D3.2 – Documentation of Business Model Propositions

This report documents the underlying business model propositions that have been identified for the 5 themes in Europeana Creative.

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Approval

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1. Introduction

This report documents the business models that have been identified for the five themes in Europeana Creative[1], allowing cultural heritage organisations and the creative industries to develop applications and services with content in Europeana for specific thematic areas: natural history education, history education, social networks, tourism and design. The business models integrate requirements and objectives from both the supply (content providers) as well as the demand side (creative industries).

In order to identify requirements, for each theme a business model workshop was organised as part of a co-creation workshop in which different pilot applications addressing the themes were developed[2]. In the workshops, different stakeholders were brought together. Between 15-20 participants took part in each workshop, including pilot partners as well as end users (e.g. school teachers and students, tour guides, designers) as well as representatives from the business sector. The following workshops were organised:

- Natural History Education: 8 May 2013, Prague (Czech Republic)
- History Education: 15 May 2013, The Hague (The Netherlands)
- Social Networks: 13 November 2013, Palma de Mallorca (Spain)
- Tourism: 27 November 2013, Mons (Belgium)
- Design: 23 May 2014, Helsinki (Finland)

The simple but robust business model canvas developed by Alexander Osterwalder and Yves Pigneur[3] was used as a guiding methodology. For each workshop a tailor made program was set up to cater for specific demands. The application ideas with the best potential developed in the co-creation workshop were further explored on their business potential during the business model workshop (read the White Papers[4] for an extensive explanation of the methodology). Several business models were identified, further developed and analysed after the workshop during online calls[5]. Lastly, the models were documented in White Papers.

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[1] See http://pro.europeana.eu/web/europeana-creative.
[2] See http://pro.europeana.eu/web/europeana-creative/blog/-/blogs/co-creation-and-business-modelling-workshops-underway.
[3] Alexander Osterwalder and Yves Pigneur, Business Model Generation, Wiley, Hoboken, NJ, 2010. Also see: http://www.businessmodelgeneration.com.
[4] See the White Paper Business Models for Education (for the themes natural history education and history education), White Paper for Social Networks and White Paper for Tourism, which can be downloaded from http://pro.europeana.eu/web/europeana-creative/project-documents.
[5] This report focuses on *business models*, not on a business plan for the pilot applications or a blue print for business propositions of applications based on digital heritage.

2. Requirements

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"[6]. Cultural institutions are usually non-profit-making organisations that develop their work to safeguard the public good and not to obtain profit[7]. 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. However digital resource projects struggle in the transition from grant funding to a longer-term plan for ongoing growth[8]. In such a framework, sustainability is a prime concern and challenge.

Within this project we understand business models – meaning the way that value is created, delivered and captured within an organisational point of view[9] - as the way public institutions deliver content and revenues are created. As producers and distributors of content, cultural institutions develop new (non-commercial) initiatives (projects and services) that need to be sustainable in the longer run, and also serve as content providers for the commercial sector. We identified business models according to the following requirements:

1. They must allow wider **access to cultural content** (while respecting the copyrights and related intellectual property rights of third parties):

- **Infrastructure:** creative industries need to have easy and direct access to high quality content from Europeana via the Content Reuse Framework that is currently being developed in the project[10]. The specifications of this framework can be found in *D3.1*

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[6] "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.

[7] 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, p.119; accessed February 19, 2014.

[8] 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.

[9] Alexander Osterwalder and Yves Pigneur, Business Model Generation, Wiley, Hoboken, NJ, 2010.

[10] As long as the Content Reuse Framework is not in place, a manual procedure to filter reusable content in Europeana was followed.

Specifications for Implementing the Content Layer of the Extended Europeana Licensing Framework[11];

- **Open licensing**: the content not only needs to be accessible, but also available for reuse, meaning that it should be available under one of the nine rights statements that allow reuse: the Public Domain Mark, Creative Commons Zero, the six Creative Commons licences[12] and OOC-NC[13];
- **Conditional statements:** access to and reuse of content can be restricted to specific groups of users under conditions specified by data providers, e.g. researchers or educational publishers[14].

2. They need to **create revenues** to guarantee the long-term sustainability of projects and services exploiting the content:

- **Open source:** because the pilot applications receive public funding for their development, wherever possible the software is made publicly available under the European Union Public Licence v1.1 (EUPL v1.1) or licence compatible with EUPL v1.1.[15]. This means that the software can be (commercially) reused by third parties;
- **Revenue from (in)direct benefits:** in case the product owner of the pilot has a public mission, often revenues can't be generated by the direct beneficiaries of the service (students, teachers etc.), therefore the focus must be directed towards indirect beneficiaries that value the service but do not directly use them;
- **Additional services and goods:** transaction-dependent revenues can be generated by charging fees for specific additional services (e.g., charging fees for tutorship) or additional unspecified services (e.g., membership fees, donations) or goods (e.g., fan merchandising) from direct beneficiaries;
- **Revenues:** exploitation of results and reuse of results in further activities is very much encouraged within the FP7 framework via which the project is funded[16] as long as it is generated from the use of the foreground[17].

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[11] See http://pro.europeana.eu/documents/1538974/1601973/eCreative_D3.1_KL_v1.0.

[12] See D3.1, Annex 1, page 5.

[13] See http://pro.europeana.eu/available-rights-statements.

[14] See D3.1, Annex 1, page 5-6.

[15] The only exception is the pilot application Museum Adventure Game that is being developed as part of the Natural History Theme.

[16] See FP7 Grant Agreement - Annex II General Conditions, 2 October 2008, II.12-14 (page 14-16) and II.17-18 (page 19-20), available at ftp://ftp.cordis.europa.eu/pub/fp7/docs/fp7-ga-annex2-v2_en.pdf, accessed 7 July, 2014.

[17] Foreground means the results, including information, whether or not they can be protected,

[17] Which are generated under the project. Such results include rights related to copyright; design

[17] Rights; patent rights; plant variety rights; or similar forms of protection (FP7 Grant Agreement - Annex II, page 2).

3. They must be **specific as well as generic** in the way that they specifically apply to the reuse scenarios of the pilot applications, but also have a more generic applicability for (future) applications that are developed.

3. Business Models for Themes

The following business models are identified for the five different theme applications to be of main relevance. It must be noted that the business models defined for each application often cannot be a sustainable model by itself but must be seen in conjunction with the other models. A fully detailed list of explored business models, including an elaboration of all nine building blocks of the canvas, can be found in the White Papers mentioned earlier. For the design theme only a rough sketch of business models could be made because the kickoff of the pilot took place in May 2014 and a definite pilot application idea has not been chosen yet.

3.1 Theme #1 History Education

The goal set out for the History Education theme application is to stimulate the reuse of cultural heritage resources for history education through 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. As a result of the Co-Creation workshop, the Critical Analysis Tool was selected as pilot application. The Tool is developed by EUROCLIO[18] for their educational platform Historiana[19], in close collaboration with an international community of history educators and web developer Webtic. ***The application gives history students a (free) tool to analyse visual sources***. Access is given to themed content in Europeana that is of sufficient quality, reusable, is historically relevant and suited for use in history classes. Educators can create online learning activities using the tools, share these online learning activities with their fellow educators, and invite their students to do these learning activities. Educators can use preselected sources from different collections or upload their own sources.

Value proposition Critical Analysis Tool further specified for each target group:

- **History students (14+)**: improve analytical skills and get high-quality online and visually attractive education;
- **History educators:** for those who are not confident in the use of IT, and are limited in their time and find it challenging to engage students, there is free access to preselected, curated and trusted source material, free learning activities that engage students and are tailored for use in history education, training services (paid, offline) that support professional development;
- **History educators**: those who are highly IT-skilled and are willing to contribute actively to the development of the tool can join an exclusive community of contributors, help with

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[18] EUROCLIO is the publicly funded European Association of History Educators, see http://www.euroclio.eu.

[19] Historiana (a program of EUROCLIO) is an online educational multimedia tool that offers students multi-perspective, cross-border and comparative historical sources to supplement their national history textbooks, see http://historiana.eu.

the selection of sources and the development and testing of learning activities, contact with and recognition by peers, access to professional development, equipment and travel opportunities;

● **Technology providers**: participation in an effort to deliver IT services to an international educational community of history educators, recognition and a growing reputation in the history education sector, more business and sales of their products and service contracting;

● **Educational publishers**: state-of-the-art online learning resources for history education for clients as "professional users" of the tool;

● **Public organisations** with the mission to provide high-quality and accessible education for all citizens[20]: be a partner in an international public–private partnership where costs and risks for the development of online educational resources are shared, and teachers and students get free access to high-quality learning resources.
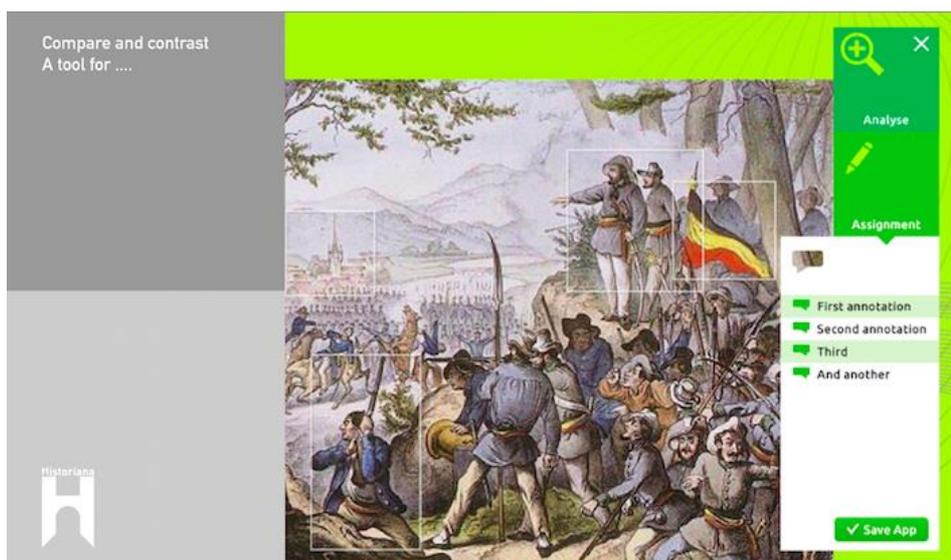
Fig. 1:Screenshot of the Critical Analysis Tool

EUROCLIO has a long-term commitment to develop engaging online learning activities for and with their community. The Tool increases access to quality (enriched) content, improves services for their members by creating learning activities (tools and resources) and increases their visibility on a non-commercial basis. The following business and revenue models are set out to ensure the sustainability of the Tool:

● **Crowdsourcing**: a crowdsourcing scheme entails the outsourcing of tasks, allowing users to contribute and add information. The success of the Tool stands or falls with an active community of educators creating online learning materials, providing feedback

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[20] E.g. national ministries of education, local educational authorities, universities and foundations.

(peer reviews) and students using the materials. In this pilot most of the work is done by educators as part of professional volunteering. Although crowdsourcing does not generate revenue directly, it supports the core value of the service;

- **Partnerships with GLAMs:** in partnership with GLAMs EUROCLIO selects quality content[21] as building blocks for the learning resources and gets resources (educators) to work on the platform (pooling and sharing of resources and services). This does not create revenues directly. On the longer term, when the basic tools proves to be valuable for the market, the focus can broaden to establish partnerships to build more tools (with educational publishers, technology providers and memory institutions);

- **Partnerships with training institutes**: another type is partnerships with Teacher Training Institutes, e.g. research institutes and schools. In these partnerships the training institute works with their students to provide content or feedback. They provide quality feedback to improve the services;

- **Training (additional services)**: while maintaining the core business free of charge for educators and students, additional training services and seminars for teachers are offered. EUROCLIO is already offering training services to their community, but does not promote this very explicitly yet. A training model for the new application is developed and promoted explicitly in the community, so this business model can mature throughout the project period;

- **Exemplar learning activities (projects and consulting)**: EUROCLIO offers GLAMs or educational publishers the possibility to showcase exemplar learning activities on any website. An account with tailored demo content is developed. Educators can try out this demo without being logged in and GLAMs can show how their content can be used in an educational context;

- **Grant funding/ subsidies**: 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. Since this business model requires a long breath, EUROCLIO follows-up this business model by promoting the Tool and results at conferences to develop a network of public funders and make an analysis of which funding cycles fit the further development of the Tool;

- **Donations/ philanthropic funding**: generating revenue from indirect beneficiaries (e.g., public organisations, technology providers) by asking for donations and optionally for direct beneficiaries in the form of crowdfunding for the development of specific additional technology and modules (teachers, students);

- **Sponsorships:** corporate and social organisations financially support the Tool and in return their products or services are associated within the brand and/or audience.

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[21] At the moment, high quality reusable content in Europeana is limited. Content sourcing and acquisition is therefore set in place.

3.2 Theme #2 Natural History Education

The goal set out for the Natural History Education theme application is to demonstrate the creative reuse of Europeana resources by developing viable applications, in the form of (serious) games, with a clear focus on the field of natural history education. As a result of the Co-Creation workshop, the Museum Adventure Game called The Secret Legacy and the Memory Card Game called Memory Match were selected as pilot applications.

The Museum Adventure Game is developed by Exozet Games (XZT) in collaboration with the National Museum of Prague (NMP) and the Museum für Naturkunde (MfN). ***The application offers an educational game through which anyone can learn about natural history in a fun way***. The game - a combination of a point-and-click and a hidden object game - tells the story of the secret legacy of the historical figure Alexander von Humboldt and ends with a mystery. Main character Sara needs to solve educational puzzles and tasks to gather all the clues to figure out where to find a map and collect all of the pieces of the map to discover the hidden secret. The first chapter takes place at the MfN. A second chapter will most probably be developed at a later stage of the project as well.

Value proposition Museum Adventure Game further specified for each target group:

- **Broad public/Gamers:** offers an attractive game that disseminates digitised natural history content and knowledge via gaming principles to an audience that is not particularly familiar with museums, collections and natural history;
- **Museum visitors**: offers a new way of experiencing the museum and its collection for all types of visitors, specifically interesting for (young) museum visitors with an interest in new media and gaming (e.g., iPad users, adventure gamers, etc.), supports teachers in teaching natural history themes to children, and families in the informal education of their children;
- **GLAMs**[22]: extends the public mission by giving access to and providing possibilities for reusing cultural sources/content for educational purposes justifying the need to digitise collections, increases the use and awareness of the collections of the institutions by addressing a bigger community, gives a greater visibility to the institutions supporting the justification for public funding to keep these kinds of services/tools ongoing, increases the sales of museum visits and ticket;
- **Public educational institutions**[23]: provides and improves educational services for citizens or institutions, makes education accessible for a broad audience;
- **Game developers**: offers the opportunity to participate in the growing market of ICT in the education sector, increases business and sales opportunities based on these kinds of products and services.

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[22] Galleries, Libraries, Archives and Museums (GLAM).
[23] E.g. ministries, schools, foundations and universities.

Fig. 2: Screenshot Museum Adventure Game

The Memory Card Game is developed by Semantika in collaboration with NMP and MfN. ***Through this application children can learn about natural history via the gaming principles of the memory card game.*** The game includes predefined thematic sets of cards from selected Europeana content. The user plays by himself or against another user to find matched pairs on the board answering quiz questions on the cards. More card sets will be unlocked according to the user's achievements and game progress. An extended option for users will offer the opportunity to create your own quiz questions by use of a predefined template.

Value proposition Memory Card Game further specified for each target group:

- **Children (pre-school and elementary)**: offers an attractive and free educational game about the topic of natural history. Especially parents will search for applications with good and trusted content, combining a game with a learning experience. The game can also be of added value for schools, as a complementary teaching tool for teachers and as an additional learning tool for students;
- **Museum visitors (and educators)**: offers a collaborative tool that museum visitors can use during their museum visit. For museum educators it can be very useful to use the game (or create one) on mobile devices or display the game on touch panels directly in the exhibition room in order to guide a group and at the same time to offer them some excitement and diversification in experiencing the exhibition;
- **GLAMs**: extends the public mission by giving access to and providing possibilities for reusing cultural sources/content for educational purposes justifying the need to digitise collections, increases the use and awareness of the collections of the institutions by addressing a bigger community, gives a greater visibility to the institutions supporting

the justification for public funding to keep these kinds of services/tools ongoing, increases the sales of museum visits and ticket via increasing the interactive elements in the exhibitions;

● **Technology providers**: promote their services in new growing markets (children, museums), get inspiration to create new applications and versions of apps and games or participate with hardware solutions (e.g. tablets).
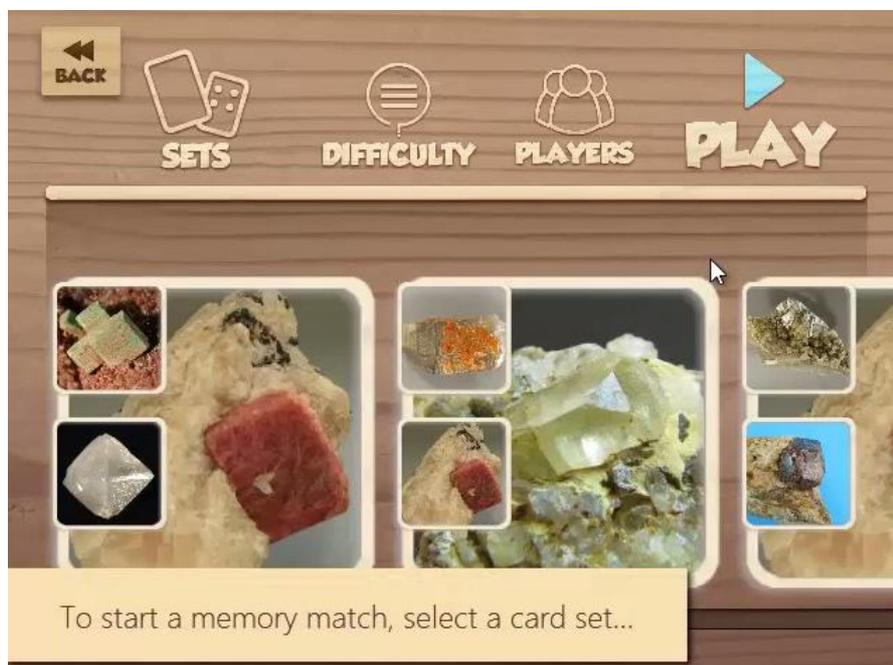
Fig. 3: Screenshot Memory Card Game

For Museum Adventure game developer Exozet Games the game is an opportunity to collaborate with cultural institutions, make innovative use of cultural heritage content and explore a new market for their products and services. The Memory Card Game is developed by software development company Semantika. Given the vast experience of Semantika in software development, museums, heritage and new technologies, they have an interest in continuing their work in the field of cultural heritage. The following business and revenue models are set out to ensure the sustainability of the Adventure Game and Memory Card Game:

● **Crowdsourcing**: the success of the Card Game depends on an active community of users that like to play the game, create their own quizzes (as learning resource or in their exhibition spaces), want more and might even be willing to pay for premium services. This can be stimulated by organising competitions including winners' packages;

- **Freemium service**: the first - and maybe also second - chapter of the Adventure Game is distributed for free in the Apple App Store and a first set of cards for the Card Game. Additional chapters, full versions but also by additional items can be purchased later;
- **Customization (consulting and projects)**: the games can be adapted for other museums and institutions. Revenue is generated by consulting offers from museums and/or project funding that is acquired from other (public) funds in either a standard service model offer or on a project basis;
- **Merchandise (additional goods):** because the games are targeted at consumers and try to create a community of fans, fan merchandising can be used and sold to players of the game;
- **Donations/ philanthropic funding**: generating revenue from indirect beneficiaries (e.g., public organisations, technology providers) and optionally for direct beneficiaries in the form of crowdfunding for the development of the game (fans);
- **Sponsorships:** corporate and social organisations financially can support the game and in return their products or services are associated in relation to the brand and/or audience;
- **Advertising**: online advertising by companies that have the same customers as the game, though well selected ones;
- **Public-private partnerships:** generate revenue from additional commercial partners that bring in new resources, services and know-how in return for brand association;
- **Selling audiences to businesses**: customer-related information is sold to data-mining agencies or other (social) organisations (e.g. museum marketing departments).

3.3 Theme #3 Tourism

The goal set out for the Tourism theme application is to demonstrate creative reuse of Europeana resources by developing a test application that integrates Europeana content into a touristic service. As a result of the Co-Creation workshop, VanGoYourself (VGY) was selected as pilot application. VGY is developed by Plurio.net (PLURIO) and Culture24 in collaboration with the Austrian Institute of Technology (AIT), service provider Surface Impression and design agency Spild af Tid (SAT). ***The application offers a fun and easy service through which you can engage with famous paintings creating a souvenir of your trip to the museum.*** VGY is a responsive web application that helps to recreate a classic painting with friends and family for virtually anyone with access to the Internet, then upload and share the photograph, "twinned" with the original, for others to enjoy.

Value proposition VanGoYourself further specified for each target group:

- **Smartphone users[24]**: offers a fun and easy to use service that they can use at home or when visiting a museum or an event at a specific destination. They can access the

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[24] The prototype is web-based, following the first pilot experiences, there is a need for the development of a native mobile application, but this is out of scope for the pilot development.

paintings digitally and use the service to engage with them instead of just looking at them in the museum, have fun with their friends and family and re-experience certain historical events, provides them with the opportunity to create souvenirs and memories of the visit or trip;

● **Museum staff:** offers a tool for museum staff, cultural heritage and professionals in the touristic sector to provide their customers with a great time or experience at their destination. They can easily select content that is relevant for their customers or let them use an existing selection of content;

● **GLAMs:** extends the public mission by giving access to and providing possibilities of reusing cultural sources/content for educational purposes justifying the need to digitise collections, increases the use and awareness of the collections of the institutions by addressing a bigger community, gives a greater visibility to the institutions supporting the justification for public funding to keep these kinds of services/tools ongoing, increases the sales of museum visits and ticket.
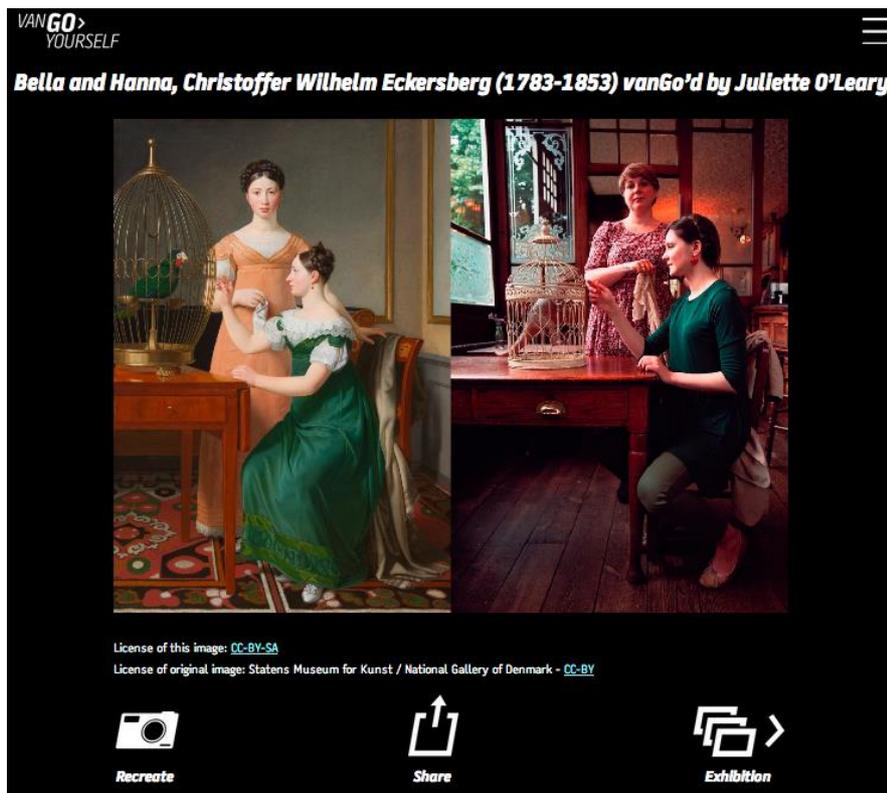

Fig. 4: Screenshot VGY

VGY is developed by PLURIO (a project of the non-profit association Agence Luxembourgeoise d'Action Culturelle asbl) and Culture24 (independent charity). They are committed to develop VGY because PLURIO wants to offer services that can promote events for the Greater Region and collaborate across borders and Culture24 wants to support the cultural sector to reach

audiences across digital platforms. The following business and revenue models are set out to ensure the sustainability of VGY:

- **Crowdsourcing**: crowdsourcing is the essential part of the success of the application. Users can recreate famous paintings and the platform crowdsources user generated contributions. It has already become clear during the pilot period that users love the application and are contributing heavily;
- **Freemium service**: VGY offers a free web service, and also offers a paid mobile application for extra services such as filtering options for your images, image processing etc.. This can create revenues from end users;
- **Partnerships:** in partnership with GLAMs, PLURIO and Culture24 open up their collection in the application[25] in either a hub solution from one brand perspective or a (paid) white labeling solution in which the service is customised for GLAMs with their own branding. GLAMs pool in their resources to select reusable content, PLURIO and Culture24 invest time in maintaining a network of partners;
- **Events (additional services):** VGY offers a paid events service for GLAMs. VGY organises a VGY and takes care of the whole application adjustment, organisation and promotion of the event. This model and different package options are explored and further developed based on market demand;
- **Merchandise (additional goods)**: VGY offers/sells (personalised) merchandising products/fan products with a strong relation to the application (e.g. posters, canvas prints, mugs) in collaboration with companies that provide such services and/or museum shops;
- **Customization (consulting and projects):** VGY offers (paid) customized versions of the product/service for other sectors, e.g. the educational sector (spin-off projects). Because the lifespan of VGY is predicted to be short, the service can have a longer life span in an educational context.

3.4   Theme #4 Social Networks

The goal set out for the Social Networks theme application is 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. As a result of the Co-Creation workshop, Sound Connections[26] was selected as pilot application. The tool is developed by the Netherlands Institute for Sound and Vision (NISV) in collaboration with WeAreWhatWeDo - the organisation behind Historypin (HP), technical partner Ontotext and the British Library (BL). *The application offers GLAMs a tool and platform to engage and interact with communities that help enrich their sound collections.* The tool enables the

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[25] At the moment, high quality reusable content in Europeana is limited. Content sourcing and acquisition is therefore set in place in WP1 of Europeana Creative.
[26] See http://www.historypin.com/en/explore/birdlife, http://www.historypin.com/en/explore/cityscapes and http://www.historypin.com/en/explore/aviation.

Historypin platform to gather together audio files via a mapping interface, solicit information and enrich these with new information from their community. More concretely, end users can find sounds recorded on specific locations on the Historypin platform, play them, add additional information and discuss with others.

Value proposition Sound Connections further specified for each target group:

- **GLAMs:** the tool can be used to achieve more interaction with the visitor/user, and also to awaken his interest and engagement with content;
- **Specialist communities** (e.g. bird, aviation, cityscapes enthusiasts): the tool offers the possibility to define and improve content related to sounds. Users can share their knowledge on specific topics by adding/completing information and by adding new content and, thereby exchanging knowledge with other like-minded people;
- **Commercial and social organisations** (e.g. national parks, aviation companies, cities): depending on the type of content offered by GLAMs, third parties that share the same mission and interest can be added to further engage end users and strengthen the partnerships with GLAMs.
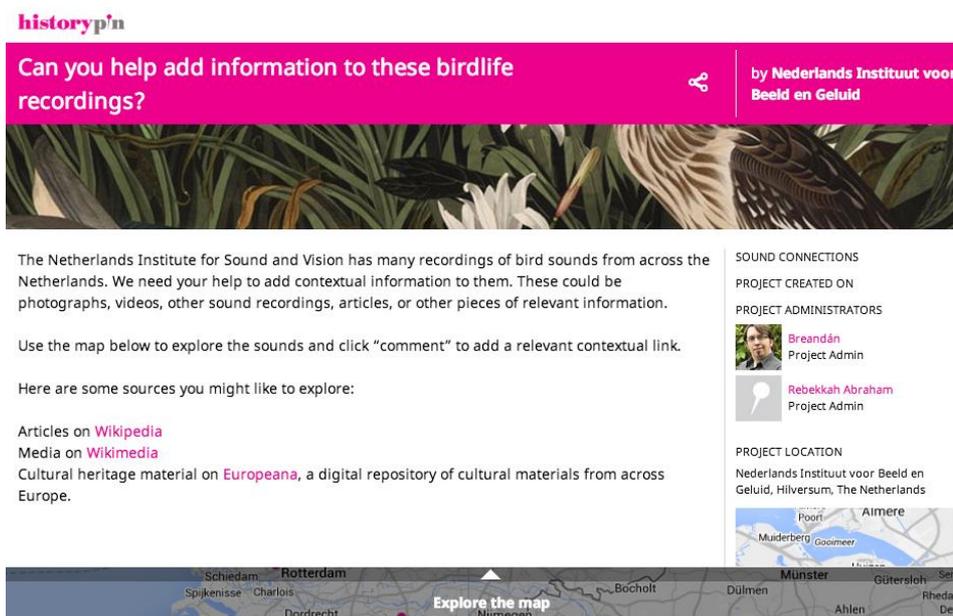
Fig. 5: Screenshot of Sound Connections on Historypin

The tool builds upon the crowdsourcing projects Sounds of the Netherlands (NISV) and UK Soundmap (BL); both institutions make their content available on Historypin via the new Tool. The non-for-profit organisation WeAreWhatWeDo is committed to develop the tool because it makes it possible to feature geolocated content on their platform and offer this to their existing community of history enthusiasts for crowdsourcing activities. The following business and revenue models are set out to ensure the sustainability of Sound Connections:

- **Crowdsourcing**: communities enrich audio content with more data that is of interest to institutions. To stimulate crowdsourcing activities, a call to action for communities of birds, aviation and city scapes enthusiasts[27] has been launched in order to engage users;
- **Customization (projects and consulting)**: (smaller sized) GLAMs assign WeAreWhatWeDo to consult them on how to work with the platform and customise the design of the platform for their specific needs while GLAMs curate the content;
- **Public funded projects**: other publicly funded projects make use of the developed technology of the application and new spin-off projects are generated that help sustain and further develop the tool;
- **Sponsorships:** sponsorships are offered to commercial and social organisations (including GLAMs). As a sign of gratitude for sponsorship, the sponsor's products or services are promoted on the platform via brand marketing;
- **Donations/ philanthropic funding:** businesses, organisations and foundations are asked to make a donation or pay a contribution to help sustain the tool (e.g. mécénat, crowdfunding);
- **Events (additional services)**: offline events (tours, roadshows etc.) are organised to support the initiation of crowdsourcing activities and paid by businesses, organisations and foundations.

3.5 Theme #5 Design

The goal set out for the Design theme application is to connect Europeana's cultural heritage to open design communities of craft and media designers who wish to use cultural heritage objects as a source for new, derivative designs and who are also interested in sharing their designs back to the community in reusable forms. During the Co-Creation workshop business models of three application ideas were developed: Pattern Gems, eFab and Collage. The Tool will be developed by Aalto Media Factory (AALTO) in collaboration with AIT and SAT.

Value propositions:

- **Pattern Gems**: through this prototype service, professional-amateurs in design can find high quality reusable images which can inspire them to create and share new patterns for clothing, furniture, interior design etc. that are printable on a broad range of different design products (e.g. chair, wallpaper, T-shirts, jackets);
- **eFab**: this prototype offers an environment for designers, DIYers and students to make Europeana content digitally fabricatable by use of 3D- and laser print. The final product - the digitally fabricated object - can be used for a variety of purposes such as decoration, to build theater stages or to sell in museum shops.

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[27] These communities were chosen because content related to these themes could be provided.

- **Collage**: this prototype is a customisable online tool and mobile application that targets both a general public and design professionals. It allows them to create new masterpieces by means of reusing of works of art. The application is both fun and pedagogical. 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 possible business and revenue models that were explored are:

- **Pattern Gems**: this prototype could generate revenue by sharing revenue streams with registered designers on the sale of a pattern via associated services and production partners advertisement. It could also create revenue by organising offline events for the community;
- **eFab**: digital fabrication is a new and emerging field in which knowledge is not fully developed yet, the know-how could be offered as a paid service for other parties. Crowdfunding can be used as a mechanism to initiate and fund the printing of objects, also public funding is considered;
- **Collage**: the basic version is available as open access, via a practical and user-friendly interface. A premium edition targeted at design professionals is offered. The resulting productions can be printed on demand.

4. Evaluation Framework

The following evaluation framework for the different theme applications is formulated to track the initiation of the main business and revenue models at the end of the pilot period. For some models that are listed in the previous paragraph, no indicators were formulated as these models were considered to be out of scope to pursue in the pilot period. For the design theme applications we haven't been able to formulate success indicators since no final pilot concept has been chosen yet.

4.1 Theme #1 History Education

Critical Analysis Tool

The development of this pilot application runs from May 2013 to August 2014.

Table 1

Business model	Stakeholder	Success indicator	Evaluation
Crowdsourcing	History educators and students (end users) (B2C)	- voluntary contributions by educators, creating around 10 learning activities per year - use of the 20 learning activities and tools by students - evidence of increase of knowledge by students - satisfaction by educators and students - More than 100 registered users.	Focus groups, usability testing, website statistics
Partnerships	GLAMs (B2B)	- 20 partner institutions whose content has been included in the database - more than 1.000 sources included per year - participation of educators working at the partner institution	Analysis, website statistics

		contributing to the platform - registered interest in the Historiana services - use of the tools in teacher training courses - quality feedback from research organisations.	
Partnerships	Training institutes/ schools (B2B)	Involvement of at least 10 schools and at least 3 teacher training institutes.	Analysis
Additional services (training)	Educational publishers, educational/teacher training institutes/public organisations/schools (B2B)	2 paid trainings and a registered interest in the service.	Analysis
Demo account (projects and consulting)	Educational publishers, GLAMs (B2B)	Registered interest in the use of a demo account.	Analysis
Donations/ philantrophic funding	Public charity organisations	1 substantial donation	Analysis
Grant funding/ subsidies	European Commission, national, (private) foundations, regional and local governments	Financial support via 5 grants.	Analysis

4.2   Theme #2 Natural History Education

Memory Card Game

The development of this pilot application runs from May 2013 to August 2014.

Table 2

Business model	Stakeholder	Success indicator	Evaluation
Crowdsourcing and freemium service	End users (B2C)	Positive feedback of the end users: - increase of knowledge via the quiz questions - increase of completed free collections / decks - increase of user satisfaction via positive comments and game sharing - increase of hits on museum content - increase of museum visits - increase of the number of downloads and users registration - increase of user traffic via Europeana - number of new sets created by users - positive feedback from users using the game in the museum exhibitions	Focus groups, usability testing, website statistics, ticket sales, positive rating in app store and social media sharing
Customization (consulting and projects)	Museums, public funders (B2B)	Financial support via project funding or consulting offers: - line-up of museums interested in an adaptation of the game - project funding (opportunities) for new	Analysis

		adaptations of the game - implementation of the game in exhibitions of GLAMs.	
Partnership	GLAMs (B2B)	- collaboration offers from GLAMs, developers, public bodies - usage of the tool by the educators and teachers in the institutions.	Analysis

Museum Adventure Game

The development of this pilot application runs from May 2013 to August 2014.

Table 3

Business model	Stakeholder	Success indicator	Evaluation
Freemium service	End users (B2C)	Positive feedback of the end users: - 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 - high positive rating on the app stores - positive comments from users in app stores - request from users about a next chapter or content in preparation - increasing number of sales of the second	Focus groups, usability testing, website statistics, ticket sales, extended game content sales, app store statistics

		chapter - editor choice on the app store - mentioning and positive review in the game magazines.	
Customization (consulting and projects)	Museums and public funders (B2B)	Financial support via project funding or consulting offers: - line-up of museums that are interested in their own chapter in the game - collaboration offers with new GLAMs - project funding (opportunities) for new adaptations of the game.	Analysis
Partnership	GLAMs (B2B)	- collaboration offers from the GLAM for implementing their digitised content in the similar games or apps with gaming elements.	Analysis

4.3 Theme #3 Tourism

VanGoYourself

The development of this pilot application runs from November 2013 to February 2015.

Table 4

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+)	Focus groups, usability testing, website statistics
Partnerships	GLAMs (B2B)	5 GLAMs have partnered up with VGY and committed to make content available in VGY	Analysis
Events (additional services)	GLAMs (B2B)	2-3 GLAMs have expressed interest organising a VGY event	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	Analysis
Customization (projects and consulting)	Commercial and social organisations (B2B)	2-3 organisations have expressed interest in customizing VGY for their sector	Analysis

4.4   Theme #4 Social Networks

Sound Connections

The development of this pilot application runs from November 2013 to February 2015.

Table 5

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 expressed interest in working with Sound Connections	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

5. Business Models for Creative Re-use

Through the simple but robust methodology of the business model canvas, we have been able to identify 13 generic business models that allow cultural heritage organisations and creative industries to develop 6 Pilot applications for 5 different thematic areas (in alphabetical order):

1. Audience Analysis Services

2. Crowdsourcing

3. Customization (consulting and projects)

4. Donations/ philantrophic funding

5. Events (additional services)
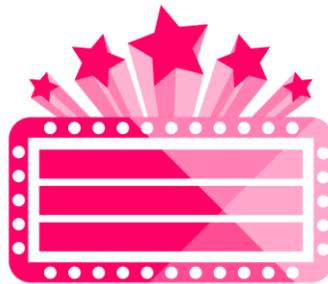
6. Exemplar learning (consulting and projects)

7. Freemium service

8.   Merchandise (additional goods)

9.   Public-private partnerships

10. Public funding

11. Sponsorships

12. Targeted Advertising

13. Training (consulting and projects)

In 3 out of the 5 cases *partnerships with GLAMs* have been explicitly mentioned as one of the core business models to be developed (VGY, Critical Analysis Tool, Museum Adventure Game), indicating that relationships should be built with GLAMs to prepare reusable content for the applications. During the business model development phase, the manual procedure for content sourcing has proved itself complex and time consuming. A fully implemented Content Reuse Framework, an automatic filter for content sourcing, could more or less reduce costs for making this work and support the core value proposition in a better way.

Because the applications are still in an early phase of their development, the emphasis is clearly on engaging end user communities in alpha versions of the product (*crowdsourcing*). With feedback on their experiences with the product, the application can be further developed into a product that is market-ready. The tested products are the foundation for engaging partners from both a public as well as commercial backgrounds (*partnerships*). Based on feedback, the relationship with end users and customers are further deepened with more specific models, ranging from additional services, goods and consulting & projects to philanthropic funding and sponsorships.

Following the list of different business models, the conversation between GLAMs and creative industries is now moving from a prevailing contractual framework[28] towards a more entrepreneurial one, in which both are together looking for other options to enable the applications in a sustainable way after the project period finishes. Though it is still undecided which roles will be taken in the expressed value propositions in this next phase of the development, a mix between public investments and commercial models that can supplement each other and cover each other's weaknesses is arising. This is starting to create a hybrid landscape for applications and services based on Europeana content.

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[28] 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.

6. Next Steps

The development of the pilot application for the design theme will continue until May 2015. The business models designed at the Business Model Workshop last May will be further explored and documented until that time. To get a better grip on the (commercial) uptake and success of the designed business models, the models will be evaluated during the project based on the evaluation framework in chapter 4. It is expected that the evaluation will help to focus on one or maybe two different revenue streams that will fit the products best. In conclusion, a business model workshop is organised in September 2014 to start the development of the business model for the Europeana Labs[29].

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[29] See http://labs.europeana.eu.

7. Annex 1 Report Business Model Workshop Design

eCreative Co-creation & Business Workshop
Helsinki May 22-23, 2014

Tessa Askamp & Nikki Timmermans (Kennisland) & João Gonçalves (EBN)

Two-Day Workshop eCreative

Goals & Objectives

The main objectives of the two-day workshop:
- 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.

Participants

eCreative Partners:
1. Lizzy Komen (Beeld en Geluid)
2. Christina Holm (SAT)
3. Tessa Askamp (Kennisland)
4. Nikki Timmermans (Kennisland)
5. Sergiu Gordea (AIT)
6. Enric Senabre (Platoniq)
7. Olivier Schulbaum (Platoniq)
8. Milena Popova (Europeana)
9. Max Kaiser (ONB)
10. Joao Goncalves (EBN)
11. Sanna Martilla (AALTO)
12. Nico Kreinberger (MFG)
13. James Morley (Europeana)
14. Lorna Stokes (ENOLL)
15. Jenz Kouhdahl (SAT, designer)
16. Jakob Thorbek (SAT, designer)
17. Jukka Ojasalo (AALTO, facilitator)
18. Kaisa Sibelius (city of Helsinki)
19. Kati Hippala (designer)

Other external participants (designers) also participated.

Day 1: Design Pilot Co-creation workshop

Objectives
- Ice-breaker activities to stimulate creative thinking.
- Think of potential users of the Europeana content for designers.
- Development of concepts/prototypes for co-creation.
- Understand the opinion and needs of designers.

Participants: a combination of Europeana, eCreative partners and participants from the creative industry

The group was split up into smaller groups. During the first exercise, the groups were stimulated to think of good examples of cases, apps, designs, artworks or other such initiatives in which cultural heritage is reused in a way that is attractive to a wider audience.
Examples are:
- Empty bubbles: http://www.eslthemes.com/comic_writing/strips/strips11.htm
- The interactive museum in India: https://www.youtube.com/watch?v=wz1VwiXTAKM (A platform in which different services come together. Selected content can be transformed into a story)
- Muse iPad app: http://museapp.org/ (artwork collages)
- Philips HUE lights combined with audio-visual materials: http://medialab.hva.nl/blog/2013/11/volt-philips-hue-hackathon/
- Remixing and reproduction of cultural heritage content: www.lnkajarvinen.com
- Sound and image/video composition Europe meets the world: www.spildaftid.dk (build in a digital space which can be accessed by anyone who wants to experience the environment)

During the second exercise, the groups created personas ('the maker' 'the designer' 'the textile fabricator' 'the illustrator' etc.) who work in the creative industry. Based on these personas, participants individually developed concepts clarifying how these personas could make use of Europeana content, specifically applied to their discipline. The favourite suggestions were collected and discussed. Based on these, five scenarios were developed.

Developed scenarios:
1. eFab! - Fabbing 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, theatre 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.
l. 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".

Day 2: Design Pilot Business workshop
Objectives:

● Selection of the best 3 scenarios.
● Development of 3 prototypes.
● Evaluation of business models of these 3 prototypes.

Number of participants: 18 (Europeana and eCreative partners)

1. Christina Holm (SAT)
2. Tessa Askamp (Kennisland)

3. Nikki Timmermans (Kennisland)
4. Sergiu Gordea (AIT)
5. Enric Senabre (Platoniq)
6. Olivier Schulbaum (Platoniq)
7. Milena Popova (Europeana)
8. Max Kaiser (ONB)
9. João Goncalves (EBN)
10. Sanna Martilla (AALTO)
11. Nico Kreinberger (MFG)
12. James Morley (Europeana)
13. Lorna Stokes (ENOLL)
14. Jenz Kouhdahl (SAT, designer)
15. Jakob Thorbek (SAT, designer)
16. Jukka Ojasalo (AALTO, facilitator)
17. Kaisa Sibelius (city of Helsinki)
18. Kati Hippala (designer)

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.

Open Source Business Models by Juho Lindman

Juho Lindman (assistant professor at the Hanken School of Economics) started with the research question: How can profit be extracted from open source software (OSS)?
OSS is software available for everyone, free of use and officially anyone can change the content. It is licensed under an Open Source Initiative license. OSS is part of a wider movement towards more openness and transparency. The open movement has its foundations in libertarian ideas.
OSS is online available free of costs. Hence, an OSS business model should be based on something other than income from sales, such as technical support or related or unrelated services (consultancy), and the selling of code work.
For OSS, the community is important. This is built up according to the onion-model: a strong core, with layer over layer around it. The point of gravitation is in the center, and the outer-layers represent the support.

Important aspects to take into consideration for an OSS business model:
● Make the project sustainable.
● Ask yourself how much income you at least need (for people and infrastructure). The very minimal cost is to keep the service in the air and running. Consider scalability: do you aim for the minimal or aim to grow?
● Consider the (added) value of the service, also in relation to the commons.
● Crowdsourcing is also a business model.

Service Logic Business Model Canvas Template by Jukka Ojasalo

Jukka Ojasalo (adjunct professor at AALTO University) started his presentation by explaining that a company needs to connect the company's world to the customer's world. The business needs to provide solutions to the problems that customers encounter. The business model tells the story of the company, and presents its numbers. A business model by definition outlines the essential details of a firm's value proposition for its various stakeholders. In principle, it focuses on the firm's potential to deliver value to its customers. It's key elements are: added customer's segment, value proposition to the customers, channels how to reach customers, customers relations, networks, revenue streams: cash flows, key resources, key activities, key partnership, cost structure.
The company needs to add value some way or another. This can be economic value, functional value, emotional value and/or symbolic value.

The business canvas that was used for this workshop takes into account 9 elements:
1. Customer's World and Desire for Ideal Value
2. Value Proposition
3. Co-creating value with the customer
4. Interaction and co-production
5. Key Resources
6. Key Partners
7. Mobile Resources and Partners
8. Cost structure
9. Revenue Streams and Metrics
10. Value proposition (2nd time)

Ojasalo introduced the Service Logic Business Model Template. This template differs from the original Business Model Canvas by Osterwalder and Pigneur. The Service Logic Template emphasises a deeper understanding of implicit and explicit customer needs (in the broadest sense; it also takes into account latent needs and future needs). The focus of this canvas is strongly on the perspective of the customer.

Service Logic Business Model Template - Prototypes

After the two speakers, the 3 prototypes were assessed by use of the Service Logic Business Model Template.

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 sale 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 customers 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 theatre 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)
By: Sergiu Gordea (AIT Austrian Institute of Technology), James Morley (Europeana), Enric Senabre (Platoniq), João Gonçalves (EBN) and Jakob Thorbek (SAT, designer)

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 contents.

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 are 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