on Europeana.

In January 2013, Europeana launched a Rights Labelling Campaign²⁴ to reduce the amount of metadata records without rights statements on Europeana; at the end of 2012, 36% of all metadata records were still missing rights information. Because of the demand for access to high-quality re-usable content via Europeana,²⁵ this framework is currently being extended with a Content Layer within the Europeana Creative project. This *Content Re-use Framework* will allow content providers to voluntarily make available content for specific re-use scenarios²⁶ in a (digital and physical) environment called the Europeana Labs. The following process steps from access to the re-use of content are defined within the Tourism theme:

²² See Directorate-General for Internal Policies 2013, p. 117.

²³ See <http://pro.europeana.eu/web/europeana-awareness>; accessed February 20, 2014.

²⁴ See <http://pro.europeana.eu/pro-blog/-/blogs/1494947>; accessed February 20, 2014.

²⁵ See Maarten Zeinstra, Paul Keller and Antoine Isaac, “D3.1 – Specifications for Implementing the Content Layer of the Extended Europeana Licensing Framework”, August 2013, available online at: http://pro.europeana.eu/documents/1538974/1601973/eCreative_D3.1_KL_v1.0; accessed February 20, 2014.

²⁶ For an overview of all issues related to the extension of the existing Europeana Licensing Framework we refer to the Discussion Document ‘Extending the Europeana Licensing Framework’ (Keller, 2013).

1. Filtering Content

Via the Content Re-use Framework digital objects are filtered based on three technical and IP-related specifications:

- The metadata for the Cultural Heritage Object contains at least one direct link to a Digital Object itself (as opposed to a page where the object is available).
- The Digital Object meets minimum technical quality requirements.²⁷
- The Digital Object is provided with a rights statement that allows re-use of the object. (as opposed to rights statements that only allow access).²⁸

Additional requirements for specific content items were formulated to fit the purposes of this pilot:

- File type: sounds
- Geodata (geolocations of the sounds)
- Connected to the themes of birdlife, aviation and/or cityscapes

Because the content supplied by pilot partners NISV and BL via Europeana were already sufficient for the pilot, there was not made a further content inventory of additional sources to be acquired.

2. Re-using the Content

The curator of a cultural heritage organisation can make use of the Europeana-API that is integrated in HP to select content that he or she wants to publish on the platform. The enduser can access the content via a map interface on HP. He can see sounds that belong to a specific location and play them directly via an audio player. It is then possible to enrich the sounds via Calls to action and add information via a comment box. Also, the service will suggest a few sources that people like to use (e.g. Wikipedia articles).

3. Publishing new content

Because the Europeana Creative project wants to stimulate creative re-use of cultural heritage objects for tourism, it was identified that the open licensing of new (user generated) content should be promoted in Europeana Creative. The Social Network pilot chose to follow the Europeana Terms of Use (<http://europeana.eu/portal/rights/terms-for-user-contributions.html>) for user generated content, meaning that:

²⁷ See Zeinstra, Keller and Isaac 2013 for the exact technical requirements list.

²⁸ Content that is identified by cultural heritage institutions as in the public domain or is licenced under an open licence that allows re-use.

- Metadata contributed to the platform will be published under the conditions of Creative Commons CC0 1.0 Universal Public Domain Dedication;
- All content (texts, images) contributed will be licensed under a Creative Commons BY-SA license.

To support this open licensing strategy of resources and encourage the open sharing of sources by the community, a simple and easy-to-understand standard agreement is to be used (<http://europeana.eu/portal/rights/terms-for-user-contributions.html>) and signed by end users once they have registered to make use of the service or tool.

6. Business Models for Re-use

This chapter outlines the requirements for the business models developed for applications that re-use cultural resources in Europeana:

- **Open access:** The vision of the European Commission's Comité des Sages that "public domain material digitised with public money should be freely available for non-commercial re-use by citizens, schools, universities, non-governmental and other organisations"²⁹ is considered as the most widely held view among heritage institutions in Europe, and most access models rely on open access.
- **Open source:** In the case of all the Pilots the product owners receive public funding in Europeana Creative to develop their applications, which will be licensed under an open source license which permits the (commercial) re-use of the developed software by other parties;
- **Revenue from (in)direct beneficiaries:** In our search for strategies to generate revenue for the product it was key that the revenues can't be generated by the direct beneficiaries of the service (e.g. bird enthusiasts). We therefore decided to focus more on indirect beneficiaries that value the service but do not directly use them;
- **Additional services and goods:** Another strategy to generate revenue while keeping access to the application for free for direct and indirect beneficiaries is to focus on transaction-dependent revenues generated by charging fees for specific additional services (e.g., charging fees for tutorship) or additional unspecified

²⁹ Directorate-General for Internal Policies 2013, p. 121.

services (e.g., membership fees, donations)³⁰ or goods (e.g., fan merchandising) from direct beneficiaries.

The business models for this pilot application are very much tied to the overall business model of the Historypin-platform run by WeAreWhatWeDo.

6.1 Business Model taxonomy

Following this line of reasoning, we propose the following business model taxonomy (including revenue models) for the re-use of public content for Social Networks.³¹

Business to Consumers models:

1. **Crowdsourcing:** Crowdsourcing does not create revenue but rather value and a sense of community. For this application crowdsourcing is an important element: communities enrich content of cultural heritage institutions with more data that is of interest to institutions. Examples are offered by previous projects of the partners, NISV participated in Sounds of the Netherlands (<http://www.geluidvannederland.nl>) and the BL in UK Soundmap (<http://sounds.bl.uk/>). These projects used other technical tools and community platforms. To stimulate crowdsourcing activities for the application the pilot will launch a Call, furthermore it competitions could be set up and offline events can be organised to feed the community.

- Strengths and weaknesses: This model empowers the end user to contribute to the application and to add information. However, the model relies on active user participation. This will be tested in the pilot with the communities of birds, aviation and cityscapes.
- Short- and long-term viability: on the short term of the project it was considered to be important to interact with the communities to figure out if they are enthusiastic to

³⁰ See Gabriela Hoppe and Michael H. Breitner, “Business Models for E-Learning”, Discussion Paper No. 287, Universität Hannover, Hannover, October 2003, available online at: http://diskussionspapiere.wiwi.uni-hannover.de/pdf_bib/dp-287.pdf, p. 9; accessed February 20, 2014.

³¹ See Guthrie, Griffiths and Maron 2008; European Commission 2011; Hoppe and Breitner 2003. See also Peter B. Kaufman, “Marketing Culture in the Digital Age: A Report on New Business Collaborations between Libraries, Museums, Archives, and Commercial Companies”, Intelligent Television, Library of Congress, Washington, 2005; Peter B. Kaufman, “Assessing the Audiovisual Archive Market: Models and Approaches for Audiovisual Content Exploitation”, Intelligent Television, PrestoCentre Foundation White Paper, 2013, available online at: https://www.prestocentre.org/system/files/library/resource/assessing_the_audiovisual_archive_market_-_peter_b_kaufman_white_paper_3.pdf; accessed February 20, 2014.

make contributions and if so, who the tool can support them in the best way possible

Business to Business models:

2. Customisation (projects and consulting): Content curation is a process that collects, finds, organizes and publishes content or information relevant to a particular topic or area of interest. Recent online services emphasize interactions with users who can create their own collections and share them in Web 2.0 applications, like for example Pinterest (<http://pinterest.com/>) or Storify (<https://storify.com/>). Another model is paid curation. “Help others curate” is the business model of Scoop.it. With this business model, the service provider gets paid to offer up preliminary curation so that other people can further curate. This is also a thinkable business model for the Social Networks product, with some slight adjustments. As memory institutions are mainly responsible for the content curation, the service provider, WeAreWhatWeDo would concentrate more on the customization of the tool and consultation than on the content curation itself. This means that the tool will be tailored for the institution and institutions will be advised on using this tool, on curating content online, and last but not least on approaching and engaging communities and on sustaining their engagement. The expectation is that mostly smaller institutions with limited budget for online activities are the main target customers.

- Strengths and weaknesses: This model can be used for B2B models. It can generate revenue. However, it very much relies on the fact that museum see an added value in this service.
- Short- and long-term viability: On the short term, during the lifetime of the project, the focus should lie more on awareness raising and on community building. The museums have to consider this service valuable and useful.

3. The donations/ philanthropic funding model is a commonly used model for generating revenue, and can be sourced from very different actors: e.g. individuals, businesses, organisations or foundations. Funding has become an important and unavoidable part of the day-to-day work of many cultural organisations. It can either have different forms, like for example donation or contribution from individuals or in some cases the form of a mécénat.

One thinkable way of generating revenue would be the **(donation based) crowdfunding**: In this case funders donate to a project without any expected monetary compensation. In exchange to their donation they can get free or special access to the project/content/tool. This model offers a direct feedback from the end-user, if the idea or product is relevant to the targeted community. At the same time it brings along the risk of failure, if there is not enough commitment or money raised.

However this model is not one of the strongest when it comes to the Social networks pilot, as the focus lies at the moment on memory institutions and not directly on the community. Therefore this model is something that might become more interesting in the long term, after collaboration with memory institutions is already established.

Another source for generating revenue can be found in foundations. These actors mostly support projects which match their objectives. This can also be a goal for the long term, after the product is further developed and the contact to the memory institutions is clearly established.

Historypin is already making use of a philanthropic model. They created a foundation - the Friends of Historypin (<http://www.historypin.com/Friends-of-Historypin/>) which has a charity mission.

- Strengths and weaknesses: Community & trust building with memory institutions - only afterwards make very clear why it appeals to him to become a funder; direct feedback from the end-user
- Short- and long-term viability: Rather a long term approach and only to be considered for organisations, not for end users

4. Events (additional services): the efforts made by communities to enrich heritage collections can be supported by offline events, paid by institutions. HP/Europeana/cultural heritage organisations can make both an online and an offline call for contributions. In the case of the bird community HP can organise a birding tour event in which a tour is arranged in areas where the birds can be spotted. Currently, Historypin offers tours (<http://www.historypin.com/tours/all>), online activity sheets and resources (<http://www.historypin.com/community/localprojects/>) for their communities. These can be expanded with offline events along the same lines as for example the Europeana 1914-1918 Family History Roadshows (<http://pro.europeana.eu/web/europeana-1914-1918>) in which Europeana made a tour through Europe to collect user generated content about WWI.

- Strengths and weaknesses: events can be a great way to bind the community of end-users and create loyalty. However, the expertise and experience with producing such events has to be present in the organisation and resources should be available
- Short- and long-term viability: as this is not the current focus and expertise of HP nor the pilot lead NISV, this model will not be explored on the short term

5. Public funded projects: New spin-off projects can follow from the experience gained in this pilot or the developed technology for which the partners can look for additional (public)

funding opportunities on a national or European level. One example is a recently started follow up project called Europeana Sounds, in which the content partners will make another effort to increase the access to sounds via Europeana and enrich them with crowdsourcing activities. One can also think of integrating the technology and creating additional functionalities for the tool or spin-off programs that stimulate the use of the tool in other sectors, e.g. the educational sector.

- Strengths and weaknesses: this model is very familiar to the organisations that are in the lead for this pilot, so this will be a convenient way to build further on the project
- Short- and long-term viability: during the project new (public) funding opportunities can already be researched and submissions can already start. This is definitely a model that is prioritised by on the short-term

6. Membership model is a business model where a customer has to pay a subscription price to have access to a specific product/service. Rather than selling products individually, this model allows a time-limited access or use. A common model on web sites is the freemium model, providing content for free, but restricting access to premium features to paying subscribers. One of the main goals is to create a so-called brand loyalty. As the focus lies on memory institutions and it was considered that it is not feasible that end users support the platform financially, a subscription model with payment cannot be used in this case. This model can be seen as a way of engaging institutions, like the example of Flickr Commons perfectly shows, to make their content available on a content platform and pool in their resources to make this possible.

- Strengths and weaknesses: This model is a good way of creating brand loyalty. The challenge is to convince the memory institutions to engage.
- Short- and long-term viability: On a short term basis the goal will be to pursue memory institutions to participate. On long term the challenge is to keep the number of the so-called members constant and to even enlarge this community. Because at the end of the project, content from Europeana can be added automatically, this cannot be the main business model of this application

7. Sponsorships

Sponsorship is another model mostly used by business, which is the payment of money with the explicit objective of promoting its name, its products or its services. Sponsorship is part of a business' general promotional spending and falls under corporate social responsibility. It is a good model for generating revenue, which has to be taken into account for this application. As the tool will be targeted at specific communities (bird, city and aviation enthusiasts), the specific Historypin page can be an interesting space for

companies or organisations that want to strengthen their brand awareness. A company's brand represents their market identity (who are they? What are they doing? etc.) and consequently brand marketing is important to nearly every business. For example the city marketing department of Amsterdam (I Amsterdam <http://www.iamsterdam.com>) could be interested in partnering up with the platform to do some branded marketing for the cityscapes themed page, the Birds Protection organisation (Vogelbescherming <http://www.vogelbescherming.nl/>) for the birding page and the Dutch royal aviation company KLM in the aviation page as part of their active social media marketing strategy towards (potential) customers. This can take different forms like: advertisement banners, branded content, brand licensing or a sponsor fee.

- Strengths and weaknesses: organisations and especially companies will ask for conversion rates to justify their investment, i.e. how many customers will they eventually get via the platform. The question is if the communities on this platform will be big enough to meet their expectations
- Short- and long-term viability: for this model to work, you need a big enough community which is not yet there at this moment, so this would be more something for the longer term to try

6.2 Success Indicators

In the sections above we elaborated on the strategies to *allow wider access to cultural content* (while guaranteeing the copyrights and related intellectual property rights of third parties) and on the opportunities to *create revenues to guarantee the long-term sustainability* of projects and services exploiting the content for the Social Networks theme.

Table 1: Success Indicators

Business Model	
Customization (projects and consulting)	yes
Donations / philanthropic funding	yes
Events (additional services)	yes
Public funded projects	yes
Memberships	no
Sponsorships	yes

Crowdsourcing	yes
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In order to be able to evaluate the success of the implementation of the proposed business models, we developed an evaluation framework based on several key success indicators for each of the business models that was decided to be worthwhile to develop on the short term, i.e., within the project period of the Pilot projects.

For the Social Networks Pilot and theme, the following evaluation framework is relevant:

Table 2: Evaluation Framework Social Networks

Business Model	Stakeholder	Success Indicator	Evaluation
Crowdsourcing	End users (B2C)	The usability of the infrastructure is demonstrated and via the faced approach and public call at least 5 user contributions are made	Focus groups, usability testing, website statistics
Customization (projects and consulting)	GLAM's (B2B)	2-3 GLAMs have expr	Analysis
Public funded projects	Museums, public funders (B2B)	The developed technology is launched in at least one other public supported project, and considered in the R&D phase of 3 others	Analysis

7. Next Steps

This White Paper comprised the efforts to identify, implement and evaluate business models that are developed within the Europeana Creative project for the re-use of cultural objects for Social Networks; specifying the approach *how* the business models were developed as well as the business models *itself*.

It furthermore had a close look at the conditions for content re-use and also on the business model taxonomy and the success indicators.

Together with the project partners involved in the pilot development we managed to sketch out some next steps and long term actions for the further development and implementation of the identified business models in the Europeana Creative project and for the product.

- Further develop and test a product that can be adapted by many communities: One general tool containing different topics - allowing institutions to interact with communities and vice versa via the platform + creating a user value by allowing users to become active
- Develop further partnerships: The collaboration of memory institutions and service providers should be extended allowing further partnerships. One thinkable and interesting third party can be found in commercial partners. This partnership triangle would not only enhance the public-private partnership but also push up the importance of corporate sponsorship as a revenue model.
- Create a public-private model: The development of a public-private partnership as explained above could also lead to the creation of a public-private business model. This hybrid model would combine the financial and the social aspect: corporate sponsorship and the consulting model for memory institutions. All this depends again on reaching and engaging the community.
- In the first phase of the pilot the main target is to build a growing network of memory institutions that are interested in this product and the consultancy of the service provider. The next step would be to engage the community around these institutions as well as those interested in the different topics of the product. Without the support of the community the sustainability of this product cannot be assured.

8. Resources

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Annex I Report Business Model Workshop Social Networks

eCreative

Social Networks Pilot // Co-creation & business model workshop report

11th - 13th December 2013 // Palma de Mallorca

Participants (40 in total) from different organizations:

eCreative Partners: Europeana / NTUA / NISV / We Are What We Do / The British Library / ONB / MFG / ONTOText

Other organizations: Es Baluard Museum / CAIB / Mallorca Government - Dirección General de Innovación / History Dept. University of Balears / BIT Foundation / Sonoscop.net / Amical Viquipèdia / Medialab Prado / Audiovisual Cluster Mallorca / Business Angels Network of Illes Balears / AA:TOMIC / Xicra Edicions / Crocodox

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The main objective of the workshop was to inspire, guide and help the development of the eCreative pilot in the area of Social Networks, with a focus in sound assets concerning content. We did it via discussions and co-design activities around user generated content possibilities and crowdsourcing, in connection with examples and collections of content and ways to digitally interact with it.

Pictures and videos from the workshop (including scenarios/wireframes/presentations):

<https://www.dropbox.com/sh/ibjoe3vr790ss05/BJ8JxRa6e6>

Sound assets & apps for inspiring the development of the pilot

Objectives:

- Ice-breaker previous to other activities
- Inspiration for developments

- Initial agreement on indicators for evaluation

Participants: 20 people

This activity started by collecting different sound assets from participants during the week before the workshop (detailed list [here](#)), according to different themes: street culture; cultural heritage soundscapes; talks and speeches; nature and industrial era. A selection of these sound assets was printed in cards with QR codes and related images, where once in the workshop, as initial activity, participants distributed in four groups could listen to and comment in order to select some of them for further discussion. For this, a framework of different motivations helped to guide the conversation according to the sound assets selected by participants.

From more intrinsic motivations (enjoying, experiencing, learning) to more extrinsic ones (attract, share), around samples like an Albert Einstein's talk, a church bell sound, a natural soundscape with frogs, an old instrument playing and a swarm of bees, comments and observations had to do with different issues around motivations:

- Need to access sound files with more contextual information and other formats (image, map, audio, etc.).
- The impact which voices from famous people could have in the user, since usually are more unknown than their images.
- The potential interest of saving and sharing sounds from heritage objects (like instruments, old machines, endangered species, etc.).
- The more experimental approach when comparing similar sounds from very different sources (for example natural and industrial sound which may follow similar patterns)

More specifically, feedback around the different assets and the motivations described were:

1. Frog sounds

- Potential for learning: e.g. teaching people how frogs sound like.
- Also more experiential in terms of exploration of nature.

2. Einstein's talk

- Main attraction: first time audience heard the voice of Einstein. Novelty to hear him (hardly to connect the voice to Einstein without an image)
- In the context of the Open Culture portal the asset is richly contextualized (further information, links, text etc.)
- The main motivation for this type of sound is primarily to share but with a focus on attraction and enjoying.
- It also represents an option to teach because the content of what he says is really important.

3. Bell sounds

- The main motivation would be to experience this type of sound in connection to local memories.
- Also to use the sound to transport atmosphere and attract places to people
- As an experience depends on the audience (for example technical interpretations from musician versus a lay audience)
- Is it can be a celebrating sound or the opposite, exploring what is transported (wedding versus funeral).

4. Bee swarm

- Selected because, technically, the quality of the sound recording is very good.
- It represents really compact metadata (description of an recording experiment)
- It can also be re-usable sound for sampling, from an highly technical approach (good quality based on the used equipment).
- Sometimes like here there are sound matches between industrial and nature sound (and vice versa).

5. Virginal (historic instrument)

- For cultural and common heritage represents a very exciting recording.
- Shows an instrument and sound that very few people know, which otherwise will be lost in the future.
- The played music is a style (kind of composition) that isn't used any more, where it can be frustrating not to know what original pieces were played with the instrument.

Afterwards, although there was not much time for that part, the next activity was for discussing applications and webpages dealing with audio content, in order to comment possible points of interest and indicators we could use for the rest of the workshop. From an initial discussion there were different websites and applications identified, one selected in each group for sharing with the rest of participants and then each discussed according to 6 key indicators: Usability // Innovation // Engagement // Technical feasibility // “Europeanability” (related to initial ideas about potential for similar things to connect to Europeana content) // Potential for crowdsourcing.

The 3 commented applications were:

- Sound Transit: <http://turbulence.org/soundtransit/> For generating personalized soundscapes when traveling, following the type of interface of flight booking portals. Important features/considerations:
 - Chance to make a “sound” travel through Europe booking a sound trip
 - Europeanability is relying on the available content / data
 - Possibility to mash up sounds
 - Narrative content is base of such a project
 - Crowdsourcing is elementary for its success

- Belfast Sound Map: <http://www.belfastsoundmap.org/> Mapping platform for a geolocated collection of sound heritage, with the possibility of adding assets by users. Important features/considerations:
 - Archive of nature sounds
 - Importance of a map with geolocated sounds can be uploaded by anybody
 - High usability and easy to use features for end-user
 - But it doesn't connect to any other archive (assets not interconnected)
- AudioBoo: <http://audioboo.fm/> Website that allows smartphone users to record and playback digital recordings of up to three minutes, adding more multimedia sources around the asset. Important features/considerations:
 - Sounds are mixed randomly and doesn't have categories (especially in the music category)
 - Uploading is user-friendly, with a combination of curated and random sound
 - There's lot more spoken than music content, where community is quite engaging
 - Tricky to work with Europeana as a connected platform

Considerations

- **WP2:** One of the main points of consideration was around the possibility of generating new sound assets and “crowdsourcing” audio and other data around it. How to make this compatible with Europeana API and an effort which also expands the content gathered via Europeana should be addressed.
- **WP4:** The motivations and implications of generating and specially accessing sound assets, had a strong relation with other existing contextual information related, like titles, descriptions, images etc.
- **WP2/WP4:** Rather than “hosting” content, given the diversity of platforms like AudioBoo or SoundCloud, the interest in relation to platforms and apps had to do with the layer of interaction for accessing, visualizing and enriching sound assets on top of the data providers.
- **WP2/WP4:** All three platforms are based on crowdsourcing and need a certain kind of engagement, but as examples don't focus on the idea of reusing existing content potentially, like in this case there's interest from the Europeana Portal.
- **WP1:** In different parts of the workshop, following some asset examples, there were contents representing songs or music archives, and then the added complexity of intellectual rights (according to record companies) or full content (although many folklore and popular music can be reachable via Europeana and some of its special projects, is only to 30 second samples).

Scenario forecast of potential developments

Objectives:

- Eliciting areas of interest
- Exploring possibilities for development
- Identifying opportunities

Participants: 25 people

This part of the workshop was preceded by a short presentation of the Europeana project and its connection with eCreative, as well as the aim of the Social Networks pilot, the role of Yourehere and Historypin and experience in community based projects, and finally the work under development at WP2 in terms of semantic search and user generated content.

Afterwards, participants focused on personas, basic actions, audio assets and related actions and content in the near future related to an application using (open) audio content. Initially in small groups they wrote scenarios in one sentence, with the following structure:

“[What if as a <type of user>] [I could <action>] [<audio content>] [<additional content/actions>]”

These examples were given: *“What if as a music lover I could record with my mobile the song of a street singer and put it on a map for others to see it”* and *“What if as a museum user I could find and share recorded guided tours on a map as well as practical information for a visit”*.

Scenarios must use at least one verb, describing an action, and a type of content, writing it down modularly on post-its with this color coding: blue: users // green: action // yellow: audio content // pink: additional content/action.

The main objective of the activity was to have a common visualization of areas of potential interest, as well as a shared language of which could be the development of the pilot in different versions and/or its main features, also taking into account the possible additional information needed apart from (digital) original sources. For this, different areas to explore aligned with motivations and themes (although not as exclusive domains, but focus of interest) were defined and several scenarios imagined by participants were discussed in groups, afterwards selected for sharing and discussing them:

1. Sounds of nature:
 1. “What if as a bird watcher I could hear while bird watching sounds of different kind of birds as well as other related data ”
 2. ”What if as a biology teacher I could post to my students' homework folder a collection of recordings and photos of local species for my class to hear and incorporate in their chosen species report”
 3. “What if as a child I could record an animal sound in nature and get help to identify it”
 - 4.
2. Industrial era:
 1. “What if as a train enthusiast I could enrich (geotag, date, etc.) existing train sounds and collaborate, discuss, etc. around them”
 - 2.
3. Heritage soundscapes:
 1. “What if as an ancient music love I could find on the web original sounds of ancient instruments as well as their history, images, extra recordings, etc.”
 2. “What if as a bored sociology postgrad I could listen on my workstation PC to a timeline of recordings from acts shown at a local hall and discover that a 40s band I like once played there”
 3. “What if as an art lover / museum visitor, I could walk around an exhibition with paintings and listen to the sounds that these paintings might produce (e.g. nature, street, conversations, and share my comments & impressions online”
 4. "What if as a music lover I could find similar music and explore connections based on its metadata (period, place of performance, tradition, etc.) as well as analyze the audio, in order to detect style changes, origins, other similar periods and influences".
 - 5.
4. Street culture:
 1. “What if as a tourist I could upload and download historical audio records or choose them from an interactive platform to build up my own historical touristic experience in a defined location”.
 2. “What if as a visitor to a city/town I could listen to geolocated sounds on the street and share them”
 3. “What if as a “future” local resident, I could preview a soundscape of the neighbourhood, appliance sounds & schedule for a week to peel what it can be like to live there”
 4. “What if as an artist I could transform sounds from a sound archive into images”

1. Learning / Teaching:

1. "What if as a teacher I could assign my students to create an audio mix using sounds of people, places, times, etc. and share/present them to tell a story, perhaps with their own narration"
2. "What if as a school student I could record sound of my community and share and add images and comments"
3. "What if as a Teacher I could explore and play for my class, sounds from the past that relate to key topics and ask students to make a sound collage and share it"

1. Dissemination / Sharing:

1. "What if as shy secondary school student I could record on my mobile and mix on my laptop the sound on a building site near my house with a propaganda speech and make a techno mix to share with my Facebook friends "
2. "What if as a user/consumer I can share on Facebook and Twitter for a known audio object in a way that makes them playable on the site they are embed"

1. Other criteria:

1. "What if as a sound designer / sonic artists I could paint sounds (different colors for different themes) on a canvas "
2. "What if as an artist I could transform all sounds in a sound archive into images"
3. "What if as a general user who enjoys puzzles I could try to identify or locate or tag an environmental or another recording to add content or enrich it or solve a puzzle"
4. "What if as a Wikipedia "reader" / "listener", I could listen original or recreated sounds, related with an history"
5. "What if as a consumer, I could preview the sound of commodities I want to buy"
6. "What is as a food lover I could add and listen to recordings of people's stories about their favorite recipes, adding my own and enriching them with sounds, pictures of ingredients, etc."

Afterwards, in order to narrow down possibilities and continue with the development of more visual brainstorming and specifications, each group of scenarios was presented and compared with all participants. They then voted with green dots in order to identify the more interesting or promising scenarios for future implementation, which were developed more visually in the next part of the workshop. Also some red dots were used for highlighting

potential problems, issues or barriers in the different scenarios, in relation to content or technical aspects.

Considerations

- **WP4:** Many of the scenarios point to specific end-users and hence communities, rather than broad audiences, where seems reasonable to choose when developing the pilot the ones which have also a potential interest in audio content.

Prototyped design of screens and interactions

Objectives:

- Connecting users, actions and content
- Potential ideas and processes for pilots
- Online features and contents
- Define a first version of minimum viable products

Participants: 20 people

After the group discussion about which scenarios to develop further, based on distributed voting from participants, there were 5 groups of interest developing a rapid diagram and wireframing of each.

The activity was oriented to match content with personas, as well as drawing a first version of basic interactions, after providing a description of end-users and selecting cards with samples of content. Connections had to reflect the most relevant relationships or interactions for the aim of the selected scenario.

Participants should refine the design adding possibilities screen by screen, defining in 2D some details of screens the pilot should have. For this they should think in chronological order, from the user's perspective, where does the interaction start, how does the interface look like, which are the Europeana/audio contents involved and how and try to get as deep as possible in layers of the application/website.

Prototyped scenario #1 “The Train Geek Challenge”

Based on the scenario: “What if as a train enthusiast I could enrich (geotag, date, etc.) existing train sounds and collaborate, discuss, etc. around them”.

The aim of this design of a platform would be, based on the “addiction” of train fans to everything related to this topic, to get online train-related content enriched, activating certain degree of competition among participants. The main end-user would be someone

who is highly motivated by his/her passion for train culture, representing a community which could participate in order to define and improve content related to trains (maps, tags, timelines, pictures, sounds, etc.). The initial interaction in order to do it so would be framing a particular activity with a defined challenge (with concrete starting and finishing) related to train and railways, and the chance to work through a series of tasks crowdsourcing data.

Another type of end-user would be people not intensely interested in the topic but curious about it, because they live near to the local area related to specific train content. For them, the homepage would have a simple viewing area where personas not interested in content enrichment can gather information on the specific train and its itinerary, browsing results rather than engaging in crowdsourced activities.

A more sophisticated experience in that case and persona could be provided by three enrichment categories (rating, sharing, adding meta data etc.), where part of the experience would be listening to the sound files of trains. This way, one target audience would get and improve information about trains, where it would be possible to compare the experience and results with non-expert users. For example having the chance to compare most famous trains in the world after enriching information about them, filter results by area or country, etc.

Among the questions after the presentation of this diagramed idea, the main one was around the way this topic can be changed to another specific target audience, since one of the main concerns was to what extent the community of train fans would be wide enough for the purpose of the pilot. Also about more precision for the challenges, where for example one question would involve to set an asset on the provided content, geotagging, image enrichment, train related competition with certain gaps in the beginning, making more attractive this way to complete information. Finally, there was a discussion at this stage about the possibility to follow the “evolution” of trains through time and their designs, features, stories, etc., where the reasoning behind is that everything that develops throughout time is worth it to get explored by comparing images, sounds etc., being also a good motivation for users to engage in the challenges.

High resolution image:

https://www.dropbox.com/s/27gryq0yuhf8n3f/Train_Geek_Challenge.jpg

Video presentation of the concept:

https://www.dropbox.com/s/enmu44ce5k63w6i/Train_Geek_Challenge_presentation.mp4

Prototyped scenario #2 “Childhood memories”

Based on the scenarios: "What if as a teacher I could assign my students to create an audio mix using sounds of people, places, times, etc. and share/present them to tell a story, perhaps with their own narration" and "What if as a school student I could record sound of my community and share and add images and comments".

The idea of this pilot would be an app for students, based on personas described as teachers, kids and neighbors of a specific local area, with shared historical anecdotes, with the level of “micro” history connected to the “big” historic events. The interaction with the app, based on a mobile device like a smart phone or tablet, would start offline with a teacher giving the initiative of the project to kids, asking them sample questions oriented to what was life like at the age of their grandparents. Students then by scouting content and interviewing people in their families, local area, etc. should give a description of how was life in the recent past (generating and uploading interviews, pictures, sounds). The end of the activity would be to present the results including all the content attached (videos, documents, images etc. everything that is linked) via the application, so it displays them in a dynamic and attractive way, with the possibility to share them and even to get a mark by the teacher.

Among the discussions around this idea, one question was about to what extent it sounds familiar to the popcorn.js project by the Mozilla Foundation, where primary content (in this case videos) is surrounded by popup content of various kind dynamically, highlighting the possible negative aspect of something already similar. Also another consideration was about how the social aspect is important in this idea, where kids recognize personally the experience and storied of others, adding then media and content from Europeana to the mix. In relation to this, there was the comment suggesting to use also archives of folkloric music from content providers.

High resolution image:

https://www.dropbox.com/sh/ibjoe3vr790ss05/lwDrZqWMyZ/DAY2_Scenarios%26Wireframing/2013-11-12%2016.26.32.jpg

Video presentation of the concept:

https://www.dropbox.com/sh/ibjoe3vr790ss05/nzOk4GXkxG/DAY2_Scenarios%26Wireframing/wireframes/Childhood_Memories_presentation.mp4

Prototyped scenario #3 “Listen to the city”

Based on the scenario: “What if as a tourist I could upload and download historical audio records or choose them from an interactive platform to build up my own historical touristic experience in a defined location”.

The aim of this tool would be to help curating an audiovisual journey around a city or area of a city selecting content from Europeana, for different potential target audiences in the cultural tourism sector. From national tourists or commuters with 3G connection which want to add more knowledge and information to their visits or trips to the city, to local operators like guides or tour buses who can offer also the device (tablet, smartphone) to its customers with the tool installed and access to online content.

The app would work as a selector, aggregator, creator of itineraries based on audio content from the back-end and admin interface side, allowing for a specific type of persona such as the “audiovisual content curator” to select and geolocate the bests sounds and images related to spots on the street. The end-user, a “tourist” visiting the area, can have a passive role with the chance to have different journeys on the way (historic, amusing, sad etc.), where different content from Europeana and its content provider institutions can be related to various objects and topics.

The interface should also give you the possibility to view content from other community members, apart from the option to discover and find content (geotagging, keyword search etc.) and maybe other options for the locals (for example a fiction work related to interest of the creator).

One of the main questions here would be how to manage the amount of content available in order to curate it (and the technical needs of API and metadata), as well as the need of moderation if the user generated content is active, where a persona can have different roles in this process, creator, user etc.

High resolution image:

https://www.dropbox.com/sh/ibjoe3vr790ss05/09nbwCIG2R/DAY2_Scenarios%26Wireframing/wireframes/Listen_to_the_city.jpg

Video presentation of the concept: https://www.dropbox.com/sh/ibjoe3vr790ss05/iAe-JuF8Sm/DAY2_Scenarios%26Wireframing/wireframes/Listen_to_the_city_presentation.mp4

4

Prototyped scenario #4 “Souper.com”

Based on the scenario: “What is as a food lover I could add and listen to recordings of people's stories about their favorite recipes, adding my own and enriching them with sounds, pictures of ingredients, etc.”.

Clearly focused on people with strong interest in stories behind a recipe, this design focused on the importance of recreating what is in the popular and common knowledge around food. Media like audio assets, videos, comments, geolocation, etc. would modularly concentrate visually around specific recipes. Users could upload recipes and then contribute with comments, pictures and other related media generated by them or obtained via Europeana.

The homepage would have features like searching and browsing receipts and users, who could login, and as special type of content users could upload audio or video tutorials, which would be embed in the site. It would also be interesting to add rating features which could catalog content regarding the feeling of people on food.

It was also discussed the clear connection with another Europeana project, the Europeana Food Project.

High resolution image:

https://www.dropbox.com/s/147uh5af7aonefd/Souper_com.jpg

Video presentation of the concept:

https://www.dropbox.com/s/g37hzt6d7fz9hox/Souper_com_presentation.mp4

Prototyped scenario #5 “Tune finder”

Based on the scenario: "What if as a music lover I could find similar music and explore connections based on its metadata (period, place of performance, tradition, etc.) as well as analyze the audio, in order to detect style changes, origins, other similar periods and influences".

This web tool would be used for enjoying, sharing and selecting music around a core concept: enabling music analysis and identification of sounds from metadata, where one of the main types of end-users would be sound/music specialists who could help to refine and complete data, comment, curate, etc. The analysis of songs then will operate regarding type of instrument, performer, period, place and other data which allow comparing music based on similarities. From the end-user side, less skilled or specialist type of people could get suggestions of similar music, discovering related songs and viewing how they are connected.

Among things to have into account for a pilot like this, one of the main issues would be how to compare and navigate across music genre (specially the technical feasibility for such a development). The other important aspect discussed was in relation to a massive part of musicology where lot of people already spend time analyzing music online in that way, where there's a chance to re-use tools which have been already developed. Also in relation to content, such database, even if incremental, would have to be limited (e.g. music from public holidays or celebrations) according to available content in Europeana or other partner's sites.

High resolution image:

https://www.dropbox.com/sh/ibjoe3vr790ss05/W_gMfdt2p5/DAY2_Scenarios%26Wireframing/wireframes/Tune_finder.jpg

Video presentation of the concept:

https://www.dropbox.com/sh/ibjoe3vr790ss05/dykiyd2FDW/DAY2_Scenarios%26Wireframing/wireframes/Tune_finder_presentation.mp4

Considerations

- **WP2:** One of the main issues commented in relation to the different scenarios was around the needed balance (ideally) between crowdsourced data versus content available in Europeana (or other already existing content and metadata from partners like BL or NISV).
- **WP4:** As something more detailed afterwards (see below comments in the section “Backlog brainstorming and issue forecasting”) many of the discussions around the five scenarios developed had to do with the extent that a curated content (theme, metadata, geolocation, etc.) from Europeana may require a selected collection of assets improved for the pilot, as well as the complexity of some type of user generated content and crowdsourcing if it does not include the connection with Europeana.
- **WP4:** According to other comments and discussions, it would be important also to develop something focused on two types of end-users: from sound specialists/curators and highly motivated people with enough computer skills, to non tech or non-sound specialists, which just would like to use the platform or app for joy and curiosity.
- **WP4:** Finally, in relation to content, another aspect to take into account would be similarities or incompatibilities in themes (food, education, tourism) when they have connection to other pilots or projects in Europeana.

Business model development and evaluation

Objectives:

- To support the Social Networks Theme with identifying, implementing and analyzing one or more business models via interactive activities and discussions.
- Start sketching and discussing business/sustainability model elements by using the Business Model Canvas by Osterwalder and Pigneur
- Imagining propositions, infrastructure, customers, finances

Participants: 15 people

As a preparation for the Business Model Workshop in Palma the project partners decided to do the exercise on the Business Model Environment in advance. This decision was taken to ensure that more time is available for the business modeling itself in Palma. It was also considered to be a helpful exercise for finding new and innovative business models.

As business models are designed and executed in specific environments, one can only effectively work on business modeling, if he understands the complex economic landscape, the technological innovations and the market needs, we can effectively work on business models.

The objective of this exercise was to visualize and map out everything that is going on in the business model environment (the market forces, the key trends, the industry forces, and the macroeconomic forces).

The results can be found in the following document:

https://docs.google.com/document/d/1Jttu1Dz_gDhRSNOz2vKNFEefr8jlxFx9oUqsNIQnEMs/edit

In Palma, the Business Model Workshop started with a short introduction to business models in general and to the Business Model Canvas of Osterwalder and Pigneur. Then the participants were asked to choose 3 out of 5 scenarios of the Co-Creation Workshop and to develop the corresponding business models:

The following scenarios were chosen:

- The Train Geek Challenge
- Childhood memories
- Listen to the city

Prototyped scenario #1 “The Train Geek Challenge”

<https://bmfiddle.com/f/#/fK6G9>

Value proposition:

- Offers a new way of approaching and analyzing the **history of transport**

- The user can **share** his **knowledge** on this topic by completing the information on the specific train, road, etc. and linking it to the sound accordingly
- This participatory tool makes the user feel that he **belongs to a group** which shares his interest → wellbeing
- At the same time this can be seen as a kind of **competition** where the users compete against each other with their knowledge on the topic
- The content + the contribution of the user leads to **generation of useful data** on this topic and to a **validation for niche knowledge**
- The assets and data are useful for museums to curate
- **Give user-generated data back to companies and tech museums**
- Train companies and model train companies can use this platform to place promotional material
- The possibility to change the topic, which opens a variety of possibilities to make sounds on other topics accessible and to link them to the right information. A template can be created around this idea, leaving a kind of flexibility for choosing the topic to focus on.

Customer: It is a niche market

- Fans of specific areas / types / trains – which are also the main contributors on the platform
- Railway companies
- Institutions, researchers with a specific interest in this kind of a topic
- Wikipedia contributors

Customer Relationships:

- Train fans: co-design the platform from day one + contribute to the content selection and enrichment of information + close ongoing cooperation between the product owner / content
- Build communities and offer mutual help
- Institutions can also co-design the platform
- Rail-Companies – role of sponsors or partners

Revenue streams:

- Funding + other grants
- Donation
- Sponsorship + marketing partnership
- Advertising for train model companies
- Publishing + merchandising

Summary of issues / comments:

- Main questions: Do we have the right content? Everything depends on this

- Complexity between participation and monetarisation.
- The engagement of the user can be very high; however only for the identified community
- Railway companies may become an interested party (content identification, assessment etc.).
- It would be important to find an identified value for the train companies.
- Content research and target audience research is very important, however time consuming and underestimated.
- An important question: What would it be making interesting for the community to participate?
- The sounds may be available on Europeana and/or to be found in the repertoire of the content providers, but these sounds have to be connected to images. This is something the user could do, to be more engaged within this project
- Model train advertiser in the platform/app could have a commercial chance.
- Tools themselves could be more important for adaptations in other content areas, as a potential if there's a clear unique value proposition.
- If embedding the developed services in existing social networks could be an objective, it seems not easy to find out how to realize this.
- The idea of valuable high quality data can be shown with this concept, based on the idea to improve audio content and its metadata.
- The idea can be more generic – the topic is exchangeable leaving a lot of possibilities for other content use and for reaching different users/audiences.

High resolution image:

https://www.dropbox.com/sh/ibjoe3vr790ss05/urVtZqoiuK/DAY3_BusinessModel%26SCRUM/Business_model_canvas/Train%20geek%20Challenge.jpg

Prototyped scenario #2 “Childhood memories”

<https://bmfiddle.com/f/#/r4g58>

Value proposition:

- It gives young user the opportunity to **present and share memories** belonging to their grandparents
- At the same time they can learn from these memories, **learn more about real people**
- Gathering memories and stories **makes history relatable**
- It is **a new way of experiencing memories by using multimedia**
- **Satisfy curiosity in a new way**

Customer:

- Students
- Youth clubs
- Families (genealogical enthusiasm)
- History teacher
- History bloggers
- Researcher
- Local museums

Customer relationships:

- online platform
- online support
- workshop in communities to exchange stories, experience

Revenue streams:

- Local funding
- EU funding
- Fee for eLearning platforms (schools)
- Donate button (crowdfunding)

Summary of issues / comments:

- One main question is why someone should upload content on this platform, and therefore contribute to this kind of history narrative / oral history.
- Value proposition: share memories, preserve personalities
- Present the site and data to featured communities should be one main objective.
- Novelty of the idea: familiarity → Families represent the most important social network
- It is a big market – but the question is, if there can be a narrow focus
- Also in this case making connections with Euroclio or other project partners from Europeana.
- In terms of commercialization, there could be a problem with licensing issues if the idea is “selling” people's stories in any way.
- Related to the questions of how Europeana content fits into this concept, the task of the history teachers would be to enrich the audio information with Europeana content, facilitated through a CMS for curators which should make easy to find matches.
- For all that, there should be metadata from partners or on Europeana directly available.
- Another comment was related to the chance to create family engagement within social networks if the concept success.

- Initial contact for end-users would be over the website, where there should be a next level to encourage contributors.
- Another question was addressing the local funding aspect, around the idea of marketing local workshops and events, trying to get funding from national agencies or local agencies and stakeholders, focusing on the educational aspects.
- Like in the other cases, it would be important to have a chance to narrow down the focus (local areas, specific themes, etc.).

High resolution image:

https://www.dropbox.com/sh/ibjoe3vr790ss05/du1x7IW1nq/DAY3_BusinessModel%26SCRUM/Business_model_canvas/Childhood_Memories.jpg

Prototyped scenario #3 “Listen to the city”

<https://bmfiddle.com/f/#/yW427>

<https://bmfiddle.com/f/-/yW427>

<https://bmfiddle.com/f/-/yW427>

<https://bmfiddle.com/f/-/yW427>

<https://bmfiddle.com/f/-/yW427>

Value proposition:

- The possibility to participate in creating this journey by using/uploading different audio content
- Expressing narratives in a new way by linking sounds (events, speeches, nature, music etc.) to different places, objects
- Enrich the environment with these sounds
- Raise individual profiles – every user can add sounds to different places, and therefore give it a personal note
- Alternative marketing channel for different stakeholders

Customer:

- Tourists
- Guides
- Tourist operators
- Commuters
- Mobile Phone users
- Social Network users
- Local People
- Newcomers
- Visually impaired
- Guide producers
- Local business

- Local historians
- Heritage sites

Customer Relationships:

- Interactive user interface
- Community of evaluators
-

Revenue streams:

- Chargeable curated audio guides without advert
- Free curated audio guides with adds
- Local business advertising in the audio guide
- Licensing fee for sellers of this audio guide
- Creation of an App
- Paypal

Summary of issues / comments:

- In this case the model clearly points to listeners as consumers, and “uploaders” or curators as contributors.
- USP: The possibility to participate in creating this journey by using/uploading different audio content.
- There is an artistic component
- The navigation should point primary to content from Europeana.
- There is a lot of content (sounds) available on Europeana for this idea
- The idea is complex and time consuming
- There are some practical consideration → the roaming issue
- Engagement can be very high → user experience
- It was suggested to consider the possibility of having an audio guide for free with adverts, or a paid version without adverts. Also licensing fees for resellers, although the model implies a community who supports each other extensively.
- One of the questions after the presentation was how this idea should encourage social websites to embed the model. Maybe to create audio tours with the option of more people from other social networks to enrich content.
- In technical terms, it seems fairly hard to realize this application from scratch.
- In terms of content and the context of the pilot, it should rely on given locations to start with → small areas should be selected for testing or even for a first version.
- Also in relation to the actual geodata needed, where the sound asset would depend on the Europeana API, and/or other platforms where that information could not be ready.
- Another question was around the “dilemma” of website versus app.

High resolution image:

https://www.dropbox.com/sh/ibjoe3vr790ss05/du1x7IW1nq/DAY3_BusinessModel%26SCRUM/Business_model_canvas/Listen_to_the_city.jpg

Backlog brainstorming and issue forecasting

Objectives:

- Identification of tasks needed, potential issues and other considerations for an initial lists
- Clarifications from partners and who is doing what

Participants: 15 people

As the last part of the workshop, participants helped to identify in the three finalist concepts those things which should be addressed first in order to develop them further. From obstacles or issues which should be solved previous to designing or programming, to specific tasks related to content, licenses, communities of use, etc.

Prototyped scenario #1 “The Train Geek Challenge”

- **Technical/programming:**
- Get freebase & DBpedia train/rail data
- Design train data schema / ontology
- Geo-reference selected media metadata (audio, photos, text)
- Other semantic enrichment (for example train named after person or event)
- Concert institutional data into common schema and integrate it
- Flexible tools that can be re-used for/by different communities
- Design and implement data consumption APIs (search, filter, order)
- Negotiate, design, implement APIs for getting data back to institutions
- Provide increments defined as "ready" to WP6

Content:

- No British Library content
- Very little NISV content for train sounds
- Move collected data back to Europeana
- NISV sound content license under CC-By and CC-by-SA
- NISV + BL sounds available via Europeana
- Can be used to enrich existing Europeana metadata
- Select a theme with enough structured data

End-users / community:

- Niche market
- Must be generic enough to be re-usable for other communities
- Get buy-in from train community
- Research on train communities and channels they use, identify key stakeholders
- Co-design with community from an early stage
- Allowing users to curate content: too complex for a pilot?
- Do train "aficionados" already enjoy train sounds? Or does this project market that idea?
- What about languages?

Other issues:

- Responsive design across app, tablet + desktop
- Hard to monetise, value generation is low
- Research existing community sites, tools, apps
- Prepare a concept paper related to the first milestone for evaluation purposes
- Clarify roles for scrum adaptation
- Focus design around community
- Display of assets should also appeal to non-enthusiasts

High resolution image:

<https://www.dropbox.com/s/g6hzwes2roza1f/Train%20Geek%20Challenge.jpg>

Prototyped scenario #2 “Childhood memories”**Technical/programming:**

- Storage layer selection (SoundCloud, Audioboo, etc.)
- Explore existing recording and editing widgets / tools
- Create minimum metadata field set
- Design basic upload sequence
- Provide testable increments to WP6

Content:

- Linkable content from BL (no oral history)
- Take care of privacy of the contents uploaded and licensing options
- Linkable content from NISV under license that allows re-use
- Identify / investigate content on Europeana for this pilot
- Check content availability for <place-year> pairs

End-users / community:

- Connect with Euroclio and other teacher associations

- Research on focus: choose a city?
- Connect different stories to people who are involved in
- Test through Beta programs in schools
- Review specific school curriculum connections
- Design should include audio recording plus editing that is very easy to use
- Where will the support info and community be?

Other issues:

- Prepare a concept paper related to the first milestone for evaluation purposes
- Survey of oral history projects
- Research children's tech and sound projects
- Clarify roles for scrum adaptation
- Outline phases focused on audio track in center of data web: photos, videos, postcards, etc.

High resolution image:

<https://www.dropbox.com/s/77nkej6l4iad5we/Childhood%20Memories.jpg>

Prototyped scenario #3 “Listen to the city”**Technical/programming:**

- Technically challenging: streaming audio as you move while looking for the next sound... wow!
- Determine which assets sound in case of conflict (more than one sound is active in the same point)
- Design non-obtrusive advertising system
- Sound sequence and sync with GPS control points
- Create tool for audio tour creation/curation
- Build the platform for audio storage
- Manual and automatic geo-referencing and localization
- Need venue names (e.g. animal > pub)
- Audio classification and categorization (e.g. humorous, mystery, ambient)
- Provide testable increments to WP6

Content:

- Good location based content for UK and the Netherlands
- Highlight materials about to join Europeana
- Research and investigate other sounds on Europeana
- Research additional visual resources on Europeana
- What audio upload formats would this support?
- Check content availability for <place - year> pairs

End-users / community:

- Connect to communities of local guides
- Connect to field “recordist” community
- Do "soundpath" shareable and embeddable
- How to tell to the world: "Hey! I've been there! If you go, you can listen to what I've heard"
- Where would users learn to create and upload a tour?

Other issues:

- Survey existing soundscape / audiotour market
- Choose specific location for audiotour
- Investigate existing audio based tours
- Review dissemination and marketing plans from other audio tour programs
- Design a really easy-to-use interface / app: when, which tags, walk in a free discover way, etc.
- Concept paper for evaluation
- Clarify roles for scrum adaptation
- Content oriented user interface to connect and create the "sound path"

White Paper: Business Models for Design

Identifying business models for the re-use of cultural objects for design

Co-funded by the European Union

The project is co-funded by the European Union, through the **ICT Policy Support Programme** as part of the **Competitiveness and Innovation Framework Programme (CIP)**.

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1. Introduction

This White Paper attempts to document the efforts to identify, implement and evaluate business models that are developed within the Europeana Creative project for the re-use of cultural heritage objects by Design professionals/companies that provide design services, by specifying the approach *how* the business models were developed as well as the business models *themselves*.

Europeana Creative is a European project which aims to enable and promote greater re-use of cultural heritage resources, aggregated by the online portal Europeana, by Europe's creative industries. Within the project, a number of Pilot applications focused on History Education, Natural History Education, Tourism, Social Networks and Design are developed. Building on these Pilots, a series of open innovation Challenges are launched with entrepreneurs from the creative industries to identify, incubate and spin off more viable projects into the commercial sector. The project goals will be supported by an open laboratory network, an on- and offline environment for experimentation with content, tools and business services, and a licensing framework where content holders can specify the re-use conditions for their material.

We reflect on the development of the business models for the re-use of cultural objects for the theme Design. This White Paper is the final one in a series of four and must be seen as work in progress, inspiring and supporting the further development of the Pilots, the open innovation Challenges and development of the Europeana Labs Network. We aim to create collaboration in our efforts to develop new business models for the creative re-use of digital objects. We invite professionals from the creative industries as well as the cultural heritage domain to contribute to the evolving discussion and sharing of knowledge and best practices.

2. Business Models for Digital Public Content

Public institutions set out to ensure that cultural heritage “can remain a living asset over time and that it is as widely shared as possible”¹. Cultural institutions are non-profit-making organisations that develop their work to safeguard the public good and not to obtain profit.² Over the past decade considerable public investments have been made in the digitisation of cultural heritage objects in the not-for-profit sector. New digital collections have emerged and enable innovative ways to explore its content, from research projects to resources valued by the community.

However – and especially in the light of the economic uncertainties in Europe and decreasing governmental budgets – digital resource projects struggle in the transition from grant funding to a longer-term plan for ongoing growth.³ In such a framework, sustainability is a prime concern and challenge. As a result, the development of new business models for the creative re-use of digital content from the cultural heritage sector seems to be “double-edged”⁴. On the one hand, they *must allow wider access to cultural content* (while respecting the copyrights and related intellectual property rights of third parties), on the other hand, they also need to *create revenues to guarantee the long-term sustainability* of projects and services exploiting the content.

Business models – meaning the way that value is created, delivered and captured within an organisation point of view⁵ – need to be seen in a wider sense as the way public organisations deliver content and the models they are implementing to create revenues. As producers and distributors of content, cultural institutions develop new (non-commercial) initiatives that guarantee the sustainability of projects and services and also serve as content providers for the commercial sector.

Recent research shows that the current most common business frame underlying these new projects is a contractual frame, where cultural heritage institutions contract creative industries

¹ “The New Renaissance: Report of the ‘Comité des Sages’. Reflection Group on Bringing Europe’s Cultural Heritage Online”, available online at: http://ec.europa.eu/information_society/activities/digital_libraries/doc/refgroup/final_report_cds.pdf, p. 1; accessed February 19, 2014.

² See Directorate-General for Internal Policies, written by Claudio Feijoo, Sven Lindmark, Juan Pablo Villar, Carlota Tarín, Javier Gelabert, Beatriz Matía, “Public and Commercial Models of Access in the Digital Era”, April 2013, requested by the European Parliament’s Committee on Culture and Education; available online at: [http://www.europarl.europa.eu/RegData/etudes/etudes/JOIN/2013/495858/IPOL-CULT_ET\(2013\)495858_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/etudes/JOIN/2013/495858/IPOL-CULT_ET(2013)495858_EN.pdf), p. 119; accessed February 19, 2014.

³ See Nancy L. Maron and Matthew Loy, “Funding for Sustainability: How Funders’ Practices Influence the Future of Digital Resources”, JISC Strategic Content Alliance, Ithaka, New York, June 2011; available online at: <http://www.jisc.ac.uk/media/documents/publications/programme/2011/sandrfundingforsustainability.pdf>; accessed February 19, 2014.

⁴ Directorate-General for Internal Policies 2013, p. 119.

⁵ See <http://www.businessmodelgeneration.com>; accessed February 19, 2014. See also Directorate-General for Internal Policies 2013.

parties (e.g., brand or web agencies, game developers) to develop services, backed by ad hoc public funding.⁶ It was suggested that both businesses and cultural heritage institutions want to exit the “contractual” frame and explore innovative funding models together. Especially cultural institutions expressed that they want new business models of profit sharing and gaining more benefits of the cooperation.⁷

However, there does not seem to be one single approach to achieve this. No study seems to be able to lay out a one-size-fits-all plan that any organisation can follow to reach the point of financial sustainability.⁸ An important aspect of a strategy to achieve sustainability seems to be a shift in management on the side of cultural heritage institutions. Clear goals, accountability, measurable targets, reviewing processes and assessing the performance are proven elements in the business sector for creating successful companies, but are considered a weak spot in the way cultural heritage institutions operate.⁹

The Design Pilot is led by AALTO in close cooperation with Spild af Tid ApS (SAT) and Austrian Institute of Technology GmbH (AIT). AALTO is one of the six schools of the Aalto University – School of Arts, Design and Architecture, established in 2010, and is a merger of three Finnish highly regarded universities with centuries of experience in research and education. The School of Arts, Design and Architecture is focused on providing education and pursuing research in the fields of design, media, architecture, motion picture, art education and art. Spild af Tid is a small graphic design studio that works across media and disciplines. Professionals with different graphical capabilities, knowledge sharing and professional development are integral parts of life at the office and its many varied projects emphasize breadth – from classical identity tasks to animation, motion graphics, illustration, film, music videos, interactive installations, web and stage design. Its experience enables SAT to be able to present the collected data in a visually manageable way, in order to provide the user with a good overview. Spild af Tid is currently also working on the Europeana Awareness project AIT is Austria’s leading research and technology establishment and a key player on the European research landscape where the exchange of knowledge between universities and companies is central to the successful development of industry. The mission of AIT’s Department of Safety and Security (DSS) is to make a significant contribution to ICT and to devote concerted efforts for guaranteeing operational efficiency and reliability of all critical infrastructures – both private and public – especially in times of potential ecological, economic and political crisis. DSS is committed to

⁶ See Aubéry Escande, Hans de Haan and Louise Edwards, “Europeana Creative White Paper No. 1. Creativity, Technology and Management: Establishing Best Practices between Cultural Heritage Institutions and the Creative Industries”, June 2013, available online at: http://pro.europeana.eu/documents/1538974/1594727/eCreative_WP3_ST3.2.1_CreativityTechnologyManagement_v1.0; accessed February 19, 2014.

⁷ See Escande, de Haan and Edwards 2013, p. 16.

⁸ See Kevin Guthrie, Rebecca Griffiths and Nancy Maron, “Sustainability and Revenue Models for Online Academic Resources: An Ithaka Report”, Ithaka, New York, May 2008.

⁹ See Escande, de Haan and Edwards 2013.

fostering the rollout of national infrastructures as well as the deployment of state-of-the-art technologies with a view to positioning Austria at the forefront of the European ICT industry.

The aim of the Europeana Creative's Design Pilot is to connect the digital cultural heritage made available by Europeana to open design communities of craft and media designers who wish to use cultural heritage objects as sources for new, derivative designs, such as embroidery, textile patterns, 3D printed objects, media art, etc., and who are also interested in sharing their designs with the community in reusable forms. The Design Pilot will amplify the usefulness of Europeana for designers, artists and practitioners as well as in general for the creative industries that are connected to such design activities. The Design Pilot promotes the revival of cultural heritage objects, reborn as elements in contemporary designs, and aggregates this new, emerging cultural heritage into collections in a format that could hopefully in future become available through Europeana.

Following the activities performed under the Design Pilot Workshop, one prototype tool was developed: the Culture Cam¹⁰. This tool aims to create an application that makes it easy and intuitive for designers and artists to browse the Europeana archive. The tool is a digital "live" similarity tool that helps recognise a colour, a shape or a pattern by using a web camera. First, a user scans an object using a computer webcam, Culture Cam then captures and analyses the given object and comes up with search results of similar colour, shape or pattern directly from the Europeana archive. This tool is being developed by SAT, Aalto and AIT.

In the next section we will (1) discuss the approach that was chosen to develop business models for design re-use in Europeana Creative, and we will reflect on the design of the process and formulate some guidelines that we developed for the development and incubation of the models. Furthermore, (2) we will elaborate on the specific business models that were identified for design re-use and dive deeper into the strengths and weaknesses of the models and application for the Pilots in Europeana Creative.

¹⁰ see also MS 13 "Delivery of the Design Prototype"
<https://drive.google.com/open?id=0B2MZ4MMRg6aEVnBRYjl4THR3b2c>

3. Business Model Development Approach

The starting point for the development of the business models in Europeana Creative was to get a shared understanding of what a business model is and how it could be used in the context of the project. Therefore, a concept that everyone could easily understand and apply was needed. Within the Europeana Creative context, several stakeholders, especially those dealing with design issues, are not particularly familiar with business modelling. A simple but robust concept and methodology was needed. Since the business model canvas developed by Alexander Osterwalder and Yves Pigneur had proven to be a successful methodology,¹¹ allowing an individual or group of individuals to discuss and develop business models by using a simple but effective canvas as a working tool, the decision was made to use this methodology.

Osterwalder and Pigneur explain “how value is created, delivered and captured within an organisation point of view”. Value takes several forms such as cultural, economic, social, environmental, thus not being limited to a common perspective that refers to business per se for profit. A business model can also be developed not only around organisations but also around specific projects, products or services. Putting it in another way: It’s about which pieces are necessary and how to put them together so that your organisation, product, service or project is built in a sustainable way.

The business model canvas can be used in teams as a shared language, for better strategic conversations and as a tool to structure thinking. Inspiration for the design of the business development was also taken from the BMICE Step-by-Step Plan, a seven-step plan that was designed and implemented by heritage institutions to embed new or existing digital service concepts in their business model, and was shared to be repeated on a long-term or occasional basis by heritage institutions.¹²

The conversation about business models was started at one business model workshop that was organised: Design Business Model Workshop on May 23, 2014 in Helsinki (see Annex I for a full report) with representatives from cultural institutions, design organisations, web agencies and representatives from the business sector. In connection with the business model workshops, a co-creation workshop was held for the Design theme. This workshop made use of co-creation tools to facilitate the concept development of the Pilots through the co-creation of possible software applications. At the end of the co-creation workshop, the three application ideas with the best potential were chosen to be further explored in the business model workshop to assess their business potential. The co-creation workshop thus provided the basis for the business model workshop. Based on the results of the co-creation workshop, the goal of

¹¹ See <http://www.businessmodelgeneration.com>; accessed February 19, 2014. See Alexander Osterwalder and Yves Pigneur, *Business Model Generation*, Wiley, Hoboken, NJ, 2010. See also Stichting Nederland Kennisland, Stichting DEN, TNO, Stichting E30, “BMICE Step-by-Step Plan”, 2011, available online at: http://www.den.nl/art/uploads/files/BMICE-Step-by-step_EN.pdf; accessed February 19, 2014.

¹² See “BMICE Step-by-Step Plan” 2011.

the business model workshop was to trigger a discussion on how a business model can be developed for each of the results. The work on defining the Design Pilot concept continued with mapping some of the possible digital cultural heritage collections to be used and promoted in the Pilot, and locating existing services, applications and communities of practice operating in the domain.

The following steps were taken to develop the business models. Together the steps sketch out the services that facilitated the business model development.

Identifying Business Models

Following Osterwalder and Pigneur, “[b]usiness models are designed and executed in specific environments. Developing a good understanding of [the] environment helps you conceive stronger, more competitive business models.”¹³ This was the reason why an analysis of the existing environment was seen as an important first step for the business model workshop. Only by understanding the complex economic landscape, the technological innovations and the market needs, one can effectively work on business models. To better analyse the existing business models environment, the four main areas suggested by Osterwalder and Pigneur – market forces, industry forces, key trends and macroeconomic forces – were discussed, visualised and mapped out.

Osterwalder and Pigneur consider that a business model can best be explained and used through nine basic building blocks that cover the four main areas of business: customers, offer, infrastructure and financial viability. With their Business Model Canvas we sketched out and visualised new business ideas for the three selected ideas.

¹³ Osterwalder and Pigneur 2010, p. 220.

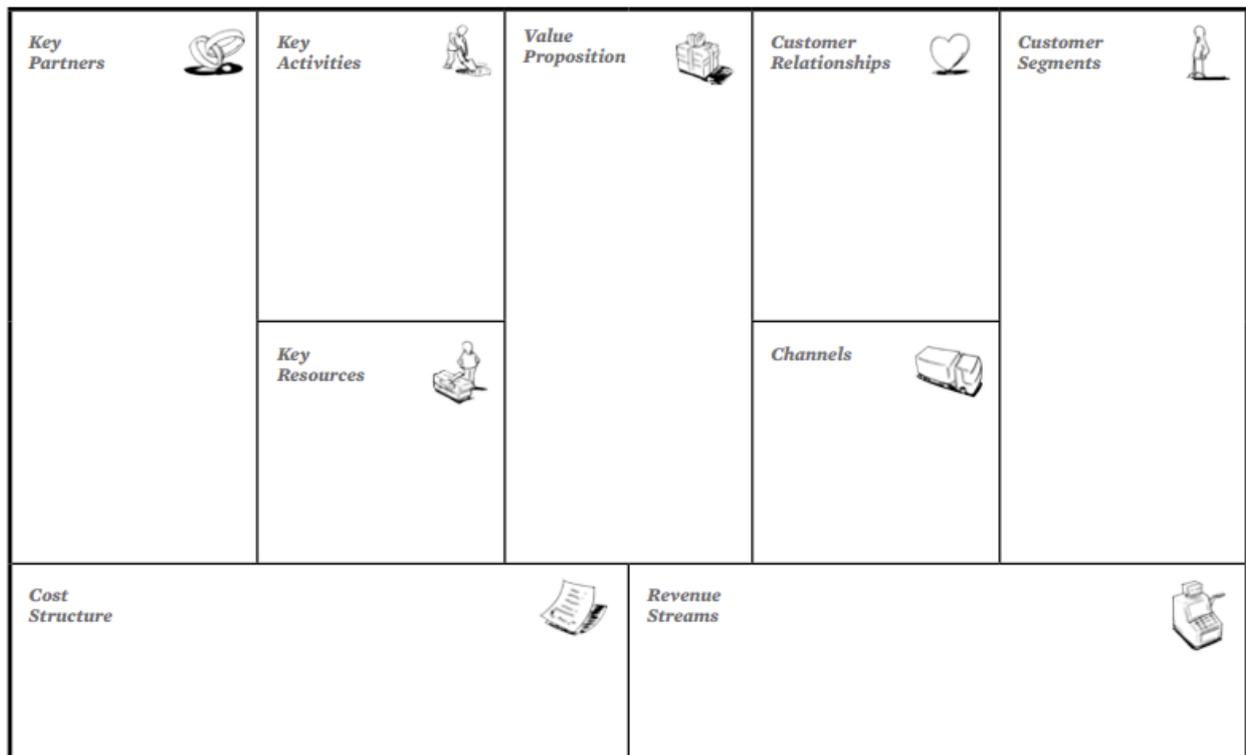


Fig. 1: Business Model Canvas by Osterwalder and Pigneur

The nine building blocks:

1. Customer Segments: The different groups of people or organisations a business aims to reach and serve. The target audience for the products and services of a business.
2. Value Proposition: A business seeks to solve customer problems and satisfy customer needs with value propositions. The products and services a business offers.
3. Channels: Value propositions are delivered to customers through communication, distribution and sales channels. The means by which a company delivers products and services to customers.
4. Customer Relationships: Customer relationships are established and maintained with each customer segment. The link a company establishes between itself and its different customer segments.
5. Revenue Streams: Revenue streams result from value propositions successfully offered to customers. The way a company makes money through a variety of revenue flows.
6. Key Resources: Key Resources are the assets required to offer and deliver the value proposition to the customer segments.

7. Key Activities: The activities a business needs to perform in order to bring value propositions to its customer segments.
8. Key Partners: Some activities are outsourced and some resources are acquired outside the enterprise.
9. Cost Structure: The business model elements result in the cost structure. The monetary consequences of the means employed in the business model.

At the end of the business model workshops, the developed business models for the application ideas were presented, discussed and published in a report.

Implementing Business Models

The next step was to further develop the product concept, specifically the underlying value proposition(s) of the chosen application idea. Value proposition is a term commonly used in business economics that refers to the argument over which an organisation or company tries to communicate and convince the client of the value of the product or service as far as his or her needs and desires are concerned. Why would people be interested in the product or service? What needs does it meet or what problems does it resolve for the customer? How can revenue be generated to be able to cover the costs of running such a service after the Pilot development period?

As a consequence, further advice on the access of content (and related IPR issues) and guidelines for the re-use of this content in design resources was given, and options for generating revenue to be able to deliver the value propositions were researched. The strengths and weaknesses of each revenue option were identified. Based on the developed value propositions, a final decision on whether or not to continue to work with a specific business model for the product or service concept was made.

Evaluating Business Models

The development is also supported by a continuous evaluation of the implementation of the business models throughout the duration of the project. The business model itself is an incremental part of the product concept. This concept and the working prototype will be discussed and evaluated in online focus groups consisting of relevant representatives from creative industries and memory institutions. A discussion about success indicators was started that can be assessed on a regular basis. Another important aspect for a successful business model is the acceptance by end users. Usability tests carried out by Europeana Creative will help to get feedback from potential end users.

4. Capturing Value: Culture Cam

As mentioned earlier, the goal that was set out for the Design Pilot was to demonstrate the creative re-use of Europeana resources by developing applications and tools. The Design Pilot connects the digital cultural heritage made available by Europeana to open design communities of craft and media designers who wish to use cultural heritage objects as sources for new, derivative designs, such as embroidery, textile patterns, 3D printed objects, media art, etc., and who are also interested in sharing their designs with the community in reusable forms.

During the Design Co-Creation workshops, multiple concepts were developed. The aim of the Co-Creation workshop was to learn about the current and emerging practices and projects related to open creative re-use of digital cultural heritage, ideate novel ways of re-using digital cultural content and data made available through the Europeana platform.

Altogether five concepts were developed and presented at the end of workshop. The three best concepts were chosen to further develop a business model around. Scenarios were evaluated according to the key indicators: “openness”, “Europeanability” and “feasibility”. The work on defining the Design Pilot concept continued with mapping some of the possible digital cultural heritage collections to be used and promoted in the Pilot, and locating existing services, applications and communities of practice operating in the domain.

In the Design Pilot Business model workshop, three concepts were selected for further exploration and discussion. These concepts were analysed and evaluated through the Business Model Canvas tool, which provides a structural way to address various issues such as sustainability and target audience of envisioned services. This collaborative exploration helped the Pilot team to choose the two main themes and directions to focus on: 1) stimulate and enable digital fabrication and creation of tangible artefacts from digital cultural heritage, and 2) create design prototypes and experiments to demonstrate alternative uses of the Europeana content and data.

One of the Design Pilot main activities was to create a prototype that offers an online tool to search and explore content in Europeana through colours, patterns and forms instead of the more traditional text based search provided by the current Europeana portal. In this sense, the Danish design company Spild af Tid in collaboration with Aalto University, Austrian Institute of Technology and Europeana developed the design prototype “Culture Cam” a tool that aims to offer designers, artists and all creative people the possibility of exploring cultural heritage images on Europeana in an intuitive way.

The starting point of the development of Culture Cam was as follows: “How to access and re-use Europeana content in a fun and playful way? From a designer’s point of view, the Europeana portal <http://www.europeana.eu> can be rather complex to access. What is there to find? How to find it? How to get inspired and motivated for exploring the gigantic amount of content? How to find inspirational content for creative re-use?”

The following business model canvas were developed and fine-tuned for the Design Pilot:

- Pattern Gems (formerly known as Knitty Gritty)
- eFab
- Collage Group (combination of Comic Saga and Open Art)

More detailed information regarding the minutes of the business models can be found on Annex I. Although these pilots did not move into a development phase within Europeana Creative, they were relevant to the project as brought relevant insights on developing business models and involving the design community.

Following the development of the Culture Cam, the project team produced the following business model canvas for the tool:

1. Customer's world and desire for ideal value:

- Designers
- Artists, creators/makers
- Creative People (general)
- Professional Designers

2. Value Proposition:

- Easiness of use
- Inspirational images
- Finding new art patterns/images or shapes
- High quality images
- Awareness of cultural heritage

3. Co-creation value with the customer:

- Alternative way of searching for cultural heritage online

4. Interaction and co-production:

- Concept itself requires interaction with the user through taking a picture of an object/person/pattern

5. Key resources:

- Cultural Heritage images database
- Europeana content
- High quality images
- Similarity tool

6. Key partners:

- Europeana database
- Design and Art Universities
- Design and Art Institutions with interest in European Cultural Heritage

7. Mobilizing resources and partners:

- Create a community of design artists and creative people

- Dissemination through social media, targeting the design community
- Free service
- Collections under public domain or copyrights expired

8. Cost structure:

- Service/website maintenance costs

9. Revenue streams and metrics

- Digital Marketing
- Online and Offline events in the topic of Cultural Heritage

At the core of the canvas is the question of the value proposition. What kind of customer problems can be solved and how can the customer needs be satisfied with value propositions? The following value propositions for re-use in design were specified for each of the stakeholders that were identified as important in delivering the central value proposition:

1. For **the creative community in general**, the Culture Cam offers the possibility of enhancing the European cultural heritage awareness among the broad community, providing a service that promotes creativity and art. The creative community will increase its knowledge on the subject, giving them a possibility to access a database of creative design materials. The creative community can use the content taken from the tool to disseminate the European cultural heritage to the general public and at the same time promoting the Culture Cam tool.

2. For **active users (designers, artists, professionals, creators, etc.)**, the Culture Cam provides an opportunity for users to access an extensive database of European Culture Heritage materials, leading to further exploration of the project content. Active users will be able to obtain inspiring images and patterns (which can have personal and professional purposes) in an easy and fun way, stimulating designers to explore the creative content of Culture Heritage. In addition, the tool can serve as a new way of enhancing the creative side of the users, providing new ideas for future projects. As the tool is simple to use, the active users do not have to possess high expertise in the IT area to use the product.

5. A Content Re-use Framework for Design

Over the past decade a tremendous effort was made to make digital content in Europe more accessible, usable and exploitable. At the moment of writing, around 20% of heritage materials has been digitised; 31% of that material is available on cultural institution websites and an estimated 6,2% is accessible online. This means that this material is made accessible through the website but without explicit rights of use or re-use.¹⁴ One of the goals of Europeana Creative is that the works are offered online in a complete form (with metadata) and the rights policy is explicit so other parties know what they can or cannot do with it. A lack of (good quality) metadata and especially rights labelling information of digital objects is a big obstacle for third partners to search for and re-use the materials that they are looking for.

In January 2013, Europeana launched a Rights Labelling Campaign¹⁵ to reduce the amount of metadata records without rights statements on Europeana; this Campaign was concluded in 2014: all the objects in Europeana carry a valid Rights Label since October 2014. Because of the demand for access to high-quality re-usable content via Europeana,¹⁶ this framework is currently being extended with a Content Layer within the Europeana Creative project. This *Content Re-use Framework* will allow content providers to voluntarily make available content for specific re-use scenarios¹⁷ in a (digital and physical) environment called the Europeana Labs.

The following process steps from access to the re-use of content are defined within the Design theme:

1. Filtering and Adding New Content to Europeana

Via the Content Re-use Framework digital objects are filtered based on three technical and IP-related specifications:

- The metadata for the Cultural Heritage Object contains at least one direct link to a Digital Object itself (as opposed to a page where the object is available).
- The Digital Object meets minimum technical quality requirements.¹⁸
- The Digital Object is provided with a rights statement that allows re-use of the object (as opposed to rights statements that only allow access).¹⁹

¹⁴ See Directorate-General for Internal Policies 2013, p. 117.

¹⁵ See <http://pro.europeana.eu/pro-blog/-/blogs/1494947>; accessed February 20, 2014.

¹⁶ See Harry Verwayen and Paul Keller, “D3.3 – Documentation of the Extension of the Europeana Licensing Framework”, March 2015, available online at:

http://pro.europeana.eu/files/Europeana_Professional/Projects/Project_list/Europeana_Creative/Deliverables/eCreative_D3.3_KL_v1.0.pdf; accessed June 19, 2015

¹⁷ For an overview of all issues related to the extension of the existing Europeana Licensing Framework we refer to the Discussion Document ‘Extending the Europeana Licensing Framework’ (Keller, 2013).

¹⁸ See Zeinstra, Keller and Isaac 2013 for the exact technical requirements list.

In addition, for the purpose of developing Culture Cam the following requirements were formulated to fit the tool's purposes:

- Library of images from Europeana
- High-resolution images
- SAT selection from a number of Public Domain collections provided by Europeana
- Specific images that can highlight certain patterns and/or shapes
- Possibility of finding similar images to the ones obtained
- Information about the author and publisher
- Direct link to Europeana archive
- Commercial and non-commercial use of the images

2. Re-using the Content

The designers and creative community that uses the Culture Cam tool can access the content obtained from Europeana through the establishment of a direct link with the project database, offering the possibility of accessing new images and creative content. After using the tool to take the referred picture, the users will be given a series of similar content that can then be accessed through the Europeana database. In addition, the users can find more information about the picture background and history directly through the tool, providing the opportunity to obtain more knowledge about European Cultural heritage and using the content in the future. The tool can then re-use the pictures that are based in the Europeana platform, according to the selection criteria described previously. It is expected that more content could be updated over time.

3. Publishing New Content

The end-users should be able to access the produced images that are taken from the Europeana database, which will be available through the Culture Cam tool. The content produced by the tool allows users to raise their awareness towards European cultural heritage. The images taken from the end-users are not stored in the platform database, so all the new content produced/available should be provided through the Europeana platform.

¹⁹ Content that is identified by cultural heritage institutions as in the public domain or is licenced under an open licence that allows re-use.

6. Business Models for Design Re-use

Regarding the Culture Cam tool developed within Europeana Creative some specific actions have to be taken into account. This chapter outlines the requirements for the business model developed for the Culture Cam tool that re-uses cultural resources in Europeana for design purposes:

- **Open access:** The vision of the European Commission’s Comité des Sages that “public domain material digitised with public money should be freely available for non-commercial re-use by citizens, schools, universities, non-governmental and other organisations” is considered as the most widely held view among heritage institutions in Europe, and most access models rely on open access.
- **Revenue from (in)direct beneficiaries:** In our search for strategies to generate revenue for the Culture Cam it was essential that the revenues can be generated through both direct beneficiaries of the service as well as indirect beneficiaries that value the service but do not directly use them. The basis for developing a sustainable revenue model for the tool should reside on digital marketing strategy, involving the direct beneficiaries.
- **Additional services and goods:** Another strategy to generate revenue while keeping access to the application for free for direct and indirect beneficiaries is to focus on transaction-dependent revenues generated by charging fees for specific additional services (e.g., charging fees for tutorials or tips) or additional unspecified services (e.g., membership fees, donations) or goods (e.g., fan merchandising) from direct beneficiaries.

6.1 Business Model taxonomy

Following this line of reasoning, we propose the following business model taxonomy (including revenue models) for the re-use of public content for Design.

Culture Cam

The Culture Cam tool is addressing two customer segments. On a B2C level it is focusing on online users of every age that are interested in engaging with digital European cultural heritage. The second segment is the B2B level that aims on the Design sector, focusing on organizations that deal with European cultural heritage products. Both levels will be further described in this section, differentiating strategies to be adopted by several organizations that re-use or are related with cultural objects in design.

Business to consumer (B2C)

The first customer segment to be described is the B2C level. In these models the revenue stream will be generated by the end-users demand. The end-user receives additional information, services or enjoyment in order to pay for it. Several business model taxonomies serve this purpose.

- **Freemium model:** the freemium model (mix between “free” and “premium”), is a business model that allows an organization to offer the core product or service for free and to sell its premium features/other products or services to the clients. The Culture Cam tool offers its users the possibility of using the similarity tool for accessing European cultural heritage products for free. The strategy to be adopted for the “premium” content could be through having price discounts at the events organized under the tool (further detailed below).
- **Service Based Business Model (sell merchandise / fan products):** merchandising articles related with European cultural heritage – for design purposes – could be purchased through the platform (e.g. posters, canvas prints, dishes, badges or generated pictures). These would be sold in cooperation with companies that provide such products or services. Collaboration can also be sought with museum shops that can be a possible channel for selling the products. It would also be a good strategy to develop partnerships with several retailers in order to personalize certain items with cultural heritage pictures that could be picked by the user through the culture cam tool.
- **Donation-Based Crowdfunding Model:** this approach is related with receiving of funds through a community of users. The main strategy to be adopted through this model is the offering of free services to the users. In this particular case, the users already can access the service for free through the Culture Cam tool. In this sense, the crowdfunding strategy would be to provide funds for the support of the free Cultural Heritage use of pictures and dissemination of the contents to the general community.

Business to Business

- **Event support services:** one potentially interesting business model to adapt to the tool would be through organizing paid focused events on European cultural heritage images and topics, as well as selling events to cultural heritage institutions. This could be developed through partnerships with museums or other relevant organizations in the area, where the Culture Cam team would be responsible for installing the tool presentation, as well as preparing other relevant exhibitions regarding European cultural heritage materials. This service could also be related with the Freemium model described previously – the users subscribed under the premium category would have special privileges for attending these events.

- **Advertising Revenue Model:** another relevant business model is related with the inclusion of advertisement on the project website. The model is based on the number of visits the website has – with the increase of website traffic, there is a higher chance of getting better advertisement agreements.
- **Big data:** this model is based on the information that the website gathers over time regarding its users. Big data has provided businesses the opportunity to use the information gathered from the consumers' habits in order to understand the market trends. Through this model, the website can provide data regarding the consumers' preferences in terms of European Culture Heritage to third parties that are willing to pay for this information.

6.2 Success Indicators

In the previous sections, the project team elaborated on various strategies that could allow wider access to European cultural content (through the Europeana content database) and on the different business models possibilities that would allow long-term sustainability of the Cultural Cam tool for the Design theme.

In order to measure the potential success of implementing the proposed business models, the project team developed an evaluation framework based on several key success indicators for each of the business models (six in total).

For the Design theme, the following evaluation framework is considered relevant:

Table 1: Evaluation Framework Design

Business Model	Stakeholder	Success Indicator	Evaluation
Freemium	End users	Usability of the platform is demonstrated and users have re-use a considerable number of pictures (500+). Premium model used by at least 15% of the users.	User statistics, user feedback questionnaire

Service Based Business Model	End users	Establish cooperation with at least one commercial organisation in the first year of activity.	Qualitative and quantitative analysis
Donation-Based Crowdfunding	End users and general public that has interest and supports the European Cultural Heritage content sharing	Receive sufficient amount of funds to maintain the tool for the first year of activity.	Qualitative and quantitative analysis
Event support services	Cultural Heritage and Design organizations	3 to 5 events organized per year	Qualitative and quantitative analysis
Advertising Revenue Model	Commercial and design organizations	Establish at least one cooperation contract for including external publicity in the Culture Cam Website	Qualitative and quantitative analysis
Big data	Commercial and design organizations	Sell and/or provision of big data to third parties	Qualitative and quantitative analysis

7. Conclusions and Next Steps

This document provides an overview of the different business models that could be adopted by the Culture Cam tool for the re-use of Design contents for European Cultural Heritage. The Culture Cam tool is currently at its testing phase, although with many of its characteristics already put in practice. In this sense, given the fact that the product is accessible for free, this document provides a set of potential models to be implemented by the project team for further exploitation of the tool. As stated in Chapter 5 and Chapter 6 of the present document, the sources of revenue for the tool are rather service-based than product oriented, meaning the main service itself should be maintained as free for the general users. The business models for re-use focus on two targeted audiences: B2B and B2C. In each of them, the approach strategy is based on further services offered through the platform, e.g. events, selling merchandise, big data management, online advertisement, among others. It is also relevant to highlight some of the proposed success indicators suggested in Chapter 6 that should be considered as reference for evaluating the sustainability in adopting each of the measures suggested in the document.

8. Resources

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Annex I: Report Design Business Model Workshop

Business Model Workshop on the 22nd and 23rd of May 2014.

The main objectives of the two-day workshop were:

- Stimulation of innovative reuse of Europeana's digitised content.
- Bring Europeana's content alive in the shape of new designs and artefacts.
- Connect cultural heritage to other communities that are already doing open design work.
- Stimulate the sharing of designs with others.
- Build demos and prototypes of potential reuse.
- Employing a practice-oriented and participatory approach.

Developed scenarios:

1. eFab! - Fabbings Europe's heritage one piece at a time

An ecosystem to support digital fabrication of Europeana content. This is a knowledge-sharing platform in which a variety of users can share 3D-print vectors and other such knowledge necessary for the digital fabrication of objects.

Features:

- a. Several target audiences (DIY communities, students, set designer, theater producer).
- b. Ecosystem in which digital cultural heritage can be re-used for 3D- and laser printing
- c. Works for a variety of objects.
- d. Creation of vector files and models needed to realize the idea.
- e. Connect it to specific platforms (e.g. engagement by challenges).

2. Knitty Gritty

A tool that enables sharing textile patterns found in the Europeana database. It supports (re)fabrication of vintage patterns.

Features:

- a. Target audience textile fabricators.
- b. Possibility of alignment with the image similarity tool, which searches for similarity in shapes.
- c. Not necessarily textile patterns, it could work with any kind of patterns.
- d. Different softwares can be used.
- e. Convert and export the patterns to specific software.
- f. Each pattern should be available for further adaptation, mix and reuse.
- g. Option to order the pattern in a specific product (addressing the business model part of the concept).
- h. Minimum interface with focus on the functionality as suggestion.
- i. Allowance for contribution of communities.
- j. No need to have a big data storage, outcomes can be exported by the user.
- k. Priority on user interface design.

- I. Problem: too many related products available / the product needs to differentiate from competitors.

3. Media Mole

A collection of Europeana content organised thematically, so that people in the media industry can collect, showcase and reproduce digitised cultural heritage.

Features:

- a. Target audience is professionals from the media sector.
- b. 3 step procedure: collection, showcasing, producing.
- c. Production of own comics/collages based on digitised cultural heritage.
- d. Include as many tools as possible to enable an easy content selection.
- e. Encourage users to share outcomes.
- f. Framework allows users to build, share and collect.
- g. Users can collect thematic content in their collections.
- h. Problem: most designer need only content access.
- i. Potential additional feature: trace what people have done with the content.

4. Open Art

A platform in which teachers can access Europeana's digitised cultural heritage and offer it to students. It specifically focuses on reuse of content for storytelling and narrative.

Features:

- a. Target audience: art- and design teachers.
- b. Tool allows image simplification as well as reworking, remixing, reusing.
- c. Option to print and work with the content manually.
- d. Teachers can use it for classes, e.g. different art styles and artists.
- e. Allows to tell a variety of stories and narratives.
- f. Option to personalize the content.
- g. Option to share outcomes.
- h. Option to create circle which allows permanent development.
- i. Trace back what has been done with your produced content.

5. Comic Saga

Europeana's digitised cultural heritage is transformed into templates to create comic sagas. Kids can create stories with these characters, and use comic bubbles to add lines of text.

Features:

- a. Target audience: 8-12 year old people.
- b. Build a character (choose look, strength, abilities, weapons, vehicles, home and background).
- c. Select from different image classifications.
- d. Present a specific set of preselected items that are classified.\
- e. Drag & drop of images.

- f. Characters can interact together in activities (collaboration or competition, e.g. hunting, etc.).
- g. Skills of the character determines success.
- h. Interesting opportunity to give kids/students the chance to create their own story (potential for educational purposes)

These five scenarios were evaluated according to the key indicators: “openness”, “Europeanability” and “feasability”.

Out of the 5 scenarios developed the day before, 3 concepts were selected to further develop on the second day of the workshop. They were selected on popularity. The scenarios had to be transformed into prototypes with a business model. Two speakers were invited to guide the group and provide background information.

1. Pattern Gems (formerly known as Knitty Gritty): “Create your own patterns from vintage images”

By: Katti Hippala (designer), Christina Holm (SAT), Milena Popova (Europeana) and Nikki Timmermans (Kennisland).

Pattern Gems is a prototype service targeted at professional-amateurs (Pro-ams) in design/creators/makers; students, amateurs that like to create patterns and have the ambition to go from amateur to professional level. Through Pattern Gems they can find high quality re-usable images, hidden gems in Europeana, which can inspire them to create and share new patterns for clothing, furniture, interior design etc. They print these patterns on a broad range of different design products (chair, wallpaper, T-shirts, jackets etc.).

Pattern Gems offers designers a very smart search tool (enabling search on similarity, color, forms etc.) through which they can search through inspirational Europeana content (example collections, e.g. high quality cut-outs of butterflies from different paintings). On Pattern Gems they can share and exchange their design patterns (under an open license) and instruction manuals/templates with the community (pattern library/gallery). Pattern Gems curates the community by asking big designer names to produce example patterns, nominate a designer of the month and organise (together with Etsy) offline fairs where the community can learn from each other.

Pattern Gems generates revenue by sharing revenue streams with registred designers on the sell of a pattern via associated services and production partners advertisement. It liaises with external related services that are already on the market, like platforms where you can order fabrics and professional tools and services that you can use to mask and cut images (e.g. Adobe InDesign). This means that Patterns Gems does not offer the opportunity to create patterns itself.

The group of knitters was considered to be not the main target-group for this service as knitters can just knit from an idea or image they see; they don't really need a service that gives them technical tools to publish a pattern for them. Designers need to 'print' something in the end. That is why the name was changed from Knitty Gritty to Pattern Gems.

The Business Model Canvas:

1. Customer's world and desire for ideal value:

- Professional Designer/ Pro-am
- Etsy user (they might have already opened a shop on Etsy)
- Art Students
- Designers
- Creators/makers

2. Value Proposition:

- High quality, high resolution images with open licenses
- Inspire designers/creators/makers
- Finding hidden treasures and unexpected patterns
- Prints (not knitting)

3. Co-creation value with the customer:

- Pattern Library

4. Interaction and co-production:

- Design/designer of the month

5. Key resources:

- Collections
- Vintage stuff
- 150 dpi content
- Associated service integration: order the patterns in real fabric, cut-tool for cutting the image, masking service (these were all seen as something Pattern Gems cannot make itself and not beat, so it would be better to work together with existing successful services)

6. Key partners:

- Big design names/brands e.g. Acne
- Art schools
- Etsy

7. Mobilizing resources and partners:

- Create a community of pattern makers
- Find unexpected inspiration

- Create a library of patterns
- Instructions for free

8. Cost structure:

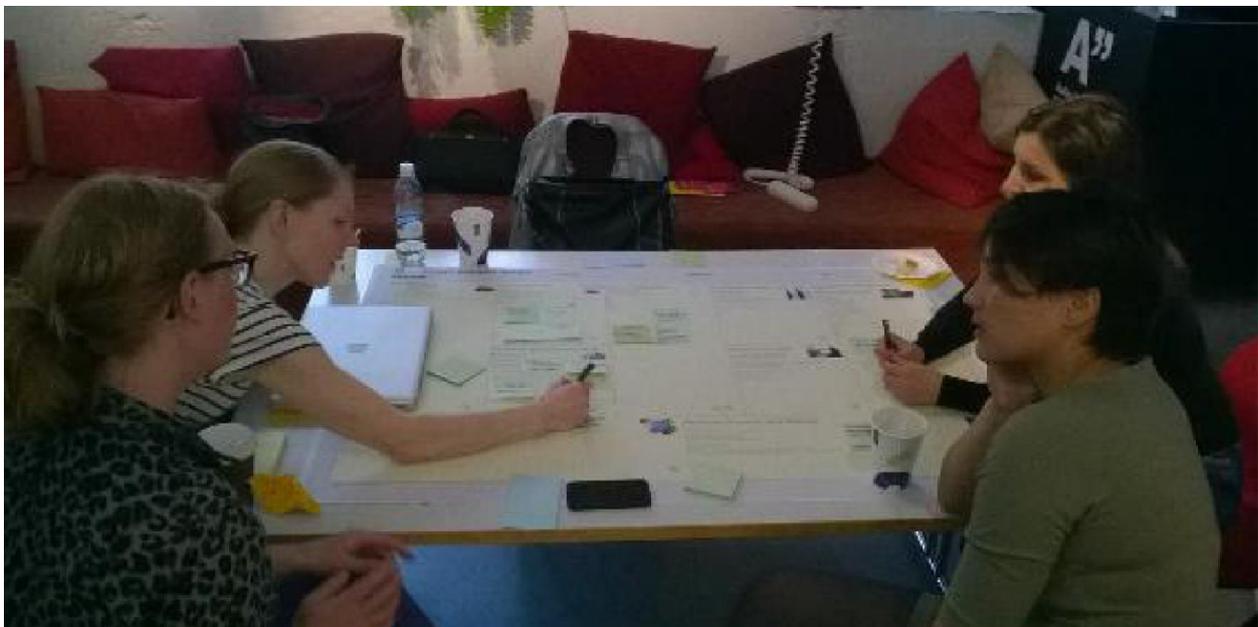
- Curating example collections
- Service maintenance costs
- Associated service integration

9. Revenue streams and metrics

- Revenue sharing-sell pattern
- Production partner ads
- Offline events

Further development points:

- Concrete number estimates needed for the size of total market and each identified segment
- Segment specific number estimates needed for revenues and costs





2. eFab

By: Sanna Martilla (AALTO), Tessa Askamp, Olivier Schulbaum (Platoniq), Jenz Koudahl (SAT, designer) and Nico Kreinberger (MFG).

The eFab prototype offers an environment that allows for digital fabrication of cultural heritage. Different users such as designers, DIYers, students etc. use Europeana content from the database and make it digitally fabricatable by use of 3D- and laser print. Not only the original work as a whole can be printed. Parts of the whole can be separated from the original, and printed as a new object on their own. Another possibility is to make additions to the original object (e.g. at a crown to the nose of glasses).

eFab has several possible consumers. In the first instance, the main customer's are designers, but also students and DIYers. In a later stage, Memory Institutions and heritage fans could be potential customers as well. Crowdsourcing would be a good means to raise money in the initial stage to initiate the project.

Digital fabrication is a new and emerging field in which knowledge is not fully developed yet. Knowledge of vector settings is necessary in order to digitally fabricate. Once a design is made, the how-to knowledge could be shared on a platform, such as the instructables.

The final product - the digitally fabricated object - can be used for diverse purposes: scenographers can use it to build theater stages, memory institutions can use it for sales purposes, and fans can use it as decoration for their house or on a keychain. Value proposition lies in make digital fabrication of the objects feasible.

Professionals can use the knowledge they have generated in the process of fabricating the object and pass it on to other parties. So the process of create/share knowledge from the know-how could be a means of generating profit. Further, value proposition can be derived from versioning of the objects.

Key partners are memory institutions, and labs offering services such as 3D-printing/ laser-printing. These partners could be reached by means of employing the Europeana network and the networks of Europeana's partners. Social media can be a good tool for a larger outreach. In addition, a challenge can incite interest in digital fabrication of cultural heritage. Groups such as designer, students or DIYers could participate in such challenges.

The Business Model Canvas:

1. Customer's world and desire for ideal value:

- Crowdsourcers: enable initial 3D-modelling, and the making of the object, writing manuals, dissemination of metadata.
- Designers: Prototypes, creation of new designs, on the longer run: contract someone else
- Memory institutions: potential buyers and resellers of the product.
- Heritage fans: potential buyers of the product.

2. Value Proposition:

- Make heritage objects feasible (at low costs)
- Value for content providers (links between original and derivatives/new works)
- Digital money for the community through knowledge (know-how): create and share
- Iterative design process generates value for the maker
- Versioning (enrichment)

3. Co-creation value with the customer:

- Curating content
- Community facilitation (metadata and content)
- Share content with the community
- Search tool

4. Interaction and co-production:

- Crowdsourcing

5. Key resources:

- Labs (social and creative labs, such as 3D- and laser printer labs)
- High resolution content
- Curating skills
- British Library for tools

6. Key partners:

- Memory Institutions
- Instructing other services
- Documentation: practices and processes
- British library
- Design institutions/schools

7. Mobilizing resources and partners:

- ENoLL
- In-House
- Social Media
- Networks of Europeana, Europeana's partners, and AALTO-university's partners

8. Cost structure:

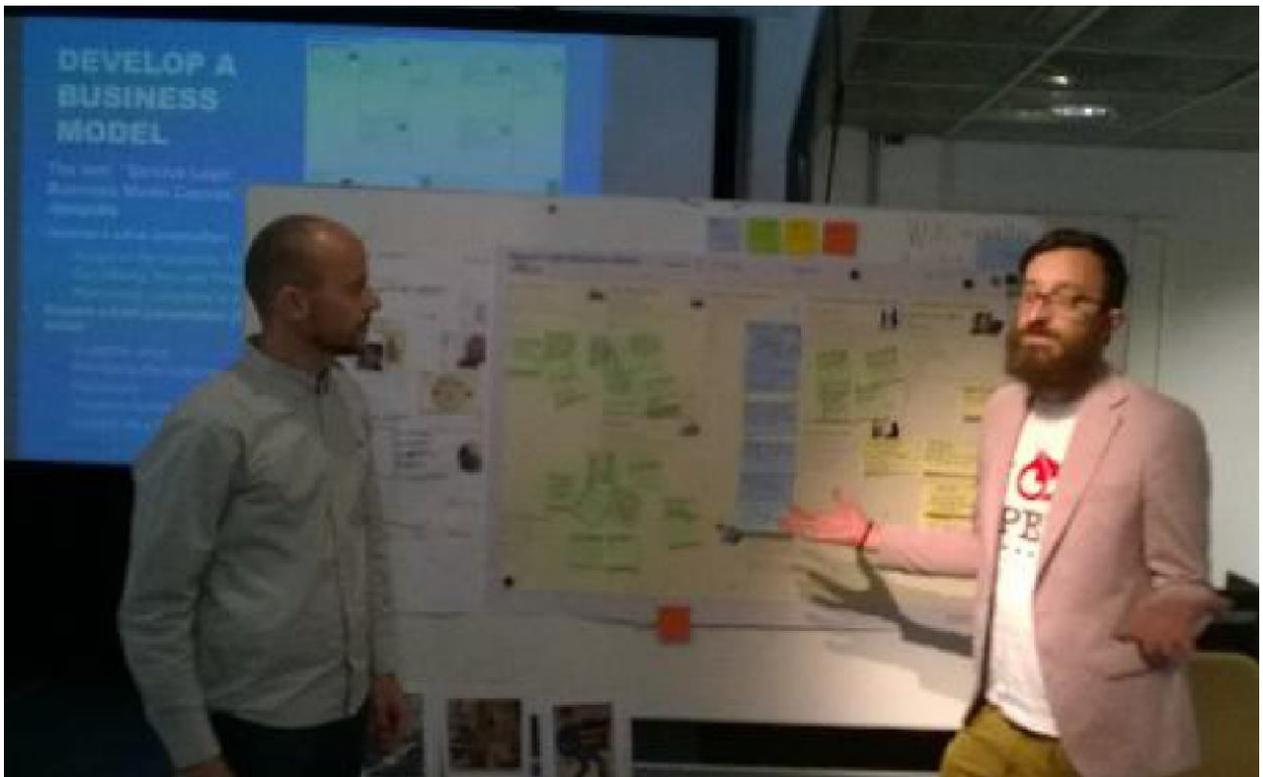
- Maintenance
- Servers

9. Revenue streams and metrics

- Public Funding
- Crowdfunding

Further development points:

- More concrete plan needed to communicate the key differentiating factors in the marketplace
 - More clear plan for dealing with the special characteristics customers' buying process and their funding mechanisms in the case of non-profit customer segments
 - More clear metrics for success needed



3. Collage Group (combination of Comic Saga and Open Art)

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The Collage prototype is a customisable online tool and mobile application targeted at public and design professionals. The tool allows new masterpieces to be created from the reuse of works of art, in a fun and pedagogical way. Specifically, the tool translates into an online template where Europeana content can be accessed, transformed and placed for public viewing and rating. Own creations can also be uploaded and used to mix heritage and new content.

The prototype is divided in two different versions, according to the degree of demand for quality.

The basic version is open access, via a practical and user-friendly interface. Within a defined template, the general public accesses Europeana digitised cultural heritage and transforms it to create stories or narratives. At this level a pedagogical feature can also be integrated by education professionals, as the cultural asset can be disaggregated to fundamental components, thus enabling the understanding of the considerable thought and work put into a work of art. A historical description can be attached to assist this task.

The central tool has some added features:

- A social tool to share and rate results and co-create new projects.
- The launch of recurring challenge for collages. The level of difficulty can be adjusted.

There is also a “premium edition” targeted at Design professionals, who would like to utilise, or receive inspiration from, the wealth of high quality Europeana content.

An indexed accessibility to the Europeana content is the clear added value of the tool. A search capacity is linked to the collage tool, enabling an inspirational and serendipitous experience for amateurs and professional users alike. The possibility to work over relatable and meaningful works of art is its unique selling proposition. In comparison, perceived competitors, the tool is able to provide easily available, and searchable high quality content of important historical content.

The Collage Tool generates revenue via the premium service provided to designers. In this version, the application has a small buying cost. In addition the resulting productions can be printed by order. To enable the functioning of the platform, minimum costs are expected, namely the ones necessary to run the archiving and indexation on the source, as well as the running costs of the tool.

The partners of the project are content providers (Europeana), professional designers and software developers. To enable the printing of the final works, a number of partnerships is envisaged with service providers.

The Business Model Canvas:

1. Customer's world and desire for ideal value:

- Public animators
- Teachers (designers/primary school) and kids
- Graphic/interaction designer
- Need: easy quantity, reusable content: Good templates
- Need: quality tools, usable
- Need: Share results & collaboration

2. Value Proposition:

- Inspiration and serendipity
- Convenience and easy to use and access
- New personal engagement
- Meaningful content
- Clear framework
- Diversity
- Fun experience

3. Co-creation value with the customer:

- yet undefined

4. Interaction and co-production:

- Creating challenges
- (Re)dissemination

5. Key resources:

- Content
- Metadata (search)
- Usable interface/software
- Social media

6. Key partners:

- Content Providers (curators)
- Professional designer
- Software developers

7. Mobilizing resources and partners:

- yet undefined

8. Cost structure:

- Managing archives and usability requirement
- Service costs

9. Revenue streams and metrics

- App-price
- Painting (3D) service
- Number of users, number of models

Further development points:

- The role and characteristics of direct buyers and distributors (disseminators) should be clarified
- In the case of non-profit customer segments, more clear plan for dealing with the special characteristics customers' buying process and their funding mechanisms
- Public-Private-Partnership collaboration models with different stakeholders need to be addressed



