EUROPEANA DSI-4
Annual report, August 2019

As an initiative of the European Union, the Europeana DSI-4 project is implemented by a consortium of 23[1] partners with Europeana Foundation as coordinator.

Contents

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1 As of February 2019 the consortium exists of 23 partners. Because of a strategic change of the business direction of Kennisland (KL), the organisation will no longer be involved in cultural heritage. This means that KL is not able to fulfill their requirements committed under Europeana DSI-4 and KL withdrew from the consortium on 1 February 2019. Europeana Foundation took up the responsibilities of KL in the consortium on 1 February 2019.

The Europeana Initiative

The Europeana Digital Service Infrastructure (DSI) showcases and provides online access to Europe's digital cultural heritage. As an initiative of the European Union, and funded under the Connecting Europe Facility (CEF), Europeana DSI-4 is the project that operates the Europeana DSI. The service is provided by a consortium of 23 partners, coordinated by the Europeana Foundation.

Together with the European Commission and the Member States, the Europeana Initiative fulfills the European Union's aim to enable easy access to digital culture and resources, for citizens, education, academic research, and the cultural and creative industries.

We collaborate with the Europeana Network Association (ENA), a strong and democratic community of 2,400+ experts working in the field of digital heritage. We also closely work with the Europeana Aggregators' Forum (EAF), consisting of national, domain and thematic aggregators. As a collaborative effort, the consortium partners EAF and ENA work towards our goals in line with the Europeana strategy and towards a strong public service that supports cultural heritage institutions (CHIs) in their digital transformation. Our strategic plan this past year was straightforward: make it easy and rewarding for CHIs to share high-quality content; scale with partners to reach audiences in education, academic research and creative industries; and engage European citizens on our websites and via participatory campaigns.

This annual report summarises the main outcomes achieved in the first year of Europeana DSI-4, covering the timeframe from 1 September 2018 until 31 August 2019.

Europeana DSI-4 consortium at the kick-off meeting in Hilversum, Netherlands, October 2018 by Europeana Foundation, CC BY-SA.

Europeana DSI: online access to Europe's cultural heritage

Europeana Collections provides access to over 57 million digitised cultural heritage objects from more than 3,700 CHIs: libraries, museums, archives and audiovisual collections. Of these, 42% of the objects are in the public domain or licensed for free reuse while an additional 21% allow for some kind of reuse, for example, educational purposes. High-quality material[2] is featured in 12 thematic collections, over 40 exhibitions, 170 galleries and more than 670 blogs.

User satisfaction and usage[3]

To receive feedback from users, we measured user satisfaction via a short questionnaire as well as via a Net Promoter Score (NPS) for Europeana Collections quarterly. In the past year, these were measured on three occasions. On average, 83% of the Europeana Collections users surveyed, rated their level of satisfaction as satisfied, very satisfied or totally satisfied with the website. Europeana Collections also achieved a good NPS score, with an average of 38[4].

In the past year, our products (Europeana Collections and blogs, transcribathon.eu) reached on average about 393,000 site visits per month, which is below the target of 500,000 monthly visits. Yet, some months we reached 90-95% of this target. Usage statistics show that traffic to Europeana Collections increased over time. Comparing metrics from the past years we see a continuous increase in visits (see graph).

Comparing Europeana DSI-3 with Europeana DSI-4 we can see an increase of 13,4% in traffic. This shows that the combined effort of communication and dissemination as well as platform developments under Europeana DSI-4 had a positive impact.

The main source of traffic remains organic search with multiple niche searches. This is a sign of long-tail traffic on which we have limited influence. We are still experiencing a high level of dependency on Google. Our efforts on Search Engine Optimisation (SEO) such as publication of Schema.org for our entity and item pages shall make these pages more visible on search engines such as Google. Particularly successful in generating traffic was curated content such as blogs and exhibitions, confirming our efforts towards SEO of curated content. We will continue to focus on the generation of traffic to areas of the website we do have control over (thematic collections, exhibitions, galleries, blogs) and on diversifying traffic sources to reduce the dependency on Google.

We can also see a lot of potential for the education market to generate traffic to Europeana Collections with more educational platforms referring to our content. This points to the success of our outreach activities which introduce Europeana Collections as a resource for educators.

2 High quality is defined as tier 2 or above of the Europeana Publishing Framework (EPF).
3 Average figures are calculated by taking monthly metrics recorded between 1 September 2018 and 31 August 2019. Figures are rounded.
4 An NPS is calculated based on responses to a single question: 'How likely is it that you would recommend our company/product/service to a friend or colleague?' NPS rating is on a scale of -100 to +100, with a score of +50 considered excellent. https://en.wikipedia.org/wiki/Net_Promoter
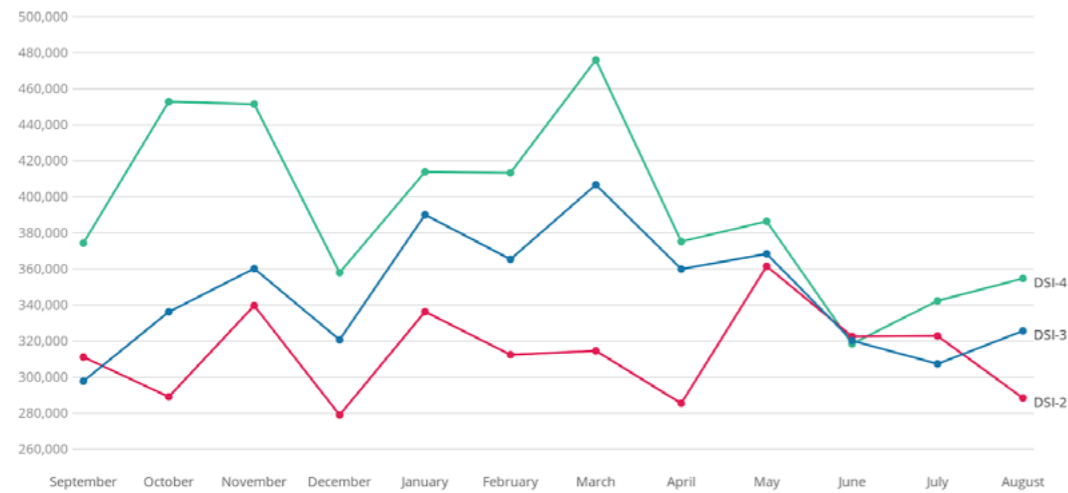
Traffic to Europeana Collections, Europeana blog and the Transcribathon.eu comparing Europeana DSI-2, DSI-3 and DSI-4

We also aimed to reach a user return rate of 30% on Europeana Collections while after the first year of Europeana DSI-4 we have about 13%. The result is the same for Europeana DSI-3, which means we did not achieve an increase. Although we feel that the KPI of 30% is set too high, we aim to see a steadily growing user return rate from year to year. Our research shows that users value our unique value proposition of offering one access point to explore all European cultural heritage. The main source of frustration that our users face is the findability of items. Incomplete metadata and multilinguality contribute to this as does our search functionality that is based on keywords instead of natural language. To increase our user return rate faster we feel

that it is critical to improve the accuracy of our search. This year we are redesigning the user interface for the search experience, incorporating an entities browse functionality for context, offering the user transparency when it comes to multilingualism and using contextual filters to narrow down the search results[5]. The main outcomes of this work are expected for the second year of Europeana DSI-4 which will significantly improve the user experience and in turn hopefully increase the user return rate.

On the other hand, we can see that user return rate on curated formats such as exhibitions (15,2%) and galleries (23,2%) was higher.

Metric	Europeana DSI-3	Europeana DSI-4	In-/decrease	Target Aug 2019
Traffic (total)	4,157,902	4,716,738	**+13.4%**	6,000,000[7]
Returning visitors	13%	13%	0%	30%
Downloads	258,750	352,682	**+36.3%**	180,000
Click-throughs to partners websites	639,834	241,200	**-62,3%**	800,000

Usage statistics Europeana Collections[6]

When comparing engagement figures on Europeana Collections we see a positive trend in number of records downloaded, corresponding to an increase of 36.3%. Number of click-throughs is behind target. We assume that as data quality improves over time on Europeana Collections there is less need for users to click-through to partners websites to explore the content. To increase traffic to partners' websites we placed the partner institutions prominent on the new record page, visible for users to click.

The top ten countries from which users visited Europeana Collections are nine EU Member States and the United States. It's worth noting that most of the countries generating visits are the same ones that provide the most content to Europeana Collections. EU Member States that generate traffic are: The Netherlands (10.05%); Spain (9.19%); Germany (8.45%); Italy (5.88%); France (4.11%); Poland (3.96%); United Kingdom (3.71%); Sweden (3.19%); and Denmark (2.41%). The United States was (9.03%).[8]

Communication and dissemination

Communication and dissemination to our end-users (European Citizens) aim to increase new visits and re-visits to Europeana DSI. We engaged users with editorials on Europeana Collections and promoted this content via our various communication channels. Our end-user newsletter in two languages (French, English) for example, reached over 51,200 subscribers each month highlighting the latest news and content. We also use social media as a means of sharing content and engaging people through participatory activities (e.g. Transcribathon.eu).

Europeana's editorial strategy statement reads: 'With Europeana Collections editorial we present engaging cultural heritage on diverse topics and from diverse sources, for learning, for work or just for fun'. We use cultural heritage to tell users curated stories through a number of formats including blogs, galleries and exhibitions. Editorial is produced by the Europeana DSI-4 consortium and Generic Services project partners.

In January 2019 we introduced our first season (Women's season). Traditionally Europeana ran year-long campaigns, such as the Migration campaign in 2018 but we realised that smaller campaigns, which we call 'seasons' have the potential to maximise the impact of our actions. Seasons can be defined as thematic campaigns, of varying scope and duration, designed to highlight and promote high-quality content on Europeana's platforms and elsewhere. In 2019 we feature two seasons: from January-March the 'Women's season, with a strong editorial focus and from mid-September until mid-December we will introduce 'Europe at Work', a season with strong participatory elements.

Curated content[9] was particularly successful as part of the seasonal campaign and their promotion on social media. Promotion on social media not only generated traffic to Europeana Collections, but also achieved high engagement of cultural heritage material on the platforms themselves.

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5 More information on traffic and user return rate can be found in C.2 Users and usage deliverable available on the Europeana DSI-4 project page.

6 Comparing average figures recorded from 1 September 2017 to 31 August 2018 (Europeana DSI-3) and from 1 September 2018 to 31 August 2019 (Europeana DSI-4). Figures are rounded.

7 Equals to 500,000 visits per month.

8 Measures taken from C.2 Users and usage report, metrics recorded in the period of Q1 2019.

9 More information on curated content can be found in C.3 Content supply and reuse deliverable available on the Europeana DSI-4 project page.

Thematic and seasonal campaign(s)

Having continued throughout the year as part of the European Year of Cultural Heritage (EYCH) 2018, the Europeana Migration campaign and the 1914-18 Centenary Tour campaign both finished in November/December 2018.

The Europeana Migration campaign looked at migration to and from Europe historically and aimed at showing that the geographical movement of people makes culture richer. Our cultural heritage shows us that the Europe we inhabit today is the result of a flow of people and ideas, and that migration is woven through and enriches our everyday lives in many ways. Throughout 2018 we ran 18 collection day events and associated exhibitions, lectures, panel discussions and social events in 12 different countries involving museums, libraries, archives and audiovisual collections across Europe that specialise in or are interested in the theme of migration. At collection days, people were invited to share their stories and material relating to migration and family history. We worked with more than 30 partner organisations, with more than 3,000 people attending campaign events. To date, 692 stories have been shared on collection day events with 595 published so far. These stories

contain 1,183 objects. The campaign was closely connected to the Generic Services project Migration in the Arts and Sciences which created the Europeana Migration thematic collection about migration to, from and within Europe, and the effects migration has had on European culture (see the corresponding section).

The 1914-1918 Centenary Tour was a campaign to commemorate the centenary of the end of the First World War. This campaign highlighted and built on the work of Europeana 1914-1918 since its start in 2011. The Europeana 1914-1918 Centenary Tour started with the launch of an online exhibition, Visions of War. Every month we highlighted a different part of the Europeana 1914-1918 collection. It encouraged public participation with and fostered a connection to cultural heritage content through on and offline events and activities. In total the campaign saw four transcribathon events (Greece, Germany, Italy, Belgium) and one collection day event (Hungary). The campaign finished with a closing event in collaboration with the House of European History which took place in Brussels in November 2018. During the event 17 previous

Contributors share their migration stories and objects, 2018 by Europeana Foundation, CC BY-SA.

transcribathon winners from around Europe participated in a European transcribathon championship. The transcribers came from Austria, Cyprus, Germany, Greece, Italy, Latvia, Romania, Poland and Spain, and competed in eight teams. The talented and multi-linguistic transcribers crossed the finishing line with over 313,000 transcribed characters involving 298 documents. European Commissioner for Digital Economy and Society, Mariya Gabriel attended the closing event and spoke about the importance of commemoration and cultural heritage for the digital transformation of Europe's society and economies.

In March 2019, we ran the Women's season, promoting stories and editorials about women's history on our social media each day of the month. We told these stories using cultural heritage content from 80 institutions from over 20 countries around the world. As part of the season we published new editorial: 12 blogs, four galleries and one exhibition. With over 27,000 visits to our Women's season

blogs during March, the traffic to the Europeana Collections blog was 138% higher in March than in February. On International Women's Day (8 March) we published the final chapter of Pioneers: Trailblazing women in the arts, sciences and society, an online exhibition highlighting the lives and achievements of eight remarkable European women in the arts, sciences and society. The exhibition performed extremely well with about 35,000 visitors so far, excellent audience reviews and an NPS of 67[10].

We liaised with data-providing institutions and invited guests to support curation. In particular generic-services project partners Rise of Literacy, Migration in the Arts and Sciences, and Europeana Common Culture contributed to our editorial efforts. Over the period of the projects, over 50 editorial features were curated and published for Europeana Migration (with an additional 25 published or scheduled after the project period ended), and over 40 editorials were contributed by the Rise

What users say about the Pioneers exhibition

'It's informative and adds perspective to art that I'm not familiar with' (US)

'[I like the most] the range and quality of the images with the detailed background information, presented in an interesting way.' (UK)

'[I like the most] aesthetic ergonomy for mobile screen, good choice of illustrations according to the text, fluidity of reading and looking.' (France)

'I've learnt something new about prominent European women of the past. It's a great start to make these women become well known actors of our history; It makes me hope that even more women will be regularly included in the reconstruction of the past.' (Netherlands)

'This is a must [sic] needed project to enhance knowledge and boost recognition for women['s] contribution to all disciplines of human knowledge. It can be used not only to showcase then but as a[n] education tool as a source for schools material etc.' (Spain)

10 NPS rating is on a scale of -100 to +100, with a score of +50 considered excellent.

THE RISE OF LITERACY IN EUROPE

Jean de Meun writing in his study from BL YT 21, f. 69v, Guillaume de Lorris and Jean de Meun British Library
⊕ Public Domain

HISTORY	HISTORY	PHOTOGRAPHY	MIGRATION
HERITAGE AT RISK	PIONEERS	AN EYE FOR DETAIL	PEOPLE ON THE MOVE
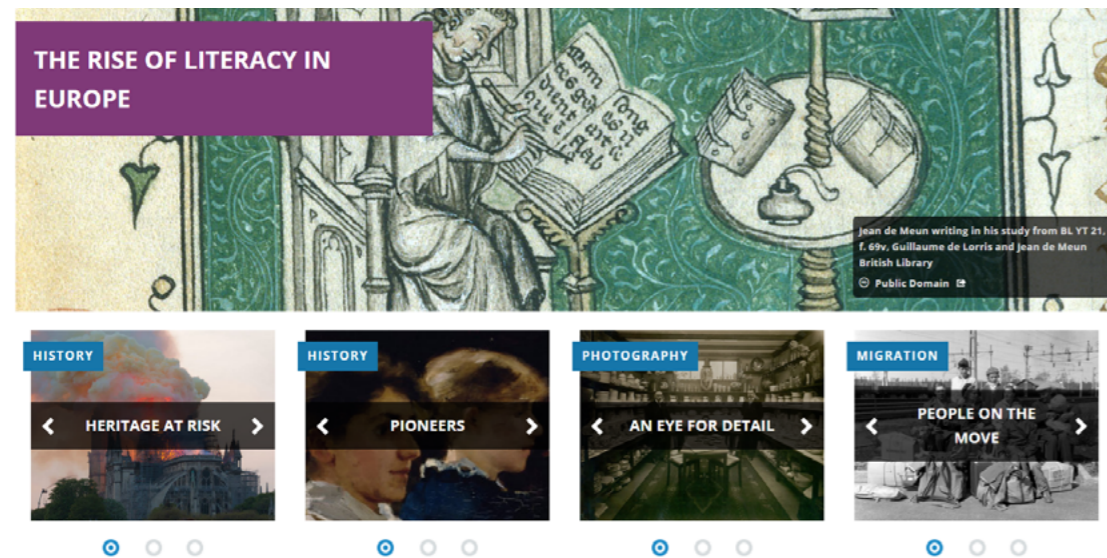
Exhibitions published under Europeana DSI-4

of Literacy project for the thematic collections Europeana Manuscripts and Europeana Newspapers (with 30 items published and 10 items scheduled). Project partners from Europeana Common Culture so far contributed five editorials, with a further 15 planned for autumn 2019.

We saw that over time, the most popular curated content is a mix of newly created content and content online for a longer period. Newly published content received traffic mainly from social media and direct traffic as a result of communication and dissemination activities. Content online for a longer period performed well in search engines. We saw that curated content has potential for a long lifespan if it combines high-quality content and a topic of high interest to users. This confirms the SEO potential of curated content, when findable on Google search.

Transcribathon.eu

Transcribathon.eu produces transcriptions of documents through crowdsourcing, thus making them more accessible. Currently, Transcribathon.eu transcribes stories and official histories of the First World War (Europeana 1914-1918). We organised transcribathons where participants were invited to transcribe text documents in participatory events. Under Europeana DSI-4, five transcribathons (either online or physical) were organised in cooperation with heritage institutions throughout Europe (Germany, Italy, Belgium, Austria, Romania). In the period, almost 3,000 documents were transcribed and the platform gained about 400 new users.

11 Comparing metrics from Europeana DS-3 with DSI-4 can't be done because Facebook changed the algorithm and the way impressions are calculated (showing on user's screen versus really seen) to limit the reach of business pages.

12 Numbers displayed were recorded in August 2019. Increase (%) is calculated by comparing metrics from August 2018 and August 2019.

Work with third-party platforms and social media

We used social media as a means of sharing content in the promotion of Europeana Collections and to support seasonal campaigns, and we engaged users through participatory activities such as Transcribathon events and GIF IT UP competitions.

Social media
Our activities on social media were very successful with about 157.7 million total impressions on Facebook, Twitter, Pinterest, Instagram, and GIPHY in the past year. We reached many more users than initially targeted (target August 2019: 82 million impressions). In Europeana DSI-3, we had 171 million total impressions on social media, but these metrics can't be compared because of the change in calculating impressions on Facebook - showing user's the feed in 2017-2018 versus really being seen by the user in 2019[11]. This means our performance on social media in 2019 is in fact better. We also gained many new fans/followers on our channels (see table).

The new editorial strategy and the introduction of seasons created an opportunity to use the success on social media towards generating traffic. While in Europeana DSI-3 social media generated around 5% of total traffic, we managed to increase traffic from social media to 10% in the first year of Europeana DSI-4. The potential is high and we expect further increase, especially during the seasons. While designing and planning social media content we also saw the importance of taking advantage of context and timing (e.g. posts for the women's history month were successful) and the ability to react to external events (e.g exhibition 'Heritage at Risk' referring to the fire at Notre Dame). Participating in global social media movements and events is also a way of increasing the brand recognition of Europeana DSI and connecting European cultural heritage to people who wouldn't interact with this kind of content by themselves.

In February 2019, we started our activities on Instagram. The potential of the platform will be further explored through optimising our daily posts, and also through an extensive use of Instagram as part of seasons and in the promotion of exhibitions.

Followers/fans on social media[12]
Facebook	c. 110,650 (+3.9%)
Twitter	c. 36,040 (+9.7%)
Pinterest	c. 17,010 (+36.1%)
Instagram	c.1,400 (-)

Third-party platforms
Our collaborations with third-party platforms are excellent ways to promote cultural heritage material to users. Throughout the month of March 2019, we published four paintings by women artists in the DailyArt app (over 700,000 users) and wrote four guest articles for the DailyArt Magazine featuring women in the arts. The four paintings presented in the app received over 1.4 million views. Content in the category Europeana on Wikimedia generated over 153.2 million impressions in the past year.

In October 2018, the fifth edition of GIF IT UP was launched where users were asked to create animated GIFs from openly licensed cultural heritage material. The competition increased reach to new and wider audiences. We collaborated with international partners including DPLA (Digital Public Library of America), Digital NZ (New Zealand), Trove (National Library of Australia), and the leading online GIF site GIPHY to run and promote the competition. In total the competition had 253 submissions. A jury selected the winning submissions while the public had a chance to select their favourites during a voting. In the last year, GIFs created with Europeana content on GIPHY reached about 87 million impressions.

Europeana DSI: platform development

We maintained and continuously improved Europeana DSI's main services and functionalities. This includes an easy and rewarding data publishing process, a satisfying platform experience for our users, and a sustainable and high-performing platform infrastructure.

Easy and rewarding data publishing

Metis V1.0 was released in production in November 2018. Metis offers a fully functional data and aggregation infrastructure, which allows to import, transform, validate and enrich metadata for aggregators. Since this first release, developments for Metis focused on rearchitecting critical services such as media processing and link checking to support platform needs, while also making key changes to the user interface to help staff work more efficiently during ingestion. The complexity of the system also required significant upgrade and maintenance activity to continually take place.

Main releases since Metis V1.0 was released include:

Metis V1.1 introduced a new version of the Media Service to support improved generation of technical metadata and thumbnails. The new media service was also run independently of Metis so as to process legacy datasets that lack technical metadata and/or thumbnails for tier calculations. A full set of technical metadata for the entire database is now available to provide an exact overview of the data quality in the Europeana DSI based on tier statistics according to the Europeana Publishing Framework (EPF).

Metis V1.2 included the redesigned version of the Link Checking service to support data quality goals on the data ingestion side, as part of other efforts towards resolving broken links.

Metis V1.3 added normalisation processing of dc:language (language of the content provided to Europeana) and xml:lang attributes in the metadata (language of the metadata itself) to support multilingual browsing in Europeana Collections.

Metis V1.4 added the calculation of content and metadata tiers as part of the Metis indexing services. Any new published data will get content and metadata tier annotations. In addition, the whole database was reindexed to add tier annotations to all items.

Throughout the year the Metis user interface was continuously improved based on user interviews run in October 2018. In July 2019, we finished implementing all improvements as suggested.

Developments towards new harvesting processes
We continued our experiments, especially investigating the use of Linked Data, IIIF (International Image Interoperability Framework) and Schema.org. We created a guide for data officers to harvest IIIF datasets using our experimental software (now 'Data Aggregation Lab') and we harvested and ingested datasets using it in Europeana's production system. We also developed recommendations for dataset descriptions to be used for Linked Data (Schema.org) harvesting.

Improved Europeana Collections experience

Our aim is to reach 500,000 visits per month with a 30% user return rate on Europeana Collections (see section 2.1). To achieve this we are focussing on making the site more interesting to browse, more accessible through multilingualism, faster and more accurate to search, and better discoverable by Google.

In the past year, we released two new thematic collections (Europeana Newspapers and Europeana Archaeology), worked on the new item page, and performed tests for the new browse features. Additionally, we started evaluating new components and tested frameworks to improve both the interaction speed and quality of the portal experience (e.g. accessibility by users with sensory impairments).

Europeana Newspapers
In December, we published a new thematic collection, Europeana Newspapers. This collection currently gathers over four million newspaper pages, spanning four centuries and 20 countries from across Europe. More than 800,000 newspaper issues are available in Optical Character Recognition (OCR) full-text, meaning they are fully searchable and readable in text format.

Europeana Newspapers involved a huge amount of development work, most of it on the backend side. Newspapers are served over IIIF and have associated full-text which by nature is complex and requires precision. Developing this new functionality meant facing a lot of data, technical and coordination challenges. Significant new functionality and

technical infrastructure were developed such as a new EDM model for full-text, new APIs, new index, new browse pages and full-text display on item pages, and a new date filter. The publication of Europeana Newspapers was the culmination of 18 months of work.

In the past months, we monitored the performance of the collection and fixed issues/bugs, mainly towards the full-text experience. This work was completed and Europeana Newspapers was officially launched via various channels in July. We focussed on curated editorial using content from the collection and on two 'professional' interviews with experts using the collection in interesting ways.

Europeana Archaeology
Another new thematic collection - Europeana Archaeology - was published in early December 2019. Europeana Archaeology gathers over 2 million items (images, texts, 3D objects, videos) of archaeological heritage from palaeolithic to contemporary times including movable and immovable heritage, archaeological landscapes, and archaeological archives. We published several editorials both contributed by the network as well as the running Generic Services project Europeana Archaeology.

New item page
Over 72% of total visits include an item page. In December 2019, we launched a new item page (see screenshot). The item page is designed to increase connectivity with other content on Europeana. When a user is on the new item page and that item exists in a gallery, exhibition or blog post, or relates to an entity the related content will be promoted on the right-hand side. This means that more than 25%[13] of our records will be connected to some other related content automatically. This effort shall encourage visitors to further explore content on Europeana Collections and also increase re-visits.

Transform browse experience across collections
To cater to the audiences that are not looking for anything specific and come to Europeana Collections to be inspired, we included an extended browse experience centred around entities. These are automated relations between items, subjects, and professions based on the item's metadata that happen at the Search API level. These detected connections allow us to present items in contextual groupings, making them easier to discover.

We also created associative and hierarchical connections between the entities which we display on the subject and profession pages. These connections are based on genres, e.g., the art movements Cubism and Art Nouveau will be related to Art, and so will the painters Johannes Vermeer and Rembrandt. These relationships allow us to present our collection of items in a structured manner that tells the story of European cultural heritage — offering users various access points into the collection.

Transform multilingual collections experience
We evaluated the use of eTranslation for multilingual support and experimented on applying eTranslation to translate selected exhibitions. We documented our current translation strategy for the various Europeana components (such as portal, exhibitions, metadata), how languages are displayed and searched, and which languages we need to focus on. We also continued experiments with the eTranslation API (for queries). To be able to identify the best options for coping with our multilingual challenges, we kept a close interaction with various teams involved in the development of eTranslation. The Europeana presidency event in Finland (October 2019) will focus on needs, expectations and ways forward for multilingualism in digital cultural heritage.

We also updated user interface (UI) localisation processes[14] and established a localisation policy. Our approach for the localisation of metadata is still in progress which will influence the selective field and locale responses from search, and record APIs for faster results (depending on decision for language strategy).
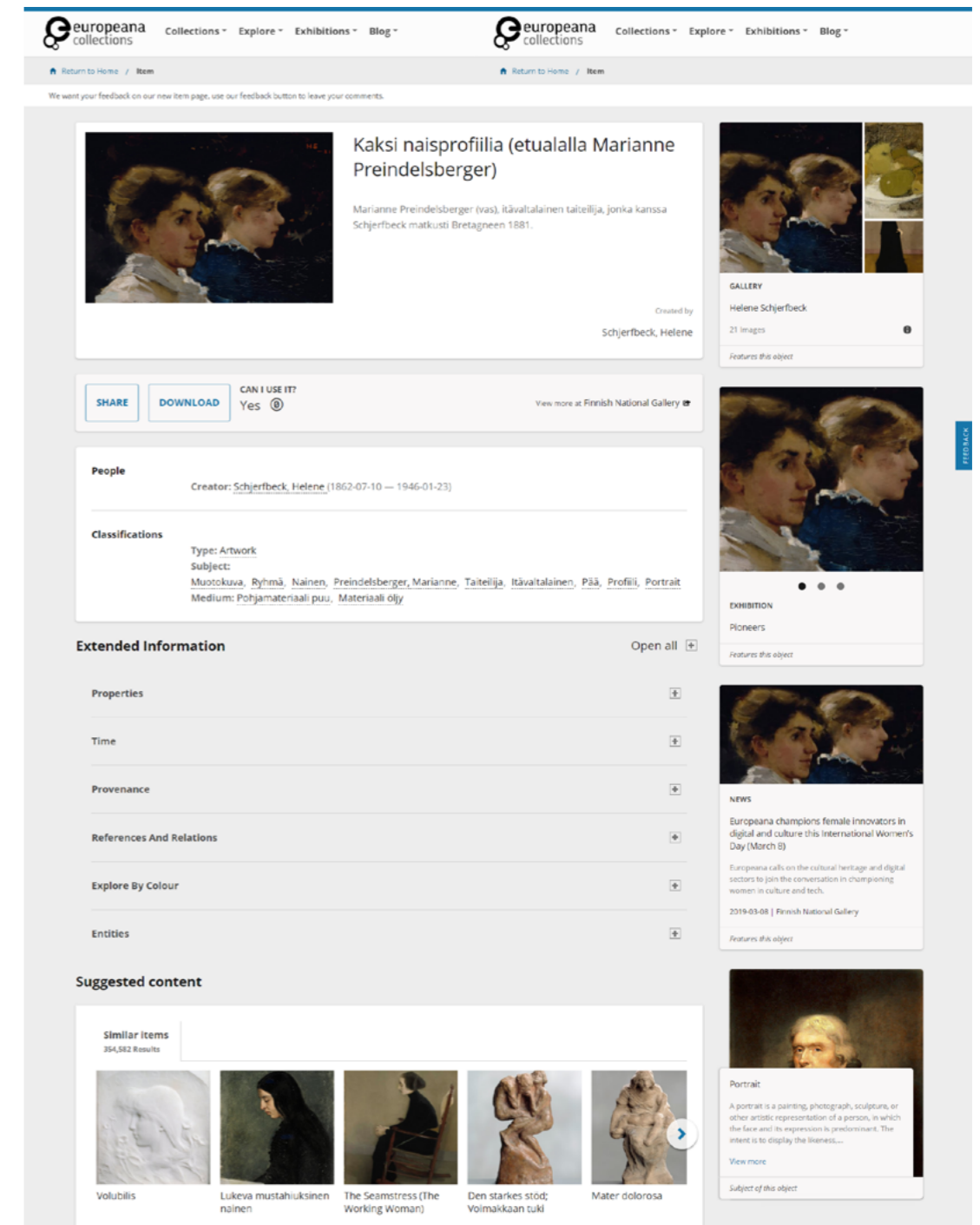
Screenshot of new item page

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13 25% of records in Europeana Collections are connected to an entity, allowing connections.

14 Localisation is the process of customising the website for a given country and consists primarily of translating display text for the user interface (UI).

Search improvements make Europeana Collections more useful

To improve the search experience on Europeana Collections we deployed a recent version of the search engine software behind the Search and Entity APIs. We also implemented, deployed and addressed issues with Newspapers' full-text search and laid plans for search improvements and new features. Entities' labels from the Entity API were included in the auto-complete function of Europeana Collections and we re-implemented streamlined scripts to evaluate search performance (mostly based on user logs).

We are also working on a new design for the search experience that will enhance the accuracy of the results shown for a search term. We identified that the search algorithm requires context to generate more accurate results. In addition to the search term, the user needs a possibility to provide context by selecting what precisely they are looking for: a person, subject, place, or time period. We are designing an interface which, after a user executes a search, will surface different types of entities (a subject, person, place, time period) matching that search term. Within the entity page, we will offer nested search giving users the option to add additional terms to refine the results further. Contextual filters will also be available based on the entity and the media type that a user selects.

Europeana Collections are more discoverable by Google

Our efforts towards Search Engine Optimisation (SEO) aim to increase traffic to Europeana DSI. 66.8% of our traffic arrives through organic search from Google. Google uses Schema.org to index pages which makes them discoverable via search. In the past months, we worked on updating our existing Schema.org mappings. We tested and published Schema.org for entity pages, and we finalised full support for organisation entities in preparation for publication of organisation pages.

In our efforts towards SEO we also deployed the new sitemap application for entity pages and released it to Google. The sitemap now includes both items and entities. In the upcoming months we will measure the results for both the sitemap and Schema.org for entities, and based on the findings also release Schema.org for item pages.

Strengthening technical infrastructure

The high-availability architecture of our main front-facing services, Europeana Collections, Europeana APIs and Europeana Pro, were available 24x7 with an average uptime of over 99.7%. Uptime and response metrics are a general indicator of resilience that we continuously monitor.

In order to improve technical environments, we audited the infrastructure and worked towards a sustainable and high-performing platform infrastructure. The most important actions were the review, consolidation, cleaning, and removal of underused infrastructure. The old infrastructure replaced by Metis was completely decommissioned. We also developed a new strategy for the reindexing process. Previously we had a permanent infrastructure for reindexing that we decommissioned to reduce costs (as the infrastructure was used only once a year). In June 2019, we introduced a new approach that provisions the infrastructure only for the time needed for the reindexing. The new approach is also 90% faster than the previous process. We also moved the domain europeana.eu from DYN to Cloudflare, for better protection from malicious attack that would result in a disruption (downtime) of the service. Additionally, we proposed a new failover environment to reduce the risk of downtime to our portal and API services. A proof-of-concept was developed and will undergo testing in the next period.

Quality-assured content supply

We make sure that the collections flowing through Europeana DSI are of the best quality possible and we work closely with aggregators to help them reach their quality targets, as well as leading by example with our own direct actions for assuring quality. We also continually grow the supply of content.

The past year, our strategy revolved around providing better information to aggregators and CHIs, driving data quality plans, taking direct action on broken links and low-quality content (not compliant to the Europeana Publishing Framework), and establishing the foundations for third-party enrichments and corrections.

Communicate the value of being part of Europeana Initiative

Europeana Foundation and aggregator partners supported and assisted content providers to ingest content to Europeana DSI via outreach events and workshops, and one-to-one support.

In the past year, over 130 CHIs from 34 countries received individual support from the aggregators on data ingestion and preparation of high-quality datasets with advice and guidance on best practices, including 20 new CHIs from nine countries. This eventually affected more than 10 million records in Europeana DSI. Support activities included assistance in preparing data, working on IPR-related questions, improvements of the mapping of their data to EDM, linking to open-data vocabulary to enrich data for more context, fixing broken links, adding richer descriptions, and processing/ingesting of data. In addition to the publication of data provided by DSI aggregators, a lot of the data we published was contributions from the Generic Services projects Rise of Literacy, Byzantine Art and Archaeology, and Migration in the Arts and Sciences.

In the past year, Europeana Foundation and DSI aggregator partners were involved in two national workshops and 32 other events, including training sessions and network meetings (key events listed below).

Presentations and interactive sessions on aspects of the Europeana Publishing Framework and data quality are key parts of the agenda, to elaborate on the challenges and opportunities of sharing digital cultural heritage online, and with Europeana DSI.

At national workshops (Slovenia, Austria), technical barriers and copyright questions as well as aspects related to the aggregation landscape in their specific country were discussed with aggregator partners and CHIs. International guest speakers were invited to present case studies and best practice examples from other countries. This concept has worked very well so far and we have received very good feedback from the participants of the workshops.

We also organised two Europeana Aggregators' Forum (EAF) meetings (Germany, The Netherlands) in the past year. The EAF is the place to coordinate all activities required for the effective functioning of a pan-European cross-domain aggregation ecosystem at operational and strategic levels. The EAF meetings help to address specific operational or strategic aspects and to work on them with all aggregators. The meetings also help to ensure a knowledge exchange between aggregators and improve the collaboration of aggregators. A train-the-trainer day for

aggregators was organised alongside the EAF meeting in April 2019. This training event was held to introduce and practice the semantic enrichment framework of Europeana.

Europeana Publishing Framework and Publishing Guide
To manage data and deliver it in higher quality to our audiences, we developed two sets of guidelines (tiers) of participation in Europeana, as part of the Europeana Publishing Framework (EPF). The content tiers were developed in 2015 and the metadata tiers added in 2019. In the past months, we finished our work on the refined definition of the metadata component as part of the work of the Data Quality Committee, with most aggregator partners participating. We

amended the existing EPF booklet and updated the Europeana Publishing Guide to cover the metadata component incorporating definitions for different audiences. The update will be officially published in September 2019.

Quality assessment framework
The Data Quality Committee refined and stabilised its quality assessment framework prototype that allows aggregators and providers to get statistics on the metadata they provide to Europeana. It especially offers new ways to select and review datasets by data provider or aggregator. The data quality assessment framework is expected to provide inspiration for the design of the upcoming statistics dashboard.

Raise quality of aggregated data

Improving metadata and content quality was one of our key objectives in the past year. Europeana Foundation and aggregator partners worked to ensure the quality of collections meet the standards set for Europeana DSI. Key mechanisms for driving this were aggregators' data quality plans. Aggregator partners worked on more language attributes and more contextual information in the metadata (including links to Linked Open Data (LOD) vocabularies), correct rights information, and improved quality of content.

Compared to approximately 58.2 million records in Europeana DSI in August 2018, we now have approximately 57.3 million records in August 2019. In the past months, we worked towards addressing issues with legacy broken links. As part of this effort some datasets were removed that had seemingly no hope for improvement. These efforts significantly improved the Europeana Collections experience. We also reached out to data

providers and fixed many datasets (i.e. links were rectified). In parallel, we developed processes to eliminate publishing any new datasets with broken links (Metis V1.2) and worked on an automated solution to systematically detect broken links that develop over time after the data has been ingested.

We aim to increase quality over quantity, with an ambitious goal of having 70% of content at Tier 2, 3 or 4 of the EPF by August 2020. Currently, 59.5% of the content in Europeana DSI is Tier 2+.

Content highlights
In the past year, the Generic Services projects Migration in the Arts and Sciences, Rise of Literacy and Byzantine Art and Archaeology not only improved content already available on Europeana Collections but also added many new items to Europeana DSI, all of which are Tier 2 quality or higher.

Salonicco, Chiesa di S. Demetrio: mosaico decorativo, University of Bologna, CC BY-SA (Item delivered by the Byzantine Art and Archaeology project)
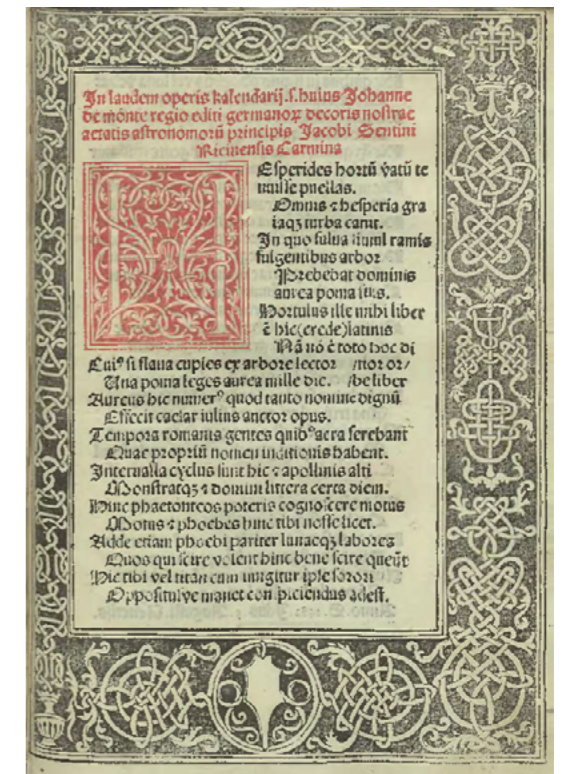
Calendarium, Regiomontanus, Johannes Müller, 1436-1476, 1482, Biblioteca Nacional de Portugal, Public Domain Marked (Item delivered by the Rise of Literacy project)

Published data is further enriched by end-users

In recognition that there are limits to what aggregators, CHIs, and Europeana Foundation can do to improve data at scale, we are also investing in APIs that would allow third parties to suggest enrichments. In the last few years, we developed the Annotations API, a data service that will also be the interface by which

running Generic Services projects (CrowdHeritage and EnrichEuropeana) are going to pass crowdsourced annotations to the platform (for more information see section 'Integrate the results of Europeana Generic Services projects').

Influence and organise global interoperability efforts to benefit CHIs

Global interoperability across the CHI network is an important foundation of Europeana's work. The evolution of interoperability efforts is largely progressed through involvement in external Working Groups, Task Forces, and committees, but also through the creation and dissemination of research reports and reference papers. In Europeana DSI-4 so far, we contributed to 15 reference papers or presentations, mostly on our data-modelling work and (IIIF and Linked Data) harvesting experiments.

We continued discussions with key initiatives such as Wikidata, IIIF (Discovery Technical Specification Group, Technical Review Committee and other relevant community groups), Linked Art and RightsStatements.org's Technical Working Group. Interoperability efforts were also part of our efforts in the EuropeanaTech community, notably via the Europeana Data Quality Committee, the EuropeanaTech Task Force on annotations and user sets, the EuropeanaTech Task Force on EDM governance and the EuropeanaTech Task Force on 3D content in Europeana.

EuropeanaTech's outreach also contributed to strengthening our ties with other communities by publishing four new issues of EuropeanaTech Insight, on linking the EuropeanaTech conference to the Europeana Innovation Agenda, Generous Interfaces, the work of the Pelagios community, and Optical Character Recognition (OCR).

Europeana Data Model (EDM)
We worked on keeping EDM aligned with relevant standards in the field. Special attention was given towards the evolution of these standards and to keep potential gaps between EDM and other standards as narrow as possible. We worked with several initiatives such as the Dublin Core Metadata Initiative (as part of their Usage Group), the IIIF community (discussing representation of full-text in EDM), and the Wikimedia/Wikidata community (on patterns to distinguish objects from their digital representations, and the rights attached to them).

In May 2019, the EuropeanaTech Task Force on the governance of EDM finalised recommendations to Europeana and its community. Recommendations set new principles for a future governance model for EDM mappings, profiles and extensions.

We finalised representation of full-text (as part of Europeana Newspapers) in EDM. We also worked on representing in EDM the metadata quality tiers of the EPF, groupings of concepts (vocabularies) as well as supporting annotations (audio transcriptions, closed captions and subtitles), notably by launching a EuropeanaTech Task Force on the subject (Interoperability of annotations and user sets).

Network of data partners and experts

Europeana DSI aims to increase awareness and reinforce the relevance of the Europeana Initiative for CHIs and aggregators as well as expert communities. Our primary communications platform is Europeana Pro. It explains what we do, and what help and resources are available (case studies, resources and tools). People can get information on and get involved in the Europeana Network Association (ENA) and in our various communities.

Europeana Network Association (ENA)

In the past year, the Europeana Foundation supported activities of the Europeana network, instituted and organised in the Europeana Network Association (ENA). We provided support for the ENA Members Council and Management board, ENA Task Forces and Working Groups, as well as ENA communities. The ENA consists of more than 2,500 members from across Europe who give time and expertise voluntarily to strengthen the role of cultural heritage in society.

A main objective continues to be expanding the Europeana network by attracting professionals working in the field of cultural heritage, while keeping the existing network fully engaged and active. In the past year, we gained approximately 500 new members (25% increase).

Europeana Network Association (ENA)	
ENA members	c. 2,500
Newsletter subscribers	c. 1,400
Europeana LinkedIn followers	c. 4,250

ENA activities were communicated to its network via the monthly newsletter, the Europeana LinkedIn Group, and Europeana Pro publications. In the past year, we registered over 300 new subscribers to the newsletter, corresponding to a 27% increase. The Europeana LinkedIn account registered 250 new followers (6.3% increase).

ENA communities

In the past year, a major focus of the ENA was on introducing and setting up the first six network communities. ENA communities are transnational networks of experts and specialists in the fields of creating, preserving and publishing digital cultural heritage online. Communities help ENA members to cultivate and share knowledge, expertise and best practices around a specific topic or area of common interest. The members can sign up to receive the newsletters, join various communication channels and social media groups, and attend community-related events and meetings.

We worked on establishing the rules and functional terms of reference for the communities, set up activity plans for 2019 accommodating Task Forces and Working Groups within those, and (re-)appointing chairs and steering group members.

EuropeanaTech (c. 1,170 members) is a community of experts, developers and researchers from the R&D sector whose objective is to ensure that the Europeana Initiative leads the way with technological innovation within cultural heritage.

Europeana Research (c. 1,410 members) community promotes digital cultural heritage for use in research and represents the needs of professionals working in research and cultural heritage across all sectors.

Europeana Education (c. 450 members) community embeds Europe's digital cultural heritage in formal and informal education and learning in innovative ways by working with professionals in education and cultural heritage fields.

Europeana Communicators group (c. 110 members) is a community of communications professionals, bloggers and social media influencers helping to put digital cultural heritage at the heart of Europe's future.

Europeana Impact (c. 215 members) community aims to collaborate on maximising the impact of cultural heritage professionals' and impact professionals' work in the sector and beyond.

Europeana Copyright (c. 260 members) community supports collaboration, offers representation and provides information and consultation on copyright in the cultural heritage sector.

Task Forces and Working Groups

ENA members take on specific subjects or areas of common interest by participating in Task Forces and Working Groups.

Three Task Forces are currently active: EuropeanaTech Task Forces on Interoperability of annotations and user sets (29 members) and 3D content in Europeana (9 members), and the Europeana Research community Task Force on research requirements (12 members).

Four Task Forces finalised their work in the past year: Creation and Governance of EDM mappings, profiles and extensions; Impact Assessment 2.0; Europeana Migration; and Resource Citation/Object Identity Standardization. Task Force recommendations are available on their respective Europeana Pro site.

Three Working Groups are currently active: EuropeanaTech Data Quality Committee Working Group (35 members); 2019 Governance Working Group (8 members); and 2019 Europeana 2019/AGM WG/programme advisory committee (15 members).

Three Working Groups ended their work in spring 2019. The Library Working Group has ended its work, and both Copyright Working Group and #AllezCulture Working Group were formally merged with communities.

Europeana Network Annual General Meeting (AGM)

Europeana Foundation organised the Europeana network annual general meeting (AGM) at the Technisches Museum Wien in Vienna, Austria in December 2018. Communication around the AGM resulted in all early-bird tickets selling out in record time - AGM tickets sold out three weeks before the event. The event itself saw 201 attendees. The programme focussed on the six ENA communities and celebration of the 10th anniversary of Europeana. Part of the programme was the annual general assembly, where present attendees formally approved formal association documents and launched the Members Council 2018 elections.

ENA governance
In December 2018, the Members Council (MC) elections campaign invited network members to come forward or to step up again to fill at least 28 open seats by submitting their candidacy. Impressively, 89 eligible candidates came forward as candidates. The MC welcomed newly elected as well as re-elected Councillors.

In December, Europeana Foundation also organised elections of the new Management Board (MB). Eleven councillors came forward as candidates. In January, MC representatives elected six of them to form the new Board.

AGM 2018 Vienna, Europeana Foundation, CC BY-SA

Communication and dissemination activities

Based on monthly themes (e.g. Professionals in Focus), Pro News offered guest contributions from network members, and inspirational content from industry leaders and provided a platform for a strong network community. At the start of 2019 we exploited cross-platform narrative and engagement by combining the editorial season 'Women in Arts and Sciences' with activities on Europeana Pro, 'Women in Culture and Technology'. Communication to CHIs and expert communities were disseminated through a number of key channels including Twitter and LinkedIn expert groups.

Our communication efforts were supported by the Europeana Communicators Group - a community of approximately 110 communications professionals, bloggers and social media influencers, funded by the Europeana Network Association (ENA) to support communications best practice, develop and share resources and further disseminate communications campaigns.

Europeana Pro

Europeana Pro is Europeana's main communication tool for our professional markets and the wider network of data partners and experts. Currently, the Europeana network, CHIs, education, academic research, and creative industries all have dedicated spaces on Europeana Pro.

Over the course of this year we re-examined these target audiences. We concluded that Europeana Pro serves three main audiences: primarily the CHIs looking for an effective dissemination partner that could help them increase the reach of their collection; aggregators who assist the CHIs in their digital transformation to ensure that cultural heritage is documented professionally online; and the network association members whose primary goal is to understand what Europeana can do for them and to network with international professionals in the cultural heritage sector.

We conducted customer journey workshops with these audiences to understand their information needs, main tasks and frustrations, which were documented in the form of personas. We will use this information to reassess the information architecture of the website and the narrative to ensure that it addresses the needs of these audiences. In the coming months, we will validate the information architecture of the website with the main audience groups, add a new menu and continue refining the current narrative of the website.

We also released several new features this year, such as the aggregator profiles to support the needs of the Europeana Initiative, a promotional page for the Europeana 2019 event, annual report 2018 and the 10-year anniversary of Europeana.

Fostering reuse of digital cultural heritage resources

One of our priorities is to foster reuse of digital cultural heritage. We built up market-specific communities that bring together various stakeholders on the three reuser markets: education, academic research, and the creative industries. We worked with partners that already have strong and loyal communities of users on the respective markets and supported the development of new products, services and creations with cultural data. In the past year, education emerged as our top performing reuse market, where the strong partnerships with non-commercial educational networks working with teachers on national and pan-European levels have played a key role in the success.

Europeana Education

We embedded digital cultural data in various educational systems and increased awareness of digital learning resources in the classrooms and other educational projects. We promoted the reuse of cultural heritage material in education by developing relationships with education networks, publishers, educational providers, policymakers and national ministries.

We communicated these efforts on Europeana Pro, on the Europeana Twitter account and via the Europeana Education LinkedIn group which gained over 210 new members in the last year - a 65% growth in comparison to August 2018. Our work was supported by a community of professionals with educational and cultural heritage background who believe in the important role culture can play for innovative teaching and learning.

As part of our outreach activities, we attended nine national and international events in several countries, contributing with presentations, workshops, and panel discussions to the topic of cultural heritage in education.

In collaboration with European Schoolnet, a network of 34 European Ministries of Education, we engaged with more than 2,100 teachers and impacted over 38,000 students from 45 countries in the first year of Europeana DSI-4. Together, we established the Europeana Teacher Ambassador network and expanded further the Europeana Teacher User Group. In March 2019, we also launched the Teach with Europeana blog as an online platform for teachers to share their experiences in integrating Europeana resources in their classroom.

Europeana Education	
Education community members	c. 450
LinkedIn followers	c. 530

In the past year, the Europeana Teacher Ambassadors reached over 509 teachers and about 13,000 students with their 24 webinars (and 23 recordings). The Teacher Ambassadors, the Teacher User Group and the participants in the three Europeana MOOCs created in total 213 learning scenarios with Europeana data as well as 85 stories of their implementation in the classroom. These resources are being published on a weekly basis on the Teach with Europeana blog.

Europeana Teacher Ambassadors: 13 ambassadors worked with their supporting education ministries. They lead the development of learning scenarios with cultural material as well as the promotion and adoption of these resources at national level.

Participating countries: Croatia, Finland, France, Greece, Hungary, Italy, Malta, Poland, Portugal, Romania, Spain, Turkey

Europeana Teacher User Group: 130 teachers from 15 countries delivered new learning scenarios integrating Europeana resources.

Participating countries: all above-mentioned plus Bulgaria, Serbia and North Macedonia


Some of the User Group teachers and Ambassadors during a meeting in EUN, European Schoolnet, June 2019, CC-BY

The 'Europeana in your classroom: building 21st-century competencies with digital cultural heritage' developed during Europeana DSI-3 was updated by incorporating the learning scenarios created during the Europeana DSI-4 period, and run once in English, Spanish and Portuguese. These MOOCs supported both the creation of learning scenarios and promotion of the use of Europeana resources in classes. The Europeana MOOCs (EN/ES/PT) were well-received with nearly 2,000 participants from 45 countries and 700 certificates (which corresponds to an average completion rate of

30%)[15]. MOOC participants' testimonials confirmed the positive impact of this learning resource with regard to pedagogical innovation and capacity building.

Overall, we can see a very high interest in the service we provide to educators and usage of our learning scenarios. Teachers were very satisfied with the offer with an excellent NPS of 61.

Euroclio published 12 new source collections and 12 new eLearning activities on Historiana
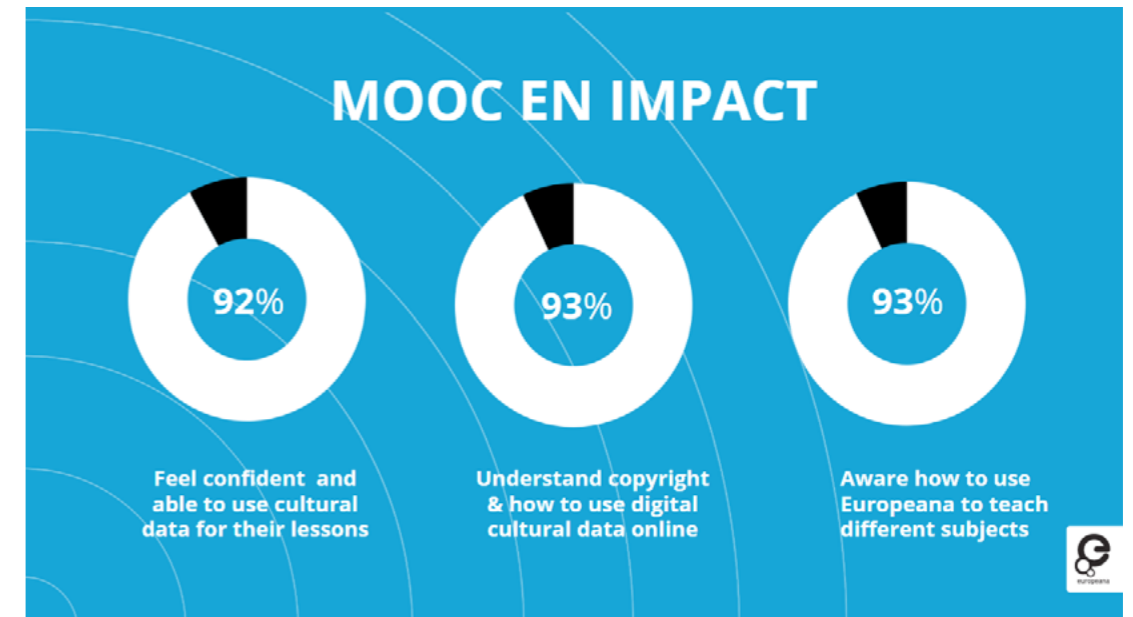
MOOC EN Rerun statistics[16]

for history educators across Europe. They cover a wide range of themes, including Napoleon, medicine and anatomy, Renaissance, the Industrial Revolution and more. We also updated the teacher training guide on how to use online tools and cultural heritage data to promote historical thinking.

As part of our efforts towards the education market, the Portuguese Direção-Geral da Educação (DGE) integrated in their portal a search bar which allows their national community of educators to retrieve relevant Europeana content via the Europeana API. In addition, the Finnish educational publisher Itslearning now offers more resources with Europeana content to their users by complementing the existing Europeana API with 12 Historiana resources (six of which with Europeana content) in their virtual library.

HackCultura competition
HackCultura 2019 campaign was a joint initiative of several Italian educational partners and Europeana Foundation, with DiCultHer in the lead, which ran between October 2018 and April 2019. Each of the participating partners led a separate 'challenge' within the main HackCulture campaign. The campaign invited Italian students to create multimedia projects with cultural content. It was officially closed with an award event within the Fourth Week of Digital Cultures in April in Matera, Italy. The #ImparaconEuropeana challenge within this competition awarded with certificates six projects involving 94 students from Calabria, Puglia, Emilia Romagna and Molise. These projects were published on the ICCU platform.

15 The average completion rate for MOOCs is 10%. Reference: Jordan, K. (2014). Initial trends in enrolment and completion of massive open online courses. The International Review Of Research In Open And Distributed Learning, 15(1). : http://dx.doi.org/10.19173/irrodl.v15i1.1651
16 Based on the responses from 210 participants in a post-MOOC survey running from 25 February to 22 March 2019. The MOOC EN Rerun took place from mid-January till end of February 2019.

Europeana Research

We increased the awareness of the Europeana Initiative as a trusted source of digital cultural data for digital humanities researchers to develop new knowledge and insights. We reached out to researchers via a dedicated space for the research community on Europeana Pro and the Europeana Research Twitter account, which registered over 770 new members in the last year (or 35% increase in comparison to August 2018).

The work of Europeana Research is supported by the Europeana Research advisory board. Representatives of Europeana Foundation, Europeana Research partners (AthenaRC and Clarin) and advisory board members attended and presented at various international events which provided excellent opportunities to expand our outreach to research communities.

Europeana Research	
Research community members	c. 1,410
Twitter followers	c. 2,980

The third edition of our Research Grants Programme on WWI topic ran in September/ October 2018. It closed with 22 applications, with most of the applications coming from institutions based in Italy (7), Spain (6), and France (3). Three research proposals were awarded a Europeana Research grant. The winners were formally announced at a dedicated WWI commemoration event at the House of European History in Brussels in November 2018.

Europeana Research Grants Programme winners 2018	
Europeana 1914-1918: AV Storytelling Data in a European Comparative Perspective	Dr. Berber Hagedoorn, University of Groningen, Niederlande
Upgrading History. Diaries from the War Front	Dr. Saverio Vita, University of Bologna, Italy
Return to Sender: Mapping Memory Journeys in the Europeana 1914-1918 Postcard Archive	Dr. Elizabeth Benjamin, Coventry University, United Kingdom

In April 2019, after a thorough content evaluation, CLARIN integrated 135,000 Europeana records in their Virtual Language Observatory (VLO) portal. Usage statistics showed a higher usage for Europeana records compared to the average use of VLO items, especially with regard to visit duration for Europeana content. A very positive sign was that 60% of the VLO visits translated into referral traffic to Europeana Collections.

In June 2019, Europeana Research published its new strategic plan that proposes a number of changes to maximise the impact of digital cultural collections in research. It illustrates the critical shift of focus from data to community-driven impact and introduces three strategic objectives:

Winners of the Europeana Research Grants Programme 2018

1. Increase the visibility and fit of Europeana Collections and APIs for research. We will work primarily on improving our understanding of the researchers' needs and usage patterns and translating them into relevant improvements in the Europeana products and services.

2. Establish strong synergies between the cultural heritage and research sectors, with a focus on developing the Europeana Research ENA community and the relations with relevant research networks (DARIAH, LIBER, etc.).

3. Leverage the opportunities offered by the big innovation initiatives such as Horizon 2020 Programme and the EOSC.

Europeana Labs (creative industries)

We fostered the creative reuse of cultural heritage material in new products and services inspired by or developed with digital cultural data. We built up the community of cultural heritage developers and digital innovators on Europeana Labs and engaged them via a dedicated Twitter account and a monthly newsletter with regular updates on topics of interest to creative industries. In the past year, we gained 26 new newsletter subscribers and 78 new Twitter followers in comparison with August 2018. The slow increase is due to the shift of priority (and efforts) to the education market.

We fostered relationships with partners who already work with creative industries (i.e.

Europeana Labs	
Newsletter subscribers	c. 580
Twitter followers	c. 1,280

innovation labs, data platforms, and large-scale events) by attending events/ conferences. In October, for the third consecutive year, we partnered with the festival for the creative and cultural industries THE ARTS+ at the Frankfurt Book Fair. We contributed to a panel on 'Cultural trailblazers' focussing on the changing role of CHIs. In addition, we took part in the parallel Innovation Summit which aimed to help build an ecosystem for adequate innovation support frameworks in Europe, but

also at national scale. The 14 partners – amongst them Europeana Foundation, the European Creative Business Network and Fitzcarraldo Foundation as strategic partners - and 100 international representatives from business, culture, technology and politics discussed 'The bigger picture: How can the cultural and creative sectors bridge the innovation gap?'. The event resulted in a European Manifesto for supporting innovation for cultural and creative sectors which was presented at a special press conference and promoted widely on Europeana and other channels.

One major new commercial product was introduced using Europeana content - the video game '11:11 Memories retold'. The game includes objects and stories from the Europeana 1914-1918 collection and shows the

First World War through the eyes of two soldiers on the different sides of the front in an interactive game narrative. It was an excellent collaboration that brought digital cultural heritage to the general public in the form of an immersive storytelling experience.

On 25 March we launched the Europeana STEM Challenge which offers EUR 20,000 for the best educational videos using Europeana openly licensed content to teach STEM (science/technology/engineering/math) topics. We received 24 applications from 17 countries. The winning video project 'Igniting an Industrial Revolution through Steam and Physics' by the American mechanical engineer Teddy Tablante was awarded EUR 8,000 and will be available to teachers and students in the beginning of October 2019.

11-11: Memories Retold, DigixArt, 2018, CC BY-SA

Europeana APIs

We provide and develop multiple API endpoints[17] for software clients to interact with Europeana DSI. All Europeana APIs received approximately 54.2 million requests each month. In the last year, our main API, the

Europeana REST API saw a stable usage with on average about 69 API keys that exceeded the average of 5 calls a day, and on average about 67 API keys that were active for more than 5 days in each month.

Maintain an international interoperable licensing framework

The Europeana Licensing Framework (ELF) and Rightsstatements.org are our main tools to standardise rights-related information and practices between cultural heritage domains and EU member states. The Europeana Copyright community supported our efforts on copyright in the cultural heritage sector. We communicated activities via a dedicated newsletter and Twitter account, with the Twitter account registering about 240 new followers in the past year (24% increase).

Europeana Copyright community	
Copyright community members	c. 260
Twitter followers	c. 1,240

Europeana Licensing Framework (ELF)
To support the correct implementation of the ELF, research that evaluated the accuracy of rights statements in Tier 3 & 4 data was undertaken. This research showed that from Tiers 3 & 4, 38% of data was accurate. The remainder of the data is not necessarily inaccurate, but we cannot guarantee its accuracy at this time. Based on the findings we designed a rights accuracy campaign to address a variety of issues. This campaign, implemented in February 2019, addressed issues in the data in a staged approach. Firstly, at a data partner or aggregator level we worked with partners to address datasets which were determined to contain a mixture of accurate and inaccurate statements. Secondly, we are working with the Copyright community to address knowledge gaps that lead to inaccuracy including access to better tools and resources such as webinars, or Q&A sessions. Research is also being undertaken to better motivate partners with the implementation of the multilingual rights statements utilised by the ELF.

The new consent system of the Data Exchange Agreement (DEA), as a principal element of the ELF, between Europeana Foundation and each content provider was approved after a consultation of aggregators and data providers. The new DEA is functional for new data providers since September 2018.

Rightsstatements.org
The Rightsstatements.org consortium is the service that the Europeana Foundation and the Digital Public Library of America (DP.LA) founded to develop and manage international interoperable rights statements. There are six members, five from outside the European Union.

The implementation of the statements is dominated by Europeana DSI (24.9 million objects), DPLA (3.5 millions objects) and is slowly growing internationally with some implementation reported in member countries (Canada and Australia) and is planned throughout India in 2020. In certain countries implementation is closely tied to the presence of a translation. Therefore, the consortium prioritised supporting translations that facilitate the implementation by members. To date the multilingual statements are available in seven official EU languages (English, Estonian, Finnish, French, German, Polish and Spanish), with a further six languages being processed (four from the EU: Finland-Swedish, Swedish, Portuguese and Lithuanian, and two from India: Hindi and Bangla).

In relation to earlier efforts on aligning data practices, the next version of IIIF specifications are going to recommend the use of RightsStatements.org for expressing rights pertaining to resources published over IIIF.

In the beginning of 2019, the RightsStatements. org consortium developed a work plan for 2019 identifying its core activities.

New strategies, services and business models

We used various tools (e.g. Europeana Impact Playbook) to get feedback on what is working and what needs revising in the current practice of the Europeana Initiative. We worked with the Europeana DSI-4 consortium as well as with the European Commission and the

subgroup for Digital Cultural Heritage and Europeana (DCHE subgroup) to align the Europeana Initiative with the objectives of the independent evaluation and to work out new strategies.

Europeana presidency events

Under the Romanian EU Presidency the Europeana Conference 'Exposing online the European cultural heritage' was held in Iași in April 2019. It brought together 90 officials, policymakers and practitioners to examine and explore the positive impacts and the challenges of making cultural heritage available on the web for heritage institutions. Interoperability and cooperation emerged as the keywords of the meeting and pointed to the foundations needed to consolidate and secure the cultural heritage sector's place in Europe's digital future. Workshops, plenary and feedback sessions saw delegates develop a series of ideas, recommendations and shared issues that were summarised in a number of strategic recommendations and in three principles for building a strong national approach, identified and agreed upon with the delegates:

1. National Strategies should achieve more than enabling a national aggregator - a published strategy should be agreed upon by the local CHI sector and supported by policymakers.
2. Having a standard on paper is not enough: it needs to be supported on a local level - adoption of international standards requires local environments that create opportunities to learn, share and access resources and expertise.

3. Individuals are the drivers of motivated and sustainable communities - local communities are essential tools to agree on and implement shared standards and practices towards increasing access to higher-quality data.

Europeana Foundation, together with representatives from this meeting, has developed a document that builds on these principles. The document will illustrate and articulate the thoughts, ideas and recommendations which came out of the conversations, observations and strategic planning in Romania. It will also recommend actions to support the aforementioned principles outlined at ministerial level, as well as actions for CHIs and the Europeana Initiative. The final recommendations will be published in September 2019.

Under the auspices of the Finnish Presidency of the Council and in collaboration with the Ministry of Education and Culture of Finland, we are organising the Europeana meeting on 'Multilingualism in digital cultural heritage' (October 2019 in Espoo, Finland). The event will look into multilinguality and linguistic diversity in the European Union and aims to identify and provide insights into solutions for applying multilingualism in digital cultural heritage. It will focus on multilingual metadata, content

Exposing Online the European Cultural Heritage: The impact of Cultural Heritage on the Digital Transformation of The Society, 2019 by Sebastiaan ter Burg, CC BY

translation and user interactions. At the meeting we aim to develop a deeper understanding of challenges and opportunity towards multilingualism which can provide input into the strategy for multilingualism for Europeana DSI. It will also consider what

options and actions can be pursued in a local context at each ministry of culture and heritage institutions across the EU. Multilingualism experts, DG CNECT, the DCHE expert group, representatives from the ministries of culture and CHIs will be invited to the meeting.

Europeana Innovation Agenda

In December 2018, the Europeana Innovation Agenda was published. The agenda highlights research and innovation priorities in the cultural heritage domain and advocates for their implementation across Europe. Working in consultation with the Europeana Network Association, a dedicated Task Force identified areas where innovation and research actions are most needed. The agenda proposes thirteen topics that showcase the opportunities for transformation in four overarching

categories: institutional strategy and impact, technological innovation, social change, and economic innovation. Building on the Europeana Impact Assessment Framework, the agenda positions cultural heritage as an invaluable resource for the European society. It highlights the transformative potential of an innovative cultural heritage and aims to prioritise its research and innovation needs in Europe's cultural policies and research and innovation programmes.

Impact toolkit for the cultural heritage sector

The Europeana Impact toolkit helps cultural heritage institutions develop a better understanding of the changes their activities bring to audiences. The toolkit consists of a guide for cultural heritage organisations to assess their impact - the Europeana Impact Playbook - supported by a video explainer, case studies, articles, resources (e.g. canvases) and a community. Since its launch the Impact Playbook has been downloaded almost 2,500 times. Visitors have come to the landing page from 113 countries around the world. The implementation is supported by the Europeana Impact community and by professionals on LinkedIn 'Impact of Cultural Heritage Institutions', which gained over 120 new members in the last year (49% increase).

In the past year, we advocated the use of the toolkit by integrating it into our strategic presentations and workshops such as the Romanian Presidency event and the workshop held at the closing ceremony of the EYCH. We further developed the underlying resources, most notably by creating Phase II of the Impact Playbook, and reinforcing its implementation with further case studies and articles showcasing its application across the sector. The appointment of a steering group to the Impact community contributes significant expertise and resources to support our efforts to increase the application of impact assessment across the sector.

Europeana Impact community	
Impact community members	c. 220
LinkedIn followers	c. 370

Introducing: Impact Playbook by Europeana, CC BY-SA

Europeana Generic Services projects

In the past year, projects resulting from three rounds of Europeana DSI Generic Services were running (new thematic collections, end-user and re-user services, data and content quality improvement). We worked with the funded projects to integrate their results in a sustainable way into Europeana DSI. We were in contact with 15 projects, of which three projects ended, including Rise of Literacy, Migration in the Arts and Sciences, and Byzantine Art and Archaeology.

In October 2018, representatives of the GS projects (GS1 and GS2) met in The Hague, The Netherlands. 11 projects were presented by the individual project representatives and Europeana Foundation gave presentations on several areas of interest to the audience (including editorial strategy, Europeana Collections, APIs, reuse, branding, ENA and communities). Project participants also met in one-to-one meetings with Europeana Foundation staff to discuss support on individual areas in more detail. The next GS projects meeting (GS2 and GS3) is planned for October 2019 in The Hague.

Rise of Literacy
The project 'Rise of Literacy' looked at the use of written text in Europe over centuries (from the 6th to the 20th century) and told users the story of the rise of literacy in European culture, as a manifestation of a European-wide cultural movement. Besides improving material already on Europeana Collections, the project delivered over 2,000 manuscripts, 4,000 books and almost 20,000 issues of newspapers to Europeana DSI. This included rich textual materials from 12 European CHIs, from medieval manuscripts, printed books to journals and newspapers. As part of the project two new thematic collections, Europeana Manuscripts and Europeana Newspapers were developed and over 40 editorials (one exhibition, galleries and blogs)

were published or are scheduled to be published. One editorial highlight is the exhibition 'The Rise of Literacy in Europe' which follows a chronological narrative from early demands to establish a formal education through structured learning practices to reading and writing with the help of alphabet books and catechisms.

Migration in the Arts and Sciences
The project 'Migration in the Arts and Sciences' was linked to the creation of the Europeana Migration thematic collection about migration to, from and within Europe, and the effects migration has had on European culture. It digitised and delivered over 9,300 new items to Europeana DSI and improved already existing content, all of which are Tier 2 or higher. Over the period of the project and beyond, 75 editorial features such as galleries, blogs and one exhibition were curated and published, or are still scheduled to be published. One editorial highlight was the exhibition 'People on the Move: How migration has changed the world'. The exhibition takes a broad view of the enriching effects of migration and tells some memorable stories of inspiring individuals and communities.

Byzantine Art and Archaeology
Byzantine Art and Archaeology provided about 75,000 new digital objects of cultural and artistic content about Byzantine history and culture to Europeana DSI. The content strengthened our themes on Europeana Art and Europeana Archeology.

EuropeanaMedia
EuropeanaMedia aims to develop an Enhanced Unified Playout Service (EUPS), offering heritage institutions a media playout with market-competitive quality, user friendly design, and cross-border content reusability. The main outcome for Europeana DSI will be the integration of the Media Player.

The project is represented in the EuropeanaTech Task Force on annotations and user sets, which is set to compare requirements for these features and agree on shared models to support them.

CrowdHeritage

CrowdHeritage aims at improving the quality of Europeana's digital content by developing a standalone online platform for enriching metadata of selected cultural items. The main outcome for Europeana DSI will be the integration of user annotations on record pages. The project is also represented in the EuropeanaTech Task Force on annotations and user sets.

EnrichEuropeana

EnrichEuropeana aims at developing a crowdsourcing platform that will enable citizens to transcribe and enrich cultural heritage material from Europeana Collections and national aggregator portals. The main outcome for Europeana DSI will be the integration of user annotations and transcriptions for selected cultural items. The project completed and delivered an IIIF Based Viewer, which will be integrated in the new version of Transcribathon.eu. The project is also represented in the EuropeanaTech Task Force on annotations and user sets.

Europeana Common Culture

Europeana Common Culture aims to develop a harmonised and coordinated environment for Europeana's national aggregators (NAs), to collaborate, share resources and technical means, and agree on common recommendations and standards. Additionally, the project will improve the quality of content and metadata to increase user satisfaction. We contributed to and supported three national aggregator workshops and surveys that will result in a report on the 'Landscape of national aggregation in Europe'. The report will detail information on the state-of-the-art of NAs towards technology used and workflows. The project is also expected to improve 3-4 million existing records to at least Tier 2 and 1-1.7 million new records to comply with Tier 3. We supported data quality improvements by providing access to tools, resources and support for setting up data-quality improvement plans. The project will also deliver 30 editorial outputs, including blogs, galleries and one exhibition, with a working group established from project partners. So far this year, five editorials were published with 15 more scheduled for autumn 2019.

Other Generic Services projects

Europeana Foundation was in contact with all the other Generic Services projects to identify their requirements for the core service. These projects are CultureChatbot, CultureMoves, Europeana Archaeology, Fifties in Europe Kaleidoscope, LinBi (Linking Biodiversity and Culture Information), Opening Up Historiana, and Judaica Europeana 2.0.

Budget and realisation

Europeana DSI-4 is funded under procurement by the European Union. Its funding is EUR 14 million for the period from 1 September 2018 to 31 August 2020. The work was performed in nine separate activities:

1. Platform maintenance and development
2. Content supply
3. Content reuse
4. Communication and dissemination
5. Europeana Network Association (ENA)
6. Impact of digitisation and reuse of cultural heritage
7. Governance
8. Phasing-in and phasing-out
9. Project and programme management

The charts and table below state the percentages of resources within the consortium allocated to each of the nine activities, both as planned and actual

realisation. Furthermore, a comparison with the previous tender contract Europeana DSI-3 was added.

The realised division for the first year is close to the planned division from the tender. Some larger deviations are for ENA (+1.31%), Governance (-1.60%) and Project and Programme management (+2.54%). Also the effort for Phasing-in and phasing-out activities is less, mainly because some of the reports to be produced were cancelled in cooperation with DG Connect.

Compared to the DSI-3 activities we see some differences between platform, content supply and content reuse. In the calculation of the planning for Europeana DSI-4 some tasks were reallocated to other activities. More tasks were planned towards platform maintenance and development.

Allocation of resources by activity (%)			
Activities	**DSI-4 - Planning**	**DSI-4 - Actuals[17]**	**DSI-3 - Actuals**
Platform	57.10%	55.78%	39.52%
Content supply	10.95%	10.9%	18.29%
Content reuse	9.69%	10.33%	16.68%
Communication	8.93%	8.04%	12.41%
ENA	6.44%	7.75%	N/A
Impact	1.32%	1.16%	2.61%
Governance	1.96%	0.36%	1.79%
Phasing in/out	0.50%	0.02%	0.43%
Project/Programme	3.12%	5.66%	8.27%
	100%	**100%**	**100%**

17 Numbers reflect balance of effort for the first year of Europeana DSI-4 (September 2018 - August 2019)

de Volkskrant

KATHOLIEK DAGBLAD

Prof. Mr. C. P. M. Romme • Alg. H...

na 17.30 uur portier

ZES PAGINA'S

DE ABONNEMENTSPRIJS bedraagt voor geheel Nederland / 5.25 per kwartaal, / 1.85 per maand, of / 0.43 per week. Losse exemplaren 10 cent. Voor het buitenland gelden hogere tarieven.

De advertentie-prijs bedraagt / 0.50 per millimeter hoogte. Reclames of Ingezonden Mededelingen dubbel tarief. Bij contract reductie, waaromtrent op aanvrag bij de Administratie van „De Maasbode" of bij de erkende advertentie-bureaux inlichtingen verkrijgbaar zijn

Buitenlandse Kroniek

De strijd om het Witte Huis

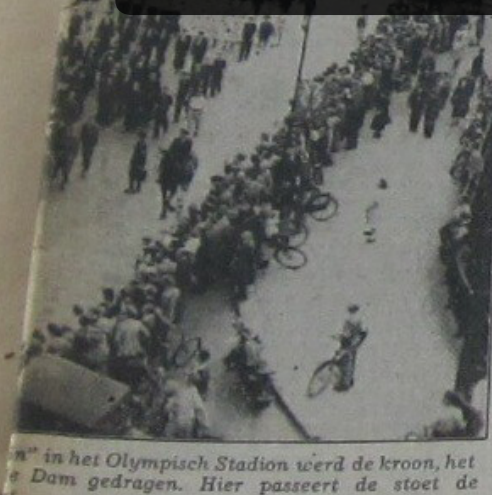AMERIKA'S VERKIEZINGS-CAMPAGNE BEGINT

De senaat voor de democraten?

Binnen enkele dagen, na 6 September, Labor Day, begint in de Ver. Staten de grote verkiezingscampagne voor het Witte Huis, welke tot de vooravond van de beslissing, welke op 2 November a.s. zal vallen, met steeds verbitterder kracht zal voortwoeden. In deze periode staat een Truman vol zelfverzekerde en bovendien zeer sluwe Dewey, de twee candidaten, die elkaar het presidentschap betwisten, en die elkaar in vastberadenheid niets toegeven.

Van de bedeesde, aarzelende, schroomvallige Truman, die zonder veel ervaring de plaats van de grote Roosevelt bij diens verscheiden moest innemen, is niet veel overgebleven; in de drie en een half jaar van zijn bewind is hij een berekenende en sympathieke politicus geworden, een figuur, die niet onderschat mag worden. Zijn persoonlijkheid blijkt een sterke aantrekkingskracht uit te oefenen en zijn zelfvertrouwen — echt of gefingeerd, maar de meesten menen, dat het echt is — werkt aanstekelijk. En al geeft men Dewey verreweg de grootste kans om het Witte Huis te betrekken, men is toch niet meer zo absoluut zeker van de zaak. Als de vakverenigingen zich onvoorwaardelijk achter Truman scharen, zou het wel eens een nek-aan-nekrace kunnen worden, waarin de laatste meter de uitslag brengt.

De Amerikaanse bladen schetsen in algemene lijnen de „campagne", welke de presidentiële candidaten zullen voeren, volgens het program, dat hun gangmakers hebben klaar gemaakt. President Truman houdt zijn eerste rede op Labor Day zelf...eind September in zijn...

ton's buitenlands beleid te demonstreren.

Zoals de zaken op het ogenblik staan, lijken de kansen van Dewey het best; Truman zal te veel achterstand hebben in te halen van de geweldige, bijna troosteloze depressie, welke de democratische partij enkele maanden geleden heeft doorgemaakt, en na de dubbele scheuring van Wallace en van het Zuiden. Maar behalve de president moet ook een nieuw Congres worden gekozen en nu is het merkwaardig, dat de republikeinen zich lang niet zo zeker voelen, dat zij daarvoor ook een schitterende overwinning zullen behalen. Voor het Huis van Afgevaardigden lijken de kansen best, maar voor de Senaat wordt een democratische overwinning niet onwaarschijnlijk geacht. De Senaat wordt elke twee jaar voor een derde vernieuwd en de democraten behoeven slechts vier zetels te winnen om de meerderheid te behalen. Nu worden republikeinse zetels: Illinois, Minnesota, West Virginia, Ohio, Wyoming uiterst kwetsbaar...hebben de democraten ook...swakke plekken; maar...ders staan er slechter...tijdens de jongste zit...gres een zeer slecht...

Met dit al zullen...van nu af twee...toestand van...welke ook in...situatie zal h...schijnlijk, in...zingen za...2 Novem...belde...dezel...zull...

Het Noorden in beraad te Stockholm

Tot economische samenwerking

De ministers van handel van Noorwegen, Zweden, Denemarken en IJsland hebben op een bijeenkomst... king en deelneming van de Noordelijke landen aan de internationale samenwerking op het gebied van handel en economie.

De ministers besloten, dat hun landen nauw contact met elkaar zullen houden...

Het Vrije Volk

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15

DE KONINGIN TOT HET NEDERLANDSE VOLK: „Ik vertrouw...

ZATERDAG 8 DECEMBER 1962

...in het Olympisch Stadion werd de kroon, het ...Dam gedragen. Hier passeert de stoet de