



## Europeana – Core Service Platform

### **DELIVERABLE**

### **D9.3: Final Technical Report**

<b>Revision</b>	draft
<b>Date of submission</b>	1 July 2016
<b>Author(s)</b>	Victor-Jan Vos, Jill Cousins, Harry Verwayen, Henning Scholz, Aubéry Escande, David Haskiya, Pavel Kats, Eleanor Kenny, Albert Verhaar, Milena Popova, Cristiana Grosaru, Joris Pekel, Dasha Moskalenko, Remy Gardien, Cecile Devarenne, Antoine Isaac (Europeana Foundation)
<b>Dissemination Level</b>	Public



Co-financed by the European Union

Connecting Europe Facility

**REVISION HISTORY AND STATEMENT OF ORIGINALITY**

<b>Revision No.</b>	<b>Date</b>	<b>Author</b>	<b>Organisation</b>	<b>Description</b>
1	21-04-2016	Cristiana Grosaru	Europeana Foundation	Initial Version
2	20-05-2016	All project partners	All partners	Added information under the work package involved in
3	20-05-2016	Victor-Jan Vos, Jill Cousins, Harry Verwayen, Henning Scholz, Aubéry Escande, David Haskiya, Pavel Kats, Eleanor Kenny, Albert Verhaar, Milena Popova, Joris Pekel, Dasha Moskalenko, Remy Gardien, Cecile Devarenne, Antoine Isaac	Europeana Foundation	Added information under the work package they are responsible for
4	10-06-2016	Cristiana Grosaru, Victor-Jan Vos	Europeana Foundation	Revision of text and preparation of first version
5	27-06-2016	Jill Cousins, Harry Verwayen	Europeana Foundation	Review
6	30-06-2016	Victor-Jan Vos	Europeana Foundation	Comments inserted from the review and final version

**Statement of originality:**

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

The sole responsibility of this publication lies with the author. The European Union is not responsible for any use that may be made of the information contained therein.

# FINAL TECHNICAL REPORT

**Project acronym:** Europeana DSI  
**Project title:** Europeana DSI - Core Service Platform  
**Project reference:** CEF-TC-2014-2

**Periodic report:** 3rd  
**Period covered:** from 01 April 2015 to 30 June 2016

**Project coordinator name, title and organisation:**

**Jill Cousins, Executive Director, Europeana Foundation**

Tel: +31 70 314 0 198

E-mail: [jill.cousins@europeana.eu](mailto:jill.cousins@europeana.eu)

Project website address: <http://pro.europeana.eu/>

‘Europeana DSI is co-financed by the European Union's Connecting Europe Facility’

## Table of contents

- [1. Publishable Summary](#)
- [2. Response to recommendations from reviewers \(November 2015\)](#)
- [3. Progress and achievements under each work package \(1 April 2015 - 30 June 2016\)](#)
  - [3.1 WP1 Data Partner Services](#)
    - [3.1.1 Summary of the main achievements under WP1](#)
    - [3.1.2 Description of work carried out](#)
  - [3.2 WP2 End User Services](#)
    - [3.2.1 Summary of the main achievements under WP2](#)
    - [3.2.2 Description of work carried out](#)
  - [3.3 WP3 Re-user services](#)
    - [3.3.1 Summary of the main achievements under WP3](#)
    - [3.3.2 Description of work carried out](#)
  - [3.4 WP4 Policy, Research, Knowledge and Programme Management](#)
    - [3.4.1 Summary of the main achievements under WP4](#)
    - [3.4.2 Description of work carried out](#)
  - [3.5 WP5 Network and Sustainability](#)
    - [3.5.1 Summary of the main achievements under WP5](#)
    - [3.5.2 Description of work carried out](#)
  - [3.6 WP6 Product Development](#)
    - [3.6.1 Summary of the main achievements under WP6](#)
    - [3.6.2 Description of work carried out](#)
  - [3.7 WP7 Technology](#)
    - [3.7.1 Summary of the main achievements under WP7](#)
    - [3.7.2 Description of work carried out](#)
  - [3.8 WP8 Communication](#)
    - [3.8.1 Summary of the main achievements under WP8](#)
    - [3.8.2 Description of work carried out](#)
  - [3.9 WP9 People and Business Support](#)
    - [3.9.1 Summary of the main achievements under WP9](#)
    - [3.9.2 Description of work carried out](#)
- [4. Project management](#)
- [5. Overview of project deliverables and milestones](#)
  - [5.1 Deliverables](#)
  - [5.2 Milestones](#)
- [6. Dissemination activities](#)
  - [6.1 Presentations at External Events](#)
  - [6.2 Publications](#)
- [7. Performance indicators](#)

# 1. Publishable Summary

Europeana connects Europe's cultural heritage institutions to provide access to the commonly shared heritage for work, learning or pleasure. Our mission is to transform the world with culture. The Europeana DSI project provides the mechanism for this to happen. The project took place between 1 April 2015 and 30 June 2016 (14 months), and was funded by the Connecting Europe Facility (CEF) Trans-European Telecommunications Networks Work Programme 2014.

Europeana DSI was coordinated by the Europeana Foundation and was run in cooperation with 26 partners. They can be divided into domain and thematic aggregators (film, natural history, museums, archaeology, fashion, television, history and archives), expert networks for distribution (education, tourism, research, creative industries) and experts on subjects that complement the mission of Europeana DSI (legal, technological, statistical, crowdsourcing, events).

The key objective of Europeana DSI project was the continued operation of the Europeana DSI to achieve the aims of the [Europeana Strategic plan](#) 2015-2020, supported by **3 specific key objectives**:

1. Innovate the aggregation infrastructure;
2. Boost the distribution infrastructure;
3. Work towards long-term financial stability through business model innovation.

The consortium worked hard to meet these objectives and **good results** were achieved.

The work carried out under work packages 1 (Data partner services), 6 (Product Development) and 7 (Technology) targeted objective no 1. Their work focused on developing **ingestion tools, establishing the concept of expert hubs, improving data quality and adding new data to Europeana, all under the umbrella aim to innovate the aggregation infrastructure.**

The development of a **shared toolset** for harvesting, analysing, transforming, enriching and publishing data has started under Europeana DSI and has led to some promising initial results. In parallel to these improvements of the existing systems, we have also started experimenting with more radical ways to get data directly from the cultural institutions (**Operation Direct**). In addition, the **expert hub** as a concept has been developed with aggregating partners, outlining the roles needed in an innovated aggregation landscape. While this should be considered a good step forward, more work is needed to fully understand the implications for the current aggregation landscape. An important component of the development of a more reciprocal relationship with the cultural institutions and the aggregating partners is the launch of the **Statistics Dashboard**.

An important step to improve **data quality** was **the translation and wider adoption of the Europeana Publishing Framework (EPF)**. The EPF defines data quality (including minimum standards) by presenting four tiers of participation in Europeana to our data partners and aggregators. According to these tiers, the higher the quality of information provided, the more benefit for end user audiences and data partners. It is now widely accepted as a conceptual and technical framework that guides our relationships and has already been translated in five

languages. Additionally, a **Data Quality Committee** was set up to address other key data quality issues and to propose quality improvements. Members of this Committee come from our Aggregator Forum and representatives of users, re-users and Europeana Foundation's ingestion and R&D-teams.

Under Europeana DSI-1 9.5 million records were added to the Europeana Platform. As the Europeana Publishing Framework was implemented on our Platform during the Europeana DSI project, we do not have the figures for division in tiers yet, but we will report according to the tiers from the next project.

The work carried under work packages 2 (End-user services) work package 6 (Product development) and 3 (Re-user services) focused on boosting the distribution infrastructure. This comprises of improvements of the infrastructure itself, as well as on making better use of it to reach target audiences. Main achievement was the completely redesigned **Europeana Collections** (i.e. portal) website that was launched in December ([www.europeana.eu](http://www.europeana.eu)) and the release of **three thematic collections** (Europeana Art History, Europeana Music, Europeana Fashion (in alpha version)). An extensive user survey was carried out in the months after the mid-term review of the Europeana DSI project. This has already led to new improvements of Europeana Collections. We have also installed an on-going end-user validation programme in which Europeana tests assumptions using key elements of the lean start-up methodologies. The engagement levels on Europeana Collections have gone up (in particular with professional users) while most of the traffic and impressions come through Google searches and use of Europeana material on third party platforms (Pinterest, Wikipedia) and through social media, such Twitter and Facebook.

In addition, our products and services for creative and research communities were improved. **Europeana Labs** got a new visual design and added tools and services for the developer community. The **Europeana Research** website was launched (developed under the Europeana Cloud project), 'repackaging' data and services from Europeana Labs, Europeana Pro and Europeana Collections to reach digital research communities. We have given a considerable boost to our distribution infrastructure. As well as the improved labs, partnerships have been developed and consolidated in Education, Smart Cities and the Creative Industries have been encouraged both through Challenges and a partnerships with physical Labs networks. We applied some lessons on the setting up of challenges with excellent results in the Europeana Innovation Challenge. This closed with 56 applications from around the world, more than double the average number of previous online challenges, such as those under Europeana Creative. The three winners Europeana Art Stories, Cinemacina and StoryPix have developed prototypes and all are using Europeana material.

The Europeana API us to develop the re-use of Europeana's data in both education and tourism sectors. The distribution partnerships developed with European Schoolnet (EUN), Euroclio and Inventing Europe (SHT) focused on setting up automatic distribution of Europeana data into education systems (from formal to informal education and lifelong learning), while the distribution partnerships with PLURIO.net and SE1 Media identified the means (but also investment required) to distribute cultural heritage in tourism. The preliminary conclusion is that Europeana is currently better set up to reach the educational market than to the more demanding, localised tourism industry. Euroclio's application in Historiana has been particularly well received and a new MooC partnership is in the making. The crossover work with Creatives such as #BigArtRide, CREATE

Colour App and the Faces of Europe exhibition have got Europeana noticed by Frankfurt Bookfair leading to a new partnership called ArtsPlus.

Work packages 2 (End-user services), 3 (Re-user services), 4 (Policy, Research, Knowledge and Programme Management), 5 (Network & Sustainability), 8 (Communication) and 9 (People and Business support) all contributed to the **long-term impact, viability and sustainability of Europeana**, a key objective of this DSI.

Sustainability was a big topic during this project, which requires alignment between all stakeholders about the aims and scope of Europeana. An important component of this alignment was the development of the **Europeana Business Plan 2016** (D4.1) and, probably the main achievement, the **Council Conclusions** of May 2016.

Two strands of work contributed to this: p.p

- Analysis of the value of Europeana to its stakeholder/client groups;
- Work under the Dutch Presidency on sustainability of Europeana;

The first strand - **analysis of the value of Europeana to client groups**, value proposition work was undertaken with each of the client groups of Europeana to get a solid understanding of the value of Europeana to each potential client group, culminating in the document *Towards a sustainable future for Europeana*<sup>1</sup>. In essence it concludes that Europeana creates value for five client groups.

- For end users: free access to trustworthy digital cultural heritage;
- For the European Commission: interoperability facilitating the Digital Single Market and fuelling the creative industries;
- For Member States: increased international visibility and being part of a community;
- For creative industries: access to high-quality, rights-cleared digital cultural heritage material;
- For expert hubs: innovation and shared costs for services (infrastructure, core and add-on).

The multi-sided platform aims to create value for all five client groups. The paper concludes that alternative (i.e. commercial) sources of income have been investigated and maybe possible, but that at this time Europeana cannot become self-sustaining. To maximise value for all customer groups and act as a catalyst of change, central EU and Member State funding coupled with smaller additional income sources is the best model to operate Europeana.

The second strand of work resulted in the Council Conclusions on the role of *Europeana* for the digital access, visibility and use of European cultural heritage<sup>2</sup>. The Dutch Ministry of Education, Culture and Science worked with the Member States, the Commission and the Europeana Foundation to come to agreement on the funding of Europeana under this Multiannual Framework. and in holding an independent evaluation of its impact by October 2018 to be able to decide on

---

<sup>1</sup> Paper 5a, Europeana Foundation Board Meeting 19 November 2015

<sup>2</sup> <http://data.consilium.europa.eu/doc/document/ST-9643-2016-INIT/en/pdf>

how to proceed for the following Multiannual Framework. The result is funding under procurement through to 2020 and possibly beyond.

While all three concerned parties (Europeana, European Commission and the Member States) were invited to make contributions to a sustainable future for Europeana, the adoption of the conclusions can be seen as a tremendous endorsement of the work of our partners and Network.

The **Europeana 280 campaign** revitalised the relationship with the EU and the Member States, providing an attractive case study how the provision of new, high-quality data can lead to the engagement of captive audiences, on and off the web. For this campaign, each of the 28 European Ministries of Culture (+ Norway) were invited to select ten pieces of art held in their country that have contributed to a European art movement. Through an interactive online and social media campaign, people across the EU were encouraged to engage with our European art history. This together with direct monetary appeals to the MS has resulted in a healthier cash position for Europeana Foundation.

All the listed outcomes contribute to achieve social, economic and innovation impact. The impact framework itself was evaluated and improved. We have put it to test evaluating the impact of the Europeana1914-1918 service.

#### **Social/Cultural impact:**

- Europeana DSI contributes to the mutual understanding of European citizens about their shared heritage (unity in diversity). We have invested in making these connections easier to make, by making it easier to find cultural heritage in different European languages. For example, we have enhanced the discoverability of famous works of art presented in Europeana's collections; 150 artwork titles were translated in various languages including English, German, Spanish, French, Italian, Dutch and Polish through a crowdsourcing campaign in cooperation with Wikidata. By doing so, famous works of art became more accessible to an internationally distributed audience.
- Another example is the interactive public event #BigArtRide, that took place in nine European countries as part of the Europeana280 campaign and which made accessible openly licensed artworks in a new and innovative way through a virtual reality app. In this way, participants across Europe were brought closer not only to the artworks but to each other as they shared a virtual journey together.
- Based on the partnerships established in education, sources from the Europeana Collections can now be used in educational activities leading to a better shared understanding of our common heritage. A strong example is the innovative teaching and learning resources that were developed, such as the first Europeana Multi-Touch book and related iTunes U course, World War I: A battle of perspectives. This was made in collaboration with EUROCLIO and Apple and introduces learners to the causes of the outbreak of the First World War.

#### **Economic impact:**

- Europeana organised and joined various challenges/competitions to nurture the development of viable products, apps and services using digital cultural data. The winning ideas from these competitions were supported by Europeana DSI. Europeana designed a simple incubation process to support promising initiatives with every stage on their path



from an idea to a market-ready product: from experimenting with digital cultural content to developing a prototype product and trying alternative financing strategies such as a crowdfunding campaign. An good example is the First Europeana Innovative Challenge in February 2016, which resulted in three incubated re-use projects. One of the winners set up his own start-up StoryPix B.V. (in The Netherlands) to be able to develop a business around the web storytelling technology of StoryPix. These types of initiatives provide test cases for our contribution to the European economy, jobs and growth.

- Europeana DSI reduced costs for all stakeholders and user groups who want to share or use digital cultural heritage. While it is hard to quantify these cost savings in absolute numbers, user research has shown that the introduction of the rights facets and quality filters on Europeana Collections are highly valued aspects of our service, in particular in the professional (researchers, educators and creatives) markets. On the supply side, the investments being made in a simplified and more effective way to share data (Operation Direct) are good examples of initiatives that will hopefully reduce the barriers to market for cultural institutions to participate in the sharing economy of the web.

### Innovation impact:

- The development and introduction of several standards has made our industry of GLAM professionals more innovative and fit for a future on and off the web. Building on earlier work the EDM data model has been further extended to accommodate the needs of the library and museum sectors, we have a whitepaper on Best Practices for Multilingual Access to Digital Libraries<sup>3</sup>. Other good examples are the roll-out of the **Europeana Publishing Framework** and the the launch of [RightsStatements.org](http://RightsStatements.org), a partnership between Europeana, DPLA and Creative Commons to provide a global set of rights statements for all cultural institutions. The adoption of these frameworks and standards provides the interoperability and shared language necessary to fully reach our aims.

### List of project beneficiaries, with the corresponding contact name and associated coordinates

No. of beneficiary	Name of organisation	Abbr.	Name of contact person	Contact details
1	Europeana Foundation	EF	Victor-Jan Vos	<a href="mailto:victor-jan.vos@europeana.eu">victor-jan.vos@europeana.eu</a> +31 70 314 0 198
2	Association des Cinémathèques Européennes	ACE	Kerstin Herlt	<a href="mailto:herlt@ace-film.eu">herlt@ace-film.eu</a>
3	Deutsches Filminstitut	DIF	Julia Welter	<a href="mailto:welter@deutsches-filminstitut.de">welter@deutsches-filminstitut.de</a>

<sup>3</sup>

[http://pro.europeana.eu/files/Europeana\\_Professional/Publications/BestPracticesForMultilingualAccess\\_whitepaper.pdf](http://pro.europeana.eu/files/Europeana_Professional/Publications/BestPracticesForMultilingualAccess_whitepaper.pdf)

4	Michael Culture AISBL	Michael	Maria Teresa Natale Corinne Szteinszneider Marzia Piccininno	<a href="mailto:mariateresa.natale@gmail.com">mariateresa.natale@gmail.com</a> <a href="mailto:corinne.szteinszneider@michael-culture.eu">corinne.szteinszneider@michael-culture.eu</a> <a href="mailto:marzia.piccininno@michael-culture.eu">marzia.piccininno@michael-culture.eu</a>
5	Freie Universität Berlin	FUB	Walter Berendsohn	<a href="mailto:w.berendsohn@bgbm.org">w.berendsohn@bgbm.org</a>
6	2Culture Associates Ltd	2Culture	Kate Fernie	<a href="mailto:kfernie27@gmail.com">kfernie27@gmail.com</a>
7	Athena-Research and Innovation Center in Information, Communication and Knowledge Technologies	AthenaRC	Dimitris Gavrilis	<a href="mailto:d.gavrilis@dcu.gr">d.gavrilis@dcu.gr</a>
8	Europeana Fashion International Association	eFashion	Marco Rendina Marco Rufino	<a href="mailto:mrendina@europeanafasion.eu">mrendina@europeanafasion.eu</a> <a href="mailto:mrufino@europeanafashion.eu">mrufino@europeanafashion.eu</a>
9	Netherlands Institute for Sound and Vision	NISV	Johan Oomen	<a href="mailto:joomen@beeldengeluid.nl">joomen@beeldengeluid.nl</a>
10	Stichting International Association of Labour History Institutions	IALHI	Afelonne Doek	<a href="mailto:ado@iisg.nl">ado@iisg.nl</a>
11	EUN Partnership AISBL	EUN	Elena Shulman Ioanna Leontaraki	<a href="mailto:elena.shulman@eun.org">elena.shulman@eun.org</a> <a href="mailto:ioanna.leontaraki@eun.org">ioanna.leontaraki@eun.org</a>
12	European Association of History Teachers	Euroclio	Steven Stegers	<a href="mailto:steven@euroclio.eu">steven@euroclio.eu</a>
13	Foundation History of Technology	SHT	Jan Korsten	<a href="mailto:J.W.A.Korsten@tue.nl">J.W.A.Korsten@tue.nl</a>
14	DARIAH ERIC	DARIAH	Laurent Romary	<a href="mailto:laurent.romary@inria.fr">laurent.romary@inria.fr</a>
15	CLARIN ERIC	CLARIN	Franciska de Jong	<a href="mailto:f.m.g.dejong@uu.nl">f.m.g.dejong@uu.nl</a>
16	Agence luxembourgeoise d'action culturelle asbl	PLURIO	Tessy Fritz	<a href="mailto:tessy.fritz@culture.lu">tessy.fritz@culture.lu</a>

17	European Museum Academy	EMA	Onno Ephraim	<a href="mailto:onno@heritageinformation.eu">onno@heritageinformation.eu</a>
18	Koninklijke Bibliotheek, National Library of The Netherlands	KBNL	Christine Smittenaar	<a href="mailto:Christine.Smittenaar@KB.nl">Christine.Smittenaar@KB.nl</a>
19	National Library of Latvia	LNB	Uldis Zarins	<a href="mailto:Uldis.Zarins@lnb.lv">Uldis.Zarins@lnb.lv</a>
20	The Collections Trust	CT	Solange Prata	<a href="mailto:solange@collectionstrust.org.uk">solange@collectionstrust.org.uk</a>
21	SE1 Media	SE1	Nicholas Hall	<a href="mailto:nick.hall@se1media.com">nick.hall@se1media.com</a>
22	Digital Heritage Netherlands Foundation	DEN	Marco de Niet	<a href="mailto:Marco.deNiet@den.nl">Marco.deNiet@den.nl</a>
23	Stichting Nederland Kennisland	KL	Lisette Kalshoven	<a href="mailto:lk@kl.nl">lk@kl.nl</a>
24	Facts and Files Research Institute Berlin Partnership	F&F	Frank Drauschke	<a href="mailto:drauschke@factsandfiles.com">drauschke@factsandfiles.com</a>
25	Platoniq Sistema Cultural	Platoniq	Olivier Schulbaum	<a href="mailto:olivierschulbaum@platoniq.net">olivierschulbaum@platoniq.net</a>
26	Austrian National Library	ONB	Max Kaiser	<a href="mailto:max.kaiser@onb.ac.at">max.kaiser@onb.ac.at</a>
27	Poznan Supercomputing and Networking Center	PSNC	Marcin Werla	<a href="mailto:mwerla@man.poznan.pl">mwerla@man.poznan.pl</a>

## 2. Response to recommendations from reviewers (November 2015)

A project review meeting took place at halfway of the project (on 2 November 2015), to which both representatives of the European Commission and external reviewers attended. We took into consideration the recommendations received on the progress of the project and we present them below together with the work we carried out in response to these recommendations. Also, some comments of the external reviewers involved actions to be taken or underlined existing issues. We considered that these comments are worth being mentioned under the related task or subtask followed by the description of the work carried as necessary actions for improvement and for solving the identified issues.

**Recommendation 1:** The Consortium should seek to reinforce more frequent direct communication, interaction, and engagement with both primary and secondary users targeted by Europeana services, in addition to already well established communication channels with end users through their associations or other types of intermediaries that represent them. In particular, it is important that the Consortium considers adding more user research activities to better understand users' expectations and how Europeana can address unmet needs.

The exact offer to the various Europeana audiences - seen as "customers" now that Europeana is shifting from a portal to a service infrastructure with a business approach geared towards service offering to various categories of end users - needs to be further clarified and relevant expectations of each type of end user managed accordingly. This is especially (but not only) applicable in the case of the Europeana Labs targeting various types of professionals, as the process and time required for accessing the desired content can greatly vary depending on many diverse factors and content discoverability represents a threat to success and establishing a good relationship with potential business partners. Moreover, user journeys for different user groups are unclear and confusing, therefore reducing users' engagement and consideration. A better and clearer definition of the different journeys from a single entry point could support and improve users' engagement and experiences.

The project could benefit from a wider research plan that should include:

- Europeana user testing with a think aloud protocol, to understand what are the current pain points and delights in the user journeys. Ideally it should include both Europeana users and participants that have never been accessing Europeana, to highlight and understand both learnt behaviours and spontaneous expectations. This can lead to a better understanding of the user experience and lead the development of the services answering real users' expectations.
- The user testing sessions may be combined with in-depth interviews to collect insights regarding the expectations, the frequency of use, and what are the best in class sites users enjoy when exploring culture related content, to learn from others and tailor the user experience around real expectations.

- The development of user journeys or empathy maps, that can be developed out from the user research (user test and in depth interviews) may be beneficial for a better understanding on how to engage with primary and secondary users and support Europeana exploitation strategy on the long term.
- Additionally, the Consortium may consider a broader survey that can be spread through the social media activities to reach a wider audience. The goal of a broader survey should be to understand what users expect from a project like Europeana, which kind of content would they like to see, which other sites/services similar to Europeana do they enjoy, how did users learn about Europeana, frequency and reason of interaction.

The goal of these research activities, which should target both primary and secondary users, is to develop a sounder understanding of the users, develop a stronger engagement and exploitation strategy, and answer users' expectations by providing a best in class experience and user journey.

**Work carried in response to recommendation 1:** Europeana speaks to distinct audiences and communities from the cultural enthusiast, to the cultural professional and to the creative re-user. Important factors that need to be kept in mind in this context are the potential of opportunity, experience and reach offered by these communities in effectively communicating Europeana's resources and messages to relevant audiences, and the limited resources at Europeana's disposal compared to the scale of the communication task. These factors have underpinned Europeana's strategic approach to widen reach by communicating where possible through communities, as seen for example with the Communicator's group, the Europeana Association Network Members' Council and the Aggregators' Forum.

Europeana recognises however that the above approach needs to sit within the context of targeted and focused communication to audiences and that there are areas where this targeted communication can, and should, be more effectively employed directly. As a result Europeana has increasingly undertaken more direct communications with its audiences:

- Following the new Thematic Collections, the Collections (WP2) and Product teams (WP6) are now reaching out directly to users to better understand and address their needs, holding interviews with hundreds of end users, who have responded to our surveys, to validate and improve our approach on that side;
- On social media there has been a step-change in approach to move from a 'push' approach to more interaction and dialogue with users, e.g. on Pinterest, Twitter and Facebook. This is resource intensive but the response has been positive not only with wider user groups but also more focused communities such as the Europeana 1914-1918 community;
- With Wikipedia the success of the Europeana Art Challenge<sup>4</sup> where at the start of competition there were 472 Wikipedia pre-existing articles across all 39 tracked languages (an average of 12 articles per language). Now, there are now over 1,300 articles - an average of 34 per language. This makes this challenge the largest ever GLAM-Wiki

---

<sup>4</sup> <http://pro.europeana.eu/blogpost/europeana-art-history-challenge-concludes>

competition, the first to incorporate Wikidata and the second largest Wikipedia translation event. But most importantly, volunteer participants from across the continent have learned about Europeana and, by sharing that information, helped spread it to a wider audience.

- As an integral part of Operation Direct - a work project promoting innovative aggregation with data providers- the Infrastructure team (WP7) has expanded and deepened direct dialogue with the field (individual cultural institutions) to gain unmediated insight into their needs and realities;
- Within existing direct communication channels, Europeana is working to ensure that these are as targeted as possible. For example Europeana is now using a CRM tool, Zoho, which allows direct communications to the Network Association to be matched against the declared professional interests of members.

In what concerns the research among users, during development of Europeana Collections we engaged users to review various design choices using A/B tests, tracked their comprehension of our navigation structure using heat maps and conducted a series of on-site usability tests. We also regularly released user surveys asking people for feedback on their experience with one of our websites in general or on a particular element such as the information architecture.

After the release of Europeana Collections Europeana contracted two agencies for intensive user research including a heuristic review and online user tests specifically focused on the new Music and Art History Collections. More information about this research in the WP6 section.

For the developer-oriented services we have released the [Annotations](#) and Newspaper APIs for limited Alpha testing. Both APIs are tested by invited partners and interested developers, whose feedback is contributing to the further enhancements of both APIs in preparation for a public Beta release. The Europeana [OAI-PMH Service](#) has also been in public beta and has gained a lot of interest, feedback which is used to improve further and expand the service.

To formulate a suitable design for the user interface our aggregation tools, we engaged the primary users of the current ingestions tools to gain insight into the issues and restrictions they are facing now and their workflow. This was done through a series of face to face interviews and recording of workflows which resulted in wireframes and functional requirements.

**Recommendation 2:** Over the years of its operation and expansion and in its effort to shift from a portal to a service infrastructure, Europeana has correctly experimented with offering data and services to a number of stakeholders active in many different domains (e.g. tourism, education, creative industry, cultural institutions, individuals interested in culture, etc.). However, continuing to try to address all of these domains and multitude of objectives within Europeana DSI could lead to scattering offerees and difficulty in achieving high impact in one or few of these areas. Thus, the recommendation is to better and more consistently prioritise areas of Europeana activity and domains targeted by Europeana data and services and focus work on those activities that are most promising in terms of high impact and reach to the widest possible

audience(s). Accordingly, areas of activity where Europeana experiments in offering services have been less successful or impactful should receive low priority or even be eliminated.

For instance, Europeana has correctly identified education as one domain that could greatly benefit from Europeana data and services and is, thus, including it in its immediate objectives and short-term work plan. However, it is recommended to not limit the offering to only formal education establishments but consider how the Europeana content and services could be accessed and made useful to the wider education and life-long-learning arena (informal learning) and edutainment providers (such as TV production companies, digital production organisations, editors, gaming industry...).

**Work carried in response to recommendation 2:** the Europeana DSI period allowed us to further consider our 4 potential reuse markets: education, research, tourism and the creative industries. Europeana DSI already focussed on consolidating the gains in Digital Humanities Research made under Europeana v3 and prioritising the development of education partnership and access to market over the other 2 markets. We are committed to evaluate their outcomes and use this knowledge to focus and prioritise our future work. For example, the consultancy work done by our partner SE1 Media help us better understand the tourism sector and the required investment for successful entry of Europeana on this market, leading to a refining and focussing of how we will interact with this sector through Smart City initiatives and a decision to only concentrate on investigating partnerships for DSI-1.

Furthermore, we did additional research to narrow down the number of creative industries target groups so that we work together only with those for whom our re-use offer is most relevant. An example is our discussions with Rovio (the creator of Angry Birds) and UbiSoft which made clear that Europeana content can serve as inspiration but can't be a relevant basis resource for the big gaming companies. Our concentration therefore has been on the development of Challenges and supporting information on access to our data, giving us scalability without increase in resource. The development of the incubation pipeline has been "outsourced" to a strategic partner with experience in co-creation and crowd funding Wotify.co

We are also open to explore further opportunities on a particular market to identify the high impact activities. In the case of education, the collaboration between Europeana and the WP3 partners in education (EUROCLIO, European Schoolnet and Inventing Europe) focuses on the integration of Europeana data in partners' educational systems. In this way, we allow Europeana Collections to be re-used by educators across Europe in any educational format, from formal education (classroom lessons) to informal and lifelong learning. For example, the featured source collections that have been created by EUROCLIO highlight selected items from Europeana Collections that can be used in history lessons in school but are also relevant for a general public interested in history. Also, the coding used to create the search and select tool can be used for other educational applications.

In addition, Europeana has explored other opportunities for re-use of digital cultural content in informal education and lifelong learning. Examples include the cooperation with EMMA (a European aggregator of Massive Open Online Courses) and iTunes U. EMMA MOOCs using Europeana data are open for anyone interested in the respective MOOC topic. The iTunes U

materials on First World War can be easily used outside the classrooms (in fact, most downloads are done by the user group of age above 35 years).

**Recommendation 3:** given that the requirements and implementation roadmap of Europeana encompasses a time period that is longer than the 14 months of operation of Europeana DSI-1, the public implementation roadmap of the project should better clarify when each set of user requirements (especially those expressed as "user epics") will be implemented and relevant functionality will be available in the portal or other Europeana environments (Labs, Pro, etc.).

**Work carried in response to recommendation 3:** the majority (70%) of user epics as defined in D6.1 have been completed as part of the beta releases of Europeana Collections and Virtual Exhibitions. Many user epics are still being worked on and either partly implemented (e.g. as internal alphas) or close to being so. Some user epics have been prioritised lower than initially set (for instance as a result of user research findings).

An internal quarterly roadmap is updated and distributed after every Scrum Sprint (3 weeks), while a public development plan and roadmap for 2016 has been [published on Europeana Pro](#).

**Recommendation 4:** In order to strengthen Europeana appeal, a sound data quality process is essential. It is therefore important that Europeana continues to work on an effective quality control process that is repeatable/scalable and generally applicable. This process should also address sustainability and 'lessening the cost' of data improvement issues.

**Work carried in response to recommendation 4:** improving data quality is priority number one for Europeana. We are approaching this work from different angles.

The Europeana Publishing Framework (EPF) helps data partners to decide what they want to achieve with publishing online and encourage them to improve their offering. This is also supported by new products like Europeana Collections and the Thematic Collections to make our offering more attractive for data partners. With the EPF and the new products in mind, we are reaching out to data partners and work with them on data improvements.

On a different level, we are working with members of our audiences (data partners and users) on clear recommendations for data quality improvements. The Data Quality Committee formalised as a Working Group of the Europeana Network Association will work on these recommendations. Within that group and the DSI aggregating partners a number of key quality aspects have been agreed to be addressed under Europeana DSI-2, in order to make a step forward towards more normalised and standardised data. While the work on implementing the EPF is currently leading to more showcases, the normalisation work on organisation names and dates, for example, will lead to large scale improvements of the database. However, the biggest quality improvement we expect from changing the way we work currently with aggregators. This affects both the technical infrastructure but also the collaboration of Europeana Foundation with aggregators and cultural heritage institutions. We are improving our way of working with the infrastructure we have available at the moment, including the aggregator model as it was set up in the beginning. This includes a



much closer collaboration with as many aggregators as possible through bilateral meetings and workshops.

In parallel, the work on developing a shared ingestion / aggregation tool (METIS) is ongoing with the aim that the first ingestion services support aggregators in providing better quality data. A preview service is in development which allows data partners to preview their data before they get published to work on improvements earlier in the process. A data reporting service is also being developed, based on the Data Quality Assurance framework set up by Péter Király<sup>5</sup>, which will for each collection provide statistics on data completeness, enabling new ways to identify areas for improvements. We are also working with data partners on more user-friendly solutions to allow partners to directly interact with the Europeana data platform and empower them to improve the quality of their data through immediate feedback.

**Recommendation 5:** Although the consortium has produced a road map in terms of technology, there lacks a sense of urgency and adequate priority. For example, the 'Search Improvement' plan includes a number of proposals for R&D around the use of language technologies (NLP) and linked data. Considering recommendations above, the reviewers would argue that these technologies are going to be essential immediately to be able to deliver content in an intelligent and scalable way. It would be better to think of these technologies as fundamental to the platform rather than a means to improve search. Semantics and lightweight entity 'tagging' are no longer a research topic but are core infrastructure to a number of high profile and traditional businesses. The most well-known and often cited is the BBC's use of linked data across its portfolio of content sites from sports to education. Additionally, this would also put the Europeana DSI in line with a larger strategy commitment of national governments (e.g. data.gov.uk) and the EC (e.g. <http://ec.europa.eu/digital-agenda/en/open-data-portals>) itself in terms of linked and open data initiatives as well as enable harmonization with other EC projects. It is better to prioritize this work now to save time, effort and cost later.

**Work carried in response to recommendation 5:** Linked Data technologies are in full production at Europeana in a number of different implementations with a primary focus on data enrichment, linked data compliant API-responses and linked data publication. Linked data publication via content and data dumps was something Europeana had in production well before the European Open Data Portal and most national open data portals. We also had the vision of semantic web technology generally backing our core services since the first designs of the Europeana Data Model, seven years ago. The technology was being applied or prototyped for many key aspects of the platform before the Europeana DSI project even started, as reported in a blog post for the LODLAM community three years ago<sup>6</sup>. Since then we have made even more progress, and the work done in several Europeana DSI work packages is backed by semantic technologies.

Like e.g. the BBC, Europeana does offline semantic annotation of our primary objects (articles for BBC, records for Europeana) prior to publication. BBC does so manually with professional indexers or automatically by extracting data from its video or sound content. Europeana has focused so far on automatic metadata enrichment, as (1) we do not have as easy an access to content, and

<sup>5</sup> <http://144.76.218.178/europeana-qa/>

<sup>6</sup> <http://lodlam.net/2013/06/18/what-is-europeana-doing-with-sw-and-lod/>

furthermore Europeana's data is multilingual. (2) a manual pre-publication approach does not scale well for Europeana though we do batch annotation of select datasets<sup>7</sup>. For manual semantic annotation of records Europeana is instead focusing on the development of an Annotations API the aim of which is to allow users, of Europeana Collections and other clients of the API e.g, Historypin, to tag records with terms drawn from linked data sources. We are a member of the BBC Res Advisory Board and actively learn from each other. The BBC is still at the research rather than production phase.

Natural Language Processing (NLP) technologies are also in production at Europeana though at a very limited scale. If Europeana were single language database, and not the 30+ language database that it is, NLP technologies could have been brought into wider use. As a matter of policy Europeana is very reticent in introducing to production technologies that only work on a minority of its data.

The R&D unit at Europeana continually researches further opportunities for Europeana to adopt linked data technologies and linked data sources that can enrich the data aggregated from our partners. Once an opportunity has been assessed as useful its implementation is performed as part of Scrum teams that have members from multiple units (Product Ownership and Design, Software Development, Research and Development). The fact that it's the R&D unit that makes the initial assessment is a reflection of the specialised skills and experience they have, not on whether the technology is mature or not, prioritised or not, or close to implementation or not.

---

<sup>7</sup> For example datasets of newspapers only are batch annotated with the Getty AAT term for newspaper and datasets with first world war related records only with the DBpedia term for First World War.

## **3. Progress and achievements under each work package (1 April 2015 - 30 June 2016)**

### **3.1 WP1 Data Partner Services**

This work package is responsible for the operations of our aggregation infrastructure (including relationships of the aggregators to our data providers, such as archives, museums, libraries and other cultural institutions and projects. In addition, we are developing a new, innovative and efficient data and aggregation infrastructure and continuously improving metadata and data quality in our repository.

Participants in this work package:

- Europeana Foundation (EF)
- Association Cinématiques Européennes (ACE) and Deutsches Filminstitut (DIF) (both representing the film archive-domain)
- MICHAEL Culture AISBL and Collections Trust (both representing the museums domain)
- Europeana Fashion International Association (eFashion)
- Freie Universität Berlin (FUB) (natural history domain)
- 2Culture Associates and AthenaRC for CARARE (representing the archaeology and architecture domain)
- Netherlands Institute for Sound and Vision (NISV) (representing EUScreen for the television and audiovisual archives domain)
- International Association of Labour History Institutes (IALHI) (representing the labour and social history domain).

Associate partners (non-funded) are Archives Portal Europe Foundation (APEf) (representing the national archival domain), the Europeana Sounds project (represented by the British Library) and Daguerreobase (the aggregator for early photography) and several national aggregators and national libraries (France, Spain, Germany, Austria, Belgium/Flanders, Czech Republic, Italy, Lithuania, Norway, Romania, Sweden, Croatia). Associate partners provide data to Europeana and are involved in discussions on the innovation of the infrastructure.

The objectives of this work package are to:

- innovate the aggregation infrastructure
- optimize the interaction between aggregators and data providers
- integrate The European Library data aggregation into the new aggregation infrastructure and the Europeana DSI
- create the requirements for the integration of museum data aggregation into the new aggregation infrastructure and Europeana DSI
- improve the Europeana DSI repository
- streamline and improve the Europeana DSI operational workflow.

### 3.1.1 Summary of the main achievements under WP1

- Three meetings of the Aggregator Forum including workshops to develop the concepts for a new aggregation infrastructure;
- First one-on-one workshops with DSI aggregating partners to develop a common understanding of ingestion workflows (to also inform about the development of the new aggregation infrastructure);
- Launch of continuous publication as a big step towards improving the Europeana DSI operational workflow;
- Development and publication of the Europeana Publishing Framework and Europeana Publishing Guide;
- 340 high quality objects published with high quality metadata for Europeana 280;

### 3.1.2 Description of work carried out

#### Task 1.1 Data and aggregation infrastructure innovation

##### **Comments of the reviewers:**

“Although this is a viable aggregation model, there are still a lot of open questions to be addressed and solutions to be specified in detail related to how data quality is ensured in this model (and by whom), as well as what Europeana will/can do to motivate data providers to improve the quality of their data. Another open question is how Europeana will maintain and reinforce direct interaction with data providers as one of its main target groups (see recommendation 1). Moreover, in D1.1. of the previous Ev3 project, of which Europeana DSI is the continuation, the aggregators identified a number of challenges and problems related to the current aggregation process from an organization and technical point of view. Further clarification will be required as to how each of these problems will be addressed by the new aggregation model (including technology development and processes) currently under definition, notably the sourcing of content for creative reuse within the existing Europeana data but also by attracting new content from content holders. Relevant KPIs measuring improvement should also be formed.”

**Work carried in response to the comments of the reviewers:** we will highlight three elements:

- The Europeana Publishing Framework (EPF) is and will be even more a very important driver to motivate quality improvements. Being clear about what institutions can and can not expect to happen with their data once published in Europeana should help to also guide institutions to understand what improvements are necessary to change the user experience. Connected to this, a KPI was developed for the Europeana Business Plan 2016 to measure improvements over time. We aim to add at least 2.5 million records in 2016 to tier 2, 3 and 4 of the Europeana Publishing Framework.
- For how we reinforced the direct interaction with data providers to attract new content from content holders, see D1.2. Europeana 280 has been an important project which provided the opportunity to work more closely with content holders and ingest a variety of new items

from them in very high quality. For the work on the thematic collections, we are approaching more content holders (in collaboration with existing aggregators).

- Challenges and problems of the current aggregation process and how we think to respond to them is explained in more detail in D1.1. This deliverable also explains the different levels of work, from changes of the way we collaborate to the changes of the technical infrastructure, including very pragmatic solutions but also very innovative approaches to make it as easy as possible, even for individual content holders, to publish in Europeana. Data quality should be the key driver for the innovation of the aggregation infrastructure.

#### **Subtask 1.1.1. Devise business requirements for the new aggregation infrastructure**

Since EF started to work on high-level requirements for a new shared aggregation infrastructure in 2015, we focussed on consolidating the current status for [D1.1, the work and implementation plan to innovate the aggregation infrastructure](#). As part of this innovation in the sector and in consultation with the Europeana DSI aggregators (in three workshops with all aggregators from the project consortium alongside the Aggregator Forum meetings and two one-on-one workshops with individual aggregators), we are developing a shared toolset for harvesting, analysing, transforming, enriching and publishing data on the Europeana platforms (e.g. Europeana Collections). The Europeana Foundation and The European Library are the first two users for this. At a later stage (2017 onwards), this toolset will be developed further and offered as a package of tools to more expert hubs (see below).

Europeana DSI aggregating partners were involved in creating D1.1. FUB contributed by introducing and explaining the OpenUp! workflow and sustainability model to other aggregators. CT contributed to the creation of D1.1 by giving information about the workflow of its aggregator CultureGrid. It was active in collecting the views of UK museums about their needs, in particular with regard to Europeana 280, and in the context of a workshop organised in London (see also CT/MICHAEL for MUSEU). 2Culture and Athena RC contributed information about the CARARE workflows, aggregation infrastructure and the tools and services available to network members. TEL contributed by providing information about TEL workflows, aggregation infrastructure, membership model and services. TEL also worked on an analysis and comparison between Europeana and its own system and workflows to envision how a shared system could be used keeping in mind also the longer term need for a shared solution for other Europeana DSI aggregators.

APEF has successfully released an API service for the Archives Portal Europe. With this API developers can create their own applications on top of the Archives Portal Europe's search engine. It is expected that in the near future the API service will be an important distribution channel for content from European archival institutions, next to the regular Archives Portal Europe front-end, and as such it could be the next interoperability channel between the Archives Portal Europe and Europeana. The APEF technical coordinator is discussing with Europeana how the real time content ingesting and processing within the Archives Portal Europe's system is organized, which will be used for formulating principles for publishing archives data in Europeana under a new infrastructure.

This subtask is also about the specifications for the accurate representation of data providers' names in the Europeana DSI. The work towards these specifications is summarised in [MS1](#). Following up on this, a workplan was developed to start normalising the (data) provider information by summer 2017 (see also [D1.2](#)).

### **Subtask 1.1.2 Investigate and develop the concept of expert hubs**

We will transform the way we make Europe's cultural heritage available by turning the aggregator model upside down. We aim to collaborate as interconnected nodes that support each other and work together to provide value to Europe's memory institutions. Domain and thematic aggregators are expected to become expert hubs of the Europeana DSI, recognizing their and allowing for an increased emphasis on expertise-based services. A working group was set up at the Aggregator Forum meeting in May 2015 (MS4) to make this task a collaborative effort between the Europeana Foundation and all Europeana DSI aggregating partners. The outcome of this work is mentioned in D1.1 includes a roadmap for the further development of the concept and when the first expert hubs are expected to be launched.

Domain knowledge of all partners was key to create an expertise and service inventory to extract key activities and values for future expert hubs that is explained in more detail in D1.1. In some phases of the discussion, TEL was used as a case study for the library domain, by bringing to the table the relevant experience in the area. During the Rome Aggregator Forum in October 2015, TEL led an interactive session around the tasks and activities of expert hubs with other aggregators.

Europeana DSI aggregating partners also coordinated the discussions around the expert hub concept and the sustainability of expert hubs within their communities. Europeana Fashion headed a task force on *brokerage and business opportunities*, which analysed possible business cases for the activities of expert hubs and presented them to the expert hub working group in order to explore possible ways for their sustainability. Europeana Fashion also chaired a session on the expert hub sustainability during the partner meeting on 21 April 2016, where it presented the preliminary results of the above-mentioned task force to all aggregator partners. A sustainability working group was established in July 2015 for EFG to discuss sustainability models for EFG and to investigate how the concept of expert hubs fit with DSI sustainability and how expert hubs can be sustained as part of DSI and beyond. 2Culture and AthenaRC are exploring sustainability for CARARE with network members. Discussions with partners indicate that their interests include public access, digitisation, community content creation and education, and suggest possible services that could form part of the business plan and the sustainability model for CARARE. In preparation of becoming an expert hub, EUscreen established its organisation structure by holding elections for its Foundation Board and Participant's Council. TEL is a library for library membership organisation, supported by CENL with an independent aggregation infrastructure. In the course of 2016, CENL initiated a Taskforce to explore future services and membership models for TEL beyond 2016. The outcome of these investigations could have organisational implications for TEL's aim to transform into an expert hub for the library domain.

### **Task 1.2 Continue and maintain The European Library data distribution into Europeana and migrate the aggregation infrastructure**

TEL continued to work closely with its partner libraries to bring in collections. Through its active working groups as well as by carrying out surveys with partners, TEL identified and published new collections in Europeana.

To support the migration of the aggregation infrastructure several workshops were organised during Europeana DSI between data officers from TEL, data officers from Europeana and the Europeana product development team to highlight commonalities and differences between data workflows ([see also D1.1](#)). Existing processes were reviewed and taken into account for the future migration of workflows to Metis. Investigations using Europeana tools to ingest data sets from TEL libraries commenced and is providing useful insights into libraries specific processes.

Developments enabling data quality improvements for libraries were done with Metis in mind and services designed to support their future integration to Metis. E.g. TEL provided a normalization tool that is able to recognize language names in all European languages, and the codes of the ISO-639 family of standards (see also T1.5.2).

### **Task 1.3. Create the requirements for the integration of museum data aggregation into the new aggregation infrastructure and Europeana DSI**

Europeana Foundation worked with MICHAEL and CT on the requirements for the new aggregation infrastructure Metis. Europeana and the members of MUSEU met in Berlin on 16-18 February 2016 to develop a shared understanding of the respective workflows and to use this knowledge for the development of requirements for the future Europeana aggregation infrastructure Metis. On this occasion the role and use of the MINT web service in both aggregation workflows was discussed.

MUSEU worked to improve the ‘dark aggregator’ (i.e. an aggregator with no front-end showcase for its data) built under Europeana Inside. This is an entry point for the CMS vendors using the Europeana Connection Kit (ECK), also developed during the Europeana Inside project. Updates made by a former Europeana Inside partner, Knowledge Integration (subcontracted by MICHAEL), were received during a meeting alongside the Europeana AGM in November 2015. It was agreed that the planned work needed to be reframed because it was tightly connected to the development of Metis, which at that time was still under definition. Three back-end services were integrated into the ECK, and these will also be used in Metis:

- EDM validation service;
- EDM data statistics;
- Europeana Collections preview service.

The work on developing ECK-originated functionality will continue by Knowledge Integration as a full partner under Europeana DSI-2.

MUSEU addressed the improvement of the museum data quality in terms of better visualization and indexing in Europeana through the adoption of the ‘[Requirements for Visualization and Indexing of Museum Content](#)’ elaborated within the AthenaPlus project. These requirements for improving the quality of museum data were intended for the use on the provider’s side and

implemented as basic requirements in MINT. Their use will enhance searches for the museum items, and hence their accessibility via Europeana.

#### **Task 1.4 Optimize the interaction between Europeana DSI and aggregators**

##### **Subtask 1.4.1 Partner relationships of Europeana DSI with aggregators and data providers**

We worked on implementing the recommendations of the last Partner and Data Development Plan, delivered in May 2015 as part of work under Europeana v3. This plan was also updated under Europeana DSI (MS2). [The paper on amount of data partners and outreach to major institutions \(D1.2\)](#) describes how we approached the extension of the network of data partners. It also elaborates on the outreach activities to new partners, through which we have added about 150 new major institutions to Europeana, overachieving on the Europeana DSI target of 10 new major institutions to be added between April 2015 and June 2016.

With the publication of the Europeana Publishing Framework (EPF - see below under 1.5.2), we revised Europeana Pro and updated the ‘share your data’ section. The framework and the revised Europeana Publishing Guide are now much better integrated in Europeana Pro to make it easier for data partners to prepare their data submissions for Europeana.

##### **Subtask 1.4.2 Organize and facilitate aggregator meetings**

We organised and facilitated three meetings of the Aggregator Forum in Europeana DSI. The meetings in spring 2015 (18-19 May 2015) and spring 2016 (20-22 April 2016) were organised and hosted by EF in The Hague, while the meeting in autumn 2015 (21-23 October 2015) was organised and hosted by MICHAEL in Rome. These meetings consisted of plenary sessions and workshops and lasted for up to three days. We used the workshops to work with our aggregating partners on common issues and challenges, e.g. data quality, technical innovation of the aggregation infrastructure, expert hubs. We also had two IPR trainings alongside two Aggregator Forum meetings and one additional IPR training (24 March 2016) to prepare and discuss the training material for aggregators. A meeting of all Europeana DSI aggregating partners using MINT was organised and held in Athens on 2 September 2015, in order to align the work of all the aggregators, discuss their common needs and avoid duplication of work.

#### **Task 1.5 Improve the Europeana DSI data and metadata quality**

##### **Comments of the reviewers:**

[...] “little progress is visible so far in terms of sourcing content for creative re-use.”

**Work carried in response to the comments of the reviewers:** there was no follow up work on Europeana Creative by Europeana DSI WP1. However, the content sourced and published for Europeana 280 is a good basis for creative re-use. Some of the Europeana 280 content has already been re-used as part of the Europeana 280 campaign (colouring app, #BigArtRide, Jumping Jacks). We have also started to actively source more content for the Art History Collection with the goal that this content is open for re-use. See also further down on T1.5.3.

##### **Subtask 1.5.1 Ingest and enrich metadata for Europeana DSI**



In July 2015, we started a re-indexing project that changed significant parts of the technical infrastructure. This allows us now to publish data continuously to Europeana. This means that the database and the number of records that are accessible in europeana.eu is changing every day. As of 30 June 2016, 12:00, we have 53,110,475 records published in Europeana Collections. In addition to the regular ingestion of data from our partners, we also processed and published the data for Europeana 280, which are now also accessible on Europeana Collections.

### ***Subtask 1.5.2 Improve data quality***

Europeana Foundation has published the data quality plan [D1.3 last summer](#) and revised it earlier in 2016 based on feedback from the European Commission. The [revised data quality plan](#) is now specifying a set of common tasks for each DSI aggregating partner to bring as much of their legacy data as possible up towards tier 2 of the Europeana Publishing Framework (direct links, thumbnails, correct rights statements). All DSI aggregating partners worked together with EF on the data quality plan and set the quality targets for the individual aggregator (see D1.3 for these targets).

As an outcome of the Aggregator Forum in Rome, we set up a [Data Quality Committee](#) with members from the Aggregator Forum, with representatives from users and re-users and with Europeana Foundation. DSI aggregators also have representatives in the group: EFG, MUSEU, CARARE, Europeana Fashion, EUscreen, The European Library, APEf. This Committee started working in December 2015 and was formalised as a Working Group of the Europeana Network Association in March 2016. The Data Quality Committee works to address key data quality issues over time and comes up with proposals on quality improvements. The following areas are expected to structure the Committee's work: mandatory metadata elements for ingestion of EDM data, data checking and normalization, meaningful metadata values (in the context of use), quality of content (digitized media), coordination with other quality-related initiatives. First recommendations of the Data Quality Committee are published with MS2, the updated partner and data development plan.

In preparing for the autumn 2015 Aggregator Forum meeting in Rome, we developed first ideas for a Europeana Content Strategy. As the ideas were supported by the aggregators, the scope for a Europeana Content Strategy was defined in early 2016 and a team of EF staff and representatives of the four key domains (libraries, museums, archives, audiovisual archives) started to work on the Content Strategy. It is planned to finalise the Content Strategy by the end of 2016 with 2017 being the first year the Content Strategy is formally in effect. This will support the development of the Europeana database to improve the quality of the data over time.

The [Europeana Publishing Framework](#) was published at the end of November 2015 together with the [Europeana Publishing Guide](#), which is a revised version of the Europeana Publication Policy, published earlier in 2015. Implementing the Europeana Publishing Framework is in progress, towards a full adoption of this framework by our data partners. We do this work in close collaboration with the data partners. Some aggregators have already taken important steps to support the adoption of the framework in their domain or country.

The Europeana Publishing Framework is not just a document to guide data partners. Users can benefit from the work on our technical infrastructure as we are now allowing users to search for technical metadata of the digital objects linked from the metadata records. Users are thus able to

filter for digital objects that are compliant with one of the four tiers of the Europeana Publishing Framework. Now that technical metadata are being extracted, we also started to monitor the development of content in the database that is compliant to the four tiers of the Europeana Publishing Framework (see e.g. MS7. [Content report from April 2016](#)).

Following the methodology described e.g. in MS7, [Content report from December 2015](#), we have not met the KPI on the number of downloadable digital objects with direct links. We expected to add two million records that include a direct link to the digital object, but only added about one million records. However, the methodology mentioned above is not giving a very precise measure of the number of downloadable digital objects with direct links. Going forward, we have a much better way of measuring direct links, based on the technical metadata we extracted from the digital objects linked from the metadata records: instead of 13,278,042 records with direct links using the ‘old’ methodology, using the measure based on technical metadata gives 13,746,721 records with direct links at this moment in time (30 June), with about 50% of the database not being processed for technical metadata yet. We are also using these technical metadata to monitor the development of content that is compliant to one of the four tiers of the Europeana Publishing Framework.

The progress with the data quality targets as specified in [D1.3](#) per DSI aggregating partner is summarised in the table below. More background information about these numbers and the concrete work and achievements per partner is provided in the text below.

Aggregator	Rights statements validated		Direct links to digital objects		Thumbnails for digital objects	
	Planned	Achieved	Planned	Achieved	Planned	Achieved
EFG	90%	90% 15% of objects Tier 2+	85%	95%	85%	95%
MUSEU	100%	100%	50% checked	+50% of the missing checked added. Checking still ongoing	50% checked	60% checked
OpenUp!	100%; 20% of objects freely re-usable	100%; 43% of objects freely re-usable	40%	78%	50% of missing thumbnails added	43% (change of missing thumbnails between Nov 2015 and Jun 2016)
CARARE	100%	100%	60%	27%	60%	77%
eFashion	100%; >15% of objects CC licensed	100%; ~15% of objects Tier 3+	100%	100%	100%	100%
EUScreen	100%; 19,000	100%; 19,000	100%	*Not a useful measure for	75%	80%

	objects CC licensed	objects CC licensed		video*		
IALHI	100%	100%	100%	95%	100%	95%
TEL	10-20%	70%	30-50%	15%	30-50%	77%

## FUB

FUB actively contributed to D1.3 by focussing its activities on the Common Names Webservice (subcontract, see below). Since most of the OpenUp! natural history objects in Europeana are originally provided with a scientific name in Latin, enriching the metadata with relevant common names in multiple languages increases the accessibility of natural history objects. The following information describe the status of OpenUp! metadata on 10 May 2016 towards the additional quality targets set in D1.3:

*Rights statements.* All OpenUp! records are provided with valid rights statements. By end of June 2016 1,233,661 records (43%) out of 2,863,354 OpenUp! records have been freely reusable. Most of the rights statements are already internationally interoperable (CC Licenses).

*Direct Links.* FUB investigated all OpenUp! collections in order to identify broken links and possible reasons in the technical or organisational workflow. By end of June 2016 2,233,003 records (78%) out of 2,863,354 OpenUp! records were provided with direct links to objects. Within the natural history domain some data partners intentionally provide links to a viewer on their own website (edm:lsShownAt) instead of direct links to their multimedia objects (edm:lsShownBy). Websites of bigger natural history institutions often provide additional information which is difficult to be shown on Europeana or offer special features for users e.g. zoom function and measurement tools.

*Thumbnails.* OpenUp! data partners generally provide direct links to objects which are used by Europeana to create thumbnails. Sound files (e.g. animal sounds, actually 17,773 items given by 3 providers) are regularly provided without thumbnails. In Europeana DSI a media discovery tool was implemented to check Europeana content for important metadata items. Since the media discovery tool was first implemented in November 2015, about 58% of the OpenUp! records have been checked. Within these 1,664,765 records, 226,967 records (14%) are found with broken thumbnails. It has to be further investigated in Europeana DSI-2 whether the accessibility problems occur constantly and if the so far unchecked part of OpenUp! records is equally affected.

*Subcontract Common Names Web Service.* The subcontractor Natural History Museum Vienna (NHM Vienna) enhanced the Common Names Web Service, which is regularly used to enrich all metadata harvested by the OpenUp! natural history aggregator. Natural history collections provide multimedia items of organisms using the scientific name in Latin as title of the object. The enrichment of scientific names with corresponding common names greatly enhances the accessibility of natural history objects by non-scientific users querying Europeana. With the last harvest 973,085 scientific name strings have been requested by the OpenUp! natural history aggregator. In Europeana DSI, NHM Vienna included 3 new data sources accounting for more than 100,000 additional common names (most in Dutch and Japanese). The web service is now able to provide common names in 753 languages and dialects for 259,300 different scientific names of plants and animals. Although the subcontractor could not include all data sources

foreseen in Europeana DSI, more than 20 national linguistic institutions (e.g. Belgium, Hungary, Romania) expressed their strong interest in collaborating with the NHM Vienna for expanding the data basis of the web service. The subcontractor also investigated mechanisms to develop better search results for generic terms, such as ‘mouse’, which are often queried by non-scientific users but cannot easily be linked to a specific scientifically named object. The time-demanding analysis of the huge amount of OpenUp! data to find relevant search terms and mechanisms for query improvements are currently underway and will be concluded by the end of Europeana DSI.

The subcontractor also technically enhanced the web service. An update from the Yii-framework to Java2EE allowed changing the serial retrieval of common names from web service based providers (Catalogue of Life, PESI, WBOe, etc.) to a much faster parallel process. Another important technical development is a facility for a bulk comparison of a given dataset of scientific names with the common name database (‘All-in-one-Service’). In collaboration with the OpenUp! natural history aggregator the current process is comparing 900.000+ scientific names.

### **DIF for EFG**

DIF and EFG partner archives have actively worked on data sets of 15 archives under Europeana DSI. As meaningful data improvement can best be carried out at provider level, ACE subcontracted 11 archives to enrich their data mainly focusing on four activities:

- improvement of rights labeling,
- fixing and providing direct links;
- providing previews for video items as these cannot be generated automatically by Europeana or the EFG system.
- providing improved content descriptions (translated into English) and keywords

In addition to the 11 archives that worked actively on their collections, DIF together with the subcontractor worked to improve data by revising mappings of and re-ingesting legacy data. DIF and ACE shared the Data Publishing Framework with all EFG partners so that it could guide the archives’ enrichment activities. According to D1.3, EFG archives worked on the following:

*Rights statements.* 90% of EFG records are provided with a correct rights statement. The vast majority of content made available by the EFG partner archives is from the 20<sup>th</sup> century and is still copyright protected (labeled ‘Rights Reserved - Free Access’). As EFG delivered data to Europeana at a time when rights labeling was not mandatory yet a lot of legacy data still exists that was labeled by default as copyright protected. Under Europeana DSI, copyright statements of 34 out of 38 EFG partner archives could be validated. The respective information was updated for legacy data and new contributions. About 1,800 items were identified as being in the Public Domain or orphan, which makes for ca. 0,4% of all EFG content. Seeing that the content of some of EFG’s major data providers is completely in copyright, the overall percentage of Public Domain and orphan works compared to the overall content made available by EFG remains relatively small.

*Direct Links.* DIF reviewed all data sets available in the EFG repository to identify broken links. Currently, on EFG 95% of records come with IsShownBy links and thumbnails. DIF was in contact with the majority of its data providers to find out whether archives could provide IsShownBy links in addition to the IsShownAt links. In some cases, it is a political decision by the archives to only

provide the link that leads to their website as they see Europeana's main function as a search portal that drives traffic to their own website, where they often can provide more in-depth information on an item than they do on Europeana. During Europeana DSI, 5 data sets with broken links could be fixed.

*Thumbnails.* As thumbnails can be created automatically for IMAGE and TEXT files via a functioning `IsShownBy` link, all IMAGE and TEXT items that have a direct link should have a thumbnail. The main effort for EFG archives lies in the provision of thumbnails for video items, which actively have to be created by the archives themselves. This means that in addition to the links to the video files they also have to provide links to thumbnails in their exports. In this sense, film archives have to do extra work as they not only have to host the videos, but also the thumbnails, which means they are basically providing two digital items per record. Sometimes the process of thumbnail creation from a video is automatic (and thus random), sometimes archives create screenshots manually in order to have a meaningful preview image for the film. By the end of Europeana DSI, 98% of EFG items have a thumbnail, either created automatically through the `IsShownBy` link or delivered by the archives for video items.

*Further improvement.* Additionally, archives worked to improve descriptions and titles of items, providing keywords and translations of content descriptions into English. Source values as provided by partners in the source XML were further harmonised (genre, dates, colour etc.) in the EFG repository. During the project, the technical subcontractor, the archives and coordinator DIF actively worked on data sets from 25 out of 38 EFG partners. Data sets of all 38 EFG partners were transformed and provided to Europeana in EDM. Before Europeana DSI, EFG had still delivered its data in the old ESE format.

### **NISV for EUscreen**

During the EUscreen general assembly for existing network partners and the workshop in London for prospective partners, participants were informed about the Europeana Publishing Framework and its applicability in their respective working contexts. Earlier experiences with aggregating 1,000,000 audiovisual records showed the limitations of direct linking to video content and the need for improved solutions for video playout - a topic taken up in the later established task force on audiovisual media in Europeana.

Technical partners NTUA and Noterik were subcontracted to work on enriching metadata using manual and automatic methods and tools. In order to improve the quality of the data using enrichment tools, group edit functionalities were added to MINT to facilitate cleaning and normalising the data. The aggregation supporting platform also implemented functionality to select thesaurus terms in the annotator. A keyframe extraction tool increases the quality of the Europeana service by allowing content providers to select the visual signifier (i.e. thumbnails) sent to the Europeana portal. 80% of the collection aggregated by EUscreen possess thumbnails. In order to expand the service to other video collections, more work would be needed.

As a baseline to involving audiences in translation video materials, NISV worked with Amara to provide baseline captions for a select number of materials. EUscreen created captions in the broadcast's native language for 32 hours of material - text forming the basis for all further translation efforts - in 5 European languages.

### **Europeana Fashion International Association (eFashion)**

eFashion continued the activities of normalisation and enrichment of its published datasets. In particular, eFashion applied to its datasets, coming from 35 different data providers, semiautomatic semantic enrichment techniques developed and tested at the end of the Europeana Fashion project. The objective of this task was to add automatically specific properties of the EDM-fp schema, like "colours", "materials" and "techniques" to all the ingested records, through the analysis of the textual descriptions and also through image analysis techniques.

eFashion has reached by the end of the project all the defined targets regarding data quality improvement, namely:

- 100% of ingested content has direct links (all digital content has been cached and stored locally on our cloud repository);
- 100% of ingested content has thumbnails (generated locally on our portal);
- 100% of ingested content has a valid rights statement;

According to the classification of the Europeana Publishing Framework, 85% of the published content in the eFashion aggregator is Tier 2 and about 15% is Tier 3 and 4.

Europeana Fashion has also carried on the normalisation activities on metadata elements like names of designers/brands and dates, republishing all its datasets (more than 800.000 items) in a normalised form to the Europeana Fashion portal and subsequently to Europeana. The concrete outcome of this activity has been the implementation of a data filter on the Europeana Fashion portal.

At the end of May 2016, a new enriched version of the fashion multilingual thesaurus was published and made open available in SKOS.

### **International Association of Labour History Institutions (IALHI)**

**Establishing Aggregation Best Practices:** IALHI (former HOPE project) has always been primarily focussed on sharing best practices among minor non-state memory institutions which have limited resources but valuable historical collections to preserve. Its aim has always been to address the biased top-down approach towards European identity based on national and state institutions and to make the identity building exercise - besides contributing to the creation of a transnational aggregation infrastructure - more of an inclusive grassroots effort.

IALHI strives for becoming the forward looking community of practice which does not only share the common vision but promotes the federated technical infrastructure. Formerly HOPE and now IALHI has visionary implemented shared services, for example, the shared object repository, PID service, best practice wiki, mobile training unit, multilingual data ingestion, collection descriptions. Therefore the knowledge base, which has been accumulated through the years, can be utilized by other partners or minor memory institutions. This progressive approach has resulted in useful experiences in the following area of work: revision and updates on the HOPE Data Model, change of the D-Net aggregation system to an open source solution MINT, the amended version of the Tagging Tool and updates on the social history controlled vocabularies along with the growth of

multilingual metadata. Needless to state that IALHI continues maintaining a highly complex federated repository solution including the Persistent Identifier Service, the Digital Object Repository and dedicated thematic portal to social history.

For the future sustainable model of this highly important network of memory institutions the Social History Portal can serve as a prototype of curating vast data sets of particular topics rather than enlarging the pool of selected masterpieces based on the modernist tradition of the late 20th Century. The DSI project has enabled the IALHI consortium to re-assess the functioning of the federated repository model, to switch from the restrictive proprietary D-Net tool to the standard compliant MINT mapping tool. With the introduction of MINT, former and new data providers of IALHI can continuously update their digital objects, metadata etc, in one word, we can clearly state that the data provision workflow has become more streamlined and standardised as the result of the enhanced tools.

**Data Curation:** IALHI heavily relied on the Europeana media discovery tool, it has revealed some obvious flaws of the data quality of the HOPE collections, the cross cutting analysis of the IALHI data sets has highlighted the following problems: broken links, missing thumbnails, vast amount of “unknown” EDM rights values (which otherwise complies with the requirements but makes the reuse difficult) and very preliminary descriptive metadata. The former HOPE project has paid explicit attention to the high quality of metadata descriptions since the beginning, although the above mentioned quality assurance issues were mostly the result of the too flexible ingestion framework and the technical incompatibility of solutions. Two French data providers (Bibliothèque de Documentation Internationale Contemporaine (BDIC) and Génériques) to the Social History Portal are conducting a research on the impact of the availability of data provision to Europeana and other portals. [The scope of the research](#) is to provide guidelines on the improvement of the digital object quality and the contextual metadata for future contributors, their results will be incorporated in the HOPE Best Practice Wiki.

One of the seemingly unresolvable problem of the content ingestion is the clearance of copyright. For the same reasons and promoting the new licensing provisions of Europeana we organised a workshop in September 2015 along with HOPE experts we included Europeana experts in the agenda. For minor archival institutions the IPR solutions are overwhelmingly resource related problems. Past examples can illustrate the acute situation: several IISH collections were withdrawn from Europeana because of copyright issues. Until then IISH followed the notice-and-take down approach but a copyright incident that resulted in a lawsuit forced the IISH to withdraw the collections. Over two years since the incident IISH have reached an agreement on the use of these collections based on Extended Collective Licensing. All of the images in the collections were available for research again on 23 June, and the same collections, 153.677 records have been provided to Europeana again. The specific case has lead to data improvements as well, descriptions were updated, new digital objects were added, thumbnails were replaced by bigger size images. In addition to IISH 's efforts several data providers re-evaluated their objects with “unknown” value, more than 1,000 items have been cleared and were re-ingested under Public Domain Mark (PDM).

Since 2015 we have gradually introduced **new data curation guidelines**: we have encouraged the IALHI members to produce **multilingual metadata records**, for example 10 Greek collections,

in total 11,392 intellectual items were transliterated, translated from Greek to English. The polished multilingual metadata descriptions are unique historical resources, they shed the light on Greek left movements with high relevance to the latest political developments and Grexit. As part of the new data curation guidelines transliteration was introduced as mandatory requirement for non latin alphabets and we have implemented an automated solution which was also tested in the HOPE project. In addition, we have encouraged the new data providers, namely 7 social history institutions to apply controlled vocabularies and authority records during the data ingestion process. This has led to improvement of the quality of over 50,000 items in Europeana. The domain specific controlled vocabularies (themes) were also applied to existing and new datasets along with SKOS concepts. The current social history tag-hub contains 48 social history concepts which are mapped not only to Europeana collections but even to metadata sets on the Social History Portal. We have revised our method of assigning social history tags to our collection: in our previous aggregator model, these social history concepts (which were defined in three different languages: English, Dutch and Portuguese) were ingested as Dublin Core subject fields. Having in mind, that the Europeana Data Model is now able to handle SKOS vocabularies, [first we expressed these tags in a proper SKOS form, using Apache Fuseki as the triple-store](#) and have the thesaurus be selectable in the MINT Mapping Tool. As an outcome we hope that submitting SKOS concepts to Europeana will add another layer of interpretability and discoverability to our newly submitted datasets. Further the links to other social history data sets on the Social History Portal could be explored by Europeana in future by expanding its linked data cloud. As an outcome of changing the aggregator technology, this new Social History Tagging Tool implements the domain specific controlled vocabulary, and being the only social history tagging tool it helps retrieval and re-use at a larger scale.

Following the Europeana Publishing Framework existing data providers were asked to reconsider the size of all thumbnails and the related digital objects, many of them has chosen Tier 2 or 3. On the other hand, one collection has been rescanned for this purpose and delivered to Europeana in a high quality for re-use. The result of this request and the possibilities to make larger previews available varies per data provider and requires further looking into. Moreover, the improved quality of thumbnails together with more open licensing options can give new impetus to creative re-use. A campaign on new licensing options among our data providers has started in last September and is ongoing, we encourage them to apply more open licenses which support the broader definition of reuse.

The analysis has shown that 95% of the legacy records already provided to Europeana in the HOPE project did provide an edm:isShownBy but in case of 25% of the objects this proved to be not a direct link to the digital object but rather to web page. In most cases legal and technical issues inhibited the providers from applying direct linking, proprietary cataloging solutions remain the main obstacle. During this project we have managed to convince the majority of the existing data providers to change this and provide a direct link to the digital objects. This has also radically improved the number of thumbnails available for our holdings since Europeana uses the direct link to the object to create the thumbnail. A small 5% of the existing collections, 6,157 records of the total 753,628 items are still without an edm:isShownBy, a direct link to the digital object. During Europeana DSI with the guidance and technical help of the Europeana tech-team we rebound the persistent identifiers of isShowBy elements which were pointed to non existing digital content. Approximately 131,000 PIDs were reregistered.



We will in the future continue to stress the importance to provide, whenever possible, direct links to the digital objects. However, approximately 18,000 metadata records submitted are and will be perhaps without a thumbnail: these are collection level records (following the archival glossary, fonds, series or subseries) deriving from hierarchical descriptions and do not have a direct digital object attached.

By now all IALHI records have a valid EDM right statement. The majority (70%) of existing content (524,928 out of the 753,628 existing items) available on Europeana is from the 20th century and the vast majority of all items is still copyright protected and therefore labeled 'Rights Reserved - Free Access'. Furthermore 5% (43,095 out of the 753,628 existing items) have the Rights Unknown statement. Although valid, we would like to use a more elaborated right statement for those records. We have urged the data provider to use one of the other right statements if applicable. However this proved not to be a feasible task due to national regulations regarding copyright. An intensified effort resulted in the update of 1,968 records by confirming the item to be in the Public Domain or otherwise clearing the copyright and changing the Right Statement accordingly.

### **The European Library (TEL)**

*Consistency of rights labels.* TEL worked on the consistency of rights labels by making sure the rights statements chosen by data providers are consistent with the objects they are applied to. TEL developed validation rules based on the publication date and digitisation laws per country.

From the collections delivered during Europeana DSI, a total of 843.128 records of were checked and validated with the data provider as part of the current workflow. These records belong to either new collections that were delivered during this time or to collections for which we were already in contact with our partners. TEL followed up closely with respective data providers in cases where the rights status was not selected accordingly to Europeana recommendations (UCL, National Library of Scotland).

Alongside this effort close to the data providers, TEL also worked on improving its processes and systems to enable the regular verification of rights labels within its aggregation processes. For this purpose, TEL made the first steps into accommodating the results of the research made by the [“Out of Copyright” group](#), conducted over the course of 5 years on the right status of works within Europe. A reporting tool was developed, which allows the TEL ingestion team to efficiently monitor possible inconsistency in rights labeling. The reporting tool works based on the aggregated metadata, particularly on the dates of publication, dates of copyright, dates of availability, general dates associated with the digital objects (for which a more precise meaning is not known), rights labels.

The above data, is analyzed in the context of the digitisation laws that exist per country. This will help to identify objects that possibly belong to the public domain but they are not licensed accordingly. Although these reports cannot provide fully conclusive automatic checking of rights labels, they allow for the identification of cases where human validation may be necessary, either just at TEL, or involving the data providers as well.

Based on this reporting tool TEL was able to identify 33% of records that should have been marked as in the public domain and initiated contact with providers which led to 10% of collections checked, validated and delivered to Europeana with updated rights statement.

*Deduplication of records.* TEL analysed all its newspapers and 1914-1918 collections to identify duplicate records. Each newspaper collection was checked for duplicates at newspaper title level and under the same provider the collections tab was checked for other records mentioned in other sets. If those sets were in Europeana, TEL identified the existence of duplicate records by the date field, if not, collections were checked in TEL's client relation manager (Sugar CRM), if information about these sets in Europeana exists. A total of 9 data providers were identified as having duplicate records, however the deduplication workflow was not completed for all these sets during Europeana DSI, 3 of them were fully deduplicated. The other newspaper duplicates will be addressed in the context of further development of the newspaper channel. TEL published a blogpost<sup>8</sup> on the methodology for duplications including suggestions to Europeana for directions of future work in this area.

*Normalisation.* In order to improve the quality of metadata, related to the language of textual digital objects, TEL has performed an initial analysis of language data within its own collections, identifying some typical data quality issues that affect this particular metadata field.

In a second stage, and in concertation with other ongoing work in the Europeana Network addressing language attributes in general, TEL constructed a second analysis task, which addressed the language data in the complete Europeana dataset by all data providers. Based on the results from the previous analysis tasks, TEL provided a normalization tool that is able to recognize language names in all European languages, and the codes of the ISO-639 family of standards. The tool has been designed to support the integration into Metis, but without dependencies of the Metis framework to be used by any Java application. [See here for more details.](#)

*Vocabulary enrichment.* TEL has also contributed by enrichment of its data with controlled vocabularies and increasing the amount of linked data identifiers. TEL ran an initial data mining operation on its dataset to identify possible targets for vocabulary enrichment. It resulted in the identification of three target vocabularies:

- [The Getty Art and Architecture Thesaurus](#)
- [The Getty Thesaurus of Geographic Names](#)
- [Iconclass](#)

TEL investigated mechanisms to reliably establish quality links between the digital objects metadata and the target vocabularies. Finally the TEL dataset was processed, resulting in the addition of links to the linked data publications of the three vocabularies in 46,012 records. The datasets were delivered to Europeana in May 2016.

---

<sup>8</sup> The European Library's Deduplication Case Study:  
<http://www.theeuropeanlibrary.org/tel4/newsitem/9900>

*Quality images & thumbnails.* TEL checked its collections for improvement with a focus on thumbnails and identified a total of 40 datasets with missing thumbnails in Europeana. TEL identified 11 newspaper sets with missing thumbnails and envisaged that thumbnail images could be extracted from issue level metadata (first page, first issue published) and updated directly into Europeana. However to date it proves not to be possible for Europeana to extract images at issue level, but future work should reassess this matter in the development of the newspaper channel, and its new image processing based on IIIF.

TEL identified 29 sets from libraries with missing thumbnails that came in either through previous projects or as part of TEL membership. The datasets were investigated and partners approached to improve the data, also in light of the Europeana Publishing Framework and its tiers.

In total 1.6 million records were identified with missing thumbnails in Europeana, including the Europeana Newspaper corpus.

In the communications TEL had with its partners during Europeana DSI, a number of cases were identified where it is unfortunately not possible to improve the data with a thumbnail or it takes the data provider more time to export the thumbnail and redeliver. This work will continue under Europeana DSI-2.

As for the reasons of not being able to provide thumbnails this varies: from copyright restrictions, to system in-capabilities to provide such links, to human or technical resource issues at the library side. Europeana's Publication Framework (EPF) aims to improve this situation and provide clear motivations for data providers to further improve and advance in this area. TEL has been disseminating the EPF in its network and has incorporated this aspect in its regular ingestion process.

This resulted in the delivery of 33 thousand records with improved or added thumbnails during Europeana DSI, which adds up to a total of 77% of TEL material with thumbnails in Europeana.

TEL also actively encourages partners to provide `edm:isShownby` links and during Europeana DSI 7 collections amounting for 33 thousand records were delivered by TEL with links to `edm:isShownby`.

`isShownby` links are mostly used for images and in this context it is important to note that the total TEL corpus consists of 75% text and 20% images. Many libraries provide their digitized books through viewers such as Vivaldi rather than in a file format like PDF. For the text material it is less obvious to data providers what is the impact for providing links to text files in Europeana relative to images and they are more likely to provide thumbnails.

## **2Culture and AthenaRC for CARARE**

2Culture and AthenaRC planned and carried out a series of activities to ingest, enrich and improve the quality of the metadata for CARARE partners and the Europeana DSI. The migration of the CARARE aggregation infrastructure to the services developed in the LoCloud project (with new versions of MINT and MORE, and a set of enrichment and quality assurance microservices) enabled a series of data quality improvements to be offered. A survey of existing CARARE data in

Europeana was completed and strategies for addressing issues such as the display of thumbnails and broken links, and metadata enrichment were then devised. CARARE data partners were consulted about data quality issues in their datasets and the options for making improvements.

### **CARARE and EDM**

CARARE maintains a metadata schema for the archaeology and architecture heritage domain, which is used as a common framework for data provision and transformation to EDM. 2Culture and Athena updated the mapping between the CARARE metadata schema and EDM to take into account new developments in EDM and the CARARE schema. A new XSLT was prepared to manage the transformation of data to EDM. Existing CARARE datasets in the MORE repository were re-transformed to EDM. In some cases this remapping enabled data quality issues, such as hidden thumbnails and links to the content objects, to be addressed. These datasets were supplied to Europeana for re-publication.

*Microservices for enrichment and quality improvements.* A series of microservices within the MORE repository are being made available to validate and enrich the metadata. In this task, Athena RC focussed on:

- Language identification
- Place names and geographic enrichment
- Utilization of vocabularies to thematically enrich records
- Link checking
- Quality measurement of thumbnails and linked objects
- Normalisation of display dates and subject terms.

Most archaeology and architectural heritage digital content relates to a place and enriching metadata records by adding geographic coordinates and matching place-names to LOD sources is of importance. Geographic enrichment services (for modern and historical place names) are offered on the MORE aggregator. However it is worth noting that the original location of some of the content is restricted (for example, to protect fragile sites from destruction or valuable items from being looted).

A series of domain relevant vocabularies were made available to partners via the LoCloud Vocabulary Service and these can be exploited within MORE in metadata enrichment plans. Most of the CARARE content is classified using national subject vocabularies, which include scientific and regional names for particular forms of archaeological monument in national language. Enriching the content by adding relevant subject headings available in multiple languages would improve multilingual retrieval of archaeology content.

Building on vocabulary development, work carried out by ARIADNE research infrastructure and analysis of the subject terms in the content provided for CARARE content, the possibility of creating mappings from simple subject terms to revealing SKOSified concepts. Athena RC is working with individual partners to add multilingual SKOS concepts to their EDM records; the aim is to provide at least 1 SKOS concept for each record.

Athena RC is analyzing the temporal information in CARARE datasets to see if there is a possibility of normalizing the data and/or SKOSifying period names using Period.do.

AthenaRC designed and implemented two microservices in MORE that aim to normalizing subject terms and temporal information through common thesauri.

*Shared quality targets.* Following the revision of Deliverable 1.3 in March 2016 three additional targets were set for all aggregator partners. CARARE's activities in relation to these targets were as follows:

- *Rights statements.* All of the records published by CARARE in Europeana have valid rights statements. We disseminated information and advice to our data partners on rights labelling, and consulted partners on rights in archaeological datasets. We added an element to the CARARE metadata schema for Europeana Rights labelling and embedded all 13 current values so that the data providers can easily choose and apply the correct one. Most of CARARE content is within copyright and the vast majority (1,984,423 items) can be freely used with attribution.
- *Direct links.* CARARE's content includes 3D models and other media that is made available to users via a landing page for which it is not technically feasible to provide a direct link. Our aim was to achieve a target of 60% of content with direct links to the digital content via the `isShownBy` property. By the end of June 2016, 97% of CARARE content included links in this element with around 27% being direct links to digital objects and the remainder being links to HTML pages. It is worth noting that a large proportion of CARARE's text content is in the form of HTML documents and not PDF files, for example the large collection from the Swedish National Heritage Board comprises of HTML documents which incorporate text descriptions, maps, related PDFs and in some cases images for each CHO.
- *Thumbnails.* CARARE's content includes text and other media for which no thumbnail is available. Our aim was to achieve a target of 60% of content with a thumbnail. Updating the mapping from the CARARE schema to EDM enabled us to address an issue that had resulted in available thumbnails being hidden in Europeana; if a CHO includes links to more than one digital object and no thumbnail is available for the first object, no thumbnail was displayed in Europeana. By June 2016, 77% of CARARE content provided links to thumbnails; not all are currently displayed as a result of the move to Europeana Collections and the need to re-cache thumbnails.

In January 2016, Europeana launched its new Publishing Framework. Following this launch aggregators were requested to check the size of all thumbnails and the related digital object. The process of checking is underway, further effort is required to discuss with partners the possibility of making larger previews available.

### **MUSEU and museum content requirements**

The new MINT aggregation infrastructure for MUSEU was shaped, taking into account the quality parameters as discussed in the DSI and those ones released inside the community ("Requirements for the Visualization and Indexing of the Museum Content") in order to raise the quality level of the future content.

The following activities took place:

- Definition of the museum sector requirements in terms of expressiveness and quality of metadata using LIDO as common framework;
- Implementation of an EDM-LIDO profile in the MINT platform and mapping of the LIDO records to it;
- Integration of the museum requirements in the MINT aggregation platform in order to give content providers the appropriate tool to deliver high quality data;
- Configuration of the Europeana Connection Kit to allow a wider range of museums to submit content to Europeana enriched in their data back into their core systems.

*EDM and data visualisation.* MICHAEL representatives from NTUA and Bildarchiv Foto Marburg take part in the Data Quality Committee to express the vision of the Europeana museums about the quality of records. In particular they discuss the EDM implementation of key metadata fields that are in LIDO (the harvesting schema used by the MUSEU partners) that do not have a direct correspondence in EDM. This work is still ongoing and will be carried on in Europeana DSI-2.

*Direct links to digital objects.* Providing direct links is not always technologically or legally possible. Nevertheless, MUSEU continuously informed the data providers about the necessity to provide, whenever possible, direct links to their digital objects via `edm:isShownBy` in addition to `edm:isShownAt`. It is estimated that 52.4% of the legacy records have an `edm:isShownBy` value. The percentage is higher (66.2%) for the most recent datasets provided within the AthenaPlus project because the other records are mostly in the ESE format and were provided where less strict rules in terms of quality were in force. Data providers are updating these records on a voluntary basis.

*Thumbnail.* MUSEU estimates that over 88% of the data providers used the `edm:object` to provide the URLs for the thumbnails. Through the Europeana media discovery tool, MUSEU is checking at least 50% of the thumbnails to verify broken links.

*Rights labeling.* All records that the MUSEU providers published in Europeana within the ATHENA, Linked Heritage and AthenaPlus projects (2008-2015) have a correct rights label. For the legacy records (1,982,215 from ATHENA and 1,332,927 from Linked Heritage) the consortium has already put in place a strategy of rights correction and integration when the value was missing following the campaign that Europeana launched in February 2014 on the occasion of the change of some rights statements. All the new records that will be published in Europeana during the Europeana DSI will have suitable rights statements. The MINT platform for the data aggregation embeds all the 13 current values so that the content providers can easily choose and apply the correct one.

*Semantic enrichment.* MUSEU collected the feedback of the data providers about the enrichment of the legacy records: two data providers, Bildarchiv FotoMarburg (Germany) and Nationalmuseum (Sweden) are using the TGN, ULAN and AAT vocabularies. Their experience will be a driving factor for other data providers in Europeana DSI-2.

*DAGUERREOBASE.* The Fotomuseum in Antwerp worked successfully with Europeana on the improvement of the Daguerreobase (and Europeana) metadata. We worked towards international standards by editing and merging related SKOS terms in the free edit fields by using search and

replace actions to improve the data. Subject names, tags and creators were our first goal, 30% of the 4,385 records with subject names have been improved. We also plan to have a full list of subject names prominent on our website, so visitors can easily find the corresponding records. The field creators was improved in 220 records, and almost 4,000 tags were improved. A report on our findings will be handed to Europeana and other aggregators to optimize the aggregation process. Daguerreobase also replaced all 5,698 thumbnails with high-resolution images in Europeana's database. The use of watermarks was reviewed and they were taken out where possible. Daguerreobase also worked with Europeana on specifications for the accurate representation of data providers' names, and to find a solution for duplicates that had come in via other sources/aggregators.

### **Subtask 1.5.3 Source content for creative re-use**

This is an ongoing task, developed out of the Europeana Creative project. We scan the Europeana database every month for new datasets that are openly licensed, of high quality and attractive enough for creative re-use. We have two mechanisms to feature them: (1) as part of our open collections on social media, (2) on [Europeana Labs](#). During Europeana DSI, we featured 10 collections as open collections and 10 collections on Europeana Labs, among them collections from [Statens Museum for Kunst](#), the [National Library of Romania](#), the British Library and the MoMu Fashion Museum Antwerp. In addition, the queries behind the music and art history collections are also featured on Europeana Labs, to give these collections an even wider visibility.

## **Task 1.6. Optimize the interaction between aggregators and data providers**

### **Subtask 1.6.1 Relationships of partner aggregators with data providers**

A lot of the work that DSI aggregating partners did on this task is reported already with [D1.2, the paper on amount of data partners and outreach to major institutions](#). All DSI aggregating partners contributed to this deliverable and gave detailed reports about their partner networks and its development during Europeana DSI. The work and achievements per partner that go beyond what is reported with D1.2 (but still belongs to the task) or has been changed since this deliverable was published is described in detail below.

The table below shows the ingestion totals for each of the DSI aggregating partners. The table shows the status per aggregator with the start of DSI-1 (May 2015), the planned ingestion as specified in [MS6](#) and the status in [europeana.eu](#) at the end of DSI-1 (30 June 2016, 12:00). The planned ingestion is an estimation of the total amount of new metadata records to be ingested by Europeana per DSI partner. The actual number of new records was subject to change as the numbers for some sets still needed to be confirmed. The final column gives an indication to what extent the ingestion plan was realised, but most aggregators have more data prepared and published on their side, but the data still need to be processed or improved to be published in Europeana. For one aggregator the additions are negative. In the process of updating existing datasets we have lost records either intentionally (due to improvements made by the aggregator) or because records became invalid or were discarded for various reasons (e.g. duplicate identifiers, missing mandatory elements, broken links). For more details see the full report per aggregating partner. Please have in mind that as Europeana is publishing continuously, numbers in [europeana.eu](#) can change every minute.

Aggregator	Status start DSI-1	Planned (MS6)	Status end DSI-1	Additions in DSI-1
EFG	594,145	6,893	640,879	46,734
MUSEU <sup>9</sup>	7,363,617	66,080	7,426,592	62,975
OpenUp!	2,128,147	352,600	2,863,354	735,207
CARARE	2,129,682	40,062	2,235,866	106,184
eFashion	667,744	50,000	757,789	90,045
EUScreen	1,043,862	915,486	1,045,244	1,382
HOPE2	759,327	55,035	727,752	-31,575
TEL	10,762,336	551,431	11,467,532	705,196

### FUB for OpenUp!

*Inform and collaborate within the Natural History community.* FUB further developed the collaboration with the Consortium of European Taxonomic Facilities (CETAF) and the European nodes of the Global Biodiversity Information Facility (GBIF). FUB represented the OpenUp! network within 2 European Nodes meetings (May 2015 in Paris, April 2016 in Lissabon). In Europeana DSI, Europeana specifically benefitted from the strong collaboration of OpenUp! with GBIF Norway and GBIF France. Following a meeting with representatives of GBIF Norway and the MUSIT collection database in Oslo (August 2015) the UiO Natural History Museum Oslo agreed to join Europeana. However, it has been decided to export collection data via the Norwegian GBIF node to Norvegiana which will provide the data to Europeana. The publication of several hundred thousands of Norwegian natural history collection objects is planned to be ready by the end of Europeana DSI. To further extend the OpenUp! network towards French natural history collections FUB involved representatives of GBIF France. After a first meeting in Paris (September 2015), a joint workshop for potential new data partners was organised (Montpellier, April 2016, see 1.6.2) focusing on data quality and online publication of collection data via Europeana and GBIF. Furthermore, FUB presented the OpenUp! network and did lobbying for participation within the natural history community by attending national and international conferences, e.g. in Berlin, Hamburg, Leipzig, and Budapest.

*Compiling information for data providers.* FUB began to reorganise the information given to (potential) data providers via the OpenUp! website ([www.open-up.eu](http://www.open-up.eu)). As a first step communication with the Narodni Museum (Prague, Czech Republic) took place in order to agree upon basic principles, enable access to the content management system for FUB members and develop a concept of reorganisation. This includes an update of basic texts, links, and forms as well as offering new mappings (DwC-A to EDM, see 1.7.2) and recently available Europeana documents such the Publishing Framework and IPR training materials. The fully reorganised websites are planned to be available by the end of Europeana DSI-2.

*Acquisition of new data providers and collections.* During Europeana DSI, FUB communicated with 35 potential new data partners including institutions from Belgium, France, Germany, Great Britain,

<sup>9</sup> Numbers for MUSEU are the sum of records of Athena, Linked Heritage, AthenaPlus and MUSEU, as updates for MUSEU also had an effect of some datasets in the other three aggregators.



Poland, and the USA. By the end of the project 2 new data providers will have joined the OpenUp! network and account for more than 16,000 additional records including images of herbarium specimens, mosses, and microorganisms.

One data provider quit the OpenUp! network because of institutional and related data policy changes. One existing data provider (Botanical Garden and Botanical Museum Berlin) added one new collection containing 620 historical drawings of plant species. Eight existing data providers undertook major extensions of their collections accounting for more than 800,000 additional items, mainly herbarium specimens, zoological specimens and animal sounds. Eight of the contacted institutions were not interested to join Europeana or could not provide multimedia data so far. By end of June 2016 OpenUp! is the fourth largest aggregator in Europeana and provided 2,863,354 records.

Due to FUB's considerable communication to natural history museums and scientific collections during Europeana DSI, at least fifteen other data providers are already in the pipeline to be connected in Europeana DSI-2. Among these potential new data providers there are important herbarium collections, collections of zoological specimens (e.g. birds, spiders, and butterflies), as well as collections of geological items, photos of plant species, and historical drawings.

Two major data partners in the OpenUp! network (Natural History Museum London, UK; Naturalis Biodiversity Center Leiden, NL) recently decided to provide their collection metadata using the DwC-A standard for biodiversity data instead of the ABCD standard. This technical pathway was enabled through the implementation of the new harvesting software B-HIT (see subcontract under 1.7.2). Data providers benefit from streamlining their technical workflows while OpenUp! and Europeana benefit from a growing amount of shared multimedia items. The NHM London enlarged their shared collection from 189,369 records to now 757,607 records. Due to the deadline of this report it is not yet evident for Naturalis (now 97,718 records), how many records will be added, but Naturalis will at least double its number of shared records.

*Subcontractor operating the OpenUp! Natural History aggregator.* AIT strongly supported the relationship with existing and new data partners by communication and personal feedback. Summing up all content processing activities within Europeana DSI, the OpenUp! aggregator has processed the average amount of 1.7 million records per ingest from the existing partner network and in addition has processed and tested the amount of 1.2 million records from new partners that are just running through the process of becoming OpenUp! and Europeana partners. AIT conducted the test harvest and transformation, analysis and feedback for the following new datasets:

- 911,000 records - Natural History Museum London (NHM, UK), various collections
- 19,358 records - German Collection of Microorganisms and Cell Cultures (Braunschweig, D), Procarya collection catalogue
- 15,902 records - Field Museum of Natural History (Chicago, USA), Historical photographs of Berlin herbarium specimens, partly destroyed in WW2
- 7,010 records - Helmholtz Centre for Infection Research (Braunschweig, D), Reichenbach collection of Myxobacteri
- 818 records - Michael Lüth (D), Bildatlas der Moose Deutschlands

- 642 records - Botanic Garden and Botanical Museum (Berlin, D), Collection of botanical drawings by Georg Schweinfurth

For the two new providers AIT waived the usual aggregation fee for the first 2 years. A new Service Level Agreement (SLA) template was produced and distributed to FUB for further use with new data providers. AIT also produced a new information sheet on the data mapping from the DarwinCore standard to Europeana EDM. The subcontractor contributed to the Europeana report on the amount of added aggregated content in Europeana DSI.

*Deviations from the Description of Work.* At present (June 2016) we can only report 2 new data providers instead of the 5 foreseen. However, several of the new providers given above are expected to join shortly. The Institute of Plant Genetics and Crop Plant Research (Gatersleben, D) already committed to publish its herbarium collection (about 16,000 records) in Europeana. Furthermore the German Collection of Microorganisms and Cell Cultures (Braunschweig, D) and the Helmholtz Centre for Infection Research will join. Collection metadata will shortly be processed by the OpenUp! natural history aggregator, perhaps even before the end of the Europeana DSI project period.

### **ACE and DIF for EFG**

*Dissemination in the network.* ACE and DIF made sure that relevant information and campaigns (Europeana Publishing Framework, Europeana Collections, New rights statements, Copyright, Creative Commons Licensing, #AllezCulture campaigns etc.) were regularly communicated to the EFG data providers and the wider ACE network.

*New partners.* ACE (as the legal entity running EFG) negotiated subcontractor agreements for new data contributions and enrichment with 10 EFG partners (among them four new partners). All in all, 1,400 new videos have been contributed to EFG and a considerable amount of data has been enriched (see Task 1.5). We received good feedback from new partners, who learned a lot from this experience (digitisation, data contribution). As a result of outreach activities, ACE and DIF had active and closer contact with 9 film archives that were not EFG partners yet and of which 5 could actually be connected to EFG and Europeana under Europeana DSI. Negotiations with 4 further archives are still ongoing. Subcontracting has proven to be the best incentive for improving data quality and attracting new partners. It helped partners to establish valid XML exports from their local databases, which is still not an easy task for many film archives and often requires help from external database developers, at least if they are first-time contributors.

*Other activities.* ACE was also co-leader of the Task Force “Europeana Communicators Group”. This Task Force was set out to develop recommendations for a Communicator's Group to support pan-European awareness of Europeana's added value, strengthen the role of domain and thematic aggregators in reaching out to the data providers and the wider network.

### **Europeana Fashion International Association (eFashion)**

eFashion is running a dedicated Basecamp platform to maintain contacts with its members (more than 120 registered users) and a blog on its website ([www.europeanafashion.eu](http://www.europeanafashion.eu)) to keep its network of fashion institutions and professionals up-to-date with the current activities of the network and of the fashion heritage domain at large. Since June, we have regularly published an

average of three blog posts per week, highlighting partners' archives or initiatives, relevant events and curiosities or specific themes. In conjunction with task 2.3.1, eFashion is involving data providers in the curation of content on its different social channels (Tumblr, Pinterest and Instagram). In this reporting period, the eFashion has attracted three new data providers that started ingesting content through the Europeana Fashion aggregator. More than 100,000 records from old and new data providers were ingested and published on the Europeana Fashion portal and on Europeana, since the beginning of Europeana DSI project.

eFashion continued to keep constant contacts with its members through a dedicated group on Basecamp and also through its blog and social media channels, targeting also new potential members. Since April 2015, eFashion has attracted 16 new data providers and 5 new institutions registered to the Association as supporting members. New and existing partners have been engaged through the eFashion portal and also through social media. Every month, eFashion involved a different partner in the curation of its Tumblr fashion blog, which now has almost 7.000 followers. Also Instagram has been used to engage fashion institutions, publishing on a daily basis the best images from each of the contributing partners. eFashion also maintains an area of its website in which it regularly publishes information on relevant events in the fashion heritage domain and it runs also a blog in which partner institutions are invited to contribute. Overall, the audience of eFashion on the different social media has surpassed the 20.000 followers.

On the 20 April 2016, eFashion held its general assembly in Amsterdam, where all the member institutions were represented.

## **International Association of Labour History Institutions (IALHI)**

### *The network*

Relations with data providers have intensified during the project and over the last months. Existing data providers were contacted about data enrichment and improving quality of the existing data. Selected new data providers were contacted and close cooperation followed in preparing their data provision (see also T1.6.2). Since we have an existing network of 80 members which is connected through the Social History Portal, we manage to schedule outreach campaigns through our web site, we also meet on regular basis every year and have Coordination Committee meetings twice a year to discuss network related issues. These forums, along with well-known social history conferences, make communication, training and networking quite easy, however, off-site visits were paid to all content providers to get acquainted with their recent collection development and content provision plans (see also D1.2).

### *New data providers and collections*

The selection of new data providers was a result of a survey that went out to all IALHI members that had expressed their interest in becoming a data provider in previous years. Based on the outcome of the survey on the type of collections, metadata quality and the ability to provide direct links to the digital objects, the new data providers were selected. Geographical coverage of the network and the collections also played a role in this selection; we were eager to attract data providers from countries that were not participating yet and selected therefore, among others, providers from the United Kingdom, Greece and Sweden. New data providers are:

- Trade Union Congress (TUC) 22,316 records,
- Modern Record Centre (MRC) , 10605 records
- European Trade Union Institute (ETUI),1572 records
- Contemporary History Archive (ASKI) 11,342 records,
- Labour Movement Archives and Library (ABARK) 3,342.

Apart from the above mentioned providers one existing provider (AMSAB) provided a collection of Newspaper Vooruit (1884-1918), over 13.000 newspaper scans, and the IISH was able to reprovide their visual collections after reaching agreement on Extended Collective Licensing.

### *Dissemination*

IALHI has presented the Europeana DSI project at the 2015 annual conference of IALHI in Edinburgh 17 September 2015 and was present with its information booth on IALHI network and the Social History Aggregator at the European Social Science History Conference in Valencia 29 March - 2 April 2016. In addition to this, IALHI member institutes participating in the Europeana DSI project have communicated on the project in various national and international meetings and conferences.

IALHI has revised its best practice wiki of the HOPE (Heritage of People's history Online) project to share knowledge on data provision and data curation. IALHI will make this available to data providers through Europe. IALHI hopes to spread the model of sharing case studies with constantly updated guidelines along with specific case studies on the LAM domain.

### **2Culture and AthenaRC, on behalf of CARARE**

Three meetings of the CARARE network have been organised. The annual CARARE network meeting was held in Brussels on 18-19 June with support from the Ministry of the Brussels Region. The purpose of the meeting was to update members on the Europeana DSI, the new Europeana publishing policy, new CARARE aggregation services and to discuss content re-use and metadata quality issues. In addition, there were two briefing meetings for members participating in the annual Computer Applications in Archaeology (CAA) conference in Sienna, Italy on the 1<sup>st</sup> April 2015 and in Oslo, Norway on 30<sup>th</sup> March, 2016.

2Culture maintains a dedicated Basecamp as a channel to keep CARARE network members up-to-date about current activities, news from Europeana and the digital archaeological heritage domain. The Basecamp was used to contact network members about forthcoming training workshops, updates to datasets and the availability of slides, training materials (including the IPR materials produced under the DSI). The Europeana survey on the costs of rights clearance was disseminated to the CARARE network via the Basecamp.

2Culture also maintains the CARARE website, which is being prepared for re-launch in June 2016. The new website will provide a channel to highlight data partners' collections, relevant events, themes and news. The site will reflect network members interest in public access, digitisation, community creation, and education initiatives.

*Expanding the community and adding content.* The initial focus was to reach out to former project partners and to inform them about the Europeana DSI. Potential new network members were identified among the partners involved in the 3D-ICONS and LoCloud projects, and through direct contacts. As a result the Discovery Programme, ABM Resurs Västernorrland, Archaeovision, Skagafjörður Heritage Museum, Politecnico di Milano and Cyprus University of Technology have expressed interest in joining the CARARE network.

2Culture and AthenaRC liaised with network members to provide a response for CARARE to the DSI data ingestion plan (MS6). Network members were invited to provide content with the initial focus being updates to existing collections, many of which have grown since they were first published. The focus has now moved to identifying new collections and new data partners.

Several CARARE network members expressed an interest in providing content. 2Culture followed up each expression of interest, discussing the work involved and planning the timetable for each collection with the network member and Athena RC. There are several dependencies that affect the timetable ranging from organisational priorities, the availability of staff time and technical support, the archaeological field season, in addition to the regular tasks involved in preparing data for ingestion. The outcome of this preparatory work with partners has been a regular flow of datasets through the aggregator for publication in Europeana.

*Other activities.* 2Culture represented CARARE at the Europeana Research workshop for archaeology and the classics. Athena RC and 2Culture are organizing a round table at the European Association of Archaeologists Conference on the theme of “Towards digital infrastructures for open, participatory, public archaeology”.

### **MICHAEL for MUSEU**

MICHAEL organized 3 workshops for museums in Italy, Germany and Paris in order to increase the awareness and involvement of museums in Europeana DSI, and to start networking at the national level. The first two workshops (Bologna, Italy on 9 October 2015 and Berlin, Germany on 15 and 16 February 2016) were organised in cooperation with NEMO, the European network of museum organisations, involved in the hub activities thanks to a cooperation agreement. A third workshop was organized in Paris on 19-20 May 2016 in partnership with the French Ministry of Culture and Communication. Representatives of the Europeana Foundation or of the Europeana Foundation Board were present at all meetings and had the opportunity to exchange directly with European museums.

Moreover, MICHAEL developed a specific campaign toward French museums in order to increase the awareness of French museums and their participation to Europeana ecosystem, and increase the number of new data providers. In France there is a national aggregator “Collection” for national museums and some of the territorial museums, which sends part of its content to Europeana. Private museums and part of territorial museums don’t use this. The aim of MUSEU is to cooperate with Collection, managed by the French Ministry of Culture, and to reach the museums that don’t use it, in order to support the current and new data providers and increase the number of records as well as the number of data providers in Europeana.

MICHAEL prepared and circulated towards French museums a specific paper with presentation of Europeana DSI and why to join as new data providers. MICHAEL disseminated towards national and territorial museums through several departments of the French Ministry of Culture. Seeing the great interest of French museums in this workshop it could be a first step for a new work meeting under Europeana DSI-2.

The presentations of the three workshops organized by Michael Culture under DSI are accessible on [MICHAEL Culture website](#).

### **NISV for EUscreen**

EUscreen is closely connected via the Basecamp platform. The network focused on the transition from a project-based network to an independent foundation, with elections happening and individual partners taking on responsibility. EUscreen network partners are kept up to date of evolutions in the Europeana hemisphere by means of Basecamp announcements and regular updates. Potential new partners have been informed of the Europeana plans and benefits and were acquainted with the aggregation toolset by means of an extensive training manual. The reach of the network was increased by presenting to the members of CIRCOM - regional broadcasters across Europe - in Plovdiv, Bulgaria.

### **The European Library (TEL)**

The European Library runs two active working groups consisting of representatives from each partner library. Through these groups, TEL informs and engages with its libraries on Europeana developments such as the Europeana Publishing Framework, copyright, righthstatement.org etc. A monthly skype call with the Library Coordinators Group (LCG) was introduced to which all partners were invited to participate in (minutes and relevant documentation is shared via a dedicated Basecamp space) and one physical meeting was organized.

TEL's partners were contacted to identify new digital collections for aggregation to TEL and Europeana. By doing this, TEL encouraged the member libraries to update TEL with the status of their digital collections and provide new collections. As a result, many libraries provided new collections, updated existing ones, or worked with TEL to schedule collections. A special focus was also to bring in digital collections from seven national libraries from non-EU countries with no presence in Europeana both via an active Basecamp community as well as through a hands-on workshop.

### **Daguerreobase**

With the Museum fur Kunst und Gewerbe in Hamburg we wrote a case study on opening up collections to a broad public. This shows how institutes can profit from digitization and how the line between 'giving away' material and opening up a collection can be defined. Partner aggregators can use this case study to improve the relationship with their (future) data providers.

To improve the sustainability of Daguerreobase, we also worked on two case studies to bring the database to life:

1. Forgotten Faces: Genealogy is a hot topic; genealogy sites do not include portraits so far. Daguerreobase represents a very small part of all portraits in Europeana. By adding Cartes

de Visite, and using cross-links in Europeana, we will enable the public to find hitherto lost personal stories of our ancestors and bring the database to life.

2. We Were Here is a case study of Tourism in Switzerland. Daguerreobase contains a very interesting selection of high quality daguerreotype images including views of the Swiss Alps, historic buildings, sculptures, market places, chalets, etc., which could easily be used and adapted, in the “Field Trip” App. The Musée Gruérien in Bulle has expressed its interest in enhancing the digital visibility of this collection throughout the products of Europeana/Google.

Both case studies are also (the start of) an application to find the necessary financial means to develop these plans.

### **Archives Portal Europe Foundation (APEF)**

A country managers network is coordinated and organized by APEF. Workshops and training are organized for this network. The network coordinator helps the content providers to upload new data in the proper format, making sure metadata and digital objects rights are registered while doing that. Within the Archives Portal Europe, system content providers are more or less self-sufficient and can ingest, process, publish and forward their own content themselves via a dashboard account, but a developer working for APEF is constantly available to assure that the data quality is up to standard. In the last months the focus of this developer and the technical coordinator was aimed at evaluating and improving the quality of the recent Archives Portal Europe - Europeana contributions, which has led to providing Europeana completely new improved data-sets via the existing interoperability workflow (OAI-PMH harvesting).

#### **Subtask 1.6.2. Raising competency levels of data-providing partners**

The concrete work and achievements per partner are described in detail below.

### **FUB for OpenUp!**

*Helpdesk and Data Quality Toolkit.* The OpenUp! helpdesk supported the following partners: Royal Botanic Gardens Kew, Biologiezentrum der Oberösterreichischem Landesmuseen, Natural History Museum Vienna, Museum für Naturkunde Berlin, Zoologisches Forschungsmuseum Alexander König Bonn. The OpenUp! Data Quality Toolkit has been used during helpdesk activities and was promoted actively to the IT staff when checking potential new data providers.

*Workshop for potential data partners.* FUB and GBIF France jointly organised the bilingual (French-English) workshop “Open up your natural history collection! Sharing digital objects and metadata via global web portals like GBIF and Europeana”. As a publication of collection data on the GBIF web portal requires similar prerequisites to a publication on the Europeana portal, the audience appreciated FUB’s approach to combine these two subjects in one workshop. It took place from 13-15 April 2016 in Montpellier, France. Fourteen curators and data managers of French natural history collections participated in the workshop and accounted for seven potential new content providers. The workshop focused on data cleaning and standardisation of metadata, introduced Europeana and the OpenUp! workflow, explained the new Europeana Publishing Framework and how to deal with IPR issues in the natural history domain. For the future training of data providers on IPR issues and how to choose the appropriate rights statement for their objects,

the training material developed under Europeana DSI in three dedicated workshops (22/10/2015 in Rome, 24/03/2016 in Amsterdam, 20/04/2016 in The Hague) will be used.

*Subcontractor operating the OpenUp! Natural History aggregator.* AIT supported the OpenUp! helpdesk and particularly assisted the following partners: Royal Botanic Gardens Kew, Royal Botanic Garden Edinburgh, Muséum National d'Histoire Naturelle Paris, Museum für Naturkunde Berlin, and Biologiezentrum der Oberösterreichischem Landesmuseen. After the new Europeana portal was published at the beginning of 2016 the OpenUp! data presentation has been evaluated by AIT and feedback has been provided to the Europeana office. AIT contributed to the OpenUp! workshop in Montpellier by presenting the OpenUp! workflow and by supporting the discussion about metadata requirements and IPR. In December 2015 AIT gave a presentation about the preparation and enrichment of biodiversity metadata for Europeana at the DARIAH workshop “Biodiversity and linguistic diversity: Linked Open Data 4 Living Organisms” in Vienna.

### **ACE and DIF for EFG**

ACE and DIF organized and carried out an information meeting, which took place in Bologna on 3 July 2015. The meeting aimed to update current EFG partners and teach potential new partners about the data delivery workflow, the EFG and Europeana requirements on data quality, data enrichment, Copyright, and the general approach of Europeana DSI and its strategic planning. A representative of the Europeana Foundation, presented the Europeana DSI tasks relevant for EFG data providers. 30 ACE members from 18 institutions participated in the meeting. The results of the meeting went into MS8. Under Europeana DSI, ACE participated in three Europeana IPR training sessions focused on understanding IPR principles, the Europeana Licensing Framework and the development of training materials to clearly communicate the importance of IPR in the context of publishing cultural content on Europeana. The information and lessons learned such as the Europeana Publishing Framework, the new rights labelling campaign, CC licensing, copyright reform etc. were shared with EFG partners and ACE members through the ACE website as well as through dedicated mailing lists, Facebook and Twitter.

ACE also communicates Europeana DSI outcomes and standards beyond the network of EFG data providers: Film archives' projects such as “FORWARD” (Framework for a EU wide audiovisual works registry) and ABCinema are particular interested in the new, standardized Rights Labels rightsstatements.org developed by Europeana and DPLA. At the ABCinema workshop “Rights Issues for Film in Education” (13 April 2016, Deutsches Filminstitut, Frankfurt), Europeana copyright advisors introduced into rights labelling and CC licensing for educational uses. ACE provided input to MS8 “Plan for training and workshops of aggregators for data providing partners”

### **NISV for EUscreen**

In the run-up to the workshop for prospective partners, EUscreen participants BUFVC developed a dedicated course on aggregating audiovisual materials to Europeana. The course modules were developed in collaboration with NISV and NTUA and published on Versal - a free, flexible, adaptable, modular and easy to use online education platform. It allows the person creating the course the option to block access to the next section of the course until the user has successfully completed the previous section. 14 interested partners from across Europe attended the workshop and completed the course.



**Europeana Fashion International Association (eFashion)**

After the successful organisation of a training workshop in October 2015 on metadata quality improvement, eFashion organised in collaboration with Platoniq a co-creation workshop on the 20th of April 2016 at the Rijksmuseum, in which 35 participants, representing fashion GLAMs, curators, fashion scholars, UX designers and developers gathered together to “co-create” new ideas for the exploitation of digital fashion heritage. In addition to these events, eFashion is also regularly maintaining a dedicated Basecamp group for data providers, in which partners can share their questions and get support in relation to metadata mapping and publication, content ingestion activities and any other technical issue they can encounter during the data provision process.

**International Association of Labour History Institutions (IALHI)**

The workshop held by IALHI in Edinburgh in September 2015 was focused on informing the potential new data providers on the project and the requirements for data provision.

Following the workshop held by IALHI in Edinburgh in September 2015, close contact was maintained via email and skype sessions with the selected new data providers to prepare together the data provision to Europeana DSI. In preparing the data provision, much attention was given to the importance of the labelling of rights statements, metadata quality, as well the guidelines of the Europeana Publishing Framework. IALHI did not organize a joint workshop for new data providers, but provided them individually with a 2-3 day on site training by digital collections specialists, metadata experts and developers to improve their local workflow and be able to provide the collections to Europeana. All new data providers have received this training. A special training using the MINT aggregator infrastructure (see 1.7.2) for mapping was given in April in two workshops to four of the data providers. Other existing and new data providers will receive this training in the coming months as part of a workshop within the Best Practice Network of IALHI.

**2Culture and AthenaRC, on behalf of CARARE**

2Culture and AthenaRC planned and delivered two training workshops for existing and potential data partners. The first workshop was hosted by the Archaeology Data Service and was held in York on 7-8 December 2015. The second workshop was hosted by AthenaRC and held in Athens on 28 January 2016. Both workshops provided an introduction to the Europeana Publishing Framework, discussion of metadata quality issues, an update on the CARARE metadata schema, hands-on training in MINT, MORE and the metadata enrichment services available from the CARARE aggregator, and copyright and licencing of archaeology data in Europeana.

*Helpdesk.* An online helpdesk has been established to support CARARE data partners at <http://support.carare.eu>. The helpdesk comprises of:

- a documentation wiki established by 2Culture, which includes documentation, training and other support materials;
- a support portal for MORE established by Athena RC;
- a ticket desk system established by Athena RC.

*Subcontractor for IPR.* Athena RC sub-contracted the Archaeology Data Service to complete a report on IPR in the archaeology domain.

### **MICHAEL for MUSEU**

During all three workshops mentioned under 1.6.1 MICHAEL organised technical meetings to raise the competencies of the data providing partners according to the strategic action lines of the hub. MUSEU faced the following topics with particular attention:

- Europeana overall strategy (Bologna, Berlin, Paris);
- Rights and IPR in digital environment: a particular attention was paid both to the Europeana requirements and to regulatory framework at the national levels (Bologna and Berlin);
- Aggregation training on LIDO and MINT (Berlin);
- Open access and reuse of digital cultural heritage (Bologna, Berlin, Paris);
- Tools for the creation of virtual exhibitions (Bologna, Berlin, Paris).

MUSEU provided a helpdesk service for the data providers. Here partners can ask for support on how to aggregate the records for Europeana, and to share questions and ideas.

### **The European Library (TEL)**

TEL organised a meeting with its partner libraries on 21 and 22 September 2015 at the National and University Library in Zagreb, Croatia. This meeting aimed to update and inform TEL's partners about the development of the aggregation infrastructure, looking at alternative aggregation models, implications and opportunities of moving to a shared infrastructure with Europeana, to introduce the Europeana Publishing Framework, the requirements for the Data Quality Plan and the Europeana Publishing Guide.

In addition to this meeting TEL is regularly in touch with partners via monthly group Skype calls and a dedicated Basecamp group where partners can post questions and get support. TEL provides direct support to its partners in relation to metadata mapping and publication, content ingestion and other technical issues they might have.

### **Task 1.7 Streamline and improve the Europeana DSI operational workflow**

#### **Subtask 1.7.1 Develop the Europeana DSI ingestion product requirements and improve the operational workflow**

This subtask is closely related to subtask 1.1.1 and more details about the product requirements can be found in D1.1. As a response to the needs of aggregators, Europeana is prioritising the work on the EDM validation service, EDM data statistics and Europeana Collections.

The overhaul of the technical infrastructure that supports our ingestion workflow was completed last autumn and since November 2015 we are regularly and continuously publishing to the Europeana Collections site.

#### **Subtask 1.7.2 Develop, establish and maintain technical infrastructure**

The concrete work and achievements per partner are described in detail below.

### **FUB for OpenUp!**

*Improvement of the software constituting the OpenUp! data provision process.* FUB streamlined the XML archiving process in the BioCASE Provider Software, which is important for data partners providing huge collections. The Provider Software has been extended to also support connecting Excel documents and smaller text files, a crucial adaptation for smaller institutions, which sometimes store their collection in spreadsheets instead of using databases. An overview of all additional improvements and bug fixes can be found on the [BioCase wiki](#).

*Updating the harvesting process.* FUB updated the harvesting procedure in collaboration with the subcontractor AIT. With the new software B-HIT (Berlin Harvesting and Indexing Toolkit), harvesting has been extended to also include DarwinCore Archives and ABCD-XML dumps (before only BioCASE services could be used). As a result the OpenUp! aggregator is now able to harvest the most common biodiversity metadata standards (ABCD and DwC) which tremendously widens the network of potential data providers for Europeana. From 25-27 November 2015 FUB organised an international workshop with 5 participants in Berlin exploring means of harvesting into non-SQL-databases. This will further strengthen OpenUp!'s sustainability with respect to growing amounts of data.

*Introducing LOD / Semantic Web.* FUB introduced LOD/ Semantic Web and new database technologies to the data provision process. Inter alia the Botanical Garden and Botanical Museum Berlin (BGBM) now provides its data through an RDF web service. Possible opportunities for linking the BGBM dataset with open datasets from other institutions has been explored during a hackathon with developers from Natural History Museum London and Naturalis, held from 24-26 April 2016 in Leiden (NL).

*Subcontractor operating the OpenUp! Natural History aggregator.* AIT updated and optimised the OpenUp! harvest procedure. Therefore the following technical tasks have been carried out: Technical developments were finished for switching from harvesting the data provider's BioCASE web service record-by-record to harvesting the aggregated standard dump. The new B-HIT software for harvesting of biodiversity metadata was installed and is now used for data harvesting of standard dumps of biodiversity repositories using the ABCDEFG and the DwC metadata standards. Further automation of the metadata enrichment workflow was initiated by aggregating a pre-processed file of common names from the common names provider. For that purpose, the aggregator provides a list of scientific names to the Natural History Museum Vienna and coordinates the process of returning a file containing all related common names. The OpenUp! transformation process was updated in order to use the common names file during transformation. AIT developed a mapping of the Darwin Core Metadata Schema to the EDM Metadata Schema and submitted the new mapping to the EDM mappings, refinements and extensions survey in November 2015. Based on the mapping a harvest and transformation routine for Darwin Core metadata to EDM was established in the OpenUp! natural history aggregator for future ingest of Darwin Core biodiversity metadata repositories to Europeana. Thus, the aggregator is now able to transform from the widely used Darwin Core standard. First tests were carried out and the transformation was now used for the new NHM London DarwinCore dataset.

In order to investigate the consequences of scaling up the workflow to a steadily growing number of data providers, tests have been started with huge datasets like the NHM London Darwin Core dataset (more than 2.3 million records). These tests showed that the organisation of harvest and

transformation by way of distributing the processing load over several machines is apt to handle datasets up to at least 10 million records. Tests with the common names web service provider NHM Vienna revealed the necessity to accelerate and optimise the NHM common names matching service for huge data amounts.

### **Europeana Fashion International Association (eFashion)**

eFashion continued monitoring the correct implementation of the subcontracting for the maintenance of its technical infrastructure, involving both the front-end (its portal hosted on Amazon AWS cloud services) and the back-end (the MINT aggregation platform). Several improvements were made to the publication workflow, offering through an OAI interface the publication of metadata both in EDM and EDM-fp (fashion profile) format. Several optimisation has been implemented also in the front-end, largely improving the loading times of the portal pages which are extremely rich in images. All the aggregated images have been also cached in the cloud repository so that they can be served directly by the portal, bypassing the various content providers local storage services.

### **International Association of Labour History Institutions (IALHI)**

The Social History Aggregator and tools for content checking and enrichment have been built by CNRI ISTI using D-NET within the EU funded project Heritage of the Peoples Europe (HOPE) 2010-2013. Extensive research on the existing technical infrastructure and big efforts to upgrade it to be able to provide a more user friendly platform for the data providers for the (re)ingestion of collections led to the conclusion that given its relatively high dependency on technical human expertise DNet is not a sustainable long-term solution. IALHI decided to switch from the use of the HOPE data model to Europeana EDM. IALHI has therefore decided to make use of the MINT Open Source software. An intensified effort has been made (with consultation of the MINT developers) to install and implement MINT on IALHI servers to provide a sustainable aggregation solution for the social history domain. With this acquired knowledge the project team setup new acceptance and production environments on IISH infrastructure where the applications now run on. The codebase is now part of Github and the application rollout part of DTAP environmental control.

The Mint mapping tool: <https://mint-mapping.socialhistoryportal.org/>

The OAI2 server and monitoring tool: <https://mint-monitor.socialhistoryportal.org/>

The new aggregation infrastructure was ready for testing and acceptance by the end of April and brought into a production environment in mid-May.

Apart from upgrading the aggregation infrastructure and providing a mapping tool, the additional aim of IALHI in this subtask 1.7.2. was to develop web based data enrichment tools; and theme tagging, collection description maintenance tools that a metadata expert can operate without needing a developer/ict expert.

Therefore new features were added to the application:

- LDAP connection to authenticate with our own OpenLDAP identity provider.
- A plugin load feature to insert new mapping functionality without having to change the Mint core. Specifically:

- ◆ a method to call the PID webservice to support data providers that cannot deliver PIDs via their native metadata. The Persistent Identifier web service enables data providers to obtain unique identifiers for both objects and metadata and to store the PID value in their local collection registration systems. Some data providers are unable to store PIDs in their local system because the use of proprietary software is not allowing them to do so. To solve this, a provision is created to store the local identifier and the persistent identifier within the social history aggregator environment to establish and maintain the binding and thus commitment to the user;
- ◆ a port of the Apex archival XSLT functions that convert EAD to item level EDM statements. This was added on the advice IALHI metadata experts who are actively using Apex.

The Mint infrastructure provides mapping tools and crosswalks from the domain specific metadata standards directly to EDM. To guarantee delivery of new and improved content to Europeana DSI, IALHI is using both the existing DNET infrastructure and the new MINT platform for a couple of months. The mappings and collections that exist within the DNET infrastructure will be transformed and migrated to the MINT platform in the second half of 2016. Since IALHI has not been selected to participate in the second year of the Europeana DSI project, this phase of development in the aggregation infrastructure will take place outside the project.

IALHI will be actively monitoring the developments around MINT (participating in meetings like the Skype meeting of 24 June) to keep our instance up to date and to share codes and plugins with the MINT developers and users community.

Training of metadata specialists of data providers to enable them to use the MINT tool for mapping from their metadata standard to EDM has been given to 4 data providers. IALHI is committed to maintain and support this aggregator infrastructure for their member institutes and data providing partners.

IALHI is planning on extending the platform with a data enrichment tool. During the project, the proof of concept has been developed in which the team tried out further means how to add metadata in a post-mapping phase with a play framework. This proof specifically targeted collection level content enrichment. Though successful in demonstrating that this is a viable option it was not developed into a working application further within the project due to time restrictions. This will take place in a future project on extending the aggregation infrastructure.

## **2Culture and AthenaRC, on behalf of CARARE**

At the start of Europeana DSI, the CARARE aggregation service was migrated from the platform established during the CARARE project (2010-2013) to new versions of the MORE and MINT services developed during the LoCloud project. This migration has enabled CARARE data partners to benefit from innovative, cloud-based services that provide a flexible framework for the operational workflow. Data partners benefit from support for metadata harvesting using a range of protocols and a wide range of formats. The MORE aggregator supports direct harvesting from partners' repositories, ingestion via the MINT metadata mapping service, Omeka digital libraries and the LoCloud collection service. The platform includes automated metadata validation to EDM and quality assurance services, data statistics, and offers services for metadata enrichment ranging from language identification to vocabulary matching and geographic enrichment services.

Micro-services developed in the LoCloud project have been incorporated into the MORE aggregator for CARARE. These include Vocabulary Services, which provide access to a large number of vocabularies for the archaeological and architectural heritage available as Linked Open Data.

### **Microservices**

AthenaRC has developed two new micro-services during Europeana DSI: (1) a micro-service that allows mapping of subject terms to a common thesaurus (in this case AAT) and (2) a micro-service that maps temporal information to a common thesaurus (in this case Perio.do). Both micro-services require that the content providers create the appropriate mappings using MORE.

AthenaRC has also made improvements on the geo-location enrichment and Normalisation services. The Geolocation enrichment service now takes into account the country of the data provider to validate the accuracy of the enriched records. The improvements to the normalisation services help normalising subjects terms and display dates.

2Culture and AthenaRC have discussed with EF integrating the MORE platform and services with the shared data storage developed in the Europeana Cloud project. AthenaRC plans to release an open source version of the MORE platform in Autumn 2016. EF visited AthenaRC's offices in Athens in June 2016 to study the operational workflow for the CARARE aggregator and to discuss the development of METIS.

*Subcontractor for MINT.* NTUA was subcontracted by Athena RC to provide an instance of MINT for CARARE. Data partners use the MINT service to map their exported metadata to standard metadata schemas (CARARE, LIDO and EDM are supported) and to publish the mapped metadata to MORE.

### **NISV for EUScreen**

EUScreen also makes extensive use of the MINT service to provide aggregation for audiovisual items. Specifically for audiovisual media, the platform has expanded its possibilities to cater for subtitle files as an additional form of (searchable and linkable) metadata. The information will now be able to be exploited through entity recognition and added to the linked data repository for access through the SPARQL end point, also for re-use in third-party platforms. At the EBU Metadata Developer Network Symposium, closer integration possibilities with the widely used EBUCore standard were discussed.

### **MICHAEL for MUSEU**

MICHAEL revised, thanks to a subcontracting, the MINT ingestion platform for MUSEU on the basis of the Europeana quality parameters discussed in DSI and the "Requirements for the Visualization and Indexing of Museum Content".

MICHAEL discussed with Europeana and aggregators using MINT the common needs for the future implementation of this web-based service. As a result, NTUA, responsible for the realisation and maintenance of MINT, was involved as a full partner in Europeana DSI-2 to support all aggregators.

## 3.2 WP2 End User Services

The objectives of this work package are to connect and interact directly with end-users and increase the visibility of partner's collections. It will specifically:

- Publish Europeana Collections (the [www.europeana.eu](http://www.europeana.eu)-portal) and up to four thematic collections as points of entry for end-users, in collaboration with WP6 (Product Development). The first collections delivered are on art history and music, the third one will be on fashion; the fourth channel's topic is to be decided. This WP will set our business goals for the portal development and functionality.
- Engage users through crowdsourcing campaigns, via outreach to publications such as Wikipedia, and via social media forums to help improve data quality.
- Continuously monitor the improvement and development of the user experiences in each end-user product, including Europeana Collections, based on analysis of traffic and user metrics and the feedback loop for new products.
- Create and curate content by highlighting and showcasing high-quality content via user galleries, virtual exhibitions platforms and our thematic collections.
- Identify and make optimal use of social media channels and external platforms such as Wikipedia, Imgur, DailyArt for the dissemination of partner's collections.
- Show the impact of Europeana DSI's work by providing feedback and statistics for stakeholders, through the Statistics Dashboard. (The actual development for the dashboard will be done in WP6, this WP will deliver the business requirements for it.)
- Articulate a vision on future User-Generated Content projects.

Participants in this work package:

- Europeana Foundation (EF)
- Facts and Files Historical Research Institute Berlin Partnership (F&F)
- Europeana Fashion International Association (eFashion)

### 3.2.1 Summary of the main achievements under WP2

- Development and launch of the new Collections site;
- Development and beta release of Europeana Art History and Europeana Music;
- Development and alpha release of Europeana Fashion;
- Development and launch of the new Virtual exhibitions platform with its first exhibition: Faces of Europe;
- The implementation of a user validation campaign where we interviewed hundreds of users.

### 3.2.2 Description of work carried out

#### Task 2.1 Promote partner data via Europeana End-User Products and external platforms

We have developed a marketing and social media plan (D2.1) that functions as our primary framework for promotion and engagement of end-users of Europeana.

Europeana’s primary end user groups are<sup>10</sup>:

1. Culture vultures; professionals or ‘expert amateurs’ in some subject of cultural heritage, or people who are interested in culture and cultural heritage more than most.
2. Cultural snackers; citizens who are not actively seeking for heritage content but like to see or interact with engaging items, for example in their social media timelines.

The first groups is reached primarily through the Europeana Collections services; the second group is primarily reached through external platforms with which we have partnerships.

**Subtask 2.1.1 Promote data via Europeana’s end-user products**

**Europeana Collections**

[www.europeana.eu](http://www.europeana.eu) has been thoroughly revised. We have worked closely with WP6 (Product Development) to define specifications for user interaction on the new site (and the new thematic collections). User testing done under WP6 has indicated that users find the new design a great improvement (albeit search and retrieval is still difficult at times).

Against a target of 6 million visits under Europeana DSI (April 2015 - May 2016), we achieved 5,801,429. This amount is lower as expected, mainly because of changes in Google’s algorithms and major hosting outage in April.

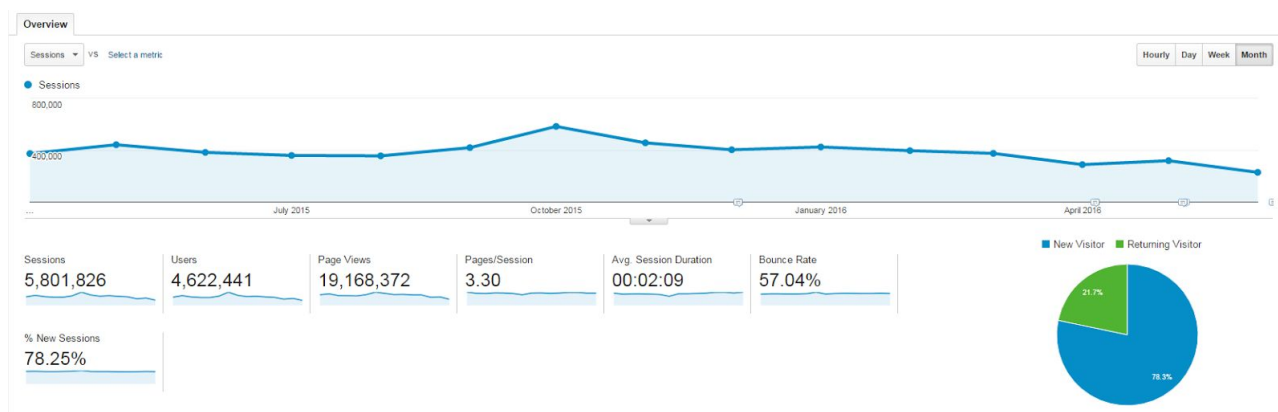


Figure 1: traffic information for Europeana.eu (source Europeana’s Google Analytics)

Our newly launched Thematic Collections, Art History and Music, have received respectively 57,804 and 26,938 visits between the launch in December 2015 and June 2016.

<sup>10</sup> These are being recalibrated for BP2017 under DSI2



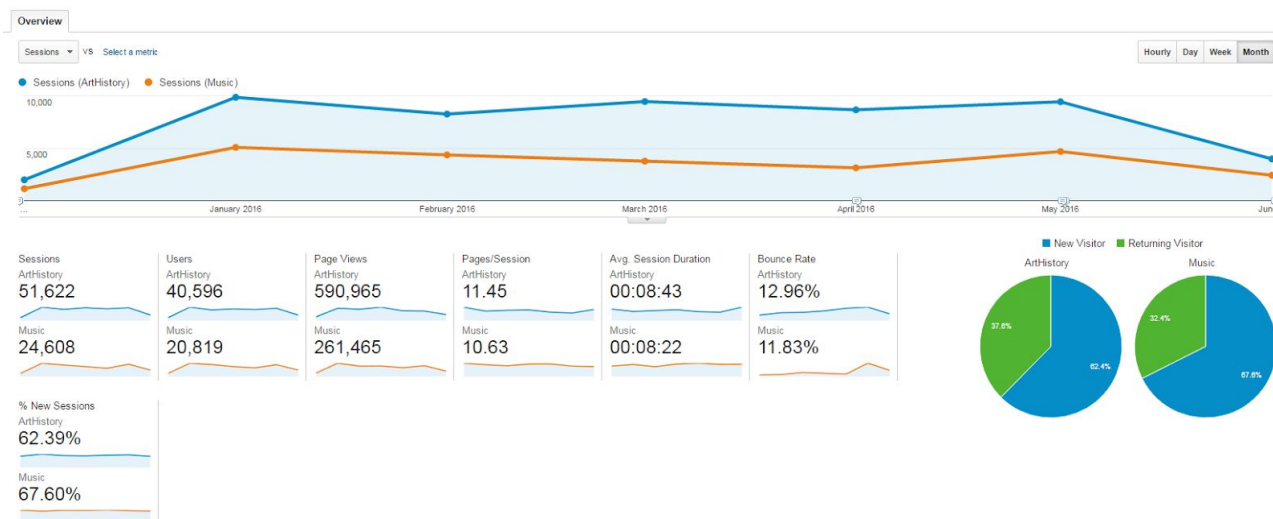


Figure 2: traffic information for Europeana Art History and Music (source Google Analytics)

To enhance the discoverability of famous works of art presented in Europeana’s collections, we translated artwork titles in various languages including English, German, Spanish, French, Italian, Dutch and Polish. This approach was necessary as titles of artworks are mainly provided in one language, which makes it difficult for users from various countries to find famous works of art in their language of origin. To overcome these language barriers, we translated about 150 titles. By doing so we made famous works of art more accessible to an internationally distributed audience. Two examples of this are explained below:

The artwork “Betsabe a fürdőben” by Sebastiano Ricci, for example, uses the Hungarian language to state the title of the artwork. Users who search for this artwork on the Europeana portal using the English translation of the title “Bathseba at her Bath” won’t retrieve the desired item. Another example is the famous artwork “The Milkmaid” by Johannes Vermeer. [Wikipedia](#) offers more than 20 translations of the title. Users are likely to use the title in their language of origin to find the artwork on the Europeana portal.

### Exhibitions

During the reporting period, together with external partners, we have been working on five exhibitions:

[Recording and Playing Machines](#). Created together with Europeana Sounds with an internal Omeka based tool. The items were selected from the collections of nine major cultural institutions to illustrate a wide range of techniques and technologies related to sound recording throughout history. The exhibition was launched in August 2015.

[1914-1918 We know this war by heart. Portugal and the Great War](#). The exhibition is available in [English](#) and in [Portuguese](#). Curated by the Institute for Contemporary History of the Faculty of Social Sciences and Humanities of UNL, with the support of the Portuguese Ministry of Foreign Affairs. The exhibition describes the most significant moments of the Portuguese participation in World War I. It was developed with Google Cultural Institute’s curatorial tool and launched in July 2015.

[\*Cake? Cake!\*](#) Created with Europeana Food and Drink and curated by project partners: Centre for Agrarian History and Royal Museums of Art and History. The exhibition tells the history of cake in Europe and explores the different stories and customs connected to it. The exhibition was developed with Google Cultural Institute’s curatorial tool and launched in October 2015.

[\*The Men on the Memorial!\*](#) The exhibition focuses on personal stories of WWI’s victims and was part of Europeana 1914-1918 project. The exhibition was developed with Google Cultural Institute’s curatorial tool and launched on November 11.

[\*Faces of Europe\*](#). It is the first exhibition published on our new virtual exhibition platform, which has been internally developed to provide a better user experience. Faces of Europe contains artworks submitted through [Europeana280 campaign](#) and is available in 6 languages: [English](#), [French](#), [German](#), [Italian](#), [Polish](#) and [Spanish](#). The exhibition consists of seven chapters, published bi-weekly between April and July of 2016, exploring different aspects of Europe’s artistic heritage. Publishing chapters in a form of series allows us to explore and showcase different possibilities of the platform, as well as respond in time to user needs.

All exhibitions have been promoted on each of our social media channels. Additionally, Google Art Project promoted exhibitions hosted on Google Cultural Institute through their channels. All of our virtual exhibitions can be accessed via <http://exhibitions.europeana.eu/>.

During this period of transition, we have focused our marketing activities on highlighting specific collections through several communications channels:

### **Europeana End-User Blog**

We have published up to seven blog posts per month. A selection of blog posts is also included in the email newsletter (eNews) sent out every month. The blog is maintained by both the End-user Services team and the Communications WP.

### **Europeana eNews**

The Europeana eNews email newsletter is sent each month to more than 50,000 subscribers. In the reporting period, seven newsletters were sent out, each one available in two language versions, English and French. French translations are provided by the National Library of France. The target audiences of the newsletter are culture vultures, people with a cultural heritage background, and people affiliated to Europeana or its partners. Each eNews bulletin consists of blog posts that have been published on the Europeana end-user blog, with additional content such as featured apps or updates from partners and partner projects.

### **External platforms**

*Pinterest.* With over one hundred million users, Pinterest is a key platform to reach culture snackers looking for engaging works of art and other heritage material. Although you don’t get the viral effects of other social media channels, Pinterest allows us to create boards that offer access to thematic collections from different content providers. In the first seven months of Europeana DSI, we gained over 1,500 new followers by publishing around forty new boards on artists, e.g. Alphonse Mucha or themes such as Eating and Feasting. As of October 2015, we have more than

7,800 followers and over 100 boards with more than 3,000 pins published. Europeana plans to extend the number of boards even further. Some boards will also be embedded in new or existing Europeana Collections such as the Art History Collection. To achieve maximum efficiency and exposure, Pinterest boards will be promoted on Facebook and Twitter.

*Medium.* We planned to publish at least three stories per week by re-using older articles from the Europeana blog. In this way, we recycle quality existing content, while reaching a new community of users. Due to time constraints we stopped this activity for the moment.

*Buzzfeed.* In order to experiment with attracting a wider audience and present European cultural heritage in a new context, we published our content on the entertainment portal BuzzFeed. A [popular form of list](#) was used to present historical photos. Given the potential of this kind of publication in reaching wider audiences, we plan to create more of this type of content.

### **Subtask 2.1.2 Define end-user product requirements**

Europeana closely follows the trends related to technology and user online behaviour. Close cooperation between product and end-user teams assures that the newly developed products respond to user needs and follow best practices. As a result of this work, a number of features are being introduced in the new products such as user-driven design, improved search filters (for example the possibility of searching by colour), easier rich media access and better curated collections. The results are discussed in WP6.

### **Subtask 2.1.3 Increase the visibility of partner data through Wikipedia**

The suite of Wikimedia websites - notably Wikipedia and Wikimedia Commons - have played an important role in facilitating the re-use and discoverability of Europeana content for several years. [Many projects](#) have been run over the last few years, both directly by Europeana staff and indirectly with Wikimedian volunteers, to further that collaboration. Equally, the volunteer communities that curate these sites are important allies.

The [report of the Europeana-Wikimedia Task Force](#) reiterated the significance of this relationship and encouraged deeper integration. The proactive sharing of high-quality and openly licensed material from Europeana partners to Wikimedia Commons will continue, notably with [the upload of thousands of images](#) of objects digitised during the *Europeana 1914-18* project - many of which are now illustrating high visibility Wikipedia articles. This is an effective way to ‘seed’ this material to Wikipedia’s articles, integrating the material within this very visible educational context, and thereby accessing online audiences that don’t necessarily know about Europeana or the partner itself.

Of great relevance to Europeana’s “portal to platform” strategy is the creation of Wikidata - a central storage for structured data in Wikimedia projects. Wikidata is a database of linked information that can be read by humans and machines. The collected data is available for free and can be easily re-used and processed by third parties. The quality of data is improved thanks to many cooperating editors and the fact that data entered in any language is immediately available in all other languages. This opens up a new range of potential collaboration projects focusing on metadata, search-result contextualisation, multilinguality and authority control. As part of the *Europeana 280* campaign the [Art History Challenge](#) has been built on Wikidata, encouraging the

creation of Wikipedia articles, and the improvement of metadata about those artworks, across all languages of Europe. This is the largest ever coordinated activity based on Wikidata and, [as noted in the project statistics](#), the 6 week competition period has resulted in several hundred Wikipedia articles written across several dozen languages. Notably most content is created by volunteers who are new to both Wikidata and Europeana, and written in their own language about *other* country's artworks. For example, after English, the most popular competition languages are Bulgarian, Swedish and Catalan while the most-translated artworks are those from Denmark.

We will continue to work with this initiative, in relation to the R&D work in Work Package 4.

### **Task 2.2 Engage**

#### **Comments from the reviewers:**

“It is stressed that, in addition to social media campaigns, further frequent direct communication, interaction and feedback from end users should be pursued at all times as the only way to create a truly engaging service and increase Europeana's reach and impact (see recommendation 1).”

**Work carried in response to the comments of the reviewers:** between February and May an extensive user survey has been conducted by User Vision (see WP6) which has led to a deeper understanding of behaviour and end user needs for Europeana Collections and the thematic Collections. In addition we have started an end User Validation project where various assumptions are being tested in two week sprints by talking directly with users of the service.

#### **Subtask 2.2.1 Engage end-users through social media**

Closely related to the previous task, the aim of this task is to engage the general public with cultural heritage through Europeana. In order to do so, we have set up a marketing plan and social media strategy. Below are the results of the actions of this plan to date.

The main Europeana Twitter account (@europeanaeu) has over 24.400 followers (as of May 2016) which means it gained over four thousand new followers during the reporting period. The account is not only used to highlight content but also to communicate important organizational news and to retweet messages from our partners and figures from the cultural heritage sector. We currently (re)tweet at least three to five updates per day. We also closely monitor what's being said about Europeana and respond if appropriate.

As Europeana has around 110,000 followers on Facebook from all over Europe, it is an excellent way to promote content and disseminate updates like blog posts from both our own and our partners' blogs. According to the best practices for maximum organic reach, we have published 5-10 Facebook posts per week. We would also like to re-start posting targeted updates in multiple languages in order to reach the right audiences with more long tail and niche content. We are working with partners in various countries to achieve a more multilingual presence. Although post reach decreased strongly at the end of 2014 as the result of an algorithm change made by Facebook, current numbers are on the rise again.

## Open Collections

One social media initiative that has proved to be popular with Europeana’s following is the #OpenCollections campaign. Each week, the End-user Services team, in cooperation with the Data Partner Services team, highlights an openly licensed collection on Facebook and Twitter, putting a spotlight on the data provider at the same time. The openly licensed datasets are also communicated to the Re-use team, to be included in the datasets section of Europeana Labs. In addition the Open Collections could be highlighted on the new Europeana Collections landing page.



Figure 2: Just one Facebook update reached nearly 70,000 people and amassed over 500 likes. Accessed October 28, 2015 at:

<https://www.facebook.com/Europeana/posts/10153234294668668>

‘Open Collections’ (20 August 2015) 70,000 people and

### Task 2.3 Create and curate

Under this task, we have set up a plan (MS11) for several thematic collections.

#### Subtask 2.3.1 Thematic Collections

Under this task, EF, Europeana Sounds and Europeana Fashion have developed three thematic collections. The campaign plan for the launch of the portal (Europeana Collections) and the

Europeana Art History Collections are described in MS11. Throughout spring 2016, Europeana Art History has highlighted content contributed by member states for the [Europeana 280](#) campaign, including weekly features and an online exhibition [Faces of Europe](#). The 280 campaign has been extensively promoted via substantial marketing activity, including public events in several European cities. Europeana Music Collection has further matured. The content of the thematic collection has substantially improved by refining the search filters and the Europeana Sounds consortium has delivered thousands of new records. The Sounds consortium has also continued with the editorial work in collaboration with the EF and provided dozens browse entry points as well as detailed blog posts about musical history.

In June we will launch the Europeana Fashion Collection (alpha version). The original channel run by [Europeana Fashion](#) will then migrate to this new channel. Europeana Fashion worked together with the EF to set the requirements for the Fashion Collections. This includes the addition of a grid-view and being able to display custom facets such as fabric and colour that have been developed by the Fashion consortium.

### **Subtask 2.3.2 UGC collection days, supported by Facts & Files**

Facts & Files and the Europeana Foundation planned and organised (press & PR, training, technical support) the following Europeana 1914-1918 collections days:

- Lisbon, Portugal (October 2015) in cooperation with the Institute for Contemporary History (of the Faculty of Social Sciences and Humanities of the University of Lisbon);
- Antwerp, Belgium (November 2016), in cooperation with the Red Star Line Museum and the AMSAB Institute of Social History (University of Ghent);
- Sarajevo, Bosnia & Herzegovina (March 2016) in cooperation with the National and University Library of Bosnia & Herzegovina;
- Prague & Brno, Czech Republic (April 2016) in cooperation with National Museum and National Film Archive;
- Poznan, Poland (June 2016) in cooperation with PSNC;
- Mostar, Bosnia and Herzegovina (May 2016) in cooperation with the Mostar Public Library.

The event planned in Latvia will take place in November 2016, coinciding with the Europeana AGM.

### **Subtask 2.3.3 Crowdsourcing community campaigns**

At the Europeana AGM 2015 further activities in the coming years have been discussed with possible partners from the Europeana Network. Based on this input a [Business Plan](#) was developed and has been put in action covering ambitions and high level milestones for the period January 2016- September 2017 (funded under Europeana DSI and Europeana DSI-2), while looking ahead at the period September 2017- December 2018 when the commemorations around the end of the war will come to its peak. It concerns the setting up of an advisory board as well as planning different types of crowdsourcing activities aiming at the further improvement and enrichment of the data collected so far.

Facts & Files organized two transcription workshops (“transcribathons”) in July 2015 and June 2016 for two groups of 20 interested students from the “Primo Levi Gymnasium” in Berlin as part of

the Day of Social Sciences. Throughout the workshops, the 15 to 16 year old students learned a variety of media skills combining use of modern technology with expertise on working with original historical documents. They worked with data ingestion tools and the [transcription tool](#). The [event](#) was very well received. Based on these experiences and the existing prototype F&F and the IT developer Piktoresk further developed a stand alone transcription tool website, which makes it possible to import and export data from Europeana 1914-1918. The tool will be used in future crowdsourcing campaigns.

### **Task 2.4 Monitor**

Under this task, the Europeana [Statistics Dashboard](#) was evaluated by the users. The design and development work for the Statistics Dashboard was delivered under work package 6 (Product Development) and launched in April 2016. This beta version of the dashboard is a substantial improvement compared to the alpha version. Every country, aggregator and institution has an automatically generated dashboard that is updated with the latest statistics on a monthly basis. The first feedback from the Europeana data partners has been very positive. With the feedback that we received the development requirements for the next version of the Dashboard under DSI 2 will be written. We have also started working with DEN (under WP4) on integrating the new ENUMERATE reports into the Dashboard to give a broader overview of the current state of digital heritage in Europe. Additionally, using Google Analytics and insights sections of social media platforms, we create monthly social media and traffic reports to measure, evaluate and optimize performance of our websites and social media.

According to these reports, majority of our performance indicators are well on track. We surpassed all our targets set for impressions on Wikimedia projects and the reach, engagement and number of followers on Pinterest and Twitter. Despite the algorithm change, our different Facebook targets are realized in 75%-96%. Concerning the traffic, our visits goal is realized in 96,6% while the impressions goal in 95,8%.

## **3.3 WP3 Re-user services**

This work package aims to support re-use and distribution of Europeana data and to generate economic value for the Europeana DSI. It is responsible for boosting the distribution infrastructure and long-term financial stability through business model innovation.

The objectives of this work package are:

- Expand the distribution infrastructure
- Improve take-up and re-use of digital cultural heritage
- Develop a more independent financial basis for Europeana to increase the re-use of Europeana material and grow an entrepreneurial arm.

Participants in this work package:

- Europeana Foundation (EF)
- EUN Partnership aisbl (EUN)
- European Association of History Educators (Euroclio)
- Stichting Historie der Techniek (SHT)
- DARIAH ERIC (DARIAH)

- CLARIN ERIC (CLARIN)
- Agence luxembourgeoise d'action culturelle asbl (Plurio)
- Latvian National Library (LNB)
- SE1 Media
- Stichting Digitaal Erfgoed Nederland (DEN)
- Platoniq Sistema Cultural
- Österreichische Nationalbibliothek (ONB)

### 3.3.1 Summary of the main achievements under WP3

- Seven subcontracted re-use projects (see the table under subtask 3.1.1)
- Five educational partnerships (various profile: commercial/non-commercial, formal/informal)
- Historiana improved Search & Select tool
- Twenty Europeana featured collections on Historiana
- Featured Europeana Collections on EUN's Learning Exchange Resources online portal
- Improved "What's like this?" section on InventingEurope website which features relevant Europeana content
- Fourteen sample learning assignments using Europeana data on Inventing Europe Education section
- iTunesU Multi-Touch book and course on First World War (Dutch & English)
- SmartCities4Culture network setup
- New co-creation toolkit website
- Improved crowdfunding platform Goteo.org

### 3.3.2 Description of work carried out

#### **Task 3.1 Expand the distribution infrastructure**

#### **Subtask 3.1.1 Establish Europeana Labs as a product and service for a targeted audience of cultural apps developers, designers, makers and entrepreneurs (with ONB)**

Based on the valuable feedback and ideas from the Europeana Labs community, we continued developing Europeana Labs to make it the go-to website for culturally minded developers and digital innovators to find practical resources for using and building with cultural collections. We now have a website with greater focus, an improved product and better services, not to mention a new visual design in line with Europeana's other sites.

The major improvements include:

- Improved API documentation
- Over eighty re-usable datasets giving access to over one million openly licensed media files. The search in these datasets can be further refined by a range of filters.
- A stronger app showcase featuring ca. 160 applications and tools, clearly divided in categories. Various filters as well as links to suitable documentation and code enrich the user experience.



→ New incubation section with focus on co-creation and crowd-funding services.

The new, simpler menu of Europeana Labs clearly indicates the main components of the Europeana re-use offer and thus allows re-users an easy user journey i.e. they can go directly to the section which best meets their needs. For instance, if users would like to explore the Europeana API to develop an app, they can just click on the APIs menu tab. The available quick links on the home page further support the fast access to the most relevant offer for the re-users. Those interested in playing with data and technology can select the “Access re-usable content” section and those with business motivation can quickly find out more by clicking on the “Support for your idea” links. The rich information on the subpages as well as the introduced extra filters and categories help users find fast the desired data and tools for their projects.

We are committed to better understand our users’ needs and expectations. We continuously monitor and collect feedback via the API mailbox and the API Google group and have been working together with the consultancy company Business Models Inc. on designing user validation experiments with our main target groups (including the creatives).

We also maintain regular communications with our community via the Labs blog, newsletter and Twitter account. As a result, we have now over 2,500 signed-up API key holders and a Labs mailing list reaching over 2,700 subscribers.

In addition to the direct interaction with the creatives, we took the first steps to building partnerships with creative industries intermediaries, such as innovation hubs, ICT clusters and niche consultancy companies to multiply outreach to the target audiences. With the Austrian National Library (ONB), we researched and targeted potential partners across Europe via mailing campaigns and direct calls to discuss and plan joint initiatives.

We also further expanded the partnership with the European Network of Living Labs (ENoLL) by attending their annual event on 25-28 August 2015 in Istanbul and giving a presentation and a workshop on the Europeana Labs’ offer for the Living Labs community. Representatives of Living Labs across the world (Spain, Tunisia, Mauritius, to name just a few) expressed interest in the Labs’ services and potential collaboration. Europeana and ENoLL have been discussing a memorandum of understanding between the two organisations and expect to sign it in June 2016.

We reached out to Smart Cities representatives and practitioners via the Europeana Luxembourg Presidency event on 14-15 October (MS13). Furthermore, Europeana in collaboration with the Ministry of Culture in Hamburg and City of Florence held a SmartCities4Culture workshop as part of the [Major Cities of Europe conference](#) on 30 May - 1 June in Florence. The workshop brought together over 15 representatives of Smart Cities in Europe, including Florence, Hamburg, London, Copenhagen, Vienna, Zurich, Barcelona and Berlin. The participants discussed the setup of a SmartCities4Culture network as an expert forum of cultural policy makers to explore relevant areas of common interest, exchange best practice solutions and cooperate in joint projects.

Europeana has also organised or joint various app competitions in the first half of 2016 to nurture the development of viable products and services using digital cultural data:

- [Hack challenge Loomehakk](#) organised by Creative Estonia in January 2016. This collaboration resulted from the mailing campaign conducted together with ONB. Europeana introduced a special award for best re-use of cultural heritage content.
- [Europeana Innovation Challenge](#), February 2016 - ONB and Europeana designed and launched an online re-use competition on the themes of Art & Design, First World War and Music. Applications were accepted via Europeana Labs between 1 and 29 February and the three winners were [announced](#) in early April.
- [Morpheus Cup](#), March - May 2016 - an external online competition between graduates from European leading universities to develop innovative products and services across various categories. The competition is under the patronage of the European Commission and takes place alongside the ICT Spring event. Europeana introduced and supported the special category [Smart Culture](#). Winners were announced at the special award event on 10 May in Luxembourg.

The winning ideas from the above mentioned competitions as well as a few other special re-use projects related to Europeana's major campaign in 2016 (Europeana 280) have been subcontracted and supported as follows:

<b>Project Name</b>	<b>Description</b>	<b>Competition/ Campaign</b>	<b>Subcontract Amount</b>	<b>Deliverable by June 2016</b>
Virtual Reality Quiz	A virtual reality quiz game for museums and galleries using Oculus Rift platform	Creative Estonia hackathon	7.260 EUR	Game prototype
Language of History	A tool to learn foreign languages through historic pictures from Europeana Collections	Creative Estonia hackathon	Co-creation workshop by Platoniq	Refined product concept
Art Stories app	An educational app (iOS and Android) that introduces primary school children to European art using selected artworks from Europeana Collections	Europeana Innovative Challenge	12.100 EUR	iOS and Android app
CineMacina	An online service based on artificial intelligence that will allow automatic remixing and cinematic visualisation of First World War archival material	Europeana Innovative Challenge	12.100 EUR	A prototype and two WW1 essay documentaries
StoryPix	A web-based storytelling service for billboards. The service will allow to create thematic storytelling routes	Europeana Innovative Challenge	18.150 EUR	A system prototype and one Europeana inspired story

	in a specific area or a whole city			
Europeana Coloring App	An app to color, personalise and share artworks from Europeana Collections	Special projects/ Europeana280	9.680 EUR	<a href="https://coloura.pp.eu/">https://coloura.pp.eu/</a>
Big Art Ride Virtual Reality installation	A virtual cycle race through a common cultural heritage, helping build bridges between European citizens in an exciting, innovative way	Special projects/ Europeana280	14.520 EUR	<a href="http://bit.ly/1XEpoK9">http://bit.ly/1XEpoK9</a>

The activities carried out under this subtask and their outcomes will be described and analysed in D3.1 Creative Industries Reach Report. Based on the analysis as well as the additional research of the creative industries' market performed by ONB, the document will provide recommendations for the future approach and cooperation with the creative industries.

### **Subtask 3.1.2 Continue to improve access to materials and tools**

Throughout the project, we introduced many new technological developments (APIs and tools) as well as new datasets to facilitate easy and fast re-use. These have been communicated via the relevant Europeana Labs channels, including Labs website, newsletter, dedicated mailbox and social media.

The Europeana API has been extended with powerful features based on technical metadata. Technical metadata is metadata which is extracted from media files which reside in records, such as the width and height of an image. These new features give users the possibility to search for and filter on Europeana records by media information, for instance to only search for records which have extra large images, high-quality audio files, or which images match a particular colour. Combined with existing filters around type and license, this opens up great opportunities for app developers. We've also added numerous smaller features to the API such as the ability to sort by timestamp, to retrieve thumbnail images and to retrieve and render hierarchically connected records.

Our OAI-PMH service is now in beta and documentation has been added to Europeana Labs. Selected developers have been approached with details to encourage use and invited for feedback.

A new API, the Annotations API, has been made available as a public alpha for developers to experiment with. The Annotations API is an extension to the Europeana REST API which allows for the management of annotations. Annotations are user-contributed or system-generated enhancements, additions or corrections to (a selection of) metadata or media. The Annotations API will work towards a first major release at the start of 2017.

Other strategic developments have been undertaken to improve the API, typically based on feedback from users. An example is the development of an attribution snippet which gives

developers a simple way to include a correctly formatted attribution in text or html form, which was released in late 2015. Likewise, plans are in place to support the collection of International Image Interoperability Framework (IIIF) standard attributes where these are available through data providers, and expose these in API responses to allow developers to harness the incredible potential of this technology.

Throughout the project period, contact has been maintained with key developers to keep them personally updated with new developments, whilst for the broader community of users, including potential new users, we continue to inform them via Europeana Labs newsletter and Twitter and invite discussion through an API email group and the [api@europeana.eu](mailto:api@europeana.eu) mailbox. A series of 'how to' articles has also been started as blog posts on Europeana Labs.

Furthermore, we have been continuously adding new applications and tools to the apps showcase section on Europeana Labs. These apps are now clearly divided into two categories: end-user applications and creations and tools for directly working with the Europeana API and content (for example client libraries). In addition, users can refine their search based on various filters and find extra information, as well as, where available, suitable documentation and code on platforms such as GitHub. There are also now 86 open datasets featured, a number that grows with each publication. When new apps or datasets are added, the best ones are featured on the Labs home page and promoted to the Labs community via the regular e-newsletter.

In addition, Europeana organised two workshops to improve re-user activities and potential:

1. [Co-creation workshop](#), 20 April 2016, Amsterdam - organised in cooperation with Europeana Fashion Association, this workshop presented tools to improve re-use and explored possible applications of fashion digital cultural content.
2. SmartCities4Culture workshop, 1 June 2016, Florence - the participating representatives of Smart Cities across Europe discussed how to facilitate the relationships between regions with different cultural, societal, and economic characteristics by federating the access to digitalized cultural assets across Europe. Please see the previous section for more details.

### **Subtask 3.1.3 Establish a Europeana Research prototype, under Europeana Cloud, directed at digital humanities research communities**

The [Europeana Research website](#) was beta launched in the spring to 2015 to make a first entry into the market of digital humanities researchers. It is built on Bolt, the same content management system (CMS) as is used for Europeana Labs and follows the same styleguide and design. In order to properly get into this market we are first building partnerships (subtask 3.1.4.) and have set up an editorial board. Under Europeana DSI-2 we will further investigate this market's needs and decide on services to be developed.

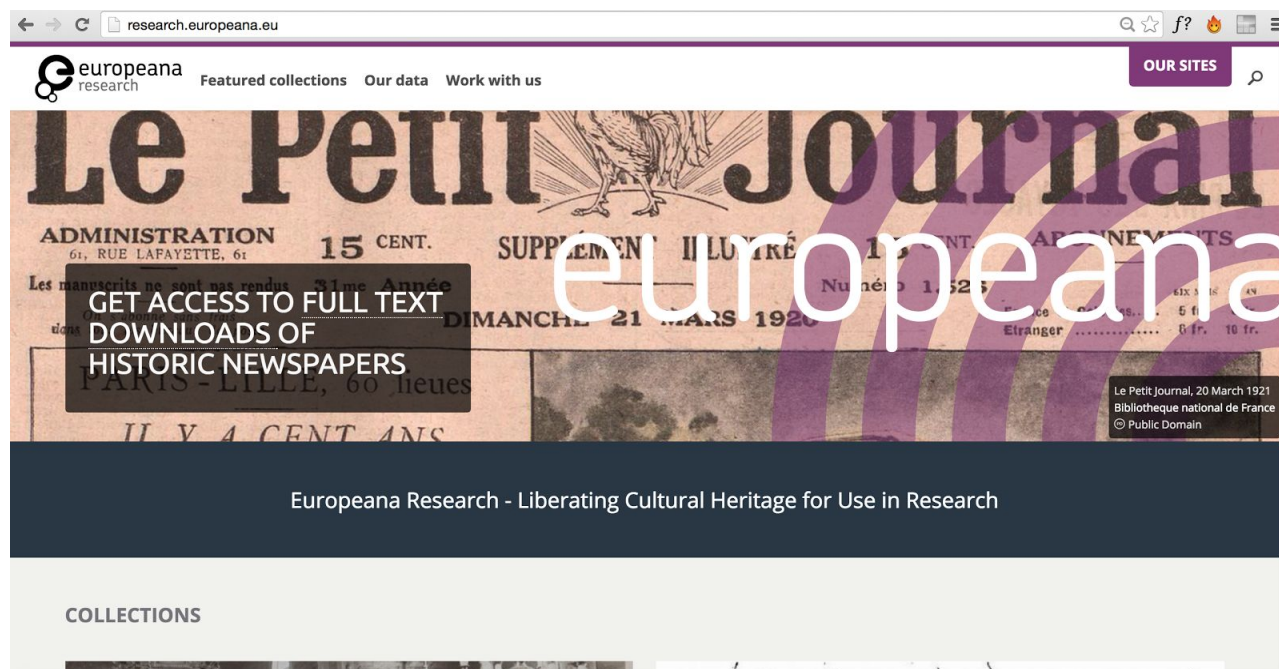


Figure 3: Europeana Research website

The [Europeana Research website](#) was beta launched in the spring to 2015 to make a first entry into the market of digital humanities researchers. It is built on Bolt, the same content management system as is used for Europeana Labs and follows the same styleguide and design. In order to properly get into this market we are first building partnerships (subtask 3.1.4.) and have set up an editorial board. Under Europeana DSI-2 we will further investigate this market's needs and decide on services to be developed.

**Subtask 3.1.4 Build on the partnerships in research with DARIAH, CLARIN and The European Library (TEL), created within Europeana Cloud, under Europeana DSI, co-ordinated by ONB**

The concrete work and achievements per partner are described in detail below.

### **ONB**

Within Subtask 3.1.4, ONB worked on Europeana Research in close consultation with TEL. D3.2 Europeana Research Distribution Plan was finalised. The main focus was on researching the availability of digitized Parliamentary Papers.

In addition, ONB contributed to research.europeana.eu. In order to populate the website, it was decided to set up blog series on different themes that were put online in December and in beginning of 2016 and brought attention via social media channels to research.europeana.eu.

Furthermore, ONB contributed in including collections that were uploaded to Europeana via TEL to the Europeana Research website and thus populating the "Data" section of the site.

### **CLARIN**

CLARIN performed a test import of a wide variety of metadata records provided by Europeana/TEL into its Virtual Language Observatory (VLO). The VLO is a metadata aggregator and search engine for language related resources and tools. As a first step, the harvested metadata was transformed into the CMDI (Component MetaData Infrastructure, ISO 24622-1:2015) metadata format used by CLARIN. The results of the harvest have been checked and evaluated with respect to the relevance of the data for the CLARIN research community.

A summary of the evaluation is available at

<https://docs.google.com/spreadsheets/d/1SGnkqTxJ00wTIV-mieD5xPKUsdZq3vSiXiLPXYSHonY/edit>

## **DARIAH**

DARIAH (the Digital Research Infrastructure for the Arts and Humanities) continued to promote the Europeana API to the Digital Humanities community. This has been done through several meetings with Cultural Heritage institutions about how GLAMs and Europeana can better provide access of their content to researchers and how digital collections can be more usable by humanists.

DARIAH has numerous contacts with several stakeholders in the framework of Europeana DSI. DARIAH is currently working with LIBER in order to prepare a workshop which will be presented at the IFLA congress in 2017. DARIAH CEO gave also presentations to various stakeholders such as the University of Helsinki Digital Humanities Centre, Berlin-Brandenburgische Akademie der Wissenschaften and DARIAH-DK.

### **Task 3.2 Develop distribution partnerships in education and tourism**

#### **Comments of the reviewers:**

[...] “However, the plan (created for distribution of Europeana data into education (D3.3) seems to focus mainly on formal (school) education without adequately considering the many opportunities for Europeana data in informal and lifelong learning or edutainment that could maximise impact of Europeana offerings (see recommendation 3).”

**Work carried in response to the comments of the reviewers:** The collaboration between Europeana and WP3 partners in education (EUROCLIO, European Schoolnet and Inventing Europe) focuses on the integration of Europeana data in partners’ educational systems. In this way, we allow Europeana Collections to be re-used by educators across Europe in any educational format, from formal education (classroom lessons) to informal and lifelong learning. For example, the featured source collections that have been created by EUROCLIO highlight selected items from Europeana Collections that can be used in history lessons in school but are also relevant for a general public interested in history. Also, the coding used to create the search and select tool can be used for other educational applications.

In addition, Europeana has explored other opportunities for re-use of digital cultural content in informal education and lifelong learning. Examples include the cooperation with EMMA (the European aggregator of Massive Open Online Courses) and iTunes U. EMMA MOOCs using

Europeana data are open for anyone interested in the respective MOOC topic. The iTunes U materials on First World War can be easily used outside the classrooms (in fact, most downloads are done by the user group of age above 35 years).

### **Subtask 3.2.1 Develop distribution partnerships in education with European Schoolnet (EUN), Euroclio, Inventing Europe**

D3.3 Plan for distribution of Europeana data in education was delivered. With European Schoolnet (EUN), Euroclio (the network for history educators) and Inventing Europe (run by SHT), we are now taking the necessary steps to put it into action.

#### **EUROCLIO**

*Search and Select.* Together with Europeana and Webtic, EUROCLIO has worked to develop an improved Search and Select tool for Historiana (which is an educational website created by EUROCLIO to help history educators to make best use of new technologies for their teaching). The Search and Select tool, which is now available at <http://sas.historiana.eu/sas/search>, makes it possible to directly search and select sources within the Europeana Collections and save them in their browser. The Search and Select tool automatically applies a filter and only shows results that have direct links to objects and are available under licenses that allow re-use.

*Search Partners.* A unique feature, compared to the Europeana portal is the possibility to add Europeana data as search partner to Historiana and add a logo and description of the partner. This helps users to get an idea of what they are likely to find in the collections. An advantage of offering the option to educators to search the collections of individual content providers is that it is possible to propose search terms that lead to relevant search results, indicate a preferred search language and refer to relevant places where educators can find more information.

*Use of the search results.* The Search and Select is integrated in the Apps Environment of Historiana, which has been created by EUROCLIO and Webtic within the Europeana Creative project. This integration makes it possible for educators to create their own online learning activities (specifically designed for use in history education) in their own language. As EUROCLIO is working on the development of additional tools in the Innovating History Education for [All project](#), the benefits of searching and selecting sources will further increase.

*Feedback from educators.* EUROCLIO presented the Search and Select Tool as well as the Featured Source Collections to history educators and teacher trainers during online sessions and a feedback session that took place during the EUROCLIO Annual Conference in Belfast in March 2016. These sessions have helped EUROCLIO and Webtic to develop the Search and Select tool in such a way that it is easy to use by educators and is offering something that educators otherwise would not have access too.

*Featured Source Collections.* In addition, EUROCLIO worked on the identification, selection and contextualisation of featured Europeana source collections that highlight sources which should be of particular interest to history educators. This featured source collections are available at <http://sas.historiana.eu/sas/>.

*Communication and dissemination.* In order to inform the community of history educators and professionals interested to stimulate the re-use of digitised heritage in educational practice, EUROCLIO presented the project during the Media and Learning Conference 2016 in Brussels on 11 April 2016 and during the Annual EUROCLIO Conference in Belfast on 21 March 2016. EUROCLIO and Europeana also presented their cooperation during the EU presidency event READY TO REACH OUT: Connecting Cultural Heritage Collections and Serving Wider Audiences that will take place on 29 - 30 June 2016 at the Europe Building in Amsterdam, The Netherlands.

EUROCLIO and Europeana have worked together to implement a communication campaign to highlight the featured source collections. The source collection have been released in three sessions, each time highlighting one way in which sources from the Europeana Collections can be used by (history) educators to teach their students. The first blog post focussed on how visuals have been used to influence public opinion, the second blog post focussed on how sources can shed a new light on known historical figures, and the third blog post showed how the introduction and further development of technologies have impacted people's lives. The fourth blog post introduces the search and select tool, and shows how the search and select tool can now be used to search and select sources for use in the Historiana tools.

### **European Schoolnet (EUN)**

During Europeana DSI, European Schoolnet set up a mechanism for automated integration of Europeana data into the [LRE for schools portal](#). As a first step, EUN identified subsets of Europeana Collections that have both an educational value and the potential to [travel well](#) across national, cultural and linguistic boundaries so that they can usefully complement the national resources already offered by Ministries of Education. Next, they prepared the necessary API queries, mapped the metadata, and performed further filtering, curation and enrichment of the metadata with pedagogically specific metadata.

The first batch of Europeana resources has been made accessible from the educational portals connected to the LRE (such as <http://mittmediacenter.se/mediawebben/> and <http://reforschools.eun.org/>) in February 2016. These resources are well-suited for a variety of subjects such as history, world religions and geography. EUN contributed to the project by:

- Adding new Europeana resources to the LRE catalog;
- Curating and enriching Europeana resources already in the catalog;
- Promoting the use of these resources by advertising them on the LRE portal, in EUN's teachers newsletters, and using social media (twitter and facebook);
- Improving the workflow used to collect and curate the Europeana resources and its automation.

### **Inventing Europe / Stichting Historie der Techniek (SHT)**

During Europeana DSI, and in line with the Education Plan (D3.3), SHT has improved the use of Europeana data in the education activities of its digital project - Inventing Europe: European Digital Museum for Science and Technology ([www.inventingeurope.eu](http://www.inventingeurope.eu)).

SHT examined the needs of its teacher and student network. It firstly conducted in-depth surveys with fifteen of its teachers about the use of Inventing Europe in their classrooms. Special focus was



on the role of the 198 Europeana API queries on display in the website's "What's like this?" sections, which retrieve relevant digital sources supporting the topics of the various website stories. Secondly, SHT organized a plenary roundtable at the Tensions of Europe conference in Stockholm, 3-6 September 2015 to discuss with its main (potential) teacher network the challenges and opportunities of "Teaching European History in the Digital Age". SHT concluded its exploration with a full-day workshop with European History and Digital Humanities students at the University of Luxembourg on 29 October 2015, in which Europeana served as a use-case for students to explore the different ways of narrating European history online. Together, these initiatives resulted in a report with recommendations for the improvement of Inventing Europe education, an education case-study for use by Europeana called "Co-Creating European History in the University Classroom", and a detailed specification to improve the "What's like this?" functionality on the Inventing Europe website.

SHT improved the Inventing Europe website to better facilitate the use of Europeana data in teaching. Firstly, it improved the website's "What's like this?" section. The functionality was re-designed with an integrated pop-up that shows extensive metadata, social media, as well as large images and has the option to play audio and video. Furthermore, the functionality received an update of the API technology and was extended with a new filter and search mechanism that suits teachers' needs. Secondly, based on these technical improvements, the SHT improved the content of the 198 existing Europeana API search queries, and created 35 new ones for the six new tours that have been published on Inventing Europe in the course of Europeana DSI. The new tours are "X-Ray wins WWII", "In Tandem Innovation", "Building Europe on Steel", "Myth of the National Engineer", "Enlightening Europe", and "Building a Better World".

To facilitate and improve the use of Europeana data in education, SHT published 14 sample learning assignments for its online education environment. These included an update of 5 existing assignments, 2 lecture aids and no less than 7 new assignments for [www.inventingeurope.eu/education](http://www.inventingeurope.eu/education). Part of these assignments are new tools for teaching as well as a newly created online video lecture on the request of its teacher community.

In January and April 2016 SHT launched its new "What's like this?" section and new assignments amongst its (potential) user communities. SHT organized two social media campaigns via Twitter and Facebook, and issued two special volumes of the Tensions of Europe newsletter. Part of these campaigns were two blog posts for the Europeana Pro website, as well as two YouTube interviews with teachers about the benefits of using Inventing Europe and Europeana data in university teaching.

Since university education works with semesters, the first results of a successful integration of the "What's like this?" section will only come in July 2016, after the ending of Europeana DSI. The new assignments have just been finalized and will start to find their way into university teaching as of the academic year 2016-2017.

The SHT user stats report provides insight into the website's outreach for January - May 2016. The SHT recommendations provide Europeana with input for the improvement of its data to better meet the needs of university teachers in the area of European science and technology history.

**Subtask 3.2.2 Distribution partnerships in tourism with PLURIO and SE1 Media**

PLURIO (cultural portal for the transborder “Greater Region” - Luxembourg, Germany, Belgium and France) organized the Luxembourg EU Presidency event on 14-15 October which aimed to explore the opportunities for incorporating digital cultural heritage in Smart Cities, and create a set of actions to make them happen. The event was attended by 70+ policy-makers and thought leaders in cultural heritage, tourism and the creative industries, as well as professionals in the Smart City and urban development field.

SE1 Media conducted a survey through research and consultations with key players in the tourism sector in Europe in order to establish the needs and an appropriate framework for the Europeana DSI to successfully develop a model for content distribution. Their findings and recommendations are presented in the D3.4 Plan for Europeana’s distribution in the tourism market which was delivered end of March 2016.

**Task 3.3. Develop and promote end-to-end services for the creative re-use of Europeana material****Comments of the reviewers:**

Despite the aforementioned good work in all activities of WP3, the exact offer to the various and diverse Europeana audiences - seen as "customers" now that Europeana is shifting from a portal to a service infrastructure - is not always clear in terms of data available for re-use, ways of possible re-use, time required to access or source the data, especially in case that the desired data is not included in the current datasets of the Europeana Labs, tools available for reuse and their maturity, etc. As a result, there is a risk that potential customers are driven away due to long-lasting procedures or disappointment caused by improper management of expectations from the part of Europeana (see recommendation 4).

Another risk is that, due to the great variety of stakeholders and potential re-users of Europeana content addressed within WP3, it becomes impossible to properly follow the ever evolving needs of each of the targeted groups, thus making it very difficult to create services that meet (re-)user needs and have a high impact. Thus, a stricter prioritization of targeted users, reusers, services and strands of Europeana work is required (see recommendation 2). At the same time, for those target groups of re-users that remain at high priority, frequent direct communication, interaction and feedback from all categories of re-users targeted by Europeana services should be reinforced, in addition to efforts to reach them through their associations or other types of intermediaries that represent them (see recommendation 1).

**Work carried in response to the comments of the reviewers:** the reviewers’ comments relate very much to the work done under subtask 3.1.1 and are properly addressed in that section.

**Subtask 3.3.1 Create a business plan for Europeana Inc.**

The MS15 Europeana Inc. business plan was delivered, detailing the proposed services of incubation support, via subcontracts, co-creation and crowdfunding as well as contacts with investors, Europeana Cloud premium services and consultancy.

**Subtask 3.3.2 Create end-to-end processes for Europeana Inc.**

The new incubation section of Europeana Labs reflects well the ambitions and efforts to create end-to-end processes for Europeana Inc. We designed a simple incubation process which helps our audiences with every stage on their path from an idea to a market-ready product:

- Play on-site: a list of physical labs we are partnered with that people can visit to experiment with digital cultural content and to build and test prototypes on-site.
- Co-creation - those interested in developing a prototype product and testing its feasibility can now make use of the co-creation services offered by our partner Platoniq. Additional information ('Co-creation made agile' leaflet) has been added to the website.
- Crowdfunding – those who are ready to take their prototype to the market can try out alternative financing strategies and create a crowdfunding campaign. In this area, we cooperate with Platoniq's crowdfunding platform Goteo.org.

Users can directly apply for co-creation and/or crowdfunding services by submitting a simple application online.

**Subtask 3.3.3 Develop the Europeana Incubator with Platoniq**

The work under this subtask has been reflected in the Europeana Inc. business plan. The decision, based on work in this area over the last year, is to modify ambitions from a separate incubator to a support service within Europeana Labs that helps others to develop new ideas, businesses and jobs. That is, to play the multiplier role. An additional area of consultancy on the setting up of digital libraries has been added, as a result of demand from other continents such as the US, Brazil and China.

Platoniq's activities related to Task 3.3.3 has been centered on branding and developing the co-creation kit website [wotify.eu](http://wotify.eu) to promote the co-creation methodologies and Europeana Labs incubation capacity. During Q1 Platoniq focused on the design, editing and curation of contents; Q2 was centred on defining the kit architecture, usability and requirements, and Q3 and Q4 were spent on developing the framework and content ingestion. The result is an advanced, robust and easy to use tool to access co-creation techniques, canvases ready to download and print, and examples of uses and tool tips.

Platoniq also created a database of potential leads for co-creation and crowdfunding workshops. These leads have been actively followed up and led to:

- A co-creation workshop in cooperation with Europeana Fashion Association at the two-day [International Conference](#) of Rijksmuseum on 21-22 April 2016 in Amsterdam. The participants were content holders, representatives of private trademarks (like Benetton) and designers. The workshop explored possible scenarios of re-use of digital fashion cultural content. 6 product prototypes were developed in less than 8 hours.
- A crowdfunding consultancy workshop "Applying Crowdfunding and Crowdsourcing to costume, textiles and fashion collections" together with MoMu Fashion Museum in Antwerp on 14 June.

- A co-creation workshop on 29 June 2016 in cooperation with the Cultural Institute for the Barcelona City Council (ICUB) and the Design Museum of Barcelona Hub. The workshop brought together cultural managers, developers, designers and makers.

The workshops held during Q4 provided an opportunity to improve and refine the co-creation and crowdfunding methodologies. Platoniq has adapted them to the need of content holders and taught cultural heritage professionals how to engage users through co-creation and crowdfunding.

Platoniq also redesigned and improved the Goteo crowdfunding platform. In Q1-Q2 they developed a fully responsive project page for more visual impact, improved the payment functionality on the platform to easily add other payment systems across Europe and improved Goteo's API to get better visualization of the project's impact. In Q3 and Q4 Platoniq made major improvements to accommodate a range of different match funding experiments, and to elicit insight into crowdfunding in the arts and heritage sectors specifically, where for every £1 donated/invested by the crowd the institutional funder will top up with an equivalent until the funding target is met.

#### **Subtask 3.3.4 Broker relationships between Europeana partners and industries wishing to associate with culture**

We started with the brokerage services in the education sector. In particular, we collaborated with Apple within their Apple Distinguished Educator (ADE) in Residence Program which places selected ADEs in some of the world's leading museums, archives, science centres and cultural organizations to develop innovative teaching and learning resources. As a result of our joint project with EUROCLIO and the Belgian history teacher and Apple Distinguished Educator Gwen Vergouwen, we released our first [Multi-Touch book](#) and related [iTunes U course](#), World War I: A battle of perspectives, introducing students and learners to the causes of the outbreak of the First World War. They are available in both Dutch and English on iTunes.

As a follow-up to this project, representatives of Apple hosted a dedicated session during the Europeana Network Association AGM in November 2015 in Amsterdam at which cultural institutions could find out more about how to participate in ADE educational projects. Europeana and Apple are currently discussing possible iTunesU projects with Museo Galileo in Florence and Natural History Museum in Leiden.

### **3.4 WP4 Policy, Research, Knowledge and Programme Management**

This work package is responsible for programme and knowledge management, and supports other work packages with research and development and policy-making.

Its objectives are:

- Managing the Europeana Foundation programme of projects and subcontracts.
- Developing new projects to fulfil the innovation needs of the Europeana DSI, under funding streams other than CEF, with the aim of upgrading the quality of the Europeana DSI.
- Coordinating Europeana DSI's knowledge management.
- Coordinating Europeana DSI's advocacy and policy development on IPR and open data.

- Coordinating the development of Europeana DSI's business models, strategy and impact assessment.
- Coordinating Europeana DSI Research and Development activities, including coordinating the EuropeanaTech community.

Participants in this work package:

- Europeana Foundation (EF)
- Stichting Nederlands Instituut voor Beeld en Geluid (NISV)
- The Collections Trust (CT)
- Stichting Digitaal Erfgoed Nederland (DEN)
- Stichting Nederland Kennisland (KL)

### 3.4.1 Summary of the main achievements under WP4

- The project coordination was performed in this WP, aligning project needs and European Commission requirements throughout the consortium.
- The WP coordinated project related work with other projects, such as Europeana Cloud and Europeana Sounds
- Europeana developed in its Network the business plan for 2016, in alignment with our strategy, network needs and the DoA of the Europeana DSI project.
- We co-created, developed and launched Rightsstatements.org in pursuit of machine readable and interoperable standards in rights labelling.
- We published the Europeana Publishing Framework to create more understanding on the benefits of opening up data.
- We updated our impact model and will relate these to our strategy and DSI project(s).
- We coordinated R&D to improve EDM, search and multilingualism using the network of Europeana Tech.

### 3.4.2 Description of work carried out

#### **Task 4.1 Implement strategic programme management**

Europeana DSI was managed using a programme management approach. This allowed us to tie objectives of Europeana DSI and related projects together. Mainly, the projects Europeana Creative, Europeana Space, Europeana Sounds, Europeana Cloud, Europeana Food & Drink are and were closely related to Europeana DSI. Under this task, we communicated with these projects aligning goals and outcomes (by e.g. joining project's executive boards).

In collaboration with work package 9, we used a system for structural reporting, so that we could become aware of deviations from Europeana DSI work plan, both on a content and a financial level, and of new developments concerning project coordination and partners.

#### **Task 4.2 Develop new projects to fulfil the research and development needs of the Europeana DSI**

Europeana has supported several projects under several Horizon 2020 and other programme project calls: supported projects as a partner if the project wanted to innovate its core services and offered its services as a subcontractor for projects acting as data providers or aggregators.

Europeana Foundation considers that supporting innovative projects is one of the main roles Europeana DSI has as a structural infrastructure, allowing innovation, creativity and research.

### **Task 4.3 Coordinate knowledge in relation with projects and the Europeana DSI**

Europeana Pro (<http://pro.europeana.eu>) is Europeana's main platform for storing knowledge that is created in projects, such as deliverables, milestone documents, formal outcomes and/or presentations.

#### **I**

#### **Subtask 4.3.1. Manage the development of ENUMERATE Observatory on the Europeana DSI Platform**

The Collections Trust (CT) and Stichting Digitaal Erfgoed Nederland (DEN) worked on the development of the ENUMERATE Observatory. An ingestion plan for new content (MS20) was delivered in August 2015 with recommendations for the development of the observatory and a mechanism for collecting new and existing statistical data. D4.2 Assessment report on needs for intelligence on digital heritage collections and services was delivered in April. The report contains a comprehensive overview of the different users and their needs, and how these needs can be addressed in the Observatory. It also provides an overview of new topics to be included into Core Survey 4.

Part of the work has been, both to trace new initiatives in digital heritage monitoring and in anticipation of the new ENUMERATE Core Survey 4 under Europeana DSI-2, to update the contacts with national coordinators in the EU member states. The MSEG meeting in June 2016 is another opportunity to extend the network and to present the results of the most recent activities.

The ENUMERATE pages on Europeana Pro (<http://pro.europeana.eu/structure/enumerate>) were restructured and amplified in anticipation of the [ENUMERATE Observatory](#) (MS19). In collaboration with Europeana staff working on the Statistics Dashboard, plans were made to migrate/integrate statistics pages from Europeana Pro to the Europeana Statistics platform/website.

Content pages per ENUMERATE indicator were developed. These pages contain statistics from most recent survey(s) and an analysis of trends over the years. These pages were a major source for D4.3 Analysis report of new statistical content.

### **Task 4.4 Coordinate Europeana DSI's advocacy and policy development on IPR**

#### **Subtask 4.4.1. Embed existing IPR and Open Data policies in the Europeana DSI Network**

Kennisland (KL) continued its work in embedding knowledge and policies within the DSI and the wider Europeana Network. KL has organised two IPR training events in the spring of 2016, one in late March and one in April. Goal of these sessions were to workshop training materials and to get the aggregators more comfortable in training their data partners about IPR and the Europeana Licensing Framework. KL is also continuing hosting a shared discussion space on Basecamp with the members of the Europeana Network.

#### **Subtask 4.4.2. Develop Europeana DSI's IPR policy**

In terms of the work in creating a shared namespace for right statements, Europeana Foundation, the Digital Public Library of America (DPLA) and Creative Commons, developed the technical

[rightsstatements.org](http://rightsstatements.org) infrastructure. The website provides 11 standardized rights statements for online cultural heritage and was launched on 14 April 2016 at the DPLA fest in Washington D.C. As part of this task a migration plan from the existing europeana.eu statements to rightsstatements.org has been formulated and is in the process of being implemented (MS35).

The upcoming migration has been communicated on the Aggregator Forum to the Europeana Network, and other communication tools such as a fact sheet and blogpost have been prepared and distributed. The Europeana Network working group on copyright, setup to facilitate the information flow between the network and Europeana Foundation / Kennisland, was asked to formulate a recommendation on incorporating two additional rights statements to Europeana ([In Copyright - Educational Use permitted](#) and [No Copyright - Other Known Legal restrictions](#)).

KL has continued its advocacy efforts directed at the European Commission, Member State representatives and MEPs. Case studies about the costs of rights clearance from institutions within the Europeana Network has been prepared and distributed.

#### **Subtask 4.4.3. Coordinate the development of Europeana DSI's business plans, strategies and impact framework**

Based on Europeana Strategy 2015-2020, the Europeana Network Association Members' Council was informed about Europeana's plans for 2016. This was done through a survey to the council, requesting comments on the preliminary ideas. This resulted in Business Plan 2016 (MS15). In May 2016, the process for setting up a business plan for 2017 commenced.

The impact framework (which was part of the Europeana Strategy 2015-2020) was put into practice by creating a practical framework (MS26).

#### **Task 4.5 Coordinate Europeana DSI research and development (R&D)**

##### **Comments of the reviewers:**

“Efforts concentrated on completing a research and development plan (MS27) and an Overall Coordination Plan for R&D Dissemination Activities (MS28). Both these milestone documents are rather generic, lacking adequate specifics or timing information for delivering the various goals listed in the document. Although several R&D activities are ongoing in existing projects of the Europeana ecosystem, the documents do not sufficiently identify which of these might be more relevant and useful to Europeana and what would be the conditions for deploying specific R&D results. Moreover, information about future R&D work relevant to Europeana that could be addressed in future activities is minimal.

[...] Both documents (MS 30 and MS 32) have outlined essential 'next-steps' and it is the reviewers' opinion that Europeana should prioritize and ensure there are sufficient development resources to realize the metadata enrichment and search goals.

**Work carried in response to the comments of the reviewers:** MS27 and MS28 are rather generic, indeed, as they were intended to be documents on vision, method and general priorities, rather than precise product development roadmaps as articulated in WP6. R&D coordination needs

flexibility. It is key for being reactive and adapting the Europeana Tech efforts to their context, within and beyond the Europeana Network. For example, one year ago the IIF initiative was still not highly visible. Had we roadmapped our coordination activities to every detail then, we couldn't have had the resources to interact with IIF as effectively as we have done.

Flexibility also enabled us to set up a Data Quality Committee and find enough relevant participants in little time, helping to give a structure to host work that was deemed more and more important to perform as Europeana DSI progressed. Prior to this, the Task force on enrichment and evaluation was also a great opportunity to identify the strengths and weaknesses of automatic enrichment tools in almost all projects in the Europeana network, helping us to identify (or confirm) which of these can be most efficient at the core of Europeana's aggregation platform, and which ones should rather be aimed for application in specific domains.

Regarding MS30 and MS32, we hope that the progress reported on (1) enhancements on various elements of the 'search stack'; (2) planning and beginning of the implementation of an Entity Collection; and (3) evaluating and improving the existing enrichment process shows that we devoted a great amount of our available resources to make concrete progress on these tasks, next to the coordination/facilitation work.

#### **Subtask 4.5.1 R&D Coordination**

Europeana Foundation and NISV have continued to coordinate the EuropeanaTech community following prioritization documents written early on in the project, MS27 and MS28.

After publishing four issues of [EuropeanaTech Insight](#), the first publication solely for the EuropeanaTech community, R&D team solicited feedback, analyzed reading statistics and re-designed Insight as a lighter newsletter, of which we've published the first issues. In addition, 6 more editions of the editorial column for OS developers, "Who's Using What?" were also published.

Two new EuropeanaTech community Task Forces were run. First, the FLOSS Inventory Task Force has made recommendations for improving our [FLOSS inventory](#) and bringing it closer to user needs and similar efforts from other communities. The work from this Task Force was presented at the DPLAfest, Open Repositories 2016 and has been accepted for presentation at Digital Humanities 2016. EuropeanaTech is also collaborating with Hydra Europe and Fedora to catalyze OS community growth in the EU.

Second, the [Task Force on Evaluation and Enrichment](#) has gathered an inventory of automatic enrichment work done in the Network and for the first time evaluated some of the most prominent enrichment tools against a common set of metadata. Results have been presented at the conference "Semantic Web In Libraries" (SWIB) in 2015 and accepted for publication at the conference Theory and Practice of Digital Library in 2016. This work will enable Europeana to continue data enrichment in a more principled way, which connects to new efforts on data quality.

A Working Group was launched to collaboratively develop and agree on new quality standards that can be agreed by data providers and aggregators. This "[Data Quality Committee](#)" gathers 30 EuropeanaTech community members. Key focus points are: mandatory metadata elements for



ingestion of EDM data, data checking and normalization, data quality measures, meaningful metadata values, and coordination with related international groups.

Finally, we have reported on EuropeanaTech results in many venues, as shown in the Europeana DSI dissemination activities. This consolidates Europeana and its Network in (research and) development for libraries, archives and museums, especially in the area of linked open data. The community now gathers a thousand members, over 700 more than before Europeana DSI. Its has more than 2,400 Twitter followers, a progression of over 500.

#### ***Subtask 4.5.2 Develop EDM***

At the beginning of Europeana DSI an [EDM development roadmap](#) (MS29) was set with the following priorities: 1) Representation of annotations; 2) Representation of user-created sets of cultural heritage objects; 3) Finer-grained representation of rights; 4) Describing content to enable re-use; 5) Indicating intermediate providers.

Progress has been made on all these axes, in a collaborative way that further consolidates EDM as a framework for cultural heritage metadata:

**1) and 2)** A first version of an EDM profile for annotation has been designed and implemented for the alpha release of the [Annotations API](#) designed for the EuropeanaSounds project. Creating this profile was the opportunity to interact (and give feedback to) the ongoing work at W3C for the Web Annotation standard data model, of which the profile will serve as ones of the first official deployment cases. This work has been selected for presentation at the ‘Semantic Web in Libraries’ and the iAnnotate conferences.

**3)** Modeling work has been carried out to represent metadata about the new rights statements published as linked data at RightStatements.org, in collaboration with the Digital Public Library of America (DPLA). This work was published as a [technical whitepaper](#), and presented as part of the launch of RightStatements.org at the DPLAfest in Washington, DC.

**4)** EDM was updated to reflect change in the way Europeana providers submit thumbnails to Europeana. A [simple EDM extension](#) was created to allow providers to submit references to content published using the International Image Interoperability Framework (IIIF). This work, done in collaboration with partners from the Europeana Cloud project, has been the opportunity to position Europeana as an important contributor (and founding member) to the IIIF consortium. Europeana IIIF cases have been presented and discussed at the IIIF conference and community days in Ghent, and later [at the DPLAfest](#) in Washington, DC

**5)** Mention of intermediate providers is now enabled in Europeana by means of an EDM extension whereby an appropriate metadata field designed by DPLA has been ‘transferred’ to EDM after discussion with them, leading to reinforcing EDM as the base model in our sector.

Europeana continued its strategic collaborations on open data exchange. Besides DPLA, IIIF, W3C Web Annotations, Europeana also continued and broadened efforts on sharing best practices with BBC's Research and Education Space (RES) project, and investigated new technologies for checking EDM data in a collaboration with the Dublin Core Metadata Initiative, which has began to contribute to the reflection of the Europeana Data Quality Committee mentioned above.

Of course Europeana Network is continuously involved in the life of EDM. An EDM Workshop "[EDM turns five](#)" was organised at the Europeana AGM (November 2015) to reflect with key members of the community on the work done in the past years and got feedback on the directions that should be followed to progress EDM for the greater benefit of the community. The inventory of EDM mappings, refinements and extensions have been updated after a survey sent to the Network.

#### ***Subtask 4.5.3 Improvement on search***

As preparation work, public comments were gathered on a Europeana v3 deliverable on best practices for multilingual access to digital libraries, which has now been re-published as a white paper. The wider input has helped Europeana to write plans for a future work - MS32 Multilingual research and development plan. This notably mentions automatic translation, a line of work Europeana began discussing with another CEF DSI, CEF.AT and other local initiatives (Latvian and Irish amongst others) or the FREME project.

For planning more concrete, short-term developments for enhancing search results in Europeana another milestone MS30 has been written with work package 6. The results of work are reported in MS31.

We deployed a ranking function ([BM25f](#)), which ranks search results based on their relevance as determined by users' reaction to them in previous searches. BM25F had been adapted to Europeana in a previous project, but couldn't be deployed until Europeana DSI. The new ranking will be evaluated against the previous performance. Should performance be low, an alternative has been developed in the form of a new weighting of metadata fields for the 'traditional' ranking function in the solr engine. This one was defined based on experiments with a custom-made ('Rank Fiddle') tool that allows experts to systematically experiment with various field rankings and immediately assess the results.

The application of learning-to-rank algorithms to Europeana started to be investigated. But this has been postponed due to the impossibility to deploy, in the new Europeana Collections portal, an appropriate logging system in time for performing this task. New efforts for logging have recently started, which hopefully will provide the necessary user logs.

Progress has also been made on an update of some other improvement plans ('More like this', detection of metadata language, auto-completion).

Most importantly, the work on Europeana's 'Entity Collection' has started, with a first version of the API being developed and populated with relevant data from third-party sources (Geonames, DBpedia - this work has been presented to the DBpedia community meeting), to which relevant (EDM) mappings have been made. This will be available for advanced search and ranking functions (including autocompletion) in Europeana DSI-2. This work was presented at the DBpedia community meeting and the ISSN conference.

The methodology work on metadata enrichment mentioned for 4.5.1 will also help enhancing search on the medium-term, by building the base for a reliable evaluation of the enrichments

created by Europeana and its providers. In fact, in Europeana DSI the existing enrichment process has undergone a significant update to fix some of the issues that have been observed, preventing a significant amount of queries to return irrelevant issues.

Finally, as an attempt to better coordinate internal and external efforts about enhancing search for Europeana(-like) platforms, time was spent for starting a more robust methodological framework and "search strategy", which was published as a white paper in June 2016. On the longer term, the team hopes this effort will enable to rationalize of the criteria for judging what counts as a relevant result (the base for most assessments of search improvement techniques), as previous efforts have shown difficulties getting a clear and consistent approach on this.

### 3.5 WP5 Network and Sustainability

The work package is responsible for managing the activities of the Europeana Network Association with the following objectives:

- strengthening and growing the Europeana Network Association
- managing the transition towards new Europeana DSI governance
- coordinating network activity and communication
- broadening the sustainability of Europeana DSI

#### 3.5.1 Summary of the main achievements under WP5

- Europeana Network Association set up with all associated requirements: Statutes, By Laws, elected Member Council, elected Management Board;
- Task Forces and Working Groups set up and operating as instruments for the Association;
- Monthly network newsletters and special bulletins that showcased Europeana ecosystem;
- 1st Europeana General Assembly and AGM organised through the Members Council dedicated Working Group;
- Three EU Presidency parallel events organised in Latvia, Luxembourg and the Netherlands;
- Analysis conducted on the value of Europeana to client groups;
- Work carried under the Dutch Presidency on sustainability of Europeana;
- The use of Europeana was broadened as resource for education, research and tourism.

#### 3.5.2 Description of work carried out

##### **Task 5.1 Complete the transition to a new governance of Europeana**

In 2015, we transformed Europeana Network into the Europeana Network Association, a democratic and transparent body that represents the interests of all organisations who work with or contribute to Europeana, and support the [Europeana Commons principles](#).

The [Statutes](#) and [Bylaws](#) of Europeana Association are now in place. Association members were asked to (electronically) dis/approve of the last amendments to both documents in November 2015.

In June 2015, nearly 1,850 people were members of the original Europeana Network. Because those members needed to take action to become part of the new Association, we projected a loss of 40% due to various variables (e.g. members no longer interested, members who had moved or changed jobs, faulty email addresses). In practical terms, we expected to have +/- 1,200 engaged individuals in the Europeana Network Association by December, 2015. The Europeana Network Association currently represents 1,417 members (May 2016).

Association candidates register through Europeana Pro website. Candidates must populate a form ([Sign-up](#)) and agree to the Association Statutes and ByLaws . The 6 Management Board members of the Association review candidate's profile on a monthly base before approval. This entry form also allows Europeana to identify the candidate's interest in its communities: EuropeanaTech, Europeana Lab, IPR, Europeana Research. This is an important step as it allows Europeana to better segment its association membership and better channel the voluntary engagement of members in Task Forces as well as the communication efforts. [See below Task 5.2]

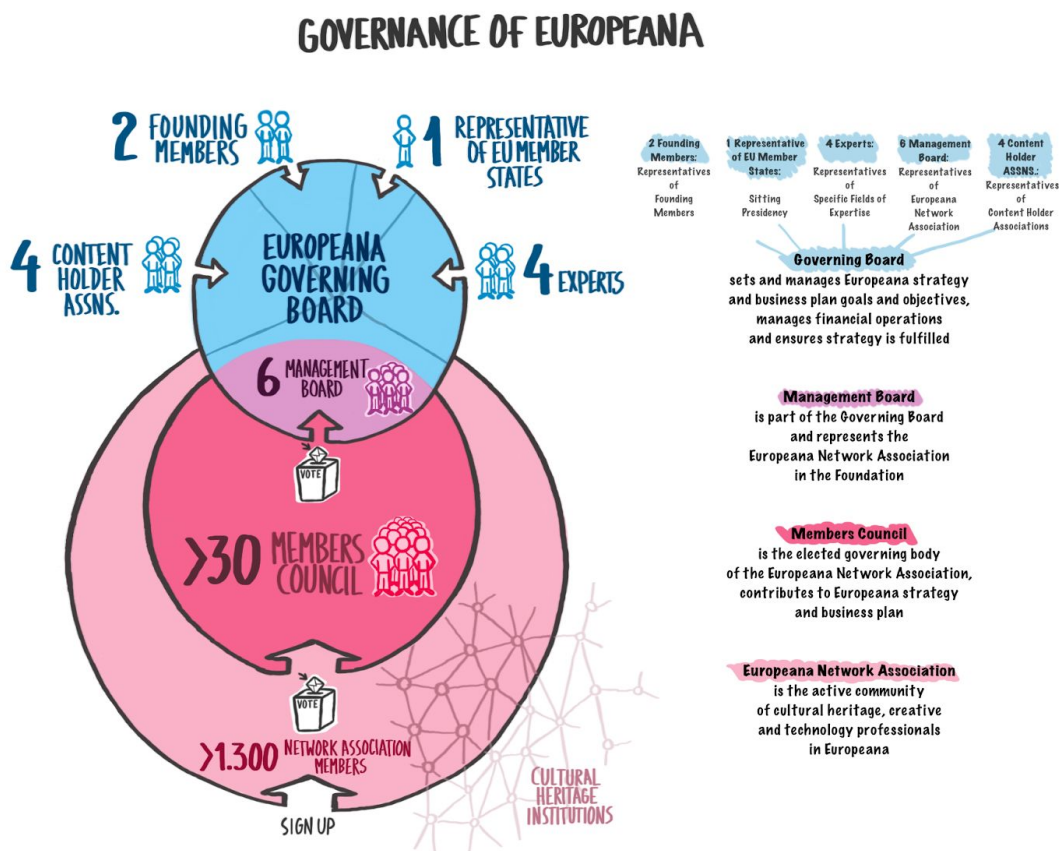


Figure 4: Governance of Europeana

**Comments of the reviewers:**

“For the moment, the Europeana-Network communication is still, largely, one way and active involvement of Network members in the various Europeana strands of works is rather limited. There is still a lot of room for improvement through setting up processes for feedback from the Network to Europeana. Relevant KPIs indicating the level of involvement of Network members (other than taking part in the elections) should also be established and reported.

[...] Attention should be paid in "keeping things as simple as possible", as too much complexity and the introduction of too many Boards, Committees, etc. intermediaries could lead to loss of direct communication and interaction with the actual Europeana end users in each targeted domain (e.g. SMEs and creative professionals in the creative space, culture vultures, etc.) (see recommendation 1).”

**Work carried in response to the comments of the reviewers:** the involvement of the Association through Task Forces and Working Groups, and its nature has been truly remarkable across the entire reporting period. 2015 and created the conditions to make this happen.. We acknowledged the need to improve transparency, to better involve the network in the way Europeana is ran and to better inform the various communities of our activities. We made tremendous efforts to understand the needs and expectations of our members when setting-up the Association. In Q2 2016, we - the Association elected representatives called Members Council and the office - focused on streamlining the various decisional processes, making sure they were as transparent and open as possible. We capitalised on our communication tools to engage our members through [Task Forces and Working Groups](#). We made sure the work committed in those Task Forces and Working Groups were integrated in Europeana Business Plan 2017 development. It may be difficult to project the amount of hours that have been committed by the Network to Europeana on a voluntary base; however, we recorded up 16 Task Forces physical meetings, at least 8 Working Group physical meetings on top of weekly virtual meetings across the whole scope of Europeana activities. The complexity that may have been perceived in 2015 has been adjusted through a clear Members Council ownership; Task Forces set-up, approval and evaluation have been streamlined and Working Groups have been of massive importance in Q1 & Q2 2016 development. See below. The numbers of Network members actively engaged in our Communicators Group, Copyright Working Group and #AllezCulture campaigns (including iam@europeana.eu) has increased exponentially: 2,456 tweets were sent during our campaigns, reaching over 975,000 people. In the lead up to finale of #BigArtRide the involvement of the Europeana Network allowed us to create a thunderclap on twitter on 30 June.

We also focused on giving the elected members of the Association the opportunity to speak to their peers and enforce the Europeana Commons Principles; “... together, we are greater than the sum of our parts.” This has lead to a notable engagement of the Network. The Governance implementation has been regularly highlighted and showcased, clarifying some of the hurdles identified in 2015.

**Task 5.2 Coordinate Europeana Network Association membership, meetings (including the AGM), elections to the Members Council and communication**

Everything the Network Association does sits within and reflects the global Europeana strategy and goals and is described in the [Europeana Network Association Activity Plan 2016](#). An important part of the Association members' role is to communicate and engage all stakeholders towards those goals.

To this end, the Network Association elects the [Members Council](#) every year; there are 30 councillors in 2016. All of them play a critical role across all Europeana activities, from prioritising the issues that Europeana addresses through the Business Plan development to setting the agenda for our annual conference.

The Members Council meet 3 times a year and act as both the voice of Europeana towards the cultural sector as well as champions of Europeana Association for the network. The Members Council represents the many communities involved in Europeana: Tech, IPR, Data providers and Aggregators, Digital Cultural Heritage professionals in general, Creative re-users, Research, etc.

The Members Council elects its executive body called the Management Board that also sits on Europeana Governing Board.

A series of meetings were organised to support the Association's development:

- Management Board meetings (monthly recurrence) - 8 participants: 6 Management Board + 2 Europeana Office representatives. 6 virtual and 2 physical meetings were organised during the reporting period;
- Members Council physical meetings (3 times a year) - All Councillors and 4 Europeana Office representatives. [1 physical meeting was organised during the reporting period in Copenhagen](#);
- General Assembly at which Association members are introduced to the Statutes, ByLaws and new elections candidates. The General Assembly will take place during [Annual General Meeting 2016 in Latvia on November 7 & 8, 2016](#).

In Q1 & Q2 2016:

- The Association members were invited to [come forward](#) and submit Task Forces that would address current Business Plan priorities (1. Create value for partners 2. Improve data quality 3. Open the data 4. Strengthening the ecosystem). 8 proposals were submitted and reviewed by the Members Council in Copenhagen in February. The Members Council selected one proposal; three proposals need adjusting and will be submitted again, 4 were rejected either because the work is covered elsewhere or because the Councillors considered they were not relevant to the Business Plan or Strategy of Europeana. Current and past Task Forces status are kept up-to-date on [Europeana Pro](#) and through the following [administrative document](#).
- 6 Working Groups were set up with the Members Council tackling major long term Europeana challenges:
  - ◆ [#AllezCulture Working Group](#)
  - ◆ [AGM Working Group](#)
  - ◆ [Copyright Policy Working Group](#)
  - ◆ [Data Quality Working Group \(fuller documentation\)](#)

- ◆ [Europeana Pro Working Group](#)
- ◆ [Voting/Elections Working Groups](#)
- ◆ Working Groups status and development are kept up-to-date on [Europeana Pro](#) and through the following [administrative document](#).

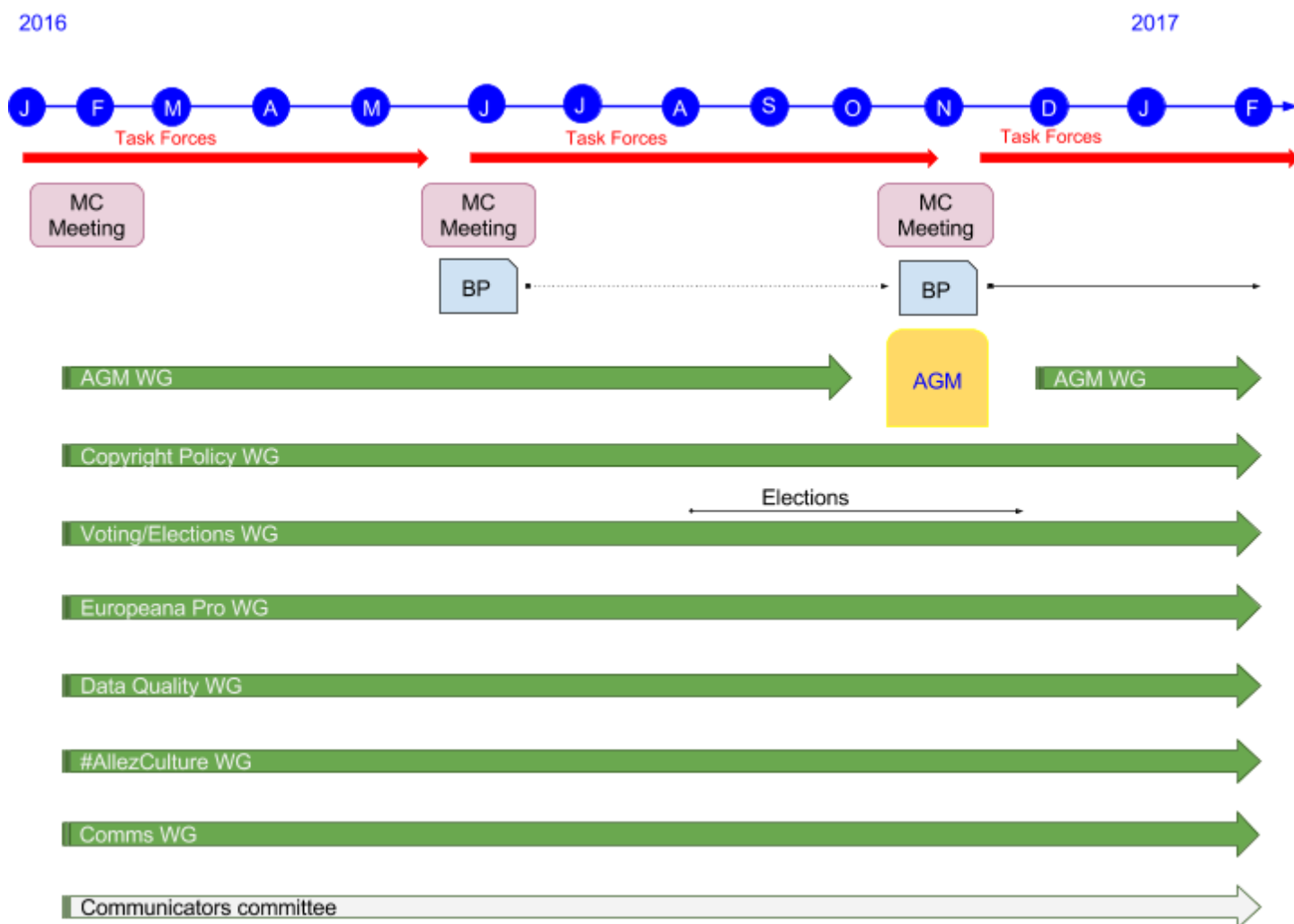
→ Communication through [network monthly newsletters](#) and various specific campaigns. Each newsletter and campaign was endorsed by the dedicated Working Group Chair and followed a specific Communications Plan. The communication feeds were relayed through Europeana LinkedIn Group and Twitter.

**Comments of the reviewers:**

“D5.1 was completed and delivered. The document provides a useful but a bit generic overview of the communications plan for the Network but does not adequately address the "network activity" part. It does not adequately address the concerns under T5.1 above, nor does it fully justify why such a large network of organisations is necessary. Actions are mainly limited to awareness raising activities addressed to members.”

**Work carried in response to the comments of the reviewers:** in Q2 2016, we - the Association elected representatives called Members Council and the office - focused on streamlining the various decisional processes, making sure they were as transparent and open as possible. We capitalised on our communication tools to engage our members through [Task Forces and Working Groups](#). We made sure the work committed in those Task Forces and Working Groups were integrated in Europeana Business Plan 2017 development. This creates widespread buy in and support to the work of Europeana and the large network as a multiplier for communication and adoption. Active participation in taskforces and campaigns by members of the network are in force as can be seen from the taskforce results and campaigns such as [iam@europeana.eu](mailto:iam@europeana.eu) or the onward communication of activities to other networks. This was very prevalent in the Dutch Presidency Conference Ready to Reach out where many and varied networks linked to cultural heritage exploitation were exploiting the data and members of the association for their own work.

In addition to better address this dual requirement (engagement, communications), we refined the [Europeana Network Association Activity Plan](#) and set the 2016 milestones as follows:



**Task 5.3 Continue development on Europeana Professional**

[Europeana Pro](#) is the platform for all information and knowledge exchange for Europeana’s network of cultural heritage professionals, technologists and projects. It is the official source for technical information, legal information, metadata standards and case studies, as well as project outcomes. Europeana Pro plays a key role in dissemination objectives. However, it remains a source of information rather than an interactive tool. An editorial team makes sure the tone of voice and content give visitors the best experience and appropriate messages. Europeana Pro is also the dedicated association information platform.

Europeana Pro Blogs - available from [Europeana Pro](#) - feature specific highlights of Europeana Network Association activities, Task Force recommendations, Working Group deliverables and other Members Council initiatives. They cover the whole range of activities across the Europeana organisations. Blogs are relayed through the support of the Network Newsletter and Europeana LinkedIn Group, as well as Twitter. Europeana Pro blogs are used strategically to reflect the core messages and priorities and provide opportunity for collaboration and input with Network members.

During Q1 & Q2 2016, the use of Europeana Pro was more specifically geared towards the Association requirements during the reporting period: [#AllezCulture](#) campaign, showcasing [Europeana Dashboard](#), the [AGM 2016](#), highlighting [Councillors](#), etc. Europeana also improved its



backend Association registration form to better profile members, therefore adapt its communication and target Task Forces calls.

**Task 5.4 Deepening and broadening our relationships with policy-makers in culture, education, tourism, research and the creative industries**

Following the organisation of the Luxembourg event with PlurioNet dedicated to SmartCities (14-15 October 2015), Europeana Foundation focused on two events during the Netherlands' Presidency (Jan-June 2016).

In December 2015, the Association's Members Council were invited by the the Dutch Ministry of Culture, Education and Science (OCW) to submit themes and speakers suggestions for their event during The Netherlands' Presidency of the EU. This event took place in Amsterdam maritime terrain on June 29-30, 2016. Europeana was invited to participate in the Programme Committee of the event and supported the programme development. Various Europeana highlights have been integrated to the [programme \(Europeana 280, Europeana Network Association, Europeana for Education, Europeana for Research\)](#). The event was promoted through [Europeana Pro](#), LinkedIn and Twitter and the Members Council relay.

A research event with policy makers was also organised on 25-26 April 2016 at the National Library of the Netherlands [see section 8.4 for more details].

**Comments of the reviewers:**

“Despite all this good activity, the potential of impact of Europeana in all the domains addressed in this task is questionable and should be rethought in the light of a prioritised list of objectives (see recommendation 2).”

**Work carried in response to the comments of the reviewers:** the strategy of Europeana was signed off by the European Commission and the Europeana Foundation Board. Each year a business plan was created to fulfill the strategy. Each business plan has actions and tasks reflected in the projects. Each year an area of focus is chosen but aim as well to continue to keep the relationships made in other areas in previous years. 2016 focusses again on Education - continuing the work of early 2015 and turning policy work into practical results with partners able to reach the markets. 2016 also revisited the Research Recommendations of 2014 to see what had been achieved and what needed to change. This served to deepen relationships with DG Research and help us in working on partnerships with Research Networks at the same time a Research Advisory Board is carrying out work independently of Europeana, set up under Europeana Cloud. It is of paramount importance that work is carried out policy as well as practical partnership levels to ensure the take up of the Europeana Platform in the domains where it will be of most use.

Europeana's efforts to deepen its relationships with policy-makers in culture, education, tourism, research and the creative industries is therefore critical. It allows to establish ties that work for the long-term benefit of Europeana, and Europeana Foundation is careful not to focus on all areas at once.

The above involvement of the Members Council in OCW's (Netherlands Ministry of Education, Culture and Science) event is a concrete example of those benefits that allows to showcase Europeana's assets in a major EU event. In 2016, Europeana also opted for the revision of research recommendations designed in 2014 (See 8.4 for more details). This was very beneficial as it provided the possibility to better profile Europeana Research in the Europeana research landscape and get the buy-in from major research networks (DARIAH). The Advisory Board of Europeana Research shows the impact of our work, with the Chairs and Professors of Digital Humanities Departments in major universities across the world prepared to actively give up their time to make sure that the service works for users and to promote the work. We work with E-Hris, DARIAH and Clarin and are taking the lead in scheduling a Roundtable to sort out which organisation takes the lead in which activity to improve total reach. Our new Research recommendations are the result of the work of policy makers, ministries of culture and research and the Researchers themselves.

### **Task 5.5 Broaden Europeana's sustainability**

Three strands of work contributing to this task:

1. analysis of the value of Europeana to client groups;
2. work under the Dutch Presidency on sustainability of Europeana;
3. broadening the use of Europeana as resource for education, research and tourism.

The conclusion of the Member States and the Commission at the end of Europeana DSI is that Europeana will be supported by EU funding, in the form of procurement under CEF for 4-5 years, with an independent evaluation in 2017 looking towards the value of continuing support under the next multi annual framework. Member States will continue to fund but in a non structural way and efforts will be made after 2016 to develop more independent means of finance.

#### **1. Analysis of the value of Europeana to client groups**

Value proposition work was undertaken with each of the client groups of Europeana to get a solid understanding of the value of Europeana to each potential client group, culminating in Towards a sustainable future for Europeana - MSEG October 2015. An initial version of this was discussed at the MSEG meeting in October 2015, and formed the basis of a summary document for Commissioner Oettinger.

In essence the conclusion was that there is value for the 5 client groups:

- For the End User: Free Access to trustworthy digital cultural heritage;
- For the European Commission: interoperability facilitating the Digital Single Market & fuelling the creative industries;
- For Member States: increased international visibility & being part of a community;
- For Creative Industries: access to high-quality, rights-cleared digital cultural heritage material;
- For Expert Hubs: innovation & shared costs for services (infrastructure, core and add-on).

But the paper concludes that having investigated alternative sources of income, including the creative industries, at this time, it does not seem feasible that Europeana can become self-sustaining if it is to retain its current philosophy of making cultural heritage freely accessible to

all and in particular for research and education and to fuel the creative industries. Therefore, Europeana will continue to rely on EC funding for the majority of its funding with other sources contributing smaller but still significant amounts. In return for such core funding, the EC is giving to the European Union three primary returns on investment: a) Interoperability of data that comes from different cultural heritage sectors across all Member States thus facilitating the digital single market; b) fuel for the creative industries so underpinning jobs and growth in this growing sector; c) community cohesion and understanding - a truly interconnected Europe through its culture. Member States are also being asked to consider more structural contribution to Europeana in return for the services provided by Europeana and international visibility for their cultural heritage and more influence alongside the EC on the forward strategy of Europeana.

One avenue we have explored over the last three years, as part of the Europeana Creative and under Europeana V3-projects, and is the subject of a milestone under Europeana DSI - the potential for businesses using Europeana in the creative industries to pay for the services they receive. However, the businesses that Europeana appeals to most are small low-budget ones (long-tail), who do not have the budget to pay for the digital resources we can give them access to. These businesses remain an important client group for Europeana though, as by using our digital resources, we are supporting their businesses to flourish and grow so that they may contribute to the European economy, jobs and growth.

## **2. Work under The Netherlands Presidency on sustainability of Europeana**

The Council under The Netherlands Presidency are working towards finding a mid and long term solution to the sustainability of Europeana. A draft version was created in December 2015 - Draft Council conclusions on access, visibility and use of European digital cultural heritage and in particular on the role of Europeana. The document was voted on 31 May 2016, based on it being decided that Europeana will become subject to Procurement rather to Grant beginning with mid-2017. Until this date, Europeana will be funded through a new Grant (Europeana DSI-2), which was awarded in June 2016.

Europeana contributed to this work with financial information and a breakdown of the understanding of what are core platform activities and the need for the supporting ecosystem in relation to aggregation and distribution. The Europeana Network Association helped in the initial drafting of the Council Conclusions and spoke with their Ministries to improve understanding and help in the reaching of consensus for the final adopted version.

## **3. Broadening the use of Europeana as resource for education, research and tourism**

Sustainability comes also from use of the service. If it is seen to be of value and use by other communities, it will become part of their funding programmes or agreed as a central cost against market failure. To this end WP3 worked on the increase of take up in education, research and the creative industries and WP2 on the development of communities and engagement into the Collections.

## **3.6 WP6 Product Development**

This work package is responsible for managing product development and ownership which includes:

- product development (chief ownership) of all Europeana DSI products
- product ownership of core services
- product ownership of all end-user products
- product ownership of re-use products
- product ownership of all data partner and network related products

### 3.6.1 Summary of the main achievements under WP6

- A new portal Europeana Collections and a new virtual exhibitions CMS and style were developed;
- A new and improved Statistics Dashboard was developed;
- The technical design of the new ingestion services was finalised and their development began;
- New API endpoints developed and existing ones improved;
- The robustness and performance of Europeana’s storage and index was improved;
- Europeana Labs website was improved;
- Europeana Pro website improved and integrated with Europeana’s CRM and DMS;
- The development processes was improved, adopting more aspects of Scrum;
- The software development processes were improved, moving towards higher degrees of test driven development, continuous integration and continuous delivery.

### 3.6.2 Description of work carried out

#### **Task 6.1 Manage Product Development**

##### **Subtask 6.1.1 Chief product ownership and technical projects coordination**

Product owners, chief scrum master and system architect have regularly met to surface and prioritise cross-team concerns. This group covered also external projects where Europeana is deeply involved (e.g. Europeana Sounds and Cloud). Technical liaisons were put in place for projects where Europeana is less involved (e.g. Europeana Space).

##### **Subtask 6.1.2 Management of product development subcontracts**

All subcontracts have been concluded with the exception of the 2,500 euro sub-contract for investigating digital archiving solution needs and opportunities. The reason this contract was not initiated was that its goal could be accomplished without it. Under the subcontracts in this WP, we further development our service (e.g. Europeana Pro) than was initially planned.

##### **Subtask 6.1.3 Manage knowledge management and process support tools**

Slack was adopted as the main new knowledge sharing tool and also integrated with collaborative environments like Invision and GitHub. Environments like Assembla (Scrum process management) and Basecamp (project management) have continued to be used (but are not new to Europeana DSI).

#### **Task 6.2 Manage product development of core platform services**

##### **Subtask 6.2.1 Develop storage and search services for metadata, vocabularies and content**

An internal alpha version is in place for the management of Entities (Concepts and Agents), this is being tested with users. The search services have been migrated from Solr to SolrCloud to allow for a more distributed and durable approach to search and indexing. An image storing service has been developed as part of Europeana Cloud for display of high-resolution images, this service stores and renders all images from Europeana Newspapers.

#### **Subtask 6.2.2 Develop APIs for search, retrieval and user annotations**

The Europeana Search API has been extended with [media queries](#)<sup>11</sup>, the ability for API users to sort data and to process multilingual data in an [easier way](#) via search. An internal alpha version has been released of the Entity API to allow API users to retrieve and search for named entities to improve search, this is currently being tested with users. For annotations, a first public Alpha version of the [Annotations API](#) has been released and used by developers.

#### **Subtask 6.2.3 Develop an authentication and authorization service**

As part of the work to make all Europeana functionality into an API (platform), work has been done to further migrate and adapt all authentication and authorisation services from the old Europeana portal to the Europeana API, as part of the MyEuropeana API. The components for user roles and the separation and management of users and API clients have been completed and are being integrated with other APIs such as the Annotations API.

#### **Subtask 6.2.4 Develop data exchange solutions for other data platforms and digital libraries**

A [shim](#) has been developed that allows all Blacklight based libraries to search Europeana.

### **Task 6.3 Manage product development of all re-use related products**

#### **Subtask 6.3.1 Develop Europeana Labs**

As part of Europeana Cloud the site has been migrated from its separate CMS to the same CMS, Bolt.cm, used to power Europeana Pro and Europeana Research. As part of this migration the API-documentation was reviewed and improved. The CMS upgrade has resulted in an improved editor's user experience.

As part of Europeana Creative layout and design changes have been implemented based on feedback from users and stakeholders.

#### **Subtask 6.3.2 Develop Europeana Research**

Created as part of the Europeana Cloud project only minor improvements have been made to the site as part of Europeana DSI. These have been focused on making it easier for users to find datasets in Europeana that are suitable for digital humanities research.

#### **Subtask 6.3.3 Migrate Europeana Newspapers**

All newspaper image scans have been migrated to a IIIF compliant image service in Europeana Cloud. The Europeana Newspaper viewer has been upgraded to read images from that service and has been made embeddable in Europeana Collections.

### **Task 6.4 Manage product development of data partner and network-oriented products**

#### **Subtask 6.4.1 Develop ingestion APIs and tools**

---

<sup>11</sup> Development initiated in Europeana Creative but finished after that project ended.

The Content Re-use toolset was further improved to better scale the processes of technical metadata extraction and thumbnail generation (caching), all of Europeana metadata was processed by this toolset and new data is regularly added.

Requirements were finalised for the new set of ingestion tools, a design plan was produced and EF and PSNC held 2 technical workshops to define and plan the needed adaptations to the current Europeana Cloud infrastructure for Metis. Prototype versions for Metis data services were implemented (services for EDM validation, dereferencing, and identifier generation).

#### **Subtask 6.4.2 Develop data enrichment services and APIs**

Data.europeana.eu agents, concepts and places URIs are now included in the entity collection and we also did a full re-enrichment of the data selected for inclusion in the thematic Music and Art History collections adding further artists, music genres and music related resource types to its subset of data. This re-enrichment was accomplished with a new and improved solution for re-enrichment and re-indexing.

#### **Subtask 6.4.3 Further develop the Statistics Dashboard**

A [beta version](#) (replacing the alpha version developed in Europeana v3) was developed and launched in April 2016. This was followed by user research to identify the requirements for the next phase of development under Europeana DSI-2. These in-depth interviews will be combined with the previous [user research done under Europeana v3](#). Post-beta launch improvements have been made to improve code quality and application maintainability. Feature additions and addition of more metrics is planned for Europeana DSI-2.

#### **Subtask 6.4.4 Maintain Europeana Professional**

The internal editorial team (led by WP5) is now responsible for a coherent content strategy. They ensure a full rounded presentation of all our services on the website. An external WG of members council representatives validates that the structure of information on the website is coherent (information architecture).

Developments completed:

- An in-page navigation was added to the events template making it easier to find relevant event information. <http://pro.europeana.eu/event/europeana-annual-general-meeting-2015>
- A CRM system setup and integrated which presents a searchable list of our network members on the website. <http://pro.europeana.eu/our-network/network-association-members>
- Developed a user login services including a social media login possibility for the Heritage in Motion website which will be integrated into Europeana Pro begin Europeana DSI-2. <http://newheritageinmotion.eu/authentication/login>
- Europeana's documented knowledge is now stored in our organizational Dropbox in a structured manner which is linked to all our community sites Europeana Pro, Research, and Labs. Allowing editors to easily share documents on the websites.
- A one-click newsletter sign-up service added to all our websites.

### **Task 6.5 Manage product development of end-user applications**

**Comments of the reviewers:**

“D6.2 - requirements for Europeana.eu has been completed. This provides a clear list of requirements for the Europeana portal. However, it is not always clear how many (what percentage) of these requirements, especially those expressed in the "user epics" have already been implemented? It is also unclear if all of them will be delivered at the end of DSU. During the review meeting, it was clarified that the implementation plan of these requirements expands after the end of Europeana DSI and it was agreed to publish an implementation roadmap including time scheduling information related to the product development (see recommendation 5).

[...] One of the emerging issues that the Consortium mentioned as an issue for the users is discoverability and the difficulty to retrieve artefacts. This can be a highly critical factor that can heavily undermine Europeana success and ability to reach its goals, both with primary and secondary users. However, during the review, it emerged that users' engagement was limited and testing reduced (testing every 2 months), not implementing a fully Agile User-centred approach. The light user engagement can still be amended with an appropriate user testing session (See Recommendation 1).”

**Work carried in response to the comments of the reviewers:** the majority (70%) of user epics as defined in D6.1 have been completed as part of the beta releases of Europeana Collections and Virtual Exhibitions. Many user epics are still being worked on and either partly implemented (e.g. as internal alphas) or close to being so. Some user epics have been prioritised lower than initially set (for instance as a result of user research findings).

An internal quarterly roadmap is updated and distributed after every Scrum Sprint (3 weeks), while a public development plan and roadmap for 2016 has been [published on Europeana Pro](#).

During development of Europeana Collections users were engaged to review various design choices using A/B tests, tracked their comprehension of our navigation structure using heat maps and conducted a series of on-site usability tests. We also regularly released user surveys asking people for feedback on their experience with one of our websites in general or on a particular element such as the information architecture.

After the release of Europeana Collections two agencies were contracted for an intensive user research including a heuristic review and online user tests specifically focused on the new Music and Art History Collections. More information about this research below.

For the developer-oriented services we have released the [Annotations](#) and Newspaper APIs for limited Alpha testing. Both APIs are tested by invited partners and interested developers, whose feedback is contributing to the further enhancements of both APIs in preparation for a public Beta release. The Europeana [OAI-PMH Service](#) has also been in public Beta and has gained a lot of interest, feedback which is used to improve further and expand the service.

To formulate a suitable design for the Metis user interface, we engaged the primary users of the current ingestions tools to gain insight into the issues and restrictions they are facing now and their

workflow. This was done through a series of face to face interviews and recording of workflows which resulted in wireframes and functional requirements.

#### **Subtask 6.5.1. User experience (UX) research, design and evaluation**

Leading up to the launch of Europeana Collections, the thematic collections and the improvement of Virtual Exhibitions, numerous actions have been undertaken to improve the usability, accessibility and overall pleasure between the user and our services.

After the release, intense user research has been conducted over a period of several months including a heuristic review, an online user survey and user testing with a test group. Users generally appreciate the Europeana initiative and the overall Collections website, which was evaluated as a great improvement. Several usability issues have been identified which have been or are being addressed and its improvements are being evaluated. Several product priorities have been re-prioritised in response to the research.

For the new Exhibitions platform, a smaller scale user test has been completed after the launch to help gain insights in and improve the user experience.

#### **Subtask 6.5.2 Maintain and develop the portal, exhibitions and end-user blog**

The old Europeana portal was maintained until the launch of Europeana Collections and a little bit beyond. While a new version of the exhibitions CMS has been developed, the previous version is still maintained and will be phased out during Europeana DSI-2. The end-user blog has been maintained and will be until it is integrated in Europeana Collections.

#### **Subtask 6.5.3 Develop the portal and channels engine**

A new website for Europeana Collections, its thematic collections (Channels) and Virtual Exhibitions have been developed and launched as an integrated platform built on Europeana APIs. The end user blog will be consolidated into this as part of Europeana DSI-2.

#### **Subtask 6.5.4 Maintain Europeana 1914-1918**

The service has been maintained with high uptime and good performance. To assess the need for a digital archiving solution an inventory of the digital files created as part of 1914-1918 has been created. This site will be fully migrated to the Europeana platform this year.

#### **Subtask 6.5.5 Migrate Europeana 1989 and 89 Voices**

Due to the no/low cost in maintaining these sites they have been retained and their data incorporated into Europeana. Deprecation may happen in Europeana DSI-2 but is not highly prioritised.

### **3.7 WP7 Technology**

The overall objectives of this work package are to:

- Operate existing Europeana systems
- Migrate to a new cloud-based hosting infrastructure
- Plan the Europeana system architecture



- Migrate TEL and Europeana Newspapers to be fully part of Europeana DSI (cloud storage and platform)
- Introduce cloud technologies on various levels to promote efficiency of Europeana operations
- Develop innovative software for Europeana's needs

Participants in this work package:

- Europeana Foundation (EF)
- Poznan Supercomputing and Networking Centre (PSNC)

### 3.7.1 Summary of the main achievements under WP7

- Europeana systems were stable during the report period, with the exception of two major outages, which were investigated and followed by corrective actions;
- Completion of Europeana's transition to a cloud-based platform-as-a-service (PaaS) approach to hosting applications;
- In partnership with PSNC, further planning of transition of Europeana's data and aggregation services to the infrastructure, developed by the Europeana Cloud project, hosted at the PSNC datacenter and jointly developed by the two parties;
- Development and extension of the core data storage and processing service, developed by Europeana Cloud, to accommodate more Europeana and TEL use-cases, such as digitised newspaper migration;
- Innovation: experimenting with lightweight and user-friendly solutions to acquire data directly from partners, thus radically shortening the feedback loop.

### 3.7.2 Description of work carried out

#### **Task 7.1 Operation of existing systems**

All Europeana systems and environments (production, testing, acceptance) were functioning in a steady and reliable way, except for two major outages in August 2015 and April 2016 respectively, lasting three days each. The outages were caused by major infrastructure failures of one of our hosting providers, the party subcontracted through a European Tender in 2014. In both cases extensive root cause investigations were done and actions taken. Following the last outage (April), Europeana is planning to open the contract for a new round of tendering. These two outages precluded Europeana from reaching the availability KPI of 99%, set for the project.

To make the systems more reliable Europeana took a wide a range of measures to strengthen the infrastructure, among them:

- Added redundancy capacity on the level of data services (replicated and clustered services);
- Contracted professional support parties to provide premium support around services;
- Introduced the [public status page](#) for immediate and transparent communication of Europeana's availability status, both externally and internally;
- Automated major change management processes to avoid human errors.

As part of the stabilisation and standardisation effort, Europeana also continued and completed the transition of its main applications layer to the platform-as-a-service hosting paradigm. This process started with choosing [CloudFoundry](#) as the application platform underlying Europeana's applications. Today this process is complete, which makes the entire stack much more standard and portable across cloud providers.

### **Task 7.2 Architectural Planning of the Platform (with PSNC)**

During the course of the project the two work package partners, Europeana and PSNC, have held two full-team developer meetups to plan the transition of their respective software stacks to a unified platform, based on the Europeana Cloud infrastructure. The platform is hosted at the PSNC data centre. Over time Europeana's systems are planned to be gradually moved to this platform.

Europeana also identified a set of adjustments to the Europeana Cloud infrastructure that need to be implemented to fully serve the two pilot aggregators (Europeana and PSNC on behalf of the Federated Digital Libraries of Poland). The work on implementing the recommendations has started under WP6 (task 6.4.1).

### **Task 7.3 Metadata and content synchronisation (with PSNC)**

The core data storage infrastructure developed by Europeana Cloud was extended in this project with more data uploading mechanisms: data harvesting from FTP and OAI-PMH repositories. These mechanisms were tested with real-life use cases using content from data partners, including migrating digitised newspapers content of the Europeana Newspapers Project (task 6.3.3.).

Europeana also started prototyping more innovative lightweight and user-friendly solutions to acquire data from partners. These solutions would allow partners to directly interact with the Europeana data platform and empower them to improve the quality of their data through immediate feedback. In this work Europeana partnered with two leading museum CMS providers in Europe: Qulto.eu (subcontracted for the experiment) and Semantika to prototype integration of direct publishing on Europeana to their systems and assess user feedback.

### **Task 7.4 Reactive Architecture (with PSNC)**

The infrastructure for data processing services was developed on top of Europeana Cloud Storage Service and tested on a number of use cases. The infrastructure uses [Apache Storm](#) as its central component for executing tasks. Europeana and PSNC experimented with the following service use cases: transformation of metadata records, conversion of images, and exposing images in a way compliant with [IIIF](#).

In task 6.4.1 Europeana has begun the development of further services to be deployed on top of the data processing infrastructure.

## **3.8 WP8 Communication**

This objectives of this work package are:

- strategic positioning of the Europeana DSI

- coordinating events in relation to the rotating EU presidencies
- coordinating the Europeana DSI communications towards cultural heritage professionals
- developing and maintaining the Europeana Communicators Group

Participants in this work package:

- Europeana Foundation (EF)
- European Museum Academy (EMA)
- Koninklijke Bibliotheek, Nationale Bibliotheek van Nederland (KBNL)

### 3.8.1 Summary of the main achievements under WP8

- Positive Council conclusions on Europeana's role in the digital access, visibility & use of European cultural heritage;
- Reflection of Europeana's representations on behalf of cultural heritage sector in Commission's communication on copyright;
- 29 Ministries for Culture engaged in supporting Europeana 280 campaign;
- 325 artworks from 153 cultural institutions, 155 with open licences, from the Europeana 280 campaign
- Public engagement with #BigArtRide in 8 European countries over 10 weeks;
- Publication of [Europeana for Education and Learning](#) & [Transforming the World with Culture: Next steps on increasing the use of digital cultural heritage in research, education, tourism and the creative industries](#);
- New Heritage in Motion awards website & branding developed & adopted.

### 3.8.2 Description of work carried out

#### Task 8.1 Manage the strategic positioning of Europeana

##### **Comments of the reviewers:**

“Within this task, a strategic communications plan (D8.1) was developed with the aim to support and maximize the impact of Europeana's work under the DSI. This is a good plan including clear indicators of success; general communication goals and approaches are identified. *However, more targeted actions and prioritisation of impactful areas will be necessary.*”

##### **Work carried out in response to the comments of the reviewers:**

Europeana speaks to distinct audiences and communities from the cultural enthusiast, to the cultural professional and to the creative re-user. Important factors that need to be kept in mind in this context are the potential of opportunity, experience and reach offered by these communities in effectively communicating Europeana's resources and messages to relevant audiences, and the limited resources at Europeana's disposal compared to the scale of the communication task. These factors have underpinned Europeana's strategic approach to widen reach by communicating where possible through communities, as seen for example with the Communicator's group, the Association Network Members' Council and the Aggregator's Forum.

Europeana recognises however that the above approach needs to sit within the context of targeted and focused communication to audiences and that there are areas where this targeted communication can, and should, be more effectively employed directly. As a result Europeana has increasingly undertaken more direct communications with its audiences. The work set out in D8.1 supports activity across other work packages and examples of more direct communications necessarily refer to that activity:

Following the new Thematic Collections, the Collections and Product teams are now reaching out directly to users to better understand and address their needs, holding interviews with hundreds of end users to validate and improve our approach on that side (WP2 & 6);

On social media there has been a step-change in approach to move from a 'push' approach to more interaction and dialogue with users, e.g. on Twitter and Facebook. This is resource intensive but the response has been positive not only with wider user groups but also more focused communities such as the 1914-1918 community (WP2);

As an integral part of Operation Direct - a work project promoting innovative aggregation - the Infrastructure team has expanded and deepened direct dialogue with the field(institutions) to gain unmediated insight into their needs and realities (WP); and

Within existing direct communication channels, Europeana is working to ensure that these are as targeted as possible. For example Europeana is now using a CRM tool, Zoho, which allows direct communications to the Network Association to be matched against the declared professional interests of members (WP5).

#### Task 8.1 Manage the strategic positioning of Europeana

A strategic communications plan (D8.1) was developed to support and maximize the impact of Europeana's work under the Europeana DSI. It was developed in the context of a longer-term perspective in its strategic approach and aims to reinforce the awareness, understanding and relationships necessary to achieve the goals set out in Europeana Strategy 2015-2020.

Its overarching objective was to effectively communicate how Europeana is working towards its goals and what it achieves, promoting the added value of the Europeana Digital Service Infrastructure to all our stakeholders.

To reinforce the messaging underpinning these tasks, updated and more user-friendly [branding guidelines and supporting materials](#) have been developed and shared within the Europeana community and its partners during this reporting period.

The Europeana Collections website launched on 14 December 2015. Communication and dissemination activities focused on positioning Europeana as the trustworthy and relevant source of digital cultural heritage from diverse sources across Europe, brought together for learning, research, innovation or pleasure. Activities were scheduled for January 2016 to ensure the website was stable and worked correctly.

A range of channels and tools were used to reach Europeana's different audiences: end-user and Pro blogs, a press release, direct email to policy makers and key media, Europeana end user and

Network Newsletter, Twitter and Facebook. The launch messages were positively received. Highlights of the campaign include the reach and engagement on Twitter (over 900 tweets/retweets, over 3 MLN impressions) and social shares - over 4,500 generated by one review in [Open Culture](#) alone.

Under the [#AllezCulture](#) banner social media campaigns have been run to support the positioning of Europeana by encouraging partners to underline the value the sector creates, while offering partners a chance to reflect on and promote their achievements in the wider Europeana community.

In December 2015 partners were asked to share their digital cultural heritage highlights of the year using [#AllezCulture](#). This festive hook encouraged the sharing of positive stories and provided the opportunity to underline the value the sector creates, while offering partners a chance to reflect on and promote their achievements in the wider Europeana community. Example tweets:



[Tweed by Annalise Duca, 4 Dec 2015](#)



[Tweed by Europeana Sounds, 1 Dec 2015](#)



[Tweed by Spild af Tid, 7 Dec 2015](#)

**Promote the uniqueness of Europeana content**

Europeana Members Council was asked to lead a campaign that highlighted the unique range of content that can be found on Europeana by choosing images relating to figures, real or fictional, that they found interesting and sharing them with a teaser description, link, the tag I am@Europeana using #AllezCulture. The campaign gathered momentum over a period of two months during which time 600 individual contributors posted more than 2250 tweets on individual items on Europeana. An average of 35 tweets per day reached 950,000 twitter users for a total of 10 million impressions. Example tweets:



[Tweeted by J.A. Alvarez Rixo 8 April 2016](#)



[Tweeted by SMK 4 May 2016](#)

Throughout the reporting period Europeana has looked to learn from communication approaches, feeding learning and experiences into subsequent activities. We have taken on board the recommendations that where possible and within the context of communicating through communities more targeted and direct contact with audiences can be a beneficial approach.

**Task 8.2 Develop advocacy on policies relating to European cultural heritage at European and Member State levels**

Advocacy activities for the period of Europeana DSI have focused on a targeted approach to relevant policy-makers in the European Commission and the European Council. In addition, the combination of the change of Commission and funding scheme (CEF) have all been contributing factors to the increased need and request for discussions on Europeana at EU member state level.

The Council’s conclusions on [‘The role of Europeana for the digital access, visibility and use of European cultural heritage’](#) adopted on 30-31 May 2016 is a significant milestone in the work of creating political awareness and support for Europeana at EU and national level. The re-instatement of the importance of Europeana in the conclusions, the guidance given and the request for more sustainable funding, are vital for the efficient and continuous work of Europeana.

In the initial period of Europeana DSI a key goal was to provide all relevant Commissioners in the new Commission with an update on Europeana. Building on previous work towards DG Connect and DG Education, Culture, Youth and Sport, this has focused on the Cabinets of DG's Research, Science and Innovation and Jobs, Growth, Investment and Competitiveness.

To further our advocacy work to promote Europeana as a resource for innovation, meetings to promote understanding and awareness focused on DG Research and Innovation and DG Education and Culture. Towards the European Council, an update and Q&A were held for the joint CULT/AV working party in the Council in June with an additional session held in July.

There has been ongoing work to reinforce the relevance and value of digitized cultural heritage to the Digital Single Market (DSM) through targeted social media efforts, for example around the Digital Assembly in June 2015.

An update of Europeana's #BigArtRide campaign to MEPs [see Task 8.3] was held in May 2016. Attendance at and response to this event demonstrated real interest in the Europeana DSI project and how it can be used by the creative sector and to connect people across Europe. Nine MEPs from different political groups, plus the assistants of several MEPs, attended this event, as well officials from the Commission and councillors from Permanent Representations.

On copyright, the focus has been to create understanding by policy-makers of the hurdles current copyright rules present to cultural heritage institutions and how an updated copyright framework could boost the potential of Europeana and its Network Association as a resource for digital innovation.

At EU level, this work focused on DG CONNECT At Member States' level, the focus was on permanent representations to the EU. To support this work, Europeana coordinated an open letter on copyright reform for online access to cultural heritage, addressed to Commissioner Oettinger, and signed by a number of important cultural heritage institutions in various member states.

To support the European Commission in its aim to make it easier to publish out-of-commerce works online, as outlined in their communication on copyright reform in 2015 '*Towards a modern, more European copyright framework*', Europeana has worked with six institutions representing museum, library and archive collections. to gather facts and figures and concrete examples on copyright clearance in these institutions. [The result has been a number of case studies](#) produced and shared with the Commission for study.

These first-hand experiences of balancing the practical day-to-day management of their collection and the expectations in making them available to the public, together with the difficulties they have in clearing rights for digitising certain types of material and making them available online were received well by the Commission. The Commission now better understands some of the challenges cultural heritage organisations face and will include some of the findings in their impact assessment this summer.

In the same spirit, Europeana is involved in a new coordination initiative together with active international library organisations (EBLIDA, LIBER, IFLA and PL2020) holding regular meetings

since March 2016 to help policymakers understand what matters most to cultural heritage institutions in copyright reform and to better formulate what changes are critical for this sector.

### **Task 8.3 Coordinate Europeana 280 campaign**

Under Europeana 280, each of the 28 EU Ministries of Culture was invited to liaise with their national cultural institutions to select ten pieces of art held in their country that have contributed to, or created, a European art movement.

In April 2016, a public-facing campaign, based on the nominated pieces of art, was [launched](#) to encourage people across the EU to engage with their national art history in the context of its contribution to Europe's rich heritage through interactive online and social media campaigns. And a dedicated, professionally curated virtual exhibition showcased the collection across Europe. Each element has been supported by specific communications activities.

A dedicated cross-functional team in Europeana progressed the key milestones and outputs, liaison with Ministries and cultural institutions on submitting content, ingestion of material and public engagement.

#### **Liaison on content submission**

The main focus of work in the first phase was liaison with Ministries and cultural institutions, providing advice and support on the selection process and the delivery of content with a focus on facilitating submission, maximizing the quality of data and content received.

All were encouraged to give as open licenses as possible so that their material could be included in the public engagement campaign and be of use in education, research and to the creative industries for the longer term. Quality was also a request. Images needed to fit into tier 2 and above of the Europeana Publishing Framework, so that they would also qualify for use in the Europeana Art History Collection.

In total 29 culture Ministries – all 28 EU member states plus Norway – undertook to participate in Europeana 280 and contributed content via their cultural institutions with 159 cultural institutions contributing 347 artworks.

#### **Ingestion**

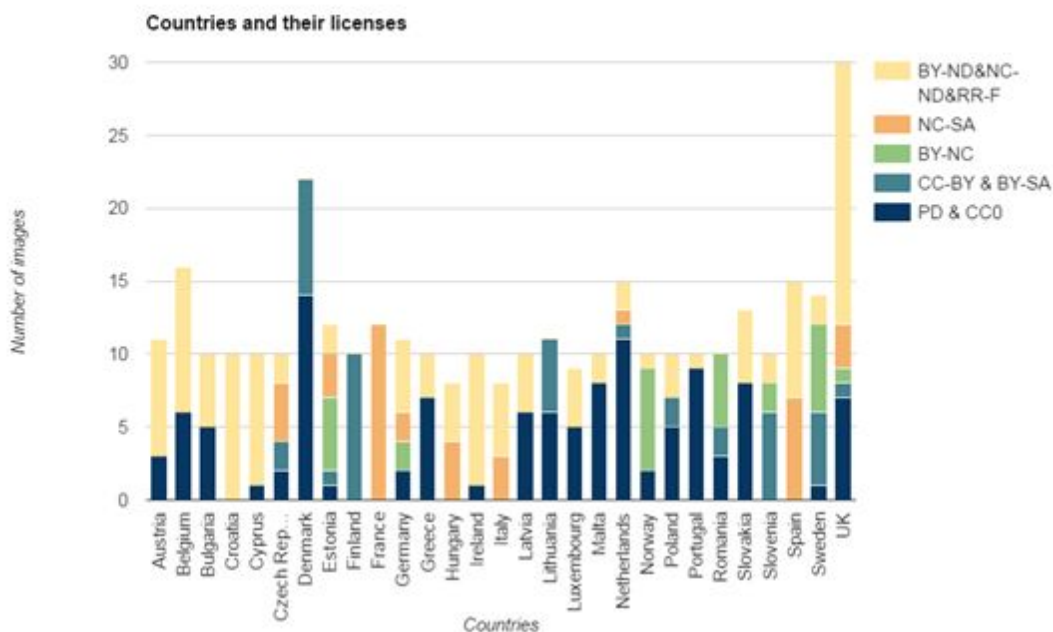
As countries adopted different approaches to the selection and submission of content and the pace of their respective submission differed, the ingestion phase completed in March 2016.

#### **Development of public engagement**

The main communications objective of the campaign is to engage European citizens with their art heritage through Europeana 280 content and to build a community around Europeana's Art History Collection. As described above the approach taken was informed by the overall picture of licences and tier quality associated with the content.

156 of the submitted artworks have licences - ranging from PD-to CC-BY-SA meaning they were available for reuse, with 24 of the 29 countries submitting content that can be reused across the wider elements of the campaign.





**Europeana280 content licences by country**

The campaign was successful in encouraging content of Tier 2 and above quality with the vast majority of content submitted being of Tier 3 and Tier 4 quality. 9% of works submitted for Europeana 280 were Tier 3 and Tier 4 (40% and 39% respectively). Only 10% of works submitted were Tier 1 while 11% were Tier 2.

A range of engagement activities to engage the public with Europeana 280 content was developed and implemented to make use of the different levels of licensed content - described below under Campaign Elements. Indicative use per tier includes:

All 347 works submitted, including Tier 1 can be found in the Europeana Collections search engine.

All works submitted at Tier 2 and above (314) can be found in the Europeana Art History Collections. For example Ivan Rabuzin’s idealized landscape [Na bregovima – prašuma OR On the hills –rainforest](#)

Works under Tier 3 (139) could be used as a cover image for country of the week on Europeana Collections and were included in the #BigArtRide, for example [Greco’s Vista y plano de Toledo OR View and Plan of Toledo](#)

Works under Tier 4 (136) could be used across all Europeana 280 channels and collaborations - in the exhibition *Faces of Europe*, on social media, in the Colourapp, Artstack and DailyArt, #BigArtRide and Jumping Jacks for example C. W. Eckersberg’s [A nude woman doing her hair before a mirror OR En nøgen kvinde sætter sit hår foran et spejl](#)

## Campaign approach

There were two key communication elements underpinning campaign activity – direct communication with the public and communication with and through participating Ministries and institutions.

Europeana's approach included engaging campaign partners - participating institutions and Ministries in each country - to promote the campaign through their own channels. To support this a [campaign resource page](#) for partners was developed, shared and regularly updated, which provided tools and information for the promotion of each element of the campaign.

Campaign partners received regular direct and tailored updates on campaign progress and real case best practice in promotion and publicity was shared to encourage and support activity. All partners were made aware in advance of how and when the digital artworks they had contributed were being used to allow them to both benefit from that promotion and to support the campaign. Examples of this activity by participating institutions include:

- <http://www.nationalmuseum.se/Om-samlingarna1/Europeana-280/>
- <https://twitter.com/BnFMonde/status/724512686361456640>
- <https://twitter.com/CollectionTrust/status/735118728677969922>

This was supported by communicating directly with and through the Europeana Network, for example to the Europeana Communicators Group and with segmented communications to Network members highlighting national contributions, events and promotion.

## Campaign elements

### *Virtual exhibition*

*Faces of Europe* - a virtual exhibition including content from all countries and using Europeana's new virtual exhibition platform. Social media activity has been ongoing to encourage visitors to the exhibition alongside user research to inform future chapters. (See task 2.1 & 2.2 WP2) Three chapters of the exhibition have been published with almost 8000 visitors. New chapters of the exhibition will continue to be published in 2016.

### *Europeana 280 Pro Blog series*

A weekly blog series was introduced from January 2016 to promote interest in the campaign. It has focused on exploring national choices with input from contributing organisations. By the end of the series all participating countries will have been covered.

### *Engagement through interactive digital public events*

[#BigArtRide](#) (working title was The Bridge) - an innovative cultural media event using virtual reality to engage people with Europe's art heritage. Visiting eight cities across Europe - Amsterdam, Paris, Brussels, Rome, Berlin, Prague, Wroclaw, and Bratislava – each event invited the public to use a virtual reality app to share a cycle journey with others in a different European city as they race through virtual cities, populating them with centuries of art along the way.

□ #BigArtRide was organised jointly by Europeana, the Dutch design studio DROPSTUFF.nl, the Netherlands Institute for Sound and Vision (NISV) and embassies of the Kingdom of The Netherlands in the relevant cities across Europe to complement efforts to celebrate the Dutch Presidency of the EU.

#### *Tender process for PR agencies*

To generate media coverage and raise awareness of the 280 campaign public engagement events related to #BigArtRide, Edelman PR agency was engaged after a public tender to cover Belgium, Italy, Czech Republic, Poland, UK, France and Slovakia. Facts & Files handled Germany while Smith Communicatie were engaged to promote the ongoing #BigArtRide presence across various Dutch locations throughout the tour. The agencies worked together sharing information and approaches at weekly meetings. Above participating institutions and ministries were involved in the process.

To promote awareness and media coverage, events were, where possible, tied to a wider context or events in touring countries to amplify the reach, e.g. Wroclaw's programme as European Capital of Culture or Bici Roma in Rome, and in the Netherlands to large-scale public events such as the Linda Festival or Campus Party.

Communications collateral generated at each stage has been used not only to support the communications at that stage but fed into subsequent stages also.

The creative re-use of content with a virtual reality app meant that #BigArtRide has been promoted directly to creative and technological journalists where it has been picked up and covered. For example:

- [http://www.eldiario.es/cultura/arte/quince-obras-salvar-incendio\\_0\\_514448941.html](http://www.eldiario.es/cultura/arte/quince-obras-salvar-incendio_0_514448941.html)
- <http://futurebehind.com/bem-vindos-ao-museu-online-do-velho-continente/>

Coverage of #BigArtRide in press and social media has been widespread and positive, [indicative press examples](#) are available on Europeana Pro. [Indicative Twitter activity](#) can be found following hashtag #BigArtRide. A full and consolidated overview of coverage generated will be submitted by the PR agencies following the end of campaign in July 2016.

As well as generating public and sectoral engagement with and interest in Europeana 280, the event was also directed towards and has been well received by key stakeholders. For example [Dutch Minister for Culture Dr Jet Bussemaker](#) who launched the #BigArtRide European tour, EU [Commissioner Ansip who blogged](#) on his official web page to announce it, HRH [Prince Constantijn](#) of the Netherlands who participated in it, members of the European Parliament CULT committee and European Council who were introduced to the event at a special lunch in the [European Parliament](#) on 25<sup>th</sup> May. The event also featured as part of the European Parliament Open Day 2016.

#BigArtRide has been a challenging project with many interdependent moving parts and partners often subject to external factors. This has meant that areas such as shortened lead in times or unexpected venue changes have not always been optimal for the implementation of the campaign

plan. However throughout, the approach has been to learn from and improve upon each leg of the campaign wherever possible.

[Jumping Jacks](#) – a further public engagement activity has been developed, also based on creative reuse of Europeana 280 content, to involve other participating countries. Jumping Jacks is an open source app developed by Danish design agency Spild af Tid under Europeana Creative and re-purposed with Europeana 280 content for this campaign. Jumping Jacks combines Europeana 280 artworks with interactive technology and moving, dynamic human bodies - mixing public domain artworks with real-time images of people in the audience, so they can see themselves transformed into part of the artwork.

To facilitate partner involvement in and the promotion of these events the approach has been to try to incorporate Jumping Jacks into existing cultural programmes. As Jumping Jacks needs a darkened environment the obvious link is to night time events such as Museums in the Night, Culture and similar which take place across Europe.

The first Jumping Jacks event was held on 17 June by the Lithuanian Art Museum in Vilnius as part of [Culture Night](#) with moving images projected on to the facade of the museum. Communication developed for and at this event will be used to promote uptake of Jumping Jacks in other countries later in 2016.



Jumping Jacks event in Vilnius, 17/06/2016

## Online and social media campaign

To engage users with Europeana 280 content and to help build a community around Europeana Art History Collections an online and social media campaign was developed and implemented. All of the above activities have been supported through this online and social media plan which also incorporated activity exploiting other aspects of the content such as themes, geography and examples of reuse. This approach has included owned channels and collaborations with external platforms and apps using Europeana 280 content (see below). Owned channels include Facebook and Twitter with activities such as voting for the Facebook cover, and Country of the month.

### **Engagement through partnerships**

We worked closely with community leaders of the Wikimedia community, in relation with the task in WP2. A pan-European competition on Wikipedia and Wikidata was held to support the Europeana 280 campaign with the goal to create a significant number of new Wikipedia entries in 37 languages. This was one of the largest translation campaigns in Wikipedia's history and the first cultural outreach campaign to focus on Wikidata. It comprised a 6 week long challenge across 27 countries, involving 39 languages and 62 X participants. The result is that a wealth of information on Europeana 280 content has been opened up across 39 languages to visitors from across Europe. There has been a 300% increase (from 472 to 1300) in translations of existing Wikipedia articles on works relating to Europeana 280 content and 700 new articles created. Importantly, volunteer [participants from across the continent](#) have learned about each other's art history and, by sharing that information, helped spread it to an even wider audience. A video providing an overview of the competition and an insight into the work and motivations of the winners of the challenge [can be viewed here](#) and the [related blog was published on Europeana Pro](#).

Partnerships have also been agreed with two social media platforms/apps that target culture enthusiasts with an interest in art. [Artstack](#) is an online platform for people to discover, collect and share art and [Daily Art](#) which delivers a daily piece of art to your inbox. A promotional programme of Europeana 280 content was agreed with each platform/app according to the nature of: its engagement with its community, the content submitted to 280, and related events, such as #BigArtRide. E.g. Daily Art coordinated promotion of artworks to coincide with the country schedule of #BigArtRide.

In addition [CREATE - colourapp.eu](#) - a web app has also been developed for the campaign whereby the public can engage with openly licensed works and reimagine them by re-colouring them and then share their efforts on social media.

### **Task 8.4 Support EU Presidency events with Latvijas Nacionālā bibliotēka (LNB) and PLURIONet, Koninklijke Bibliotheek (KB)**

Under Europeana v3, the Europeana strategy meeting 'Europeana for Education and Creative Industries' for policy-makers and practitioners in the fields of education, culture and the creative industries was hosted by and organized in collaboration with the National Library of Latvia (17-18 March 2015). Representatives of the LNB were actively involved in the programme development and event set-up. The LNB hosted several break-out groups as well as the plenary sessions. Following this event, two main outputs were formulated, disseminated and promoted under Europeana DSI (MS39).

The first of these was a set of policy recommendations, Europeana for Education and Learning. These recommendations were disseminated to around 700 key individuals and organizations in the fields of education, learning and culture and promoted widely online and via social media including Twitter and LinkedIn and on Europeana channels.

The second output to be formulated, disseminated and promoted was the white paper [Transforming the World with Culture: Next steps on increasing the use of digital cultural heritage in research, education, tourism and the creative industries](#), for which LNB drafted recommendations on use of digital cultural heritage in creative industries and incorporated both the draft and the feedback on this topic received during the Latvian presidency event into the white paper. The white paper was disseminated to around 1,000 relevant individuals and organizations in the fields of education, tourism, culture, research and the creative industries. It was also promoted online and via social media including Twitter and LinkedIn and Europeana channels. Feedback on both documents has been positive.

Under the Luxembourg Presidency, the Europeana strategy meeting ‘Europeana for Smart Cities’ was held between 14-15 October 2015, in collaboration with PLURIONet, Agence luxembourgeoise d'action culturelle and hosted by the Cercle Cité. Representatives of PLURIONet were actively involved in the programme development and event set-up. The LNB hosted several break-out groups as well as the plenary sessions.

This two-day event involved 70 participants comprising policy-makers and practitioners from across Europe in the fields of culture, tourism, creative industries and Smart Cities looking at the role of digital cultural heritage in future Smart Cities. The programme presented speakers from key organizations including, Smart City Expo World Congress, IBM, Living Labs Germany, the City of Luxembourg and of Hamburg, National Library of Luxembourg, European Commission, Ministry of Culture Luxembourg, as well as the Europeana Foundation. Business Models Inc. and JAM Visual also collaborated on the interactive sessions and the visualization of the conference proceedings.

The formulation of the output highlighting the opportunities for digital cultural heritage in Smart Cities is ongoing and promoted to relevant individuals and organizations in the fields of education, tourism, culture, Smart Cities and the creative industries.

The last event under Task 8.4 involved the Koninklijke Bibliotheek during the Dutch Presidency (January 2016 - June 2016). The purpose of the event was to revisit the [Research recommendations](#) designed in July 2014, evaluate their implementation level and project the next major milestones for a concrete forward development. The event entitled “[Digital heritage - Current questions in Policy & Research opportunities](#)” was organised in the premises of the National Library of the Netherlands in The Hague on April 25-26, 2016. KB representatives were actively involved in the programme set-up, event hosting and recommendations preparation.

The event featured three tracks: current recommendation status and ambition, practical use-cases among EU researchers/digital humanists and a round-table featuring all players in the research field in the Netherlands (research policy makers, ministry & research organisations). This group of panelists were contacted and briefed by the KB representatives on the Programme Committee.

The three tracks outcomes are currently being integrated in the revision of the [Research recommendations](#) and their dissemination.

#### **Task 8.5 Develop the Europeana Communicators Group**

To address the ongoing challenges faced by the Europeana Communicators Group as a key communications channel in terms of resource and effectiveness, a Europeana Network Association Communicators' Group Task Force was established in 2015 to create recommendations for a workable and sustainable future approach. The task force met mostly virtually from June 2105 - December 2015 with a final physical meeting organised to coincide with the Europeana Network Association AGM in November 2016. Recommendations for the future development of the Europeana Communicators Group were finalised and submitted to the Europeana Members Council Board and published on [Europeana Pro](#). Membership of the new Communicators Group will be established as per sections 3.1-3.3 of the [Recommendations](#) (pg. 7-10). Membership of the Communicators Forum is being encouraged as part of an on-going effort.

The Communicators Group reflects the multiplier element of Europeana's communications strategy (D8.1). However the more established and strategic relationship with these communities on communications that their representation on the group provides, will also support and facilitate Europeana in effective direct communications with relevant audiences as part of its wider approach.

#### **Task 8.6 Explore the Partnership in Awards programme with Heritage in Motion**

Europeana supports Heritage in Motion (run by partner European Museum Academy [EMA] ) in highlighting cultural institutions harnessing new media and digital technology to offer new routes into their collections. With its large Network Association of cultural heritage and technology professionals from across Europe, Europeana represents a community that shares this goal.

A partnership with Heritage in Motion provides the opportunity for Europeana to be involved in an established awards system and ceremony for cultural heritage. The awards offer an opportunity to inspire other institutions to think about how they can get people involved with their collections in a fresh way.

As outlined in a Memorandum of Understanding signed by the European Museum Academy, Europa Nostra and the Europeana Foundation, Europeana supported Heritage in Motion with communications promoting the 2016 Awards, and with the development of a new brand and website.

In terms of developing the new brand for the awards Europeana:

- designed and facilitated a brand positioning workshop;
- developed the new Heritage in Motion logo;
- developed the requirement for (MS42) and created the new website to be housed within Europeana Pro and which will be published for the 2016 competition following the introduction of the new logo.

With regards to supporting communications on the 2016 Awards, Europeana developed and implemented a communications plan to support the awards (MS41). Activities carried out included: promoting the initial call for entry via Europeana's Pro site, Network, Labs and Communicators Group newsletters, LinkedIn group and Twitter, publishing and tweeting an interview with [last year's winners](#) on the Pro blog in the run up to the submission deadline, presenting the awards at Europeana's Network Association AGM in November and following a deadline extension announcement, issuing countdown reminders on Twitter, which received 20,000 impressions and 120 engagements. Europeana [promoted the finalists](#) and [the winning entries on Pro](#) as well as via its newsletters and Twitter.

### 3.9 WP9 People and Business Support

To operate the Europeana DSI, it must have people and resources including a physical work environment. This work package is designed to cover those needs and manage the total financial needs of the Europeana Foundation across all EU-funded projects and the development of revenue, generated from new activities.

This work package is in place to support the team that is responsible for:

- Human resource management
- Programme control
- Financial management
- Business support

#### 3.9.1 Summary of the main achievements under WP9

- Recruited 26 new (largely replacement) employees.
- Implemented a new payroll system.
- Started on the Europeana Playbook to share our knowledge with colleagues, but also to the outside world.
- Implemented an improved process for subcontracting.
- Kept track of all finances.
- Improved on internal and external (project)reporting
- More in control on finances.
- Moved back into the building of the Dutch National Library smoothly.

#### 3.9.2 Description of work carried out

##### **Task 9.1 Human resource management**

Between April 2015 and June 2016 26 new employees were recruited, some of them for a short period, some joined Europeana in a new role, but most of the employees replaced employees who left the organisation. All new staff are working within the Europeana DSI.. In this same period 18 employees left Europeana Foundation.



From July 2015 onwards, some changes in the Dutch Labour law were made. Based on these changes, Europeana incorporated these changes in its HR practice. One of the changes is that employees with a contract for two years or who have worked two years for the organisation will get a transition reimbursement if Europeana does not extend the contract. This could have financial consequences which are difficult to calculate.

Furthermore Europeana implemented a new payroll system as of January 2016 and started the Europeana Playbook, an online Playbook to share its principles, processes and rules between colleagues, but also for the outside world. On the recruitment processes Europeana implemented an assessment centre to be able to choose the right candidate for the job.

Training of employees has had to be on the job due to lack of funds for this area, this has some direct consequences on turnover

### **Task 9.2 Programme and Project financial control & coordination**

In close collaboration with Programme Management (see also task 4.1) a communication structure, reporting structure and several formats for reporting were set up. Because the length of the project is for 15 months (including an extension of one month), the reporting periods were divided in:

1. April - July 2015 (4 months - internal reporting period)
2. April – October 2015 (7 months - formal EC reporting period)
3. November 2015 – January 2016 (3 months - internal reporting period)
4. November 2015 – June 2016 (8 months - formal EC reporting period)

All partners were provided with financial formats to be able to complete their financial report and to document the financial details. This information is used to create overall financial position of the projects.

Despite the fact that the previous project coordinator left our organisation, together with the Programme Management (WP4), a good set of processes, formats and controlling mechanisms were established.

Together with the Project Officer of the European Commission, Europeana prepared a format for reporting to the Commission. This related to halfway reporting and for the preparation of the mid-term review, held on 12 November 2015. All necessary documents were shared to all partners to be able to follow the very strict deadline for reporting.

On the latest internal reporting period, partners were asked to make a forecast for the period up to June 2016. Based on the information received and on already available information Europeana reallocated budget to other partners, which were made effective in the new version of the DoA.

### **Task 9.3 Financial management for the Europeana DSI**

Financial reporting to Europeana Governing Board is based on a quarterly basis. The information regularly provided to the board:

Overall report Europeana Foundation

- Balance sheet
- Financial overview of all running projects
- Cash-flow overview (including forecast)
- Overview of Ministry funding and the amounts required
- Once a year the board needs to approve the Annual budget and Annual report & accounts.

To improve the overall financial management of Europeana monthly financial reports were created. These were discussed internally with all work package leaders and Europeana directors. Especially on the Europeana DSI budget, the outcomes were discussed on a monthly basis in the management team meetings. The budgets were divided by work packages which is equal to the organisation structure. To improve the quality of reporting People and Business Support team was in close contact with the WP leaders to discuss the numbers and to discuss what was still pending. This information was relevant for forecasting and the cash flow calculations.

Also a process for subcontracting was implemented and aligned with the tasks as described in the DoA.

Europeana completed its Annual Report & Accounts 2015 in time, including the audit and received a positive auditors statement for 2015.

#### **Task 9.4 Business support**

Europeana Foundation moved out from the Koninklijke Bibliotheek building mid-January of 2015, to a temporarily housing above the Central Station in The Hague and moved back into Koninklijke Bibliotheek building mid-December 2015. All preparations and the moving went very smoothly.

At the beginning of 2016 Europeana switched hosting provider regarding its financial environment, which will save 30% in costs on a regular base, furthermore it updated its online front office system, which is more compliant with other internet browsers.

## 4. Project management

The project was managed under the structure explained in the Description of the Action (DoA).

All work package leaders and Europeana directors met at least once every month to discuss project progress and deviations. Day-to-day management of the project was performed through these meetings. In these meetings, special attention was given to the relation with other projects (e.g. Europeana Cloud, Europeana Space, Europeana Creative), to make sure that project results are in line with expectancies of the Europeana DSI. Also, the programme manager and programme coordinator met periodically with each work package leader to discuss the progress of the work packages against the Description of Action (tasks, deliverables, milestones, performance indicators) and if deviations occurred or could occur during the project and possible solutions. Three progress reports were issued as it follows:

- Interim Report, covering period 1 April - 31 October 2016 (D9.2);
- Technical Development Report 2, covering period 1 November 2015 - 31 January 2016 (MS44);
- Final Technical Report, covering period 1 April 2015 - 30 June 2016 (D9.3).

A set of processes and controlling mechanisms were established to ensure a proper management of the project. For example, regarding deliverables, an internal process was established in order to guarantee a proper reviewing, high quality documents and delivery on time.

Representatives of all partners were invited to join the Europeana DSI Partner Board to discuss progress with Europeana directors and programme manager and programme coordinator. The Partner Board met physically at the kick-off meeting in The Hague to discuss process and procedures, and three conference calls took place also (in June 2015, October 2015, March 2016). In these calls, we discussed processes, progress, highlights and deviations of the work plan. Financial management and reporting were a major part of these meetings. Because of the diversity of the partnership, the Partner Board meetings tended to be very procedural. Topical work and progress were discussed in work package meetings between work package leaders and team members and the partners in that work package.

The consortium was very strong during the project, mainly because all partners have worked and are currently working together in other and previous projects. The project suffered from start-up difficulties, mainly regarding late payment of the funds. As a consequence, some partners started their work later than planned, but they managed to fulfill their tasks by the end of the project. Also, an underspend in person months and other direct costs was identified within Europeana Foundation's budget during the project's implementation. This underspend was reallocated to partners and to new subcontracting, with the approval of the European Commission. The project was extended with one month in order to ensure the best use of the funding and to guarantee the completion of tasks at high standards.

## 5. Overview of project deliverables and milestones

### 5.1 Deliverables

No.	Deliverable Name	Delivered Date	Planned Date according to DoA	Comments
D1.3	Description of planned work for the aggregators on improving the data	31.07.2015	31.07.2015	According to the request of the Commission, a revised version of the document was sent on 29.03.2016.
D5.1	Network activity and communications plan	14.08.2015	31.07.2015	-
D3.2	Europeana Research distribution plan (ONB -DARIAH/CLARIN)	31.08.2015	31.08.2015	-
D3.3	Plan for distribution in education	31.08.2015	31.08.2015	-
D6.1	Description of planned development work for platform back-end	31.08.2015	31.08.2015	-
D6.2	Requirements specification for the portal europeana.eu (including outcomes of the usability testing)	31.08.2015	31.08.2015	-
D8.1	Strategic communication plan	31.08.2015	31.08.2015	-
D2.1	Marketing and Social Media plan for end users 2015-2016	09.10.2015	31.07.2015	-
D7.1	Strategic Development Plan, Architectural Planning	31.10.2015	31.08.2015	-
D9.2	Interim Report	02.11.2015	31.11.2015	-
D1.1	Work and implementation plan to innovate the aggregation infrastructure	01.02.2016	31.01.2016	-
D4.1	Europeana DSI 2016 Business Plan	25.02.2016	29.02.2016	-
D3.4	Plan for Europeana's distribution in the tourism market	31.03.2016	31.12.2015	Approval from the Commission to postpone the deadline until 31.03.2016
D1.2	Paper on amount of data partners and outreach to major institutions	26.04.2016	30.04.2016	-
D4.2	Assessment report on needs for intelligence on digital heritage collections and services	29.04.2016	30.04.2016	-

D6.3	New portal Europeana.eu	30.04.2016	30.04.2016	No document delivered, but the product itself: <a href="http://www.europeana.eu/portal/">http://www.europeana.eu/portal/</a>
D9.1	Annual report of the Europeana Foundation	26.04.2016	30.04.2016	-
D3.1	Creative industries' reach report, ONB	30.06.2016	31.05.2016	-
D4.3	Analysis report of new statistical content	30.06.2016	30.06.2016	-
D6.4	Four/Three thematic channels	30.06.2016	30.05.2016	Approval from the Commission to postpone the delivery until 30.06.2016, mentioned in the updated DoA
D9.3	Final Technical Report	30.06.2016	30.05.2016	Postponed until 30.06.2016 because the project was extended with 1 month, mentioned in the updated DoA

## 5.2 Milestones

No.	Milestone Name	Delivered Date	Planned Date according to DoA	Comments
MS7	Content reports	April-August 2015, October 2015, Dec 2015, Jan - May 2016	every month at end of the month	The gap in content reporting is due to a gap in publishing during our technical infrastructure overhaul in autumn 2015.
MS4	Aggregators Forum	20.05.2015	30.04.2015	-
MS8	Plan for training and workshops of aggregators for data providing partners	30.06.2015	30.06.2015	-
MS9	Technical infrastructure (aggregators) development plan	30.06.2015	30.06.2015	-
MS22	IPR training plan for aggregators	31.07.2015	31.07.2015	-
MS41	Communications plan for Awards advertising and event	31.08.2015	31.08.2015	-
MS45	People and Business Support Plan	04.09.2015	31.08.2015	-

MS20	Ingest plan for adding new content to the ENUMERATE Observatory	02.09.2015	31.08.2015	-
MS16	Europeana DSI's Policy, Research and Knowledge management development plan	30.09.2015	31.08.2015	-
MS27	Research and development plan	31.08.2015	31.08.2015	-
MS10	Development Plan GLAMWiki relations	30.09.2015	30.09.2015	-
MS15	Europeana Inc. business plan	30.09.2015	30.09.2015	-
MS28	Overall plan to coordinate, innovate and disseminate Europeana coordinated R&D	30.09.2015	30.09.2015	-
MS43	Progress Report 1 (Technical development report)	30.09.2015	31.07.2015	-
MS29	EDM development plan	30.09.2015	30.09.2015	-
MS18	Europeana DSI Knowledge Management plan	31.10.2015	30.09.2015	-
MS6	Data ingestion plan	31.10.2015	30.09.2015	-
MS11	Channels development and campaign plan	31.10.2015	31.08.2015	-
MS42	Requirements for new Awards site with Heritage in Motion	31.10.2015	31.07.2015	-
MS3	Updated project shift plan	-	31.10.2015	We decided not to update the document already in place, as created under Europeana v3.
MS13	Luxembourg presidency event (PLURIO)	16.10.2015	31.10.2015	-
MS14	Two workshops on the need by the tourism industry on digital cultural assets, linked to task 3.3.3.	Postponed (Nov 2015)	30.10.2015	-
MS21	Review of rights statements under the Europeana Licensing Framework	30.10.2015	30.10.2015	-
MS30	Search improvement plan (in relation to T4.5.1., as well as the WP 6 (Product Development))	30.10.2015	30.10.2015	-
MS32	Multilingual research and development plan	30.10.2015	30.10.2015	-

MS35	Annual General Meeting	02.11.2015	29.01.2016	Proofing documents (blog posts, articles, papers) published on Europeana Pro support this milestone
MS5	Aggregators' Forum meeting in fall	21.10.2015	30.11.2015	-
MS1	Specifications for the accurate representation of data providers' names in the DSI	30.11.2015	30.11.2015	-
MS12	Set up of editorial board for Europeana Research and division of editorial responsibility	30.11.2015	30.11.2015	-
MS33	Implementation of Europeana new governance of the Network	30.11.2015	30.11.2015	Proofing documents (blog posts, articles, papers) published on Europeana Pro support this milestone
MS34	Implementation of Europeana Network/Association representation bodies	30.11.2015	30.11.2015	Proofing documents (blog posts, articles, papers) published on Europeana Pro support this milestone
MS17	Projects Group Assembly	-	31.12.2015	The Europeana projects met in several meetings: - EDM workshop 2 November - AGM 2/3 November - Aggregator Forum Rome 21/22 October - Aggregator Forum The Hague 18/19 May, etc.
MS44	Technical development report 2	31.03.2016	29.02.2016	-
MS23	Updated IPR documentation on Europeana Pro	30.04.2016	30.04.2016	-
MS24	Europeana DSI's copyright policy statement of principles	30.04.2016	30.04.2016	-
MS25	Migration plan to internationally standardized rights statements	30.04.2016	30.04.2016	-
MS38	Launch of Europeana 280	30.04.2016	30.04.2016	-
MS40	Europeana Communicators Group in place	30.04.2016	30.04.2016	-
MS37	Report on sustainability	31.05.2016	31.05.2016	-
MS36	Implementation of a membership programme & management of Task forces	31.05.2016	31.05.2016	Proofing documents (blog posts, articles, papers) published on Europeana Pro support this milestone

MS39	Three EU presidency events undertaken and recommendations formulated by KB, LNB and PLURIO	31.05.2016	31.05.2016	-
MS19	Launch of the ENUMERATE Observatory	30.06.2016	30.06.2016	-
MS31	Report on the improvement of search	30.06.2016	30.06.2016	-
MS26	Recommendation report on Business Model, Impact and performance indicators 2016	30.06.2016	30.06.2016	-
MS2	Updated Partner and Data Development Plan (incorporating outcomes of subtask 1.1.2)	30.06.2016	30.06.2016	-

## 6. Dissemination activities

Below there are noted the events during which the consortium members presented the project at external meetings and conferences along with online and offline publications and collaborations, produced by consortium members and related to the project.

### 6.1 Presentations at External Events

Partner	Event name	Event description	Location	Date	No. of participants	Website
EF	GLAMwiki	Gathering of Wikimedia projects related to cultural heritage	The Hague, The Netherlands	10-11/04/2015	60	<a href="https://nl.wikimedia.org/wiki/GLAM-WIKI_2015">https://nl.wikimedia.org/wiki/GLAM-WIKI_2015</a>
EF	GLAM-WIKI 2015 conference	Conference for the Wikipedia community targeting the GLAM organizations. Presentation "Wikidata, a target for Europeana's semantic strategy"	The Hague, The Netherlands	10-12/4/2015	200	<a href="http://nl.wikimedia.org/wiki/GLAM-WIKI_2015">http://nl.wikimedia.org/wiki/GLAM-WIKI_2015</a>
EF	Riga Summit on the Multilingual Digital Single Market,	European conference for discussing the solving of multilingual issues, gathering industry providers, users and policy makers. Presentation and panel on multilingual challenges for accessing digitized culture online.	Riga, Latvia	27-29/04/2015	300	<a href="http://www.riga-summit2015.eu/">http://www.riga-summit2015.eu/</a>



EF	"W3C Workshop: Data, content and services for the Multilingual Web "	Technical workshop on solution and challenges for addressing web-related multilingual issue, part of Riga Summit. Presentation on evaluating multilingual features of Europeana	Riga, Latvia	29/04/2015	40	<a href="https://www.mu.iltilingualweb.eu/documents/2015-riga-workshop/2015-riga-program">https://www.mu.iltilingualweb.eu/documents/2015-riga-workshop/2015-riga-program</a>
NISV	Guest lecture Television History Online	Guest Lecture on EUscreen and Europeana for Bachelor students media studies	Utrecht University, Utrecht, NL	26/05/2015	30	-
EF	Zagreb summer school	Guest lecture at summer school about digital heritage	Zagreb, Croatia	27-28/05/2015	20	-
2Culture (CARARE)	ARIADNE summer school	Summer school and expert forum on the curation of archaeological knowledge, and new approaches to the digital research, information management and curation in archaeology. Presentation of CARARE and the Europeana context.	Athens, Greece	12-17/06/2015	30	<a href="http://summerschool.dcu.gr/">http://summerschool.dcu.gr/</a>
EF	Workshop "Cloud Based services for digital libraries"	Workshop organized by the LoCloud project, part of TPDL 2016. Presentation on Europeana and metadata enrichment	Poznan, Poland	17/06/2015	25	<a href="http://tpdl2015.info/workshops-list/workshop-cloud-based-services-digital-libraries/">http://tpdl2015.info/workshops-list/workshop-cloud-based-services-digital-libraries/</a>
2Culture and Athena RC (CARARE)	CARARE annual plenary meeting	Annual meeting of the CARARE network. Presentation of Europeana DSI in general and CARARE in particular.	Brussels, Belgium	18-19/06/2015	25	-
FUB	Konferenz Langzeitzugriff auf Sammlungs- und Multimedia daten	German conference about long-term accessibility of collection data and multimedia data. FUB gave 1 presentation about the Europeana DSI project and presented 1 poster about the BioCASE provider software.	Berlin, Germany	24/06/2015	50	<a href="http://www.naturkundemuseum-berlin.de/forschung/tagungen/konferenz-langzeitzugriff-2015/home">http://www.naturkundemuseum-berlin.de/forschung/tagungen/konferenz-langzeitzugriff-2015/home</a>
EF	LODLAM 2015	Annual conference of the community for applying Linked Open Data for Libraries, Archives and Museums. We	Sydney, Australia	29-30/06/2015	100	<a href="http://summit2015.lodlam.net/2015/08/02/aat-lod-vocab/">http://summit2015.lodlam.net/2015/08/02/aat-lod-vocab/</a>

		gave a conference presentation				
EF	Digital Humanities (DH2015)	Panel on Linked Data and WW1 at the annual conference for the Digital Humanities community	Sydney, Australia	01/07/2015	50 (for panel)	<a href="http://dh2015.org/abstracts/">http://dh2015.org/abstracts/</a>
eFashion	LIDER - Roadmapping Workshop 2015 on cross-media linked data	the 5th LIDER roadmapping workshop is about cross-media linked data and the event will provide several high level speakers from the multimedia area.	Rome, Italy	06/07/2015	80	<a href="http://lcl.uniroma1.it/cross-media-ld-workshop/">http://lcl.uniroma1.it/cross-media-ld-workshop/</a>
Europeana Creative	Culture Jam	Europeana Creative Culture Jam is the final showcase event of Europeana Creative, a groundbreaking project that explores ways for creative industries to connect with cultural heritage.	Vienna, Austria	09-10/07/2015	200	<a href="http://labs.europeana.eu/events/europeana-creative-culture-jam-vienna">http://labs.europeana.eu/events/europeana-creative-culture-jam-vienna</a>
eFashion	European Creative Culture Jam conference	Europeana Creative Culture Jam is the final showcase event of Europeana Creative, a groundbreaking project that explores ways for creative industries to connect with cultural heritage.	Vienna, Austria	10/07/2015	200	<a href="http://www.europeanacreativeculturejam.eu/">http://www.europeanacreativeculturejam.eu/</a>
EF	Linked Pasts workshop	Conference organized by the Linked Pasts projects, focusing on application of linked data for history-related projects. Presentation on Knowledge Organization Systems and Linked Data	London, UK	20-21/07/2015	100	<a href="http://pelagios-project.blogspot.co.uk/2015/03/linked-pasts.html">http://pelagios-project.blogspot.co.uk/2015/03/linked-pasts.html</a>
2Culture and Athena RC (CARARE)	European Research Workshop for Archaeology and the Classics	Workshop on Tools, Services and Content Priorities in Audio and Vision	London, UK	23/07/2015	20	-
EF	TPDL 2015	Academic conference on Theory and Practice of Digital Libraries. Tutorial on the Europeana Data Model	Poznan, Poland	14/09/2015	15 (for tutorial)	<a href="http://tpdl2015.info/tutorials-list/tutorial-mappings-application-profiles-extensions-cross-domain-metadata-e">http://tpdl2015.info/tutorials-list/tutorial-mappings-application-profiles-extensions-cross-domain-metadata-e</a>

						<a href="http://europeana-content-beyond/">europeana-content-beyond/</a>
NISV	European Research Workshop	Workshop on Tools, Services and Content Priorities in Audio and Vision	Copenhagen, DK	18/09/2015	50	<a href="http://research.europeana.eu/blogpost/europeana-research-workshop-on-tools-services-and-content-priorities-in-audio-and-vision">http://research.europeana.eu/blogpost/europeana-research-workshop-on-tools-services-and-content-priorities-in-audio-and-vision</a>
NISV	IASA Conference 2015	Panel on IPR with Europeana Foundation, EFG, EUscreen and KL	Paris, FR	30/09/2015	60	<a href="http://www.2015.iasa-web.org/">http://www.2015.iasa-web.org/</a>
MUSEU	Cultural institutions towards Europeana: opportunities, license and IPR issues	This workshop, organized within the Europeana DSI project, aimed at invite museums to join Europeana through the MUSEU aggregator, managed by the European Association MICHAEL Culture. The NEMO network presented on this occasion the report ""Survey on Museums and Copyright"" published in August, 2015	Bologna, Italy	09/10/2015	Ca. 30	<a href="http://www.michael-culture.eu/">http://www.michael-culture.eu/</a>
Michael	Athena Plus International Conference : "GLAMs going digital ! Multilingualism, Creativity, Reuse "	Final event of the European project AthenaPlus, coordinated by the Union Catalogue of Italian Libraries, which sees the participation of forty partners from 20 European Member States. During the event, the main results of this project will be presented, as well as tools and opportunities for cultural institutions in the field of multilingualism, creativity, reuse.	Rome, Italy	20-21/10/2015	-	<a href="http://www.athenaplusthena.org/index.php?en/202/athenaplusthena-final-conference">http://www.athenaplusthena.org/index.php?en/202/athenaplusthena-final-conference</a>
EF	DARIAH WS on annotations	Technical workshop of the DARIAH consortium to discuss cases and solutions for applying annotations in the digital humanities. Presentation on modeling annotations for Europeana	Hamburg, Germany	29-30/10/2015	18	<a href="http://work-ann.o.cutuchiqueno.webfactional.com/">http://work-ann.o.cutuchiqueno.webfactional.com/</a>
EF	UDC 2015	Annual seminar of the consortium for Universal Decimal Classification.	Lisbon, Portugal	29-30/10/2015	100	<a href="http://seminar.udcc.org/2015/programme.php">http://seminar.udcc.org/2015/programme.php</a>

		Presentation on applying linked data technology in library cases				
DEN	EGMUS Annual Meeting 2015	Annual meeting of the European Group on Museum Statistics	The Hague, The Netherlands	02/11/2015	40	<a href="http://www.egmus.eu/en/about_egmus/meetings/archive/the-hague-2015/">http://www.egmus.eu/en/about_egmus/meetings/archive/the-hague-2015/</a>
FUB	Shaping Access! – More Responsibility for Cultural Heritage	Two days international conference focused on future strategies for access to cultural heritage, innovations, trends and challenges for cultural institutions	Hamburg, Germany	05-06/11/2015	330	<a href="http://www.zugang-gestalten.de/shaping-access-more-responsibility-for-cultural-heritage/">http://www.zugang-gestalten.de/shaping-access-more-responsibility-for-cultural-heritage/</a>
EF	EVA / Minerva 2015	XIIth Annual International Conference for Professionals in Cultural Heritage Sunday 8th and Monday 9th November, 2015. Presentation of Europeana Collections in general and Europeana Music Collection in specific.	Jerusalem, Israel	08-09/11/2015	Ca. 25	Event: <a href="http://www.digital-heritage.org.il/digital-heritage/">http://www.digital-heritage.org.il/digital-heritage/</a> Presentation: <a href="https://docs.google.com/presentation/d/1YECGrRc1pBgxWqcZg9_8qzeuhxdHvr6LrM01mJsdF38/edit?usp=sharing">https://docs.google.com/presentation/d/1YECGrRc1pBgxWqcZg9_8qzeuhxdHvr6LrM01mJsdF38/edit?usp=sharing</a>
EF	First EUDAT Working Groups Workshop	The goal of the workshop was to bring together experts from different areas that lead and contribute to cement the strategy and activities of specific areas on scientific data. Presentation of the Europeana data resources of interest for the federated data mining working group.	Barcelona, Spain	12-13/11/2015	100	<a href="https://www.eudat.eu/events/eudat-first-working-groups-workshop-12-13-november-2015-barcelona-spain">https://www.eudat.eu/events/eudat-first-working-groups-workshop-12-13-november-2015-barcelona-spain</a>
MICHAEL - Rosa Caffo & Corinne Szteinszneider	Meeting with french Ministry of Culture	Meeting with Department of Museums, Department of Digital, Drest and Department of European affairs: Presentation of Europeana DSI project and French context & how to involve museums	Paris, France	18/11/2015		-
EF	Launch of Slovakiana	Launch of the national aggregator of Slovakia	Bratislava, Slovakia	26/11/2015	Ca. 50	-
EF	SWIB	Technical conference on linked	Hamburg	28-30/11	100	<a href="http://swib.org/">http://swib.org/</a>

	2015	data for the library sector. We gave one presentation on semantic enrichment and one on modeling annotations and co-hosted a special session on RDF application profiles	, Germany	/2015		<a href="http://swib15.programe.html">swib15/programe.html</a>
FUB	Linked Open Data 4 Living Organisms - A DARIAH-EU funded workshop under the OPEN HUMANITIES THEME 2015	International workshop to link current research activities on biodiversity and linguistic diversity. FUB's subcontractor AIT (Graz) gave the presentation 'Open culture @ EUROPEANA '	Vienna, Austria	03/12/2015	20	<a href="http://www.dariah.eu/system/news/sliders/workshop-biodiversity-and-linguistic-diversity.html">http://www.dariah.eu/system/news/sliders/workshop-biodiversity-and-linguistic-diversity.html</a>
EF	DISH	Digital Strategies for Heritage	Rotterdam, The Netherlands	07/12/2015	275	<a href="http://www.dish2015.nl/">http://www.dish2015.nl/</a>
EF	IIIF: Access to the World's Images - Ghent 2015	On Tuesday, 8 December 2015, the International Image Interoperability Framework (IIIF) community and Ghent University Library are hosting a one day event describing the power and potential of interoperable image delivery over the Web. Presentation of Europeana's approach to IIIF including product roadmap.	Ghent, Belgium	08/12/2015	50-100 ?	<a href="http://iiif.io/event/2015/ghent/Presentation:https://drive.google.com/open?id=1K6TOFWBYyiFUJ-RKsoWeJ1r5SnG9rmxnHhzh4vBwk">http://iiif.io/event/2015/ghent/Presentation:https://drive.google.com/open?id=1K6TOFWBYyiFUJ-RKsoWeJ1r5SnG9rmxnHhzh4vBwk</a>
EF	Meeting with Estonian aggregator	Discussing the setting up of new aggregator	Tallinn, Estonia	11/12/2015	4	-
FUB	32rd International Union of Biological Sciences (IUBS) General Assembly and Conference: "IUBS 2015 - Frontiers	International conference about key topics within the Unified Biology perspective. FUB presented 1 poster about the Europeana DSI project	Berlin, Germany	14-16/12/2015	100	<a href="http://www.iubs2015.org">http://www.iubs2015.org</a>

	in Unified Biology”					
MICHAEL - Corinne Szteinszneider	Working meetings with french MCC - department of Digital	Preparation of a communication strategy towards French museums	Paris, France	08/01/2016 & 27/01/2016		-
EF	European a Sounds plenary	Europeana Sounds plenary	Lisbon, Portugal	27/01/2016	150	-
EF	3rd European a Food & Drink Challenge Award Event	An event to award and promote the winners from the third Europeana Food & Drink Challenge	Seville, Spain	27/01/2016	25	<a href="http://foodanddrink.europe.eu/awards-third-open-innovation-challenge-event/">http://foodanddrink.europe.eu/awards-third-open-innovation-challenge-event/</a>
EF	Loomehäk/Creative Estonia	A two day hackathon for creatives; Europeana joint with a special award category for "Best ideas for cultural heritage reuse". James Morley presented Europeana Labs and participated as a mentor and a jury member.	Tallinn, Estonia	29-31/01/2016	120	<a href="https://www.facebook.com/events/1171478069548695/">https://www.facebook.com/events/1171478069548695/</a>
EF	EUDAT User Forum	Meeting of the first users of the the collaborative Pan-European infrastructure providing research data services, training and consultancy. Presentation on the Data Pilot for Enriching Europeana Newspapers	Rome, Italy	03-04/02/2016	130	<a href="https://www.eudat.eu/events/user-forums/eudat-user-forum-3-4-february-2016-rome-italy">https://www.eudat.eu/events/user-forums/eudat-user-forum-3-4-february-2016-rome-italy</a>
EF	VALA 2016	Keynote speech and presentation at the general conference for Australian librarians	Melbourne, Australia	09-11/02/2016	1300	<a href="http://www.vala.org.au/vala2016-proceedings/vala2016-plenary-3-charles">http://www.vala.org.au/vala2016-proceedings/vala2016-plenary-3-charles</a> and <a href="http://www.vala.org.au/vala2016-conference-program/l-plate-p-plate2016-series">http://www.vala.org.au/vala2016-conference-program/l-plate-p-plate2016-series</a>
EF	DBpedia community meeting	Conference organized by the DBpedia community to share projects and initiatives related to DBpedia.	The Hague, The Netherlands	11-12/02/2016	50	<a href="http://wiki.dbpedia.org/meetings/TheHague2016">http://wiki.dbpedia.org/meetings/TheHague2016</a>

		Presentations on Europeana's efforts to enrich cultural heritage metadata with DBPedia, and its new strategy for entities.	ds			
MUSEU	Tools to make your collection widely visible	Co-organized by Michael Culture, NEMO and SPK, within the Europeana Digital Service Infrastructure (DSI) project. A 2 days European event dedicated to museums organisations and museums members of NEMO and Michael Culture open to German museums. The objective was to invite museums to learn about digital tools to manage their online collection.	Berlin, Germany	15-16/02 /2016	Ca. 30	<a href="http://www.michael-culture.eu/">http://www.michael-culture.eu/</a>
EF	Day of the Museum Barcelona	Presentation about the Europeana Publishing Framework for museums in Barcelona.	Barcelona, Spain	16/03/ 2016	75	<a href="http://www.mmb.cat/activitats.php?idm=1&amp;pagina=8&amp;codi_subseccio=3&amp;codi_activitat=940&amp;estic=1">http://www.mmb.cat/activitats.php?idm=1&amp;pagina=8&amp;codi_subseccio=3&amp;codi_activitat=940&amp;estic=1</a>
EUROCLIO	23rd EUROCLIO Annual Conference “Reimagining Remembrance” - Dealing with the Legacy of a Violent Past in History and Heritage Education	The annual conference of EUROCLIO - European Associations of History Educators is the most international professional development course for history educators in Europe. As part of the programme, EUROCLIO presented the collaboration with Europeana on the development of featured source collections, and used the opportunity to get direct feedback from those educators for whom these collections are being developed.	Belfast, Northern-Ireland	21/03/ 2016	30	<a href="http://euroclio.eu/projects/23rd-euroclio-annual-conference-reimagining-remembrance/">http://euroclio.eu/projects/23rd-euroclio-annual-conference-reimagining-remembrance/</a>
eFashion	Repurpose, Experience, Taste and Rethink Culture	An interesting one-day event for culture discoverability and knowledge exchange, with focus on creative reuse and crowdsourcing of our cultural heritage.	Athens, Greece	22/03/ 2016	100	<a href="http://mint-events.image.ntua.gr/">http://mint-events.image.ntua.gr/</a>

DIF	Media and Learning Conference	Media & Learning 2016 focuses on the latest developments, services and uses of media in education and training. Aimed at researchers, policy makers and practitioners, the purpose of this annual event is to identify policies and initiatives that promote digital and media competence at all levels of education and training as well as to promote best-practice in the take-up and application of media in education and training.	Brussels, Belgium	11/04/2016	60	<a href="http://media-and-learning.eu/programme/friday">http://media-and-learning.eu/programme/friday</a>
EUROCLIO	Media and Learning Conference	Media & Learning 2016 focuses on the latest developments, services and uses of media in education and training. Aimed at researchers, policy makers and practitioners, the purpose of this annual event is to identify policies and initiatives that promote digital and media competence at all levels of education and training as well as to promote best-practice in the take-up and application of media in education and training.	Brussels, Belgium	11/04/2016	30	<a href="http://media-and-learning.eu/programme/friday">http://media-and-learning.eu/programme/friday</a>
EF	BHL@10	Re-establish connections with the BHL community in order to update and improve the BHL data in Europeana.	London, UK	12/04/2016	Ca. 30	-
ACE/DIF	Rights Issues for Film in Education	International workshop organised by the ABCinema project in cooperation with ACE	Frankfurt/Main, Germany	13/04/2016	40	<a href="http://www.ace-film.eu/?p=4003">http://www.ace-film.eu/?p=4003</a>
NISV	DPLAfest 2016	General conference of the Digital Public Library of America. Presentation "Something in the water? Open Source Developer Communities in the US vs EU" and presentation of the Europeana API	Washington DC	14-15/04/2016	400	<a href="https://dp.la/info/get-involved/dplafest/april-2016/">https://dp.la/info/get-involved/dplafest/april-2016/</a>
OpenUp	Openup workshop	Workshop for French institutions to join OpenUp	Montpellier, France	15/04/2016	20	-



Culture 24	Open Collections Workshop	Workshop for UK institutions about the Publishing Framework	London, UK	19/04/2016	30	-
DIF	1916 - The Great Battles of the World War And Their Film Images	Film programme on the occasion of the great battles that were led in 1916, such as Verdun and Somme, accompanied by lectures and presentation of WWI projects Europeana1914-1918/EFG	Frankfurt/Main, Germany	21/04/2016	50	<a href="http://deutsches-filminstitut.de/blog/verdun/">http://deutsches-filminstitut.de/blog/verdun/</a>
eFashion	Fashion in museums Symposium	International conference on fashion in museums, hosted by the Rijksmuseum	Amsterdam, Netherlands	22/04/2016	250	<a href="https://www.rijksmuseum.nl/en/whats-on/symposiums/fashion-in-museums">https://www.rijksmuseum.nl/en/whats-on/symposiums/fashion-in-museums</a>
DIF	vfm Frühjahrstagung (Verein für Medieninformation und Mediendokumentation)	Annual conference of the Association for Media and Information Documentation. vfm represents educational and professional interests of experts from the media who are concerned with the provision of information, inventory control, documentation or marketing of media content.	Saarbrücken, Germany	27/04/2016	200	<a href="http://www.vfm-online.de/tagungen/2016/programm.shtml">http://www.vfm-online.de/tagungen/2016/programm.shtml</a>
EF	ISSN conference	Presentation on Europeana and data modeling at the International Conference organised by ISSN International Centre	Paris, France	28/04/2016	50	<a href="http://www.issn.org/newsletter_issn/international-conference-organised-by-issn-ic-bibliographic-metadata-getting-linked/">http://www.issn.org/newsletter_issn/international-conference-organised-by-issn-ic-bibliographic-metadata-getting-linked/</a>
EF	EEXCESS	International Science 2.0 Conference and EEXCESS Final Conference	Cologne, Germany	03-04/05/2016	75	<a href="https://www.science20-conference.eu/programme/">https://www.science20-conference.eu/programme/</a>
FUB	Outreach via European a: Potential benefit for diverse AWI data collections	Local workshop to present Europeana and the OpenUp! network including a discussion with curators on contract details and metadata requirements.	Bremerhaven, Germany	10/05/2016	6	<a href="https://www.awi.de">https://www.awi.de</a>
MUSEU	EVA	The key aim of this Event is to	Florence,	11/05/		<a href="http://www.dinf">http://www.dinf</a>

	Florence 2016	provide a forum for the user, supplier and scientific research communities to meet and exchange experiences, ideas and plans in the wide area of Culture & Technology. Participants receive up to date news on new EC and international arts computing & telecommunications initiatives as well as on Projects in the visual arts field, in archaeology and history. Working Groups and new Projects are promoted. Scientific and technical demonstrations are presented.	Italy	2016		<a href="http://o.unifi.it/upload/sub/eventi/eva-2016--electron-ic-imaging-and-visual-art.pdf">o.unifi.it/upload/sub/eventi/eva-2016--electron-ic-imaging-and-visual-art.pdf</a>
NISV > EUscreen	CIRCOM Annual Conference	CIRCOM Regional is a Professional Association of Regional Public Service Television in Europe. Plovdiv, the 2019 European capital of culture, met the participants and the guests of the 34th Annual Conference of CIRCOM Regional, on 19 and 20 May 2016.	Plovdiv, Bulgaria	19/05/2016	170	<a href="http://www.circ-om-regional.eu/conference">http://www.circ-om-regional.eu/conference</a>
MUSEU	Valorize your collections with European a	A Workshop dedicated to French museums and cultural institutions, organized by European association Michael Culture, in partnership with the French Ministry of Culture and communication – SG/Département des Programmes Numériques (DPN), Direction Générale des Patrimoines under the framework of Europeana Digital Service Infrastructure (DSI) project.  The objective of this workshop is to present and reflect on the new developments of Europeana platform as well as MUSEU – Hub the resource center & aggregator for European museums managed by association Michael Culture.	Paris, France	19/05/2016	Ca. 60	<a href="http://www.michael-culture.eu/">http://www.michael-culture.eu/</a>
EF	iAnnotate 2016	Conference gathering organizations, users and developers to share projects and initiatives related to	Berlin, Germany	19-20/05/2016	200	<a href="http://iannotate.org/">http://iannotate.org/</a>

		<p>annotations.</p> <p>Presentation on the challenges when modeling annotations in the Europeana Sounds project</p>				
NISV > EUscreen	Second RICHES Policy Seminar	<p>The seminar will start with a pre-event consisting in a networking session of EC Projects, a follow up to the first such session, organised on the occasion of the first Policy Seminar in October 2015. The scope of this session is to reflect on how to sustain the organisation of these appointments in the future, after the end of the RICHES project. They represent a good opportunity to reflect on the impact that cultural heritage projects are delivering, identify opportunities to improve the effectiveness of their results, and identify synergies and the potential for collaboration among projects.</p>	Brussels, Belgium	23/05/2016	50	<a href="http://www.riches-project.eu/second-policy-seminar.html">http://www.riches-project.eu/second-policy-seminar.html</a>
EF	European and Open Data Symposium	Promote participation of Irish cultural heritage institutions to Europeana	Dublin, Ireland	23/05/2016	Ca. 35	-
EUROCLIO	LLLPlatform Annual Conference 2016	<p>The Lifelong Learning Platform promotes European-wide cooperation among civil society organisations. It is made up of 39 European networks active in education and training in order to build a citizen's voice on lifelong learning issues and to propose concrete solutions based on the expertise, the competencies and the experience of its networks' experts and practitioners. During its annual conference in 2016 EUROCLIO shared the featured Europeana Source Collections during the workshop round on the topic: A Digital Community.</p>	Bratislava, Slovakia	31/05/2016	Ca. 15	<a href="https://lllplatform-ac2016.org/">https://lllplatform-ac2016.org/</a>
NTUA > EUscreen	EBU Metadata Developer Network	This year's MDN Workshop will touch on a wide range of different aspects of metadata of direct interest to developers.	Geneva, Switzerland	07-08/06/2016	30	<a href="https://tech.ebu.ch/events/2016/mdn-workshop">https://tech.ebu.ch/events/2016/mdn-workshop</a>

	Workshop					
DEN	Meeting of Members States Expert Group (MSEG)	The MSEG implements the Commission recommendation on Digitalisation & Digital Preservation, exchanges information and good practice and assists the Commission in monitoring developments in the way in which digital culture can be marketed.	Luxembourg	13/06/2016	30	<a href="https://ec.europa.eu/digital-single-market/en/member-states-expert-group-digitalisation-digital-preservation">https://ec.europa.eu/digital-single-market/en/member-states-expert-group-digitalisation-digital-preservation</a>
NISV, EF	Open Repositories 2016	International Conference on Open Repositories. Panel from Gregory Markus: Building a Better Community: Collaborative FLOSS development across national boundaries	Dublin, Ireland	13-16/06/2016	500	<a href="https://www.conftool.com/or2016/index.php?page=browseSessions&amp;search=markus">https://www.conftool.com/or2016/index.php?page=browseSessions&amp;search=markus</a>
FUB	31st Annual Meeting of the Society for the Preservation of Natural History Collections (SPNHC)	International conference for holders of natural history collections focussed on preservation techniques, data management and data mobilisation. FUB gave the presentation 'Natural history online - An efficient data publication framework for museum collections'	Berlin, Germany	20/06/2016	400	<a href="http://www.spnhc2016.berlin/">http://www.spnhc2016.berlin/</a>
EUROCLIO	READY TO REACH OUT: Connecting Cultural Heritage Collections and Serving Wider Audiences	This conference is organised by the Dutch Ministry of Education, Science and Culture as part of the Dutch Presidency of the European Council. EUROCLIO has been invited to chair a session on the re-use of cultural heritage in the field of education.	Amsterdam, Netherlands	29-30/06/2016	60?	-

## 6.2 Publications

Authors	Title	Description/ Publishing info	Date	Website
Gregory Markus and Valentine	EuropeanaTech Insight journal (3 issues)	Journal of the EuropeanaTech community, published	2015	<a href="http://pro.europeana.eu/get-involved/europeana-tech/europeanatech-insight">http://pro.europeana.eu/get-involved/europeana-tech/europeanatech-insight</a>

Charles (editors)		on Europeana Pro		
Joris Pekel	Making impact on a small budget	Case study	11/04/2015	<a href="http://pro.europeana.eu/publication/making-impact-on-a-small-budget">http://pro.europeana.eu/publication/making-impact-on-a-small-budget</a>
Joris Pekel	Making a big impact on a small budget - How the LSH Museums shared their collection with the world	Europeana Pro blogpost	13/04/2015	<a href="http://pro.europeana.eu/blogpost/making-a-big-impact-on-a-small-budget-how-the-lsh-museums-share">http://pro.europeana.eu/blogpost/making-a-big-impact-on-a-small-budget-how-the-lsh-museums-share</a>
Valentine Charles	Why are projects like DM2E important for Europeana's future?	Europeana Pro blogpost	14/04/2015	<a href="http://pro.europeana.eu/blogpost/why-are-projects-like-dm2e-important-for-europeanas-future">http://pro.europeana.eu/blogpost/why-are-projects-like-dm2e-important-for-europeanas-future</a>
Joris Pekel	Images for the Future: Lessons learned from 7 years of digitisation	Europeana Pro blogpost	17/04/2015	<a href="http://pro.europeana.eu/blogpost/images-for-the-future-lessons-learned-from-7-years-of-digitisati">http://pro.europeana.eu/blogpost/images-for-the-future-lessons-learned-from-7-years-of-digitisati</a>
Joris Pekel	The Europeana Statistics Dashboard: Let us know what you need!	Europeana Pro blogpost	21/04/2015	<a href="http://pro.europeana.eu/blogpost/the-europeana-statistics-dashboard-let-us-know-what-you-need">http://pro.europeana.eu/blogpost/the-europeana-statistics-dashboard-let-us-know-what-you-need</a>
Antoine Isaac	Latvian Ministry of Culture and Europeana sign Memorandum of Understanding	Europeana Pro blogpost	30/04/2015	<a href="http://pro.europeana.eu/blogpost/latvian-ministry-of-culture-and-europeana-sign-memorandum-of-und">http://pro.europeana.eu/blogpost/latvian-ministry-of-culture-and-europeana-sign-memorandum-of-und</a>
Antoine Isaac	Linked Data Practice at Different Levels of Semantic Precision: The Perspective of Libraries, Archives and Museums	Bulletin of the Association for Information Science and Technology, 41(4), April/May 2015	04-05/2015	<a href="https://www.asis.org/bulletin.html">https://www.asis.org/bulletin.html</a>
Valentine Charles	We want better data quality: NOW!	Europeana Pro blog post and report	12/05/2015	<a href="http://pro.europeana.eu/page/data-quality-etech15-roundtables">http://pro.europeana.eu/page/data-quality-etech15-roundtables</a>
Mark Matienzo, Antoine Isaac	Developing and implementing a technical framework for interoperable rights statements	Europeana Pro blogpost	20/05/2015	<a href="http://pro.europeana.eu/blogpost/developing-and-implementing-a-technical-framework-for-interopera">http://pro.europeana.eu/blogpost/developing-and-implementing-a-technical-framework-for-interopera</a>
Valentine Charles, Antoine Isaac	Enhancing the Europeana Data Model (EDM)	Europeana White Paper	17/06/2015	<a href="http://pro.europeana.eu/publication/enhancing-the-europeana-data-model-edm">http://pro.europeana.eu/publication/enhancing-the-europeana-data-model-edm</a>
Robert Warren, Mia Ridge, Kathryn Rose,	Europeana 1914–1918, User-Generated Content, and Linked Open Data	Abstract for DH2015 Panel on Linked Data and WW1	01/07/2015	<a href="http://dh2015.org/abstracts/">http://dh2015.org/abstracts/</a>

Valentine Charles				
Joris Pekel	Exploring big visual cultural data: an interview with Lev Manovich	Europeana Pro blogpost	24/07/2015	<a href="http://pro.europeana.eu/blogpost/exploring-big-visual-cultural-data-an-interview-with-lev-manovich">http://pro.europeana.eu/blogpost/exploring-big-visual-cultural-data-an-interview-with-lev-manovich</a>
Valentine Charles and Francesca Schulze	Mappings, Application profiles and Extensions for cross-domain metadata in the Europeana context and beyond	TPDL 2015 Tutorial	14/09/2015	<a href="http://tpdl2015.info/tutorials-list/tutorial-mappings-application-profiles-extensions-cross-domain-metadata-europeana-context-beyond/">http://tpdl2015.info/tutorials-list/tutorial-mappings-application-profiles-extensions-cross-domain-metadata-europeana-context-beyond/</a>
Various editors and contributors	Recommendations for Standardized International Rights Statements	RightsStatements.org White Paper	01/10/2015	<a href="http://rightsstatements.org/files/160208recommendations_for_standardized_international_rights_statements_v1.1.pdf">http://rightsstatements.org/files/160208recommendations_for_standardized_international_rights_statements_v1.1.pdf</a>
Various editors and contributors	Requirements for the Technical Infrastructure for Standardized International Rights Statements	RightsStatements.org White Paper	01/10/2015	<a href="http://rightsstatements.org/files/160322requirements_for_the_technical_infrastructure_for_standardized_international_rights_statements_v1.1.pdf">http://rightsstatements.org/files/160322requirements_for_the_technical_infrastructure_for_standardized_international_rights_statements_v1.1.pdf</a>
Henning Scholz	Europeana – Digitale Dienstleistungsinfrastruktur für Europas Kulturerbe	in: Handbuch Kulturportale - Online-Angebote aus Kultur und Wissenschaft, eds E. Euler, M. Hagedorn-Saupe, G. Maier, W. Schweibenz, J. Sieglerschmidt	01/10/2015	<a href="http://www.degruyter.com/view/product/448739">http://www.degruyter.com/view/product/448739</a>
Suzanne Lommers and Jan Korsten	Report on the Re-Use of Europeana data in Inventing Europe Education	Report Foundation for the History of Technology	14/10/2015	<a href="http://www.inventingeurope.eu/wp-content/uploads/2016/01/IE-education-report-September-2015.pdf">http://www.inventingeurope.eu/wp-content/uploads/2016/01/IE-education-report-September-2015.pdf</a>
Various editors and contributors	Report on Enrichment and Evaluation	Report of the EuropeanaTech task force on enrichment and evaluation	29/10/2015	<a href="http://pro.europeana.eu/taskforce/evaluation-and-enrichments">http://pro.europeana.eu/taskforce/evaluation-and-enrichments</a>
Nuno Freire, Valentine Charles, Antoine Isaac	Subject information and multilingualism in European bibliographic datasets: experiences with Universal Decimal Classification	Poster at the International UDC Seminar: "Classification & Authority Control: Expanding Resource Discovery"	29-30/10/2015	<a href="http://seminar.udcc.org/2015">http://seminar.udcc.org/2015</a>
Pablo Uceda Gomez,	The missing decades: the 20th century black hole in Europeana	Blogpost	13/11/2015	<a href="http://pro.europeana.eu/blogpost/the-missing-decades-the-20th-century-black-hole">http://pro.europeana.eu/blogpost/the-missing-decades-the-20th-century-black-hole</a>

Paul Keller				<a href="#">e-in-europeana</a>
Henning Scholz	Europeana Publishing Guide		28/11/2015	<a href="http://pro.europeana.eu/publication/publication-policy">http://pro.europeana.eu/publication/publication-policy</a>
Valentine Charles and Juliane Stiller	Evaluation of Metadata Enrichment Practices in Digital Libraries: Steps towards Better Data Enrichments	SWIB 2015 Conference abstract	28-30/11/2015	<a href="http://swib.org/swib15/slides/charles_enrichment.pdf">http://swib.org/swib15/slides/charles_enrichment.pdf</a>
Hugo Manguinhas, Antoine Isaac, Valentine Charles, Sergiu Gordea, Maarten Brinkerink	Modeling and Exchanging Annotations for Europeana Projects	SWIB 2015 Conference abstract	28-30/11/2015	<a href="http://swib.org/swib15/slides/manguinhas_modeling.pdf">http://swib.org/swib15/slides/manguinhas_modeling.pdf</a>
Europeana Foundation	Europeana Publishing Framework		30/11/2015	<a href="http://pro.europeana.eu/publication/publishing-framework">http://pro.europeana.eu/publication/publishing-framework</a>
Joris Pekel	Presenting the Europeana Publishing Framework	Blogpost	01/12/2015	<a href="http://pro.europeana.eu/blogpost/the-europeana-publishing-framework-the-more-you-give-the-more-you-get">http://pro.europeana.eu/blogpost/the-europeana-publishing-framework-the-more-you-give-the-more-you-get</a>
Joris Pekel	The State of the Commons in Europeana: a 2015 review	Blogpost	08/12/2015	<a href="http://pro.europeana.eu/blogpost/the-state-of-the-commons-in-europeana-a-2015-review">http://pro.europeana.eu/blogpost/the-state-of-the-commons-in-europeana-a-2015-review</a>
Baumann, Gisela; Kusber, Wolf-Hennig; Holetschek, Jörg; Güntsch; Anton; Berendsohn, Walter G.	Out of storage – onto the web. Opening up natural history collections to the public via Europeana	in: Abarca, N. & Jahn, R. (ed.): IUBS 2015 Frontiers in Unified Biology. Abstracts and Program. Berlin. - (ISBN 978-3-946292-01-2, doi: <a href="http://dx.doi.org/10.3372/IUBS2015">http://dx.doi.org/10.3372/IUBS2015</a> )	14/12/2015	<a href="http://www.iubs2015.org/">http://www.iubs2015.org/</a>
Valentine Charles, Antoine Isaac	EDM turns five, so now what?	Europeana Pro blogpost	14/12/2015	<a href="http://pro.europeana.eu/blogpost/edm-turns-five-so-now-what">http://pro.europeana.eu/blogpost/edm-turns-five-so-now-what</a>
Gregory Markus	Who's Using What? column (8 issues)	Europeana Pro blogposts	2015-2016	<a href="http://pro.europeana.eu/tags/floss?page=3">http://pro.europeana.eu/tags/floss?page=3</a>
Gregory	EuropeanaTech Insight	Newsletter of the	2016	<a href="http://pro.europeana.eu/get">http://pro.europeana.eu/get</a>

Markus	newsletter (2 issues)	EuropeanaTech community, published on Europeana Pro		<a href="#">-involved/europeana-tech/europeanatech-insight</a>
Gregory Markus (editor)	Report on the FLOSS Task Force	Report of the EuropeanaTech task force on FLOSS	12/01/2016	<a href="http://pro.europeana.eu/get-involved/europeana-tech/europeanatech-task-forces/europeanatech-floss">http://pro.europeana.eu/get-involved/europeana-tech/europeanatech-task-forces/europeanatech-floss</a>
Valentine Charles, Antoine Isaac	Building an open layer over all knowledge: Europeana joins Annotation Coalition	Europeana Pro blogpost	12/01/2016	<a href="http://pro.europeana.eu/blogpost/building-an-open-layer-over-all-knowledge">http://pro.europeana.eu/blogpost/building-an-open-layer-over-all-knowledge</a>
SHT	Interview Bram Verhees on using Inventing Europe in university education	video	15/01/2016	<a href="https://www.youtube.com/watch?v=16B37E_UFDg">https://www.youtube.com/watch?v=16B37E_UFDg</a>
Jan Korsten	Inventing Europe Brings the Past alive with Europeana	Blogpost Europeana Pro	18/01/2016	<a href="http://pro.europeana.eu/blogpost/inventing-europe-brings-the-past-alive-with-europeana">http://pro.europeana.eu/blogpost/inventing-europe-brings-the-past-alive-with-europeana</a>
Suzanne Lommers	Special issue: Inventing Europe Digital Museum in university teaching	Tensions of Europe Newsletter	21/01/2016	<a href="http://www.inventingeurope.eu/wp-content/uploads/2016/01/Newsletter-January-2016_special-issue-Tensions-of-Europe-newsletter.pdf">http://www.inventingeurope.eu/wp-content/uploads/2016/01/Newsletter-January-2016_special-issue-Tensions-of-Europe-newsletter.pdf</a>
SHT	Inventing Europe Digital Museum in University Teaching	Special issue Tensions of Europe newsletter	31/01/2016	<a href="http://www.inventingeurope.eu/wp-content/uploads/2016/01/Newsletter-January-2016_special-issue-Tensions-of-Europe-newsletter.pdf">http://www.inventingeurope.eu/wp-content/uploads/2016/01/Newsletter-January-2016_special-issue-Tensions-of-Europe-newsletter.pdf</a>
Dirk van Delft	Enlightening Europe	Inventing Europe tour	01/02/2016	<a href="http://www.inventingeurope.eu/story/ediswan">http://www.inventingeurope.eu/story/ediswan</a>
Ad Maas	X-Ray winner of WWII	Inventing Europe tour	01/02/2016	<a href="http://www.inventingeurope.eu/story/an-american-challenge">http://www.inventingeurope.eu/story/an-american-challenge</a>
Martin Kohlrausch	Building a Better World	Inventing Europe tour	01/02/2016	<a href="http://www.inventingeurope.eu/knowledge/communicating-the-city">http://www.inventingeurope.eu/knowledge/communicating-the-city</a>
Wolfram Kaiser	Building Europe on Steel	Inventing Europe tour	01/02/2016	<a href="http://www.inventingeurope.eu/governance/puddling-europe">http://www.inventingeurope.eu/governance/puddling-europe</a>
Valentine Charles, Antoine Isaac	Europeana aligns with the International Image Interoperability Framework (IIIF)	Europeana Pro blogpost	08/02/2016	<a href="http://pro.europeana.eu/blogpost/europeana-aligns-with-the-international-image-interoperability-framework-iiif">http://pro.europeana.eu/blogpost/europeana-aligns-with-the-international-image-interoperability-framework-iiif</a>



Vladimir Alexiev, Antoine Isaac, Jutta Lindenthal	On the composition of ISO 25964 hierarchical relations (BTG, BTP, BTI)	International Journal on Digital Libraries, 17(1), March 2016	01/03/2016	<a href="http://link.springer.com/article/10.1007/s00799-015-0162-2">http://link.springer.com/article/10.1007/s00799-015-0162-2</a>
MUSEU	La libre réutilisation des données diffusées sur Europeana	Joconde newsletter published by the office for the digital diffusion of the collections of the French museums	01/03/2016	<a href="http://www.culture.gouv.fr/documentation/joconde/fr/aperos/joconde-info-24.pdf">http://www.culture.gouv.fr/documentation/joconde/fr/aperos/joconde-info-24.pdf</a>
Suzanne Lommers	Lecture: The Background Project behind the Inventing Europe Digital Museum for Science and Technology	YouTube video. Lecture material for university teaching	04/03/2016	<a href="https://www.youtube.com/watch?v=AttOLtQYiPU">https://www.youtube.com/watch?v=AttOLtQYiPU</a>
Kusber, Wolf-Hennin g; Baumann, Gisela; Güntsch, Anton; Berendsohn, Walter G.	Opening up phycological collections to the public via Europeana	in: Gilbert, M. & Wilhelm C. (ed.): Program of the 16th Scientific Conference of the Phycology Section of the German Botanical Society, 6th-9th March 2016, Leipzig. - 2016, P. 70.	06/03/2016	<a href="http://www.dbg-phykologie.de/Phykologentagung">http://www.dbg-phykologie.de/Phykologentagung</a>
Valentine Charles, Antoine Isaac	The quest for better data quality has started!	Europeana Pro blogpost	08/03/2016	<a href="http://pro.europeana.eu/blogpost/the-quest-for-better-quality-data-has-started">http://pro.europeana.eu/blogpost/the-quest-for-better-quality-data-has-started</a>
Joris Pekel	What I will do as Europeana's Impact Analyst	Europeana Pro blogpost	24/03/2016	<a href="http://pro.europeana.eu/blogpost/what-i-will-do-as-europeana-s-impact-analyst">http://pro.europeana.eu/blogpost/what-i-will-do-as-europeana-s-impact-analyst</a>
SHT	Interview Johan Schot on using Inventing Europe in university education	YouTube video.	30/03/2016	<a href="https://www.youtube.com/watch?v=6BA4u44qy3E">https://www.youtube.com/watch?v=6BA4u44qy3E</a>
SHT	Interview Bram Verhees on Using Inventing Europe in University Education,	YouTube video	30/03/2016	<a href="https://www.youtube.com/watch?v=16B37E_UFDg&amp;noredirect=1">https://www.youtube.com/watch?v=16B37E_UFDg&amp;noredirect=1</a>
SHT	Developing Research and Education Goals through Inventing Europe	Special issue Tensions of Europe newsletter	31/03/2016	<a href="http://www.inventingeurope.eu/wp-content/uploads/2016/05/Newsletter-March-2016_-Special-Issue-Tensions-of-Europe-newsletter.pdf">http://www.inventingeurope.eu/wp-content/uploads/2016/05/Newsletter-March-2016_-Special-Issue-Tensions-of-Europe-newsletter.pdf</a>
Frank Veraart	In Tandem Innovation	Inventing Europe tour	04/04/2016	<a href="http://www.inventingeurope.eu/story/blinded-by-success">http://www.inventingeurope.eu/story/blinded-by-success</a>
Joris Pekel	The Europeana Statistics Dashboard is here	Europeana Pro blogpost	06/04/2016	<a href="http://pro.europeana.eu/blogpost/introducing-the-euro">http://pro.europeana.eu/blogpost/introducing-the-euro</a>

				<a href="#">peana-statistics-dashboard</a>
Suzanne Lommers	Enriching University Learning with Europeana	Blogpost Europeana Pro	07/04/2016	<a href="http://pro.europeana.eu/blogpost/enriching-university-learning-with-europeana">http://pro.europeana.eu/blogpost/enriching-university-learning-with-europeana</a>
Kusber, Wolf-Hennig; Baumann, Gisela; Güntsch, Anton; Berendsohn, Walter G.	Opening up diatom collections to the public via Europeana	in: 10th Central European Diatom Meeting. 20-23 April 2016 Budapest, Hungary. Abstract & Program Book. Budapest - 2016, Pp. 46-47.	20/04/2016	<a href="http://10thcedm.okologia.mta.hu/">http://10thcedm.okologia.mta.hu/</a>
Suzanne Lommers	Co-Creating European History in the University Classroom	Case-Study for use by Europeana	04/05/2016	-
Anne-Mirthe Dieudonné	Myth of the National Engineer	Inventing Europe tour	09/05/2016	<a href="http://www.inventingeurope.eu/knowledge/showing-off-to-the-world">http://www.inventingeurope.eu/knowledge/showing-off-to-the-world</a>
Various editors and contributors	Data on the Web Best Practices	W3C Working Draft	19/05/2016	<a href="https://www.w3.org/TR/dwbp/">https://www.w3.org/TR/dwbp/</a>
Various editors and contributors	Data on the Web Best Practices: Data Quality Vocabulary	W3C Working Draft	19/05/2016	<a href="https://www.w3.org/TR/vocab-dqv/">https://www.w3.org/TR/vocab-dqv/</a>
EUROCLIO	The Power of Images - Europeana collections help students learn how visuals have been used to influence the way people think	Blog Post	23/05/2016	<a href="http://euroclio.eu/voice/the-power-of-images/">http://euroclio.eu/voice/the-power-of-images/</a>
SHT	Inventing Europe user statistics with a special focus on university education	Statistical report	14/06/2016	-
SHT	Recommendations on Science and Technology Themes of Relevance for Educational Communities (for further data aggregation on Europeana)	Report with recommendations for Europeana	30/06/2016	-
Timothy Hill, David Haskiya, Antoine Isaac, Hugo	Europeana Search Strategy	Europeana White Paper	30/06/2016	<a href="http://pro.europeana.eu/publication/europeana-search-strategy">http://pro.europeana.eu/publication/europeana-search-strategy</a>

Manguinhas , Valentine Charles				
Member Council and Management Board representatives	Association activities: Presentation of Members Council representatives and Membership campaign, Elections campaign, AGM organisation and call for participation, etc.	Europeana Pro blogs	On going publications	<a href="http://pro.europeana.eu/blogpost/and-the-results-are-in-introducing-your-new-members-council-representatives">http://pro.europeana.eu/blogpost/and-the-results-are-in-introducing-your-new-members-council-representatives</a>
Member Council and Management Board representatives	Association activities: Newsletter monthly publications	Europeana Pro newsletter space. Newsletters are sent to all Association members	On going publications	<a href="http://pro.europeana.eu/our-network/network-association-newsletters">http://pro.europeana.eu/our-network/network-association-newsletters</a>
#	Issue #09	VIEW Journal	Regular publication by the EUscreen expert hub, issue #9 published in June	<a href="http://viewjournal.eu">viewjournal.eu</a>

## 7. Performance indicators

No.	Indicator	Method of measurement	Exp. Prog. Y1	Real Prog. end of project	Comments
1.1	Meetings organized for aggregators and/or data providers (workshops, trainings, Forum)	Sum of 1.2 and 1.3	16	22	-
1.2	Meetings organized by EF for aggregators and/or data providers (workshops, trainings, Forum)	Number organised	6	7	3 Aggregator Forum meetings and 4 meetings with national aggregators
1.3	Meetings organized by Aggregator Consortium Partners for aggregators and/or data providers (workshops, trainings, Forum)	Number organised	10	15	-
1.4	Number of workshops with all aggregators in the consortium on aggregation infrastructure innovation	Number organised	3	3	-
1.5	Metadata records provided in native EDM	Number of records	20 mln	34,122,006	-
1.6	Downloadable digital objects with direct links	Number of objects	+2 mln	+1 mln (13,278,042)	Measure is an estimate. With technical metadata being extracted we get a much more precise and larger number soon.
1.7	Digital objects with geo-location data	Number of records	+3 mln	+4.5 mln (18,134,879)	-
1.8	Metadata records in the Europeana DSI database	Number of records	+5 mln	+9.5 mln (53,110,475)	-
1.9	Digital objects under rights statements that allow reuse	Number of objects	+4 mln	+7.1 mln (28,552,864)	-
1.10	Number of major cultural cultural institutions in the Europeana DSI	Number of institutions	+10 (1 per month)	+150	-
2.1	Number of times an item is viewed	Sum of 2.2; 2.3; 2.4; 2.5; 2.6	66 mln	147.434.701	This figure is abnormally high because

					one image was used as exemplary for all French paintings on Wikimedia projects.
2.2	Number of impressions of Facebook updates	Number of impressions	13 mln	12.582.886	Facebook algorithm change
2.3	Number of impressions of Pinterest pins	Number of impressions	3 mln	6.227.155	-
2.4	Number of impressions on Europeana's portal	Number of impressions	20 mln	19.166.904	-
2.5	Impressions of Europeana's content on Wikimedia projects	Number of impressions	30 mln	109.457.756	This figure is abnormally high because of one image was used as exemplary for all French paintings on Wikimedia projects.
2.6	Number of visits to Europeana's portal	Number of visits	6 mln	5.801.429	-
2.7	Number of engaged users (i.e. Clicking/sharing/liking)	Sum of 2.8; 2.9; 2.10	350.000	311.561	-
2.8	Number of engaged users on Facebook	Number of likes	300.000	233.836	Facebook algorithm change
2.9	Number of engaged users on Pinterest	Number of participants	25.000	40.859	-
2.10	Number of retweets, favourites, replies, clicks on Twitter	Number of retweets	25.000	36.866	-
2.11	Number of new followers on Facebook	Number of followers	15.000	11.352	Facebook algorithm change
2.12	Number of new followers on Twitter	Number of followers	5000	6060	-
2.13	Number of collection days (in cooperation with Facts and Files)	Number of days organised	3	8	-
2.14	Number of trainings on Collection Days	Number of days organised	3	3	-
3.1	Number of applications showcased on	Number of	100	161	-

	Labs	applications			
3.2	Business requirements for Europeana Inc. defined	Yes/No	completed	completed	-
3.3	Number of partnerships established	Number of partnerships	6	6	-
3.4	Number of active API-keys	Number of keys	+50	+50	-
4.1	Integration of new domains in EDM	Number of new domains	1	2	-
5.1	Membership programme	Yes/No	In place	In place	-
5.2	Association Governance fully set up and by-laws agreed and published	Yes/No	accomplished	Accomplished	-
5.3	Successful AGM 2015	Number of attendants	250 Network representatives attending	234	-
5.4	Agreed plan for structural contributions by member states	Yes/No	In place	In place	-
5.5	Number of unique users of Europeana Professional	Number of users	+ 95,000	163,980	-
6.1	User satisfaction Europeana DSI products (portal, Europeana Research, Statistics dashboard and developed channels)	Survey of users	75% satisfied or better	Collections/ Portal: 91% (Apr 2016) Music Collections: 81% (Jan 2016) Pro: 87% (May 2016) Labs (website): 94% (July 2015) APIs: 83% (July 2015)	Satisfied = minimum rating of 3 on a scale from 1-5  Statistics Dashboard and Research service will be rated in DSI-2 as will the Art History Collections.
6.2	New portal Europeana.eu	Yes/No	Yes	Yes	-
6.3	Number of developed channels	Number of channels	4	3	4th channel (Newspapers) is in internal

					testing; Fashion is in alpha version
7.1	Uptime existing systems	Uptime of services	99%	98.5%	Failure to meet the KPI due to a catastrophic failure in April at our hosting provider
8.1	(Presidency) events attended by a number of policymakers and political influencers from across Europe and recommendations formulated	Number of events organised	2 (Latvia will happen under Europeana v3) (March 2015), Luxembourg and Netherlands)	2	-