

D6.1 – Evaluation Strategy and Framework

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D6.1 – Evaluation Strategy and Framework

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Statement of Originality

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Scope

The evaluation strategy and framework was developed within task 6.1. This document is an amended version of the initial ‘D6.1 – Evaluation Strategy and Framework’ published in June 2013 and comprises the new requirements mentioned in the 1st technical review meeting in April 2014. The paper will give guidance during the whole project duration. In detail it focuses on the following issues:

- Overview of the evaluation objectives (chapter 2)
- Definition of the roles of evaluation participants and stakeholders (chapter 3)
- Insight in the evaluation design and methodology (chapter 4)
- Presentation of the relevant interdependencies with other work packages (chapter 5)
- Introduction of key quality indicators that will be used during the project (chapter 6)

The whole evaluation strategy and framework is related to the requirements outlined in the Europeana Creative Description of Work. In case the applied methods and the chosen evaluation strands are not sufficient for the evaluation of this project, the methods will be immediately changed or adjusted according to the needs that are identified during the duration of the project.

1. Introduction

Europeana Creative focuses on eight concrete objectives whereby the seventh objective defines the goal to be achieved by WP6.

Objective 7: “Evaluate the results at key points in the project and measure their success against the strategic objectives.”

Europeana Creative will demonstrate that Europeana can facilitate the creative re-use of cultural heritage metadata and content.

The project will establish an Europeana Labs Network, create a legal and business framework for content re-use and implement all needed technical infrastructure. Furthermore five Pilot applications in the thematic areas of History Education, Natural History Education, Tourism, Social Networks and Design will be created. Following these activities, an open innovation Challenge for each theme will be conducted to identify, incubate and spin off viable projects into the commercial sector.

To support the ambitions regarding commercial uptake, the project will also undertake an extensive stakeholder engagement campaign promoting the benefits of cultural heritage content re-use to creative industries and to cultural heritage institutions.

To ensure the success of the project a holistic evaluation carried out by WP6 will cover all work streams in WP1-5, while the staged delivery of Pilots and services supports best practice learning.

This evaluation framework and strategy will also ensure that the impact and quality of the project are measured in a methodical way in order to assess and improve the quality of the developed products and services. A strong evaluation and feedback loop will result in better tested and more immediately effective processes, products, activities and services delivered.

WP6 is led by MFG Medien- und Filmgesellschaft Baden-Württemberg, Innovation Agency for ICT and Media Baden-Württemberg (MFG). All partners are expected to contribute to the evaluation activities.

Task leaders Platoniq (T6.2, Pilot and Infrastructure Testing and Evaluation) and ECBN (T6.3, Evaluation of Challenges and Pilot Impact) provided input for this document.

2. Evaluation Objectives

The staged evaluation of work will be performed at key points in the project and will measure the success of these activities against the technical requirements, the project's strategic objectives and creative industries stakeholders' needs. Therefore, the evaluation of the project has two main aims:

- To provide feedback and to ensure permanent improvement within the project. The lessons learned will be transferred from stage to stage. Due to the fact that the development of the project-funded Pilot applications is a staggered process (not all five Pilots start and end at the same time) best practices learned can be applied to each cycle.
- To help provide an understanding of the impact of the project (as far as it can be ascertained within the time period available). This includes the impact of the Challenges on the businesses that take part.

WP6 will assess the activities such as Pilots and Challenges (WP3, WP4 and WP5), infrastructure (WP2) and Europeana Labs and Europeana Labs Network (WP1) on the basis of predefined key quality factors and provide recommendations for improvement during the project's lifetime and beyond.

This revised structure notes the comments from the Technical Review of the Europeana Creative Project (April 2014).

2.1 Description of Work

The responsibilities of WP6 are defined in the following tasks:

- Task 6.1 – Evaluation Group, Evaluation Methodology and Documentation (BL, ECBN, EBN, EF, yarh, Platoniq, EUN, AIT, PLURIO.NET, ONB) (M1–M30, Lead: MFG)
- Task 6.2 – Pilot and Infrastructure Testing and Evaluation (MFG, EBN, EF, yarh, Platoniq, EUN, AIT, ECBN, NMP) (M4–M30, Lead: Platoniq)
- Task 6.3 – Evaluation of Challenges and Pilot Impact (MFG, EBN, EF, yarh, Platoniq, EUN, AIT, ECBN) (M4–M30, Lead: ECBN)
- Task 6.4 – Evaluation of Europeana Open Laboratory Network, Processes and Stakeholder Satisfaction (EBN, EF, yarh, Platoniq, EUN, AIT, PLURIO.NET, NISV) (M1–M30, Lead: MFG)

In the following sections these tasks will be described in further detail.

2.1.1 Evaluation Group, Evaluation Methodology and Documentation

Until month 5 of the project cultural and creative industries (CCI) stakeholders were identified who can provide important input for this project. Out of this stakeholder pool an evaluation group composed of technical experts, content holders and business model specialists were defined. The evaluation group is an important constituent to assess the project processes and to contribute to their continuous improvement by providing testing and evaluation results and by issuing recommendations. Participants of this group are mixed according to their core competence and evaluate specific key points of Europeana Creative with a variety of methods.

To widen the scope and receive feedback from a broad range of stakeholders, three types of stakeholder groups classified as primary, secondary and tertiary stakeholder audiences are determined. These stakeholder groups can play an active role in the evaluation process, either as members of the core evaluation group or as participants in surveys, usability tests, etc.

This documents presents an evaluation methodology in order to define the evaluation criteria, objectives and key quality factors against which success will be measured (how to evaluate the Europeana Labs, how to evaluate the Pilots and Challenges, how to test and evaluate infrastructure services), and how the results of the project will be documented (e.g., interview results, cognitive walk-through documentation, questionnaire outcomes, reporting cycles, events to be monitored, etc.).

2.1.2 Pilot and Infrastructure Testing and Evaluation

In this task WP6 will provide a heuristic evaluation which matches the requirements of the specific Pilots. In cooperation with Platoniq, leader of task 6.2, user experience tests (UX) will be conducted. Technical tests such as functional unit tests, component and system integration tests and performance and scalability tests will be realised by WP2 and WP4. These tests are an integral component of the Scrum agile software development process which will be adapted for this project.

The Pilot and infrastructure testing will include most of the evaluation methods which will be applied in the overall project. The results will be fed back immediately into the development process. If needed and possible, remote user tests can be conducted (e.g., whatusersdo.com, usabilitysciences.com etc.).

In each Pilot development phase, stakeholder success criteria will be defined through expert interviews and focus groups. The design of the later one will be in line with stakeholder dialogue designs to get a consensual result. The results will be used as indicators to measure the user acceptance of the Pilots. All findings will be fed back through the Europeana Lab infrastructure of WP1. This enables project partners to improve processes before the next development cycle starts.

2.1.3 Evaluation of Challenges and Pilot Impact

Task 6.3 will evaluate the success of the five Challenges and assess the incubation activities. A frequent and holistic feedback shall also be achieved in this task. The methodology will focus on specific performance indicators which are defined in this document. The received feedback will be used to tweak the process and optimise roll-out and uptake.

2.1.4 Evaluation of Europeana Labs, Processes and Stakeholder Satisfaction

Task 6.4 will concentrate on the accomplishments of the Europeana Labs Network (four physical labs and the online Europeana Labs) and the successful transfer of knowledge between the involved partners and stakeholders. The Europeana Labs will act as facilitators throughout the Pilot development phases and contribute to their market positioning via Challenges. The received feedback will be used to develop proposals how to adjust the activities to best spark creativity and uptake.

A final report on a strategy for a sustainable Europeana Labs Network will sum up lessons learned during the lifetime of Europeana Creative. This report will include an analysis of organisational models and cultures, skill requirements, management styles, best environments for supporting knowledge flows, etc.

2.2 Project Partners Involved in WP6

The following consortium partners will contribute to WP6.

Table 1: Participants' Involvement in WP6

Participant number	Participant name	Participant short name	Person-months per participant
1	Austrian National Library	ONB	4.00
2	Europeana Foundation	EF	4.00
5	Netherlands Institute for Sound and Vision	NISV	3.00
7	MFG Medien- und Filmgesellschaft Baden-Württemberg	MFG	24.50
8	European Business & Innovation Centre Network	EBN	3.00
9	European Creative Business Network	ECBN	5.00

10	Platoniq Sistema Cultural	Platoniq	6.00
11	EUN Partnership / European Schoolnet	EUN	4.00
12	youARhere	yarh	3.00
13	AIT Austrian Institute of Technology	AIT	2.00
19	Exozet Games	XZT	2.00
20	Agence luxembourgeoise d'action culturelle	PLURIO.NET	2.00
24	National Museum	NMP	2.00
26	The British Library	BL	4.50

3. Evaluation Roles

Before accessing a specific field of research it is important to understand the field itself and its environment. The focus of Europeana Creative is on cultural and creative industries (CCI), hence their stakeholders need to be identified first. This paper applies the European Commission's definition of CCIs:

Creative and cultural industries are “those concerned with the creation and provision of marketable outputs (goods, services and activities) that depend on creative and cultural inputs for their value.”¹

In detail the European CCIs can be categorised as followed:

- Music
- Film
- Broadcast media
- Design – fashion design, graphic design, interior design, product design
- Gaming software, new media
- Libraries, museums, heritage
- Architecture
- Print media – books and press
- Object d'art – glass, ceramics, cutlery, crafts, jewellery
- The “finer” arts – literary, visual and performance arts
- Advertising
- Photography²

During the thirty months of evaluation activities, two strands will be used to gather internal and external feedback. On the one hand, a composition of stakeholders divided into primary, secondary and tertiary stakeholder audiences will participate in the evaluation activities related to the specific requirements of technical or user feedback. On the other hand, a reliable and experienced evaluation group selected from the defined stakeholder groups will be set up. Their task is a regular contribution to evaluation methods like expert interviews, online focus groups,

¹ European Commission Enterprise and Industry, Priority Sector Report: Creative and Cultural Industries, The European Cluster Observatory, EUROPA INNOVA PAPER No. 16, April 2011, available online at: http://ec.europa.eu/enterprise/newsroom/cf/getdocument.cfm?doc_id=7070, p. 32; accessed June 11, 2013.

² See *ibid.*, p. 31.

online surveys, user experience tests. Within this chapter both strands will be elaborated in further detail.

3.1 Cultural and Creative Industries Stakeholders

At the early stages of an application or web project it is important to gather feedback from stakeholders that are part of the project (consortium partners) and those stakeholders who surround it in its environment. In this chapter a brief overview of relevant stakeholders to be included into the evaluation of Europeana Creative is given. The typologies outlined here remain on a theoretical level to avoid to limit project partners' suggestions of possible stakeholders. An orientation framework is provided to help to select the right composition of stakeholders for the different stages of the project. Furthermore the evaluation group will be selected out of these stakeholders.

In task 6.1 research on relevant stakeholders (MS18) was conducted. This document identified five core stakeholder groups of cultural and creative industries (CCIs). These stakeholder groups can be identified: **Cultural and Creative Entrepreneurs**, including Europeana Creative project partners, **Education**, **Mainstream Businesses**, **Community** and **Policy Makers**³ (fig. 1). The four stakeholder groups surrounding the CCIs are characterised as follows:

- **Education:** includes the whole education sector, particularly higher education;
- **Mainstream Businesses:** all businesses which were not included in the definition of CCIs from chapter 3;
- **Policy Makers:** local, regional, central;
- **Community:** consumers, taxpayers, in general people influenced by the cultural and creative industries.

This categorisation remains on a meta-level and needs to be differentiated more precisely.

³ See David Rae, "Creative Industries in the UK: Cultural Diffusion or Discontinuity?", in: Colette Henry, C. (2007), *Entrepreneurship in the Creative Industries: An International Perspective*, Edward Elgar Publishing, Cheltenham, Northampton, MA, 2007, pp. 54–71.

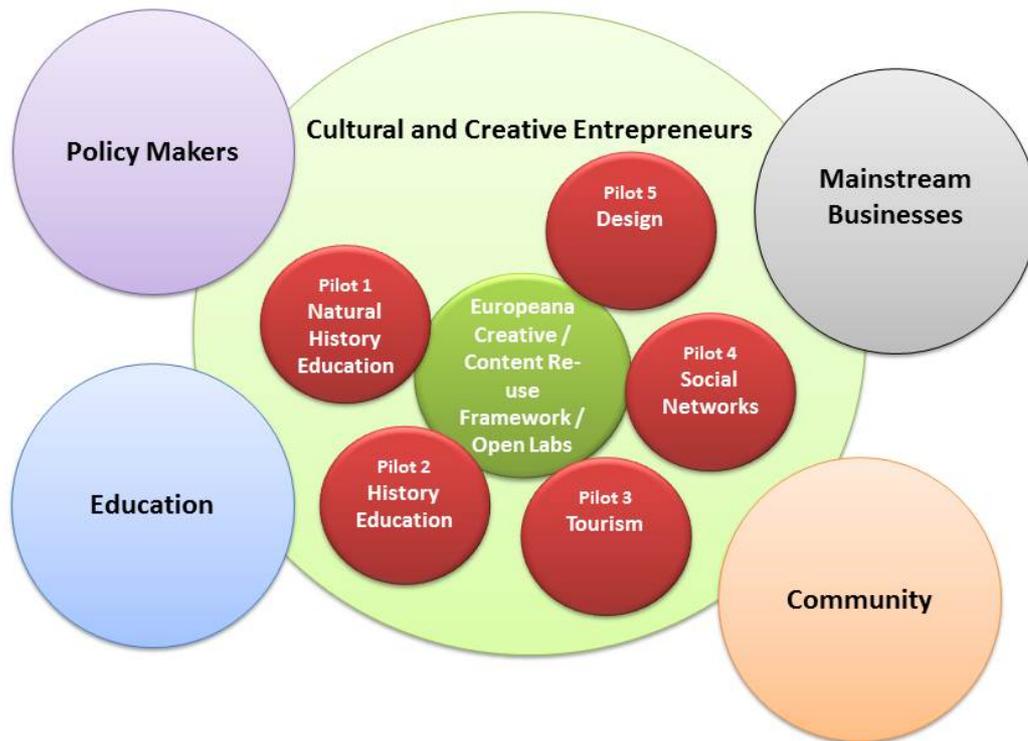


Fig. 1: Internal and external stakeholders in Europeana Creative

For the purpose of this project four categories of stakeholders can be differentiated. To understand the diverse levels of inclusion, the following sections describe, first of all, the difference between internal and external stakeholders, and in the second step a categorisation of primary, secondary and tertiary stakeholder groups is made.

3.1.1 Internal and External Stakeholders

One possibility of differentiating between stakeholders is to differentiate between internal and external stakeholders.⁴ Internal stakeholders are those stakeholders that are part of a project, company or institution, and external stakeholders are all parties who surround the project, company or institution in its environment and have interconnections with it.

⁴ See Bente Løwendahl and Øivind Revang, “Challenges to Existing Strategy Theory in a Postindustrial Society”, in: Strategic Management Journal, vol. 19, no. 8, August 1998, pp. 755–773.

In the case of Europeana Creative this categorisation is challenged by the fact that some stakeholder groups have a different level of engagement and belong to both categories, internal and external stakeholders. The consortium itself consists of representatives from the CCIs and the education sector that belong to the group of internal stakeholders. At the same time, both representatives from the CCIs and the educational sector are – together with Mainstream Businesses, Community and Policy Makers – part of the external stakeholders group (fig. 1).

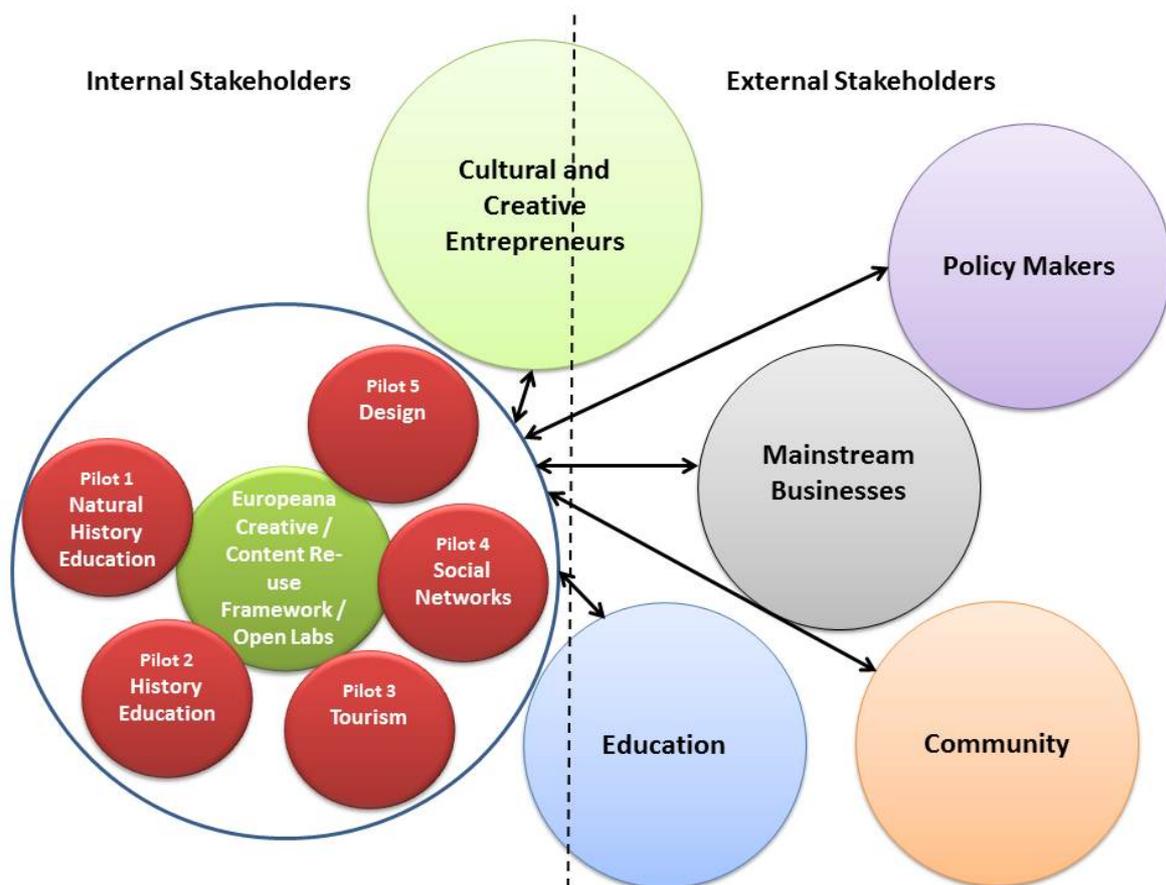


Fig. 2: Internal and external stakeholders in Europeana Creative

For the purpose of Europeana Creative the relevant stakeholder groups will be categorised according to three different levels of inclusion.

3.1.2 Primary Stakeholder Audiences (Key Stakeholder Audiences)

The group of primary or key stakeholders shall consist of stakeholders who are directly involved in the production and re-use of digital cultural heritage. In the Europeana Creative Description

of Work cultural heritage institutions, creative industries, education service providers and tourism-related online services are mentioned as key stakeholders.⁵ They all belong to the Cultural and Creative Entrepreneurs group, thus to the cultural and creative industries stakeholders described at the beginning of chapter 3.

Priority is given to CCIs, and below the groups of primary stakeholders is described:

- “**Creative industries** are a primary audience as they provide enormous potential to increase access to cultural heritage resources for members of European society. They bring the capacity, capability and appetite to re-use the resources as elements in the construction of innovative applications and services for their clients. The project’s main aim for this target audience is to increase awareness of the availability of cultural heritage resources and promote the benefits of using the infrastructure provided to create value and economic growth.”⁶

The second group of primary stakeholders consists of:

- “**European cultural heritage institutions** will be engaged by the project as a primary audience in order to increase the volume of resources available for the creative industries to re-use, by widening the network of institutions providing content. The Europeana Network represents more than 2,200 institutions, each of which would be a valuable addition to the project once they join. The project’s main aim for this target audience is to increase the awareness of new business models and benefits of working with the creative industries, thus obtaining commitment to release their cultural heritage material under the terms of the Content Re-use Framework.”⁷

Creative industries, together with European cultural heritage institutions, constitute the CCIs. The whole project focuses on CCIs and their capability to re-use digital cultural heritage. Both stakeholder groups are essential for the success of this project as they will provide a significant input for Europeana Creative and are contemporaneous prioritised stakeholder for the commercial uptake of the digital cultural heritage re-use.

Due to the fact that five Pilot applications in the thematic areas of Natural History Education, History Education, Tourism, Social and Design will be developed, followed by five Challenges, the group of stakeholders needs to be extended to a certain degree. Therefore a second type of stakeholder audiences is introduced.

3.1.3 Secondary Stakeholder Audiences

As secondary stakeholders especially those groups are relevant who belong to a specific Pilot and Challenge theme. For the successful development of Pilots and the successful incubation phase, including the creation of business models, it is also important to gather feedback from

⁵ See Europeana Creative Grant Agreement, Annex I, p. 15.

⁶ Europeana Creative Grant Agreement, Annex I, Part B, p. 19.

⁷ Ibid.

potential target audiences and customers. This enables the WP and task leaders to improve the development process with a special focus on commercial uptake of the project outcome. These secondary stakeholders are simultaneously external stakeholders, except when they belong to the Europeana Creative consortium.

- For the **education sector** the results of Europeana Creative are a chance to access a great quantity of cultural heritage without the need of expensive resources. This stakeholder group will support the Natural History Education and History Education Pilot.
- The **tourism sector** belongs to the Mainstream Businesses group and can integrate the outcome of the Tourism Pilot into new business models and use it for customised solutions.
- **Design communities** are first of all part of the primary stakeholder groups. Smaller and not well organised groups are part of the secondary stakeholders and will benefit from a wide range of inspiration and proposed business models as well as from easy access to digital cultural heritage.
- **Social networks** can inspire and engage their **communities**⁸ with new opportunities to augment existing data sources.
- **Independent software and application developer communities** also belong to the secondary stakeholder audiences. In the context of this project a wider range of communities without a professional commercial orientation is meant. These developer communities are supposed to get inspiration from Europeana Creative to develop innovative business ideas based on the re-use of digital cultural heritage.⁹

These above-mentioned potential stakeholders are part of the final target groups. They need to be included in the feedback loops as part of the evaluation group.

According to the stakeholder typologies developed by David Rae¹⁰, three of five stakeholder groups (Mainstream Businesses, Education and Community) are represented here. Merely the local, regional and central **Policy Makers** are missing in this secondary stakeholder audience. Due to the fact that Europeana Creative focuses on CCIs and possibilities to create spill-over effects for mainstream businesses and communities instead of governance issues, an involvement of policy makers at this stage is not necessary.

⁸ Communities belong to the secondary and tertiary stakeholder groups because they cover a wide range of stakeholders and are also representatives of the European society itself. It is difficult to create a clear definition of communities because they partly belong to the two stakeholder groups of CCIs and Community.

⁹ See Europeana Creative Grant Agreement, Annex I, Part B, p. 19–20.

¹⁰ See Rae 2007.

3.1.4 Tertiary Stakeholder Audiences

The purpose of involving this last stakeholder group, tertiary stakeholder audiences, is to gather feedback from a broad audience who is not directly involved in Europeana Creative. The input of this audience is needed to get an impression of the perceptions of Europeana Creative and its outcome within the **Community**; this means first of all groups of the society with a cultural and creative interest such as visitors of cultural heritage institutions, tourists, students as well as consumers, taxpayers etc. Additionally, also **Policy Makers** belong to this third stakeholder audience.

3.2 Europeana Creative Stakeholder Composition

To ensure the success of projects such as Europeana Creative it is important to reach the right stakeholder groups and gather feedback from them before the development processes start. Within Europeana Creative five Pilots are being created in the areas of Natural History Education, History Education, Tourism, Social Networks and Design. Therefore, in this chapter five stakeholder compositions according to each Pilot's requirements are suggested. It is important to differentiate between internal stakeholders that belong to the primary stakeholder audience and external stakeholders which belong to the secondary and tertiary stakeholder audience.

Table 2: Stakeholder Composition per Pilot

Stakeholder Composition per Pilot		
Pilot	Stakeholder groups	
	Internal stakeholders (primary)	External stakeholders (secondary, tertiary)
Natural History Education	<ul style="list-style-type: none"> • Cultural and Creative Entrepreneurs • Education 	<ul style="list-style-type: none"> • Cultural and Creative Entrepreneurs • Education • Mainstream Businesses • Community • (Policy Makers)
History Education	<ul style="list-style-type: none"> • Cultural and Creative Entrepreneurs • Education 	<ul style="list-style-type: none"> • Cultural and Creative Entrepreneurs • Education

		<ul style="list-style-type: none"> • Mainstream Businesses • Community • (Policy Makers)
Tourism	<ul style="list-style-type: none"> • Cultural and Creative Entrepreneurs 	<ul style="list-style-type: none"> • Cultural and Creative Entrepreneurs • Mainstream Businesses (Tourism) • Community • (Policy Makers)
Social Networks	<ul style="list-style-type: none"> • Cultural and Creative Entrepreneurs 	<ul style="list-style-type: none"> • Cultural and Creative Entrepreneurs • Mainstream Businesses • Community • (Policy Makers)
Design	<ul style="list-style-type: none"> • Cultural and Creative Entrepreneurs 	<ul style="list-style-type: none"> • Cultural and Creative Entrepreneurs • Mainstream Businesses • Community • (Policy Makers)

Overall Europeana Creative focuses on a systematic engagement of creative industries stakeholders who belong to the primary stakeholder audiences mentioned in chapter 3. These stakeholders are able to serve as key multipliers in building a bridge between creative industries, mainstream businesses, cultural heritage institutions as well as citizens with a cultural and creative interest and have to be prioritised. Therefore it is important to involve both internal and external stakeholders as participants in the co-creation workshops at the beginning of each Pilot development phase.

In this project it is important to receive feedback from the relevant audiences. Therefore each work package and task leader has to encourage the involved project partners to recommend at least five stakeholders who are willing and able to provide feedback in the online evaluation process. As far as the stakeholder composition is concerned, the main focus should be on primary and secondary stakeholders who are potential input and feedback providers. Based on these suggestions the members of the final evaluation group will be selected.

3.3 Evaluation Group

The members of the evaluation group are recommended by the project partners, and the evaluation group consists both of internal and external experts. According to the progress and requirements of the project the composition of the group can be adjusted at every stage of the project. For example, the composition of participants involved in the evaluation group varies between Pilot development phases and Challenge themes. WP6 will make a spreadsheet available to all partners on Google Drive and via Basecamp which provides an overview of members of the evaluation group.

3.3.1 Composition of the Evaluation Group

Members of the evaluation group:

- Cultural and creative industries stakeholder
- Internal experts (project partners)
- External experts (recommended and selected by project partners)

Field of expertise:

- Target groups (e.g., stakeholders in tourism, education, design, etc.)
- Technical experts (e.g., software and application developers)
- Content holders (only project partners)
- Business model specialists

Thematic areas (project partners and external experts):

- Education (Natural History and History Education)
- Tourism
- Design
- Social Networks

3.3.2 Overall Role of the Evaluation Group

The evaluation group will be used as a pool of internal and external experts that can be assembled according to the requirements of the evaluation tasks. Some experts are only needed for specific evaluation topics; for example, experts in the field of tourism shall only contribute to the Tourism Pilot. Based on the analysis and requirements of a specific task the composition of the evaluation group will be decided. Overall the evaluation group will contribute to the following tasks:

- Monitor project processes and progress.
- Contribute to the continuous improvement of the processes by providing feedback on the adaption of the Scrum agile software development framework
- Participating in expert interviews, focus groups and surveys as well as issuing general recommendations

In a staged process, the evaluation group will evaluate the extent of success and delivery of a certain task against each of the objectives defined in the evaluation methodology. Three strands of activity are pursued and then repeated in an iterative process:

- Pilot and Infrastructure Testing and Evaluation (task 6.2)
- Evaluation of Challenges and Pilot Impact (task 6.3)
- Evaluation of Europeana Labs, Processes and Stakeholder Satisfaction (task 6.4)

3.3.3 Role of Internal Experts

The group of internal experts consists, without exception, of partners from the Europeana Creative consortium. The concrete tasks of the internal experts and their evaluation activities depend on the thematic area of their expertise. They will primarily contribute to the work packages that focus on fields in which they are specialists or thematically involved. Depending on the specific expertise defined as relevant for guaranteeing best practices, these experts can give advice for other tasks or work packages.

Overall role of the internal experts:

- Monitor project processes, based on their expertise related to a specific Pilot theme.
- Contribute to the improvement of the project processes.
- Participate in testing and evaluating project results at key points of the project.
- Take part in Pilot co-creation workshops and business model requirements gathering workshops.
- Take part in Challenges.
- Issue recommendations.

3.3.4 Role of External Experts

External experts are relevant to ensure Europeana Creative is not only evaluated by internal experts, from an internal point of view. Expertise from an external point of view is important to make sure that the Pilot spin-offs are feasible. Additionally the involvement of external experts can lead to unintended but positive spill-over effects. External experts will participate in applying online evaluation methods during the different stages of the project.

Overall role of the external experts:

- Monitor project processes, based on their expertise related to a specific Pilot theme.
- Contribute to the improvement of the project processes.
- Participate in testing and evaluating project results at key points of the project.
- Participate in Pilot co-creation workshops and business model requirements gathering workshops.
- Take part in Challenges.
- Issue recommendations.

To avoid demanding a lot of effort from these experts and overusing their resources, their participation will be primarily online. Within WP4 and WP5 the WP lead has to decide, together with the task leaders, at which point it makes sense to invite international experts to workshops (involving travel) and how to compensate their effort. Generally it is recommended to invite national external experts to workshops and lab spaces. To motivate these participants, the following incentives could be offered:

- External experts will get a deeper insight into the development of the project.
- External experts will get the opportunity to contribute to the development and the outcome of the project through their evaluation activity and their recommendations (especially concerning the education Pilots).
- External experts have the possibility to take part in a Challenge (e.g., as experts in a panel discussion).
- Networking possibilities.
- External experts can be featured on the project website and social media.

3.3.5 Activities of Internal and External Experts

All participants involved in the evaluation will participate in specific evaluation tasks according to their key competence.

Technical experts:

- Test infrastructure services that support the Pilot themes.

Content holders:

- Test the success of content re-use (e.g., usability tests and user or download statistics).
- Evaluate access to and selection of content for experimentation.
- Evaluate the content inventory for experimentation by thematic areas: Natural History Education, History Education, Tourism, Social Networks and Design.

- Evaluate the Pilot co-creation workshops.

Three times each Pilot will be evaluated by external experts in in-depth interviews or focus groups. First after the design is finished and an initial product backlog can be presented (expert interview), second within the deployment phase when a working prototype can be shown (expert interview). The third evaluation will be done after the refinement phase (focus group).

Business model specialists:

- Participate in business model requirements gathering workshops.
- Evaluate business models for each theme.
- Evaluate the business models for the Europeana Labs.

After defining the roles and degrees of involvement of members of the evaluation group, the evaluation framework has to be elaborated. In the next chapter all important stages and the applied methods for evaluating the Pilot development, the Challenges and the Europeana Labs implementation including stakeholder satisfaction will be described.

4. Evaluation Framework

In chapter 2 the evaluation objectives were described in detail; in this chapter the methodology will be elaborated. The main objective of WP6 is to evaluate the results at key points in the project and measure their success against the strategic objectives. The evaluation design needs to cover a wide range of complex processes and interdependencies in Europeana Creative. In this project (1) the five Pilots, (2) the five Challenges and (3) the Europeana Labs are the three strands that build the core for recurring evaluation cycles.

The evaluation objectives and methodology apply to:

1. Pilot and Infrastructure Testing and Evaluation (task 6.2)
2. Evaluation of Challenges and Pilot Impact (task 6.3)
3. Evaluation of Europeana Labs, Processes and Stakeholder Satisfaction (task 6.4)

4.1 Evaluation Methodology

The whole evaluation is based on a multi-perspective approach which ensures a holistic point of view by assessing a research objective from a variety of perspectives when assessing it.¹¹ Feedback will be gathered from different levels (primary, secondary and partially tertiary stakeholders) and with different methods. An important goal is to ensure permanent feedback from an internal (consortium members / internal stakeholders) and an external perspective (external stakeholders) in order to guarantee a high quality standard.

As overall methodology a mixed-method design will be used, consisting of methods such as focus groups, user experience tests (UAT), expert interviews, monitoring by backlog from the agile development method and online surveys. These methods will be used in a mix according to the requirements of the specific evaluation task. The evaluation design has to be planned with consideration regarding the resources available for evaluation. Due to this fact, most of the evaluation activities are designed in an online format. In addition permanent feedback shall be provided to each project partner involved in the development process (WP1, WP2, WP3, WP4 and WP5).

¹¹ See Marita Turpin, Jackie Phahlamohlaka and Mario Marais, “The Multiple Perspectives Approach as a Framework to Analyse Social Systems in a Developing Country Context”, in: *Proceedings of the 10th International Conference on Social Implications of Computers in Developing Countries*, Dubai, UAE, May 2009, available online at: http://www.ifip.dsg.ae/Docs/FinalPDF/Practioner%20Reports/ifip_52_Turpin,%20Jakie%20and%20Marais.pdf; accessed June 11, 2013.

4.1.1 Expert Interviews

During the Pilot development phases in WP4 it will be helpful and necessary to get in-depth knowledge of certain issues from representatives of the cultural and creative industries. Relevant participants can be, e.g. software developer, producer, product owner, Challenge participants and publisher. For example in Europeana Creative the product owners are the task leaders of the Pilots (products). They are involved in all stages of the Pilot development following the Scrum framework adaptation and its regular calls. Receiving in-depth information from product owners can be ensured by semi-structured in-depth interviews. Over the entire duration of the project this method will be also applied to gather feedback from external stakeholders when necessary. For the co-funded Pilots the objective is to get a detailed impression of each Pilot's progress from a technical perspective via expert interviews (1–25). A minimum of 25 interviews is planned; they shall be conducted either personally, e.g., during a workshop, or via video chat or via phone. Additionally in-depth interviews with the Challenge winners will be realized at the end of the incubation support phases.

4.1.2 Online Focus Groups

Online focus groups are a qualitative method that can be used either online or offline. An online realisation enables an evaluation process that only requires little resources. The planned design will be a synchronous online focus group. To suit the purpose of this project, it should be arranged as a video conference, e.g., with Google Hangouts, instead of setting up an online focus group via a chat room. For the evaluation a minimum number of 10 focus groups (fig. 4) shall be conducted, starting with focus groups 1–5 scheduled in the Pilot refinement phases. Based on the main objectives of generating success criteria, key quality indicators, monitoring the Scrum agile methodology adaption and gathering feedback, this method can be adapted as a focus group via video conference tools. Behavioural criteria of the participants are not in the scope of interest.

Google Hangouts offers the possibility to upload documents in the conference room, so the participants can see the written results of the evaluation or stakeholder dialogue. For most of the iterative evaluations with online focus groups a simultaneous protocol will be generated as well as ad hoc online tools. With this technique participants can see their consensual decisions directly on the screen in the virtual conference room. This method allows gathering a variety of feedback, to find solutions for specific evaluation problems and to solve issues on the relevance and comprehensiveness of indicators, etc.

Each focus group consists of a predefined number and composition of members of the evaluation group (see chapter 4.2). The expected time frame per focus group will be one to two hours.

4.1.3 User Experience Evaluation

The user experience is focussing on the holistic experience a user has when using a product. This comprises the usability, stability and design. To enable a comparable evaluation of the

user experience of products or services the user acceptance can be measured by using short and concise evaluation criteria based on Jakob Nielsen's¹² or Bruce Tognazzini's¹³ principles, for instance.

At the beginning of the user experience evaluation, Jakob Nielsen's usability testing principles will be applied. At the stage when mock-ups or prototypes of the Pilots exist, a small group of evaluators could examine the interface and judge its compliance with usability principles such as:

- **Visibility of status:** The Pilot's interface shows clearly and on time where the user is at any given moment.
- **Match with the real world:** The Pilot uses words, phrases and concepts familiar to the user, in a natural and logical order, rather than system-oriented terms.
- **User control:** Allowing users to go back easily to previous states, or when providing content supporting undo and redo.
- **Consistency and standards:** The Pilot typology or metaphors – game, exhibition, visit, meeting, map, desk, etc. – need to be consistent according to its words, situations and actions. Ensure the same meaning for the same execution, following platform conventions.
- **Error prevention:** Written warnings and design prevent a problem from occurring; confirmation options and messages appear before an error arises.
- **Recognition rather than recall:** Objects, actions and options are visible enough so users do not have to remember too much information from one part to another. Instructions for use are visible or easily retrievable whenever needed.
- **Flexibility and efficiency of use:** The system can cater to both inexperienced and experienced users, allowing to tailor frequent actions according to the users' needs.
- **Aesthetic design:** The Pilot interface does not contain information which is irrelevant or rarely needed.
- **Useful help options:** Error messages are written in plain language; they indicate the problem and suggest a solution.
- **Help and documentation:** Contextual information should be easy to find and focused on the users' demands, listing concrete steps to be carried out; information should not be too comprehensive.¹⁴

¹²Jakob Nielsen, "How to Conduct a Heuristic Evaluation", available online at: <http://www.nngroup.com/articles/how-to-conduct-a-heuristic-evaluation/>; accessed June 11, 2013.

¹³Bruce Tognazzini, "First Principles of Interaction Design", available online at: <http://www.asktog.com/basics/firstPrinciples.html>; accessed June 11, 2013.

For the usability evaluation following these principles a basic survey with a rating scale for each principle could help to identify usability weaknesses or features to improve; furthermore fields for comments could be integrated, if needed, or more qualitative inputs. Other indicators such as anticipation, autonomy, colour blindness, consistency, efficiency, explorability or readability may be adopted as well if needed.

This evaluation method can be supported by specific tools in case a more in-depth analysis is needed. Here the chosen method depends strongly on recommendations from the Pilot task leaders. According to specific requirements the following tools can be used and evaluated in an iterative process (t1, t2, t3):

- Google Analytics (to get an overview on accessed areas via user statistics)
- whatusersdo.com (online possibility for professional user experience testing)¹⁵
- usabilitysciences.com etc.

The frequency of these usability evaluations can be adapted according to the needs identified in the development process of the different Pilots.

4.1.3.1 Evaluation and Testing Method

For Europeana Creative a specific set of usability indicators (table 3) was compiled within the deliverable “D1.1 – Service Design for the Co-Creation Labs”. They combine different approaches for accessing the field of user experience testing. This set of indicators will be used for the UX testing of the Pilots developed in this project.

Table 3: Usability Indicator¹⁶

Criteria	Explanation
<ul style="list-style-type: none"> • <i>Starting screen</i> 	The test person has a positive first impression and is willing to start using the product. It is clearly visible what kind of actions can be initiated. The screen displays the purpose of the application and raises awareness on the value proposition.
	The applications pricing is transparent. The test person can

¹⁴ See Jakob Nielsen, “10 Usability Heuristics for User Interface Design”, available online at: <http://www.nngroup.com/articles/ten-usability-heuristics/>; accessed June 11, 2013.

¹⁵ See Templates for User Experience Testing, available online at: http://www.whatusersdo.com/assets/WUD_task_templates.pdf; accessed June 11, 2013.

¹⁶ See <http://www.nngroup.com/articles/ten-usability-heuristics/> and <http://userium.com/> accessed October 20th 2013.

<ul style="list-style-type: none"> • <i>Accessibility</i> 	easily access the content. The user control and navigation matches the requirements off the application and its hardware. Important fields to fill in are labelled with terms that match the real world.
<ul style="list-style-type: none"> • <i>Navigation</i> 	The status within the application is visible and test persons are aware of it. The navigation is consistent and standardized. Test persons can recognize easily how to navigate to a desired destination. Links and buttons are described in a manner that allows test persons to identify the purpose clearly.
<ul style="list-style-type: none"> • <i>Design & Layout</i> 	The design follows aesthetic criteria, addresses the target audience and is consistent through the whole application. Relevant content is identifiable and displayed accordingly.
<ul style="list-style-type: none"> • <i>Efficiency</i> 	The application can be used by a broader audience than the target group. Expected objectives can be reached by the application.
<ul style="list-style-type: none"> • <i>Help options</i> 	During the use of the application the test person is provided with hints (e.g. error prevention), search and help options.

The method applied will be a mixed adaptation from the think-aloud protocol (TAP)¹⁷ and a world cafe¹⁸. Both methods are introduced in the following sections. Additionally the alignment for the Europeana Creative UX testing will be explained.

Think Aloud Protocol (TAP)

The TAP is a method for testing the UX of web and mobile applications. It requires an observer, a testing person, ideally audio and video equipment and the application to be tested. During the test the interviewee shall speak out loud all his thoughts related to the testing. This enables the observer to get an understanding of what users are thinking by using the web or mobile application. The testing person usually gets a specific task in order to work with the application while the observer is taking notes (without commenting) and/or recording the test with audio or video tools. This kind of testing requires a closed testing environment to avoid interference from outside.

¹⁷ See http://en.wikipedia.org/wiki/Think_aloud_protocol accessed February 17th, 2014.

¹⁸ See http://en.wikipedia.org/wiki/The_World_Caf%C3%A9 accessed February 17th, 2014.

World Café Method

The World Café method¹⁹ is used to gather feedback on different themes from a broader audience. The Method is based on the following seven principles:

- *Context setting* – defining the stage for your purpose, objectives and themes
- *Adequate space* – ensuring a comfortable environment for attendees engages their creative thinking and proactive participation
- *Preparation of relevant questions* – clear tasks and objectives which guide the participants and set the frame for the discussion
- *Encouraging contribution* – gathering feedback and input from everybody involved
- *Connected perspectives* – enabling exchange on participants thoughts and ideas to get new insights
- *Listen to insights and patterns* – allowing to connect the inputs into a bigger picture
- *Sharing the results* – bringing the results together and discussion with the whole auditorium

The workshops will start with an introduction in the topic and describing the goals that shall be achieved. The setting allows for different working stations, each of them with another theme to be worked with. The participants shall write down, paint or pin their thoughts and results at the working stations. Each group will have a specific time to work on a theme and afterwards the participants move on to the next station. At the end the results of the different working stations will be discussed together with all participants. The outcome will be documented by WP6 and published in the milestone MS19, MS21 and MS23.

Adaptation of Methods for the Europeana Creative UX Testing

Given the fact that the UX testing in Europeana Creative is carried out in the physical labs of the Europeana Labs Network the testing method needed to be adapted to match with the given environment and the amount of products to be tested.

The combination of the methods described before (chapter 4.1.3.1) allows getting a broad feedback on all products. In the beginning both methods needed certain modifications. The UX testing tasks will be realized in working groups with three to four persons what makes a loud thinking during the testing not feasible. Instead the participants will be asked to solve a predefined task with the applications on their own and to write down their experiences and perceptions on Post-its.

After everyone has finished the testing the group will discuss the experience at the working stations and document their results on a prepared flipchart paper (table 3). The rotation of the participants allows an enrichment of the feedback provided at each working station.

¹⁹ See <http://www.theworldcafe.com/method.html> accessed March 4th, 2014.

Table 4: Structure UX Testing Documentation

Structure UX Testing Documentation	
Starting Screen -	Accessibility -
Navigation -	Design & Layout -
Efficiency -	Help Options -

4.1.4 Product Backlog and Sprint Backlog

The Scrum product backlog and sprint backlog approach are supposed to serve as a monitoring tool that generates feedback during the Pilot development processes. The co-funded Pilots are developed according to an adaption of the Scrum agile software development framework where a continuous backlog is submitted to the Scrum master (in this adaption presented by Platoniq and called agile development master) before and after the sprint phases. To support the transparency of this method, an online tool will be introduced (www.trello.com).

It is intended to run approximately 14 sprints for each Pilot; these sprints include a backlog prepared by the product owner. Overall the benefit will be backlogs (14 sprints per Pilot) which provide hints for improvement and troubleshooting. The backlog reports are convenient in order to document technical obstacles within the different stages of WP4. Furthermore it is suitable as feedback instrument for the development of the other Pilots as well as for WP1, WP2 and WP5. Therefore the backlogs will be provided to all WP leads on Basecamp to allow continuous supervision or feedback if needed.

The development team involved in the adapted Scrum process will define at the beginning of every sprint in which format the tasks and features will be developed and then presented at the end of the cycle, allowing a quick check afterwards and an identification of each unit developed via URL (either on Basecamp, Google Drive or Trello).

This approach also allows a continuous reprioritisation of tasks according to the continuous internal feedback (from internal stakeholder) gathered by the agile development master at each development sprint, not only at the end and at the beginning of each sprint (every four weeks) but also twice a week, by asking all partners involved in the development of a Pilot to provide regular status messages if needed: Each person involved in a certain development or task should answer the following three questions:

1. What have we achieved since the last meeting?
2. What will we achieve before the next checkpoint?

3. Is anything holding up our progress (impediments)?

Gathering answers to these questions from all partners involved also allows to identify problems at a very early stage. This also helps to avoid discussing them in detail until the end of the agile development meeting. Occurring problems will be discussed when they arise, only by the people affected by them.

Once each task is developed and supposed to be finished according to the sprint and product backlog, there should also be an agreement by the developers team, the product owner and the agile development master on the definition of “Done” (that is, tasks which match general criteria based on feasibility, quality and/or completion).

For this reason, as a stage prior to “Done” there will be a backlog with items containing a URL or similar traceable information about the content which proves its completion, named as “Ready to be verified / evaluated”.

This backlog can be accessed on a regular basis, especially at the end of every development sprint, so tasks can be evaluated or checked by different groups as agreed (developers themselves but also focus groups or other stakeholders and partners).

The evaluation process will follow the sprint cycles. Reports on occurring problems as well as best practices will be created. These interim reports will be included in the milestones MS19, MS21 and MS23 within the Pilot development phase in WP4. A more detailed description regarding the evaluation of the Pilots will be provided in chapter 4.2.

4.1.5 Online Surveys

Within the project period several online surveys will be realised via LimeSurvey (www.limesurvey.org). The design of the survey will be a standardised questionnaire with rating scales and comment boxes, guided by the eight objectives of the project²⁰.

The main objective is to find out how the internal and external stakeholders rate the progress at different stages of the project. In this way it will be possible to measure the progress in the five Pilot development and Challenge strands. By using expert interviews and focus groups it is not possible to get broad feedback from all relevant stakeholders because these methods allow only the participation of a limited number of participants. The information collected with both methods will build the base for a standardised questionnaire used in these surveys. The results will be frequently fed back to all project partners.

4.1.6 Performance Indicator Monitoring

To ensure a high quality standard, WP6 will monitor annually the progress in all work packages according to predefined performance indicators.²¹ After each regular reporting period (Reporting

²⁰ See Europeana Creative Grant Agreement, Annex I, Part B, p. 4.

²¹ Ibid., pp. 90–91.

Period 1: M1–M12; Reporting Period 2: M13–M24; Reporting Period 3: M25–M30) all WP leads have to report on the status quo concerning the performance indicators related to their work package. WP6 will contact the WP leads and sum up the results in a short interim report. For an overview of performance indicators see Annex I.

4.1.7 Evaluation Reports

Three evaluation report deliverables have to be submitted during the lifetime of Europeana Creative. They will sum up the final results of the evaluation process at key points in the project:

D6.2 – Evaluation report on Challenges and uptake

- This document will provide the results of the evaluation of the Challenges and the success of the uptake. It will show the outcomes of the online surveys focusing on product performance expectations and market trend expectations and the results of applying the World Café method²² (see chapter 4.3).

D6.3 – Pilot and infrastructure evaluation report

- The report on Pilot and infrastructure evaluation will summarise the recommendations and lessons learned including the results from expert interviews, focus groups, online surveys, sprint backlogs from the Scrum agile development framework adaption, usability and user acceptance tests.

D6.4 – Final report on a strategy for a sustainable Europeana Open Laboratory Network

- A final document which brings together all evaluation results that were gathered during the whole project period including the results concerning the broader stakeholder satisfaction and the success of the Open Labs.

To ensure permanent improvement after each evaluation phase, several interim reports will be provided to the project partners.

- Interim reports after the delivery of each Pilot (Natural History Education, History Education, Tourism, Social Networks, Design)
- Interim reports after each Challenge (Natural History Education, History Education, Tourism, Social Networks, Design)

Overall a minimum of five interim reports will be provided by WP6. These interim reports enable all partners involved in the following iterative cycles (Pilot development and Challenges) to constantly improve their processes.

²² See footnote 1.

4.2 Pilot Evaluation

A major task within the project is the evaluation of the products developed in the five Pilot themes. For the software or design developed for the Pilots, as well as for the technological infrastructure supporting it, there should be a quick evaluation process which follows the schedule of the development sprints; evaluation should be carried out at the end of each sprint and at additional checkpoints if needed in order to evaluate quality and utility.

For the evaluation purpose a set of different indicators will be applied that is assessed by the development team and a focus group in order to track levels of quality during the process, and to take action in case certain features or design elements significantly reduce the product quality. This means that in case there is common agreement that some levels of a given indicator have changed negatively, some measures could be taken in order to reorient the development, according to the adapted Scrum agile development framework (fig. 3). These indicators were tentatively defined during the first two co-creation workshops (Natural History Education Co-Creation Workshop and History Education Co-Creation Workshop):

- Level of **usability** (as described in the indicators in chapter 4.1.2)
- Level of **innovation** (to what extent the Pilot presents new or non-expected features)
- Level of **feasibility** (related to technical development, especially at the early stages of the development or related to additional features or modules that may appear)
- Level of **engagement** (from the end users' point of view, as different roles)
- Level of **potential** (e.g., learning potential, for educational Pilots; or different potential related to other themes; to keep track of the important features that make it useful or interesting, check that these features are consistent version after version)
- Level of **adaptability** (according to the potential adaptation of the Pilot to different content, contexts or needs for a successful commercial uptake by CCIs)
- Level of **“Europeanability”** (related to the possibilities to re-use Europeana content, since at every stage of the development process the degree of connection and interaction with the API or the interface of Europeana could vary, as well as the type of content used)

The seven mentioned indicators will be applied and discussed in the expert interviews and focus groups (fig. 4). The indicators can be adjusted according to the specific requirements of each Pilot. In this stage they are only an orientation framework for the final evaluation.

The overall time frame for evaluating each Pilot, according to the evaluation task of Pilot and infrastructure testing, is fourteen months. The whole Pilot evaluation process builds upon the **adapted Scrum agile software development framework**. Starting the evaluation process with expert interviews, followed by user experience testing, focus groups and concluding it with online surveys guarantees a holistic point of view when evaluating the project progress. The stakeholder feedback will produce new input for the development team until a task is finally

defined as done. This approach and the documentation of the evaluation results can provide valuable input for upcoming Europeana projects and their consortia.

The priority is, first, to assess **the user acceptance and usability** of the Pilots, and, second to reflect on the Pilot **infrastructure functionality**. Critical issues can arise caused by the Pilots' complexity and diversity. In WP4 most of the methods chosen for this project will be applied (fig. 4).

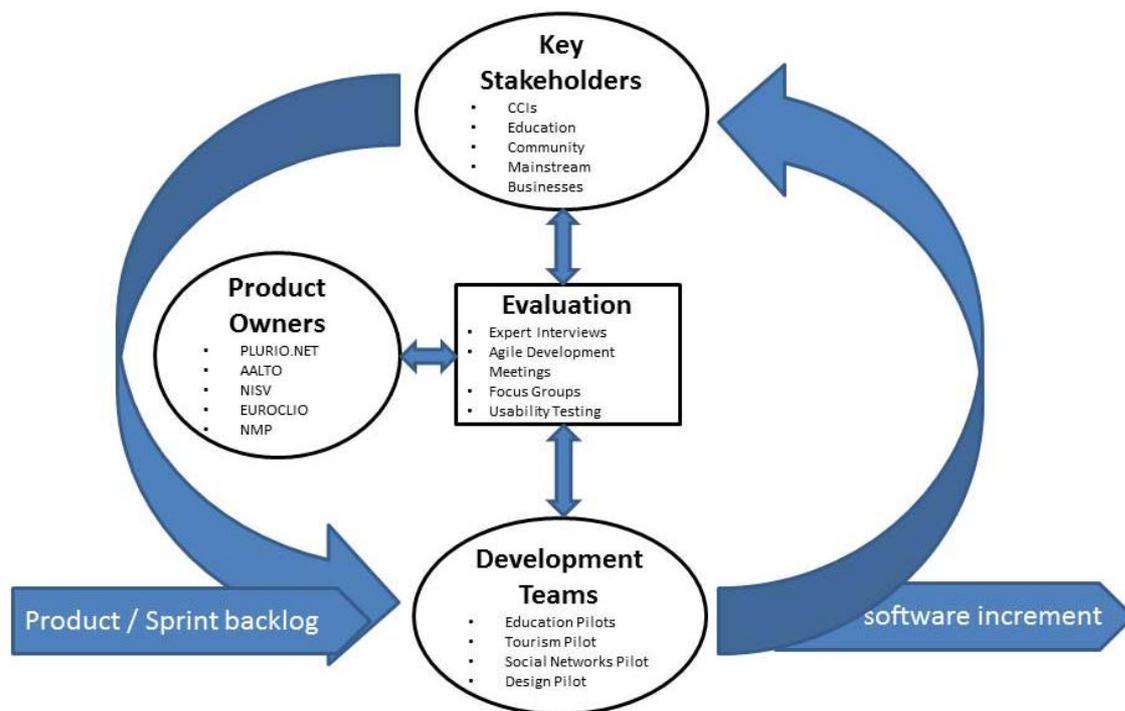


Fig. 3: Evaluation scheme for the Scrum adaption

The core elements of the evaluation are the expert interviews during the development of the five Pilots. They will evaluate the progress and functionality of the products developed with an adapted Scrum agile development framework. The research plan will be designed as outlined below (fig. 4):

- **Expert interviews 1–10** will start during the design phase. For each Pilot there two initial interviews will be conducted. The interviewees shall have a specific expertise in an area related to the Pilot product (e.g., game developer, tourism app developer, educational software developer, designer etc.) To ensure the possibility of comparison between the five Pilots it is important to focus on the seven indicators mentioned at the beginning of this chapter (usability, innovation, feasibility, engagement, potential, adaptability, “Europeanability”) and to develop specifications according to the themes

based on the interview results. These indicators shall enable on a meta-level the measuring of progress and success during the iterative evaluation process and also later on in the refinement and incubation phase.

- **User experience testings 1–10** will be conducted like described in chapter 4.1.3.1. A minimum viable prototype will be tested by relevant target audiences. The objective is to get a feedback on the usability and general experience from potential users e.g., educators, tourists, communities and designers. Each testing will be realized offline in one of the physical labs from the Europeana Labs Network (UX testing 1–5) and a second time online with the same testing participants. For the online testing the same criteria used in the offline testing will be applied and evaluated.
- **Focus groups 1–5** will be part of the user experience testing and gather feedback and suggestions for improvement from the participants. At the end of the offline testing a focus group consisting of six to eight testers will discuss the applications and formulate requirements for changes. The results will be fed back to the development teams of the Pilots.
- **Expert interviews 11–25** are addressing the progress, sustainability and future potential of the developed products in each Pilot theme. The composition of the interviewees will focus on the relevant expertise for each product. The interviews shall be realised to gather feedback on progress, obstacles, need for improvement for every Pilot. For a successful evaluation in each Pilot theme a minimum viable prototype showing the functionality and design is required to gather relevant feedback from the external stakeholder:
 - History Education Pilot: educational software developer, teacher, product owner
 - Natural History Education Pilot: teachers, game developers, product owner
 - Tourism Pilot: representatives from the tourism industry, tourism software developer, product owner
 - Social Networks Pilot: social network provider and developer, product owner
 - Design Pilot: designer, software developer, product owner.
- **Focus groups 6–10** will consist of the participants from the five expert interviews conducted for each Pilot theme. Within these focus groups the final products and relevant infrastructure needs will be discussed and documented. The objective is to gather relevant information for future cooperation between cultural heritage institutions and the creative industries from the creative industries perspective.

At the end of every Pilot development phase an **online survey (1–5)** will be conducted to gather broad feedback on the stakeholder satisfaction and to get an overall impression of possible obstacles as well as need for improvement.

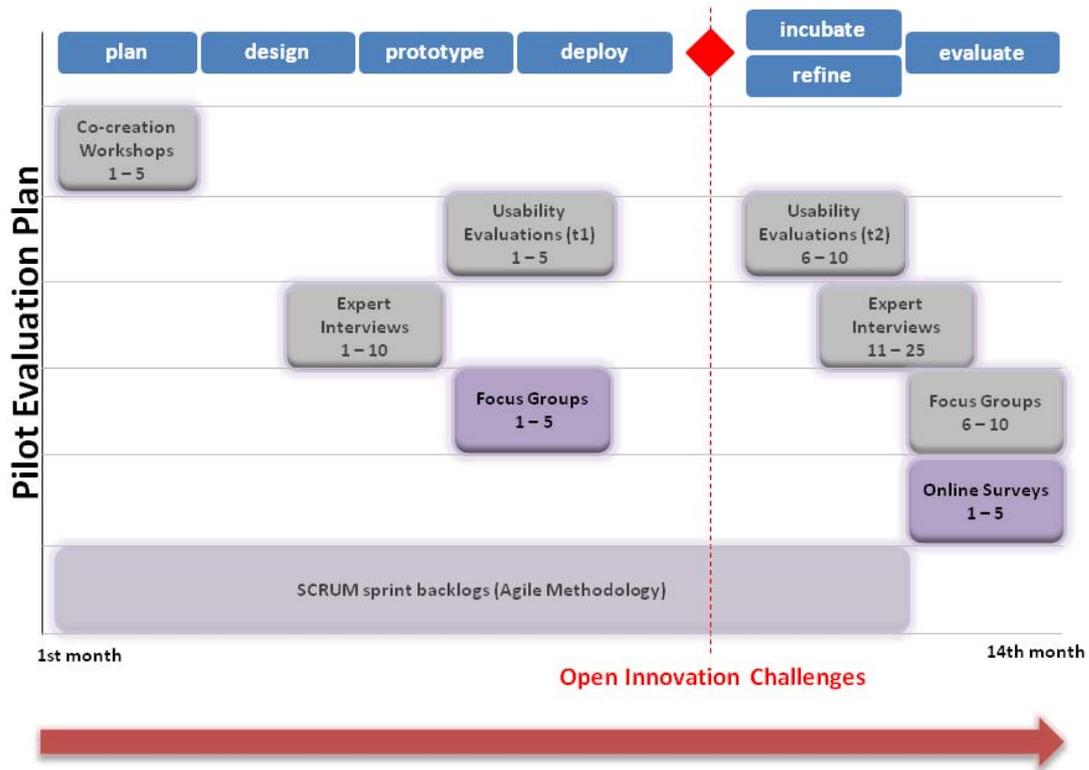


Fig. 4: Pilot evaluation plan

The results of the Pilot evaluation and testing will be reported and published as described in chapter 4.1.7.

4.2.1 Examination of the Extent of Success and Delivery

During the different stages of the project ideally a high number of stakeholders will observe the development process. The Pilot assessments in different stages and on different levels enable the observers to give hints and suggestions for improvement which can help later on the Challenge participants to optimise their approaches. The main evaluation objective is to get a holistic impression of the Pilot delivery process and to discuss barriers and possibilities to avoid these. The methods applied in Europeana Creative can be adjusted in case they are not useful. The co-creation workshops at the beginning of each Pilot development phase are supposed to be used for final alignments of the evaluation.

4.3 Infrastructure and Tool Evaluation

In Europeana Creative three work packages (WP1, WP2 and WP3) will develop different tools for the purpose of re-using digital cultural heritage content through Europeana and the Europeana Labs. The evaluation of this evolving infrastructure is also a task of WP6. Based on the variety of tools and different delivery dates the evaluation of the infrastructure and tools will be executed in cooperation with the Europeana Foundation (EF) who is in charge of the maintenance of the infrastructure and tools. WP6 will align with EF to conduct interviews and online surveys about the user experience of the Europeana Labs and the embedded tools e.g. image similarity service, geographic mapping and transformation algorithms, content re-use framework et cetera.

WP6 and EF will identify users of the tools and services and gather feedback on their experience and suggestions for improvement. Additionally technical testing will be carried out by WP1 and WP2 to enrich the information on these infrastructure components. The interviewees will consist of internal and external stakeholders who are using the provided services and tools.

Table 5: Tool and Infrastructure Evaluation Methods

Evaluation Method	Description
In-depth interviews	WP6 and EF will identify key user of the tools through the Europeana Labs Network. WP6 and EF will develop in cooperation a semi-structured interview guideline which can be used for in-depth interviews. The number of interviews to be conducted needs to be decided basing on the feedback besides the infrastructure and tool users.
Online-Surveys	WP6 and EF will develop an online-survey that can be used at hackathons where the Europeana Labs infrastructure and tools will be presented and used by representatives from the creative industries. The number of responses correlates with the numbers of hackathons and its participants.
Technical testing	The testing will be carried out by the responsible development teams in each WP (AIT, Ontotext, NTUA). WP6 will carry out interviews with the lead developer of each tool to document the test results (e.g., search results, efficiency and compatibility) and suggestions for improvement.

4.4 Challenge and Pilot Impact Evaluation

In order to address the creative industries and increase their engagement with digitised cultural heritage content three Challenge events covering the five Pilot themes will be carried out. The evaluation of the Challenge events will be led by a qualitative approach based on specific indicators and supplemented by a quantitative approach using online surveys.

4.4.1 Challenge Evaluation

Based on the objective to attract the creative industries with Challenges to re-use digitised content the Challenge evaluation will focus on the success of this objective. WP6 will measure relevant indicators regarding outreach, participation and technical uptake of the infrastructure and content. In second step the quality of the incubation support measures provided through the project consortium will be explored by in-depth interviews with the Challenge winners who received the incubation support package.

4.4.1.1 Challenge Uptake Indicators

Table 6: Challenge Uptake Indicators

Uptake Indicator	Description
Outreach	How successful the project was at reaching its intended audiences for the Challenges. The evaluation of the outreach will be based on the Google Analytics statistics embedded on the Challenge platform www.istart.org . The statistics gives an overview on the visitors per country and shows the general interest in the Challenge theme.
Number of participants	How many complete applications are submitted? The number of submitted applications gives an impression on the potential and willingness to re-use digitised cultural heritage content besides the creative industries. This also allows comparison between Challenges.
Type of content re-used	The quantity of the content used for the Challenges and its technical specification (images, text files, sound files or video files) can give an impression of the re-use potential for the content provided through Europeana.
Quality of the application	The quality of the submitted applications shows the degree of readiness besides the creative industries and gives an impression of the potential target audiences for re-using digitised cultural heritage content. This will be assessed using the data collected from the judging

	panel’s marking scheme, which is collated automatically on the system, ready for analysis.
Integration of the Europeana infrastructure in applications	The quantity of infrastructure integration shows the future potential of the Europeana Labs. WP6 will quantify what kind of services and tools is used and embedded in the application.

4.4.1.2 Challenge Online Survey

After every Challenge application phase an online survey among the participants will be executed to gather feedback from the participants’ side. The targeted audience comprises as well those candidates that have signed up for the Challenges but did not submit a proposal. This approach has the objective to figure out the general motivation of participants, the team composition and background as well as reasons for the engagement and experience with digitised cultural heritage. It should also assess whether participation in the Challenge has increase their willingness to use digital cultural heritage in their businesses.

4.4.1.3 In-depth Interviews with Challenge Winners

At the end of each incubation support phase WP6 will carry out in-depth interviews with the Challenge winners who received the incubation support. The objective is to explore potential for improvement and to identify the strength of the comprising package. The interview results will be fed back to WP5 in preparation for the next round of incubation support.

4.4.2 **Pilot Impact Evaluation**

A theory of change²³ helps to depict the logical relationships and assumptions behind a programme’s resources, outputs, outcomes and the intended impact it has. It is typically used to identify the appropriate indicators and to evaluate a programme’s success. In this instance, the resources, outputs and outcomes are predefined by the Description of Work of Europeana Creative, which are then used to identify the long-term outcomes that the programme targets, as well as the short-run indicators that may suggest whether the programme is on the correct trajectory to realise these outcomes. Having used this process, the project has developed the following criteria, which provide a first prediction of the impact for each Pilot theme developed within Europeana Creative.

Table 7: Pilot Impact Evaluation Criteria

²³ See http://en.wikipedia.org/wiki/Theory_of_change accessed May 21st, 2014.

Impact Evaluation Criteria	Description
Number of contributors	Target group, take up and depth of involvement. For some of the Pilot theme the contribution by volunteers is mandatory based on the indicated business model (e.g. History Education and Social Networks).
Number of uptakes for the Challenges	The uptake of the Pilot concepts for the Challenges is addressing those applications that are building on the initial Pilot concepts / products.
User statistics	<p>The user statistics can provide important information about the impact of a Pilot. Such statistics can be:</p> <ul style="list-style-type: none"> ○ Number of downloads ○ Numbers of subscriptions ○ In-app purchases ○ Number of frequent users
Sustainability of the Pilot beyond the project duration	This category is addressing the successful acquisition of funding or further investments besides the SMEs who are developing the products. It should also include an assessment of progress against the business planning targets each Challenge winner is developing as part of their incubation support package.
Requests besides CCIs	The number of direct request from CCIs to project partners for cooperation or the development of related products.

The criteria will be monitored by WP6 and adjusted if needed. The evaluation will be carried out in close cooperation with the Pilot theme task leads and the development teams.

4.5 Evaluation of Europeana Labs, Processes and Stakeholder Satisfaction

This evaluation task is closely related to the infrastructure evaluation described in chapter 4.3 and focusses on assessing the Europeana Labs activities and stakeholder satisfaction. If Europeana Creative fails to satisfy the targeted stakeholders (primary and secondary stakeholder audiences), the aspired project success is at risk. Furthermore new arising systems (e.g., commercial re-use of digital cultural heritage by CCIs) need to irritate the systems in their environment in a positive way to create interconnections. Successful models created and supported through the Europeana Labs can initiate incremental positive changes for cultural heritage institution and turn into inspiring best practice cases.

Four physical laboratory spaces will be involved, and the Europeana Labs (online) will be created.²⁴

The Europeana Labs will act as facilitators in the development of Pilots and market positioning via Challenges. Based on the experience made within the Europeana Labs a final report on a strategy for a sustainable Europeana Labs Network will be produced. The focus will lie on a successful transfer of knowledge.

For the evaluation task 6.4 two different methods will be applied (fig. 5):

- **User and provider feedback through expert interviews**
- **Online surveys**

An evaluation of user feedback through in-depth interviews will inform about the potential for improvement, acceptance and awareness level regarding the physical and virtual Europeana Labs. The Europeana Labs are conceived as learning organisations driven by user interests and will thus reflect if and how the internal Europeana Labs competences and procedures regarding the Pilot development can be improved to comply with the user feedback. This institutional innovation has a relevant impact and added value – even beyond the duration of the project.

Therefore users and providers of the Europeana Labs will be interviewed regarding their satisfaction in after the Pilot incubation phases. At the end of each Challenge this interview cycle will be set up to measure the improvement and the satisfaction of the Challenge participants.

For assessing the Europeana Labs its user statistics will be analysed within the Pilot development and Challenge phases. All API users of the Europeana Labs will be interviewed via online surveys at stages that have to be decided according to the uptake and acceptance of the virtual Europeana Labs. The final survey will be spread amongst the primary, secondary and tertiary stakeholder groups defined in chapter 3.1.

²⁴ See Europeana Creative Grant Agreement, Annex I, pp. 6–7.

5. Interdependencies with WP1 and WP3

WP6 depends on evaluation-related content and input especially from WP1 and WP3. Within task 1.3 from WP1, stakeholder success criteria will be evaluated. These criteria are a significant basis as indicators for the further evaluation. Additionally, in subtask 3.2.1 of WP3 a market activity analysis on CCIs is provided which focuses on identifying current best practice and actors in the digital heritage sector. This input will influence the development of best practice criteria for the iterative evaluation process.

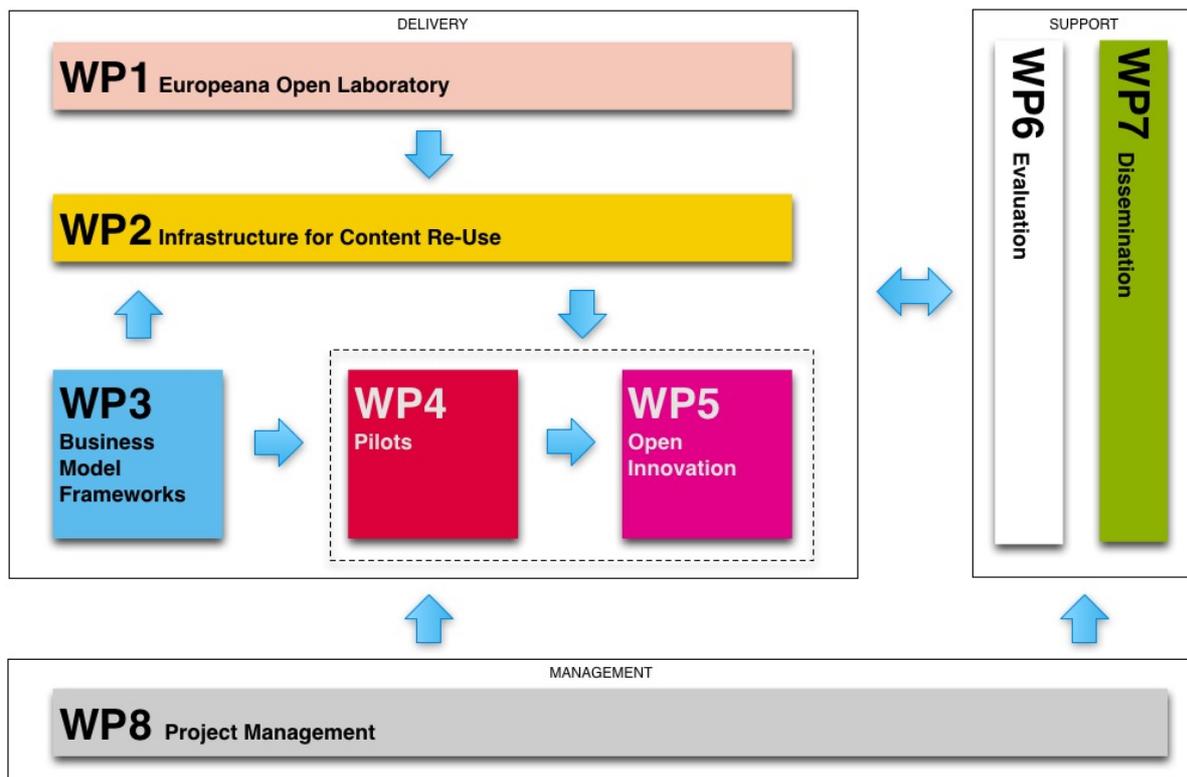


Fig. 5: Interdependencies with other work packages

6. Key Quality Indicators

The following table gives an overview of key quality indicators which are inherent in the project’s structure and process, based on the objectives to be achieved by WP1, WP2, WP3, WP4 and WP5. These indicators can be adjusted at every stage of the project.

Table 8: Key Quality Indicators

WPs	Activity	Indicators	Evaluation Method
All	Nomination of participants for evaluation group and key stakeholders	<ul style="list-style-type: none"> Minimum of 2 external experts in each topic of the evaluation group Minimum of 5 recommendations for the stakeholders groups from each consortium partner 	Measuring response on Google Drive spreadsheets
WP1	Content inventory for experimentation for the five Pilots	<ul style="list-style-type: none"> Content and metadata quality Satisfaction of primary internal stakeholders 	Expert interviews on Pilot evaluation in WP4
	Co-creation infrastructure	<ul style="list-style-type: none"> Constructiveness of workshop design and guidance Satisfaction of primary stakeholders 	Feedback from the consortium
	Europeana Labs	<ul style="list-style-type: none"> User acceptance Knowledge transfer 	User statistics Online surveys
WP2	Content retrieval services	<ul style="list-style-type: none"> Stakeholder satisfaction with content accessibility 	Expert interviews
	Services and API development	<ul style="list-style-type: none"> Quality of image similarity service, geographic mapping and transformation algorithms, API development and definition of messaging protocols plus management of user generated content 	Expert interviews Online surveys

	Data transformation services	<ul style="list-style-type: none"> • Successful transformation of Europeana metadata according to the application requirements 	Expert Interviews UX testing
	Linking to external web resources	<ul style="list-style-type: none"> • Successful transformation of metadata records into web resources 	Expert interviews UX testing
WP3	Content Re-Use Framework	<ul style="list-style-type: none"> • Successful implementation of the Extended Europeana Licensing Framework 	Focus Groups Online surveys
	Business models for Pilot themes	<ul style="list-style-type: none"> • Providing a market activity analysis on current best practices • Providing business models for each Pilot theme • Providing business models for the Open Lab including a sustainability plan 	Content analysis Focus Groups
WP4	Natural History Education Pilot	<ul style="list-style-type: none"> • Successful prototyping, deploying, refining and delivery of each Pilot (to be measured at t1, t2, t3) 	Expert interviews Focus groups Online surveys Sprint backlog UX testing
	History Education Pilot		
	Tourism Pilot		
	Social Networks Pilot		
	Design Pilot		
WP 5	Definition of Challenge entry criteria, selection process and prize	<ul style="list-style-type: none"> • Stakeholder feedback on appropriateness 	Expert interviews

Europeana Labs Incubation Support Pack (OISP) development	<ul style="list-style-type: none"> • Satisfaction of primary stakeholders and evaluation group 	Expert interviews
Spin-off Incubation Support Offer (SISO) development	<ul style="list-style-type: none"> • Satisfaction of primary stakeholders and evaluation group 	Expert Interviews
Challenge planning and execution	<ul style="list-style-type: none"> • Successful preparation and execution of five Challenges • Three venue-based offline event for each Challenge 	In-depth interviews Online surveys
Spin-off project incubation and support delivery	<ul style="list-style-type: none"> • Delivery of mentoring support package to Challenge-winning entrants • Establishing five spin-off projects • Establishing a Core Support Group (CSG) • Providing a Spin-off Project Support Requirements (SPSR) document • Monitoring spin-off delivery and incubation support fortnightly • Providing CSG Spin-off Midpoint Review • Formal independent evaluation with spin-off clients (WP6) 	In-depth interviews Content analysis Online surveys

Conclusion

The evaluation strategy and framework provides guidance on issues regarding the measurement of the project's progress and quality standards in all work packages (fig. 5). WP6 will ensure permanent improvement during the Pilot development and Challenge phases within Europeana Creative. This paper is conceived as a living document which can be updated and modified in case a specific evaluation strand proves not to be efficient.

The success of the evaluation depends on the interconnection and cooperation with other relevant work packages. WP6 is seen as a feedback instrument and not as a mechanism for criticism.

Annex I: Performance Indicators

B3.2b.2 Performance Monitoring Table:

Indicator No.	Objective / expected result?	Indicator Name	Expected Progress		
			Year 1	Year 2	Year 3
1	WP1 – Europeana Open Laboratory Network Affiliates in operation	Number of labs actively working in the Europeana Open Laboratory Network	2	4	4
2	WP1 – Online Open Culture Lab	Unique visitor traffic to the online Open Culture Lab environment	3,000 unique visits	5,000 unique visits	8,000 unique visits
3	WP2 – Enrichment of content for Pilot 1–5	Number of metadata objects made available to support Pilot projects	10,000	50,000	100,000
4	WP2 – Objects accessible through semantic search	Number of metadata objects accessible through semantic search	100,000	500,000	1,000,000
5	WP3 – Facilitate creative industries’ re-use of cultural heritage content by implementing the Europeana Content Re-use Framework	Sophistication and take-up of business models designed and documented	Single-sided business model documented allowing for non-discriminatory licensing	At least one business model implemented allowing for commercial or semi-commercial re-use of cultural material	More complex multi-sided business models documented
6	WP3 – Facilitate creative industries’ re-use of cultural heritage content by implementing the Europeana Content Re-use Framework	Number of additional Europeana content providers and aggregators making content available for commercial use via Content Re-use Framework	1	2	4
7	WP4 – Pilots	Number of Pilots developed demonstrating the potential for creative re-use of cultural heritage	0	2	5

Indicator No.	Objective / expected result?	Indicator Name	Expected Progress		
			Year 1	Year 2	Year 3
8	WP5 – Challenges	Number of open industry Challenges completed	2	4	5
9	WP5 – Spin-off projects	Number of spin-off projects identified, incubated and supported	0	3	5
10	WP5 – Open Lab Incubation Support Packs	Number of requests for support pack access through the Europeana Open Labs Network	10	30	50
11	WP5 – Creative Challenge	Number of registered attendees at open industry Challenge events	0	160	250
12	WP6 – Pilot Evaluation	Number of Usability Tests and Focus Group sessions held	1	5	10
13	WP6 – Challenge Evaluation	Evaluation Reports on Challenges available to support further lessons-learned in the sector	0	4	5
14	WP7 – Events	Number of attendees at project dissemination events	40	100	200
15	WP7 – Social Media Presence	Followers of the project on social media networks	100	200	400