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Revision History

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Periodic reports can be viewed and accessed online in the document section on the Europeana DSI-4 project page[1].

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[1] https://pro.europeana.eu/project/europeana-dsi-4

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Highlights

In this period, we have implemented a Metis Extended Sandbox feature that allows the support for one additional data source for conversion to EDM. We also extended the Sandbox with a tiers calculation module which allows a user to examine the details of the tier indicators of any record.

The Europeana website saw several updates in the period. Organisation pages are now available on the Collections hub page[2], we implemented a module to warn people of potentially offensive content[3] and a module that makes people aware about new features. Additionally, the user accounts were extended by adding a 'delete my account' functionality to make it easier for people to delete their account. We also deployed multilingual search for the Spanish destination which allows queries sent by users on the Spanish portal for Europeana[4] to be translated into English, which enables users to find more results.

For educational audiences, Euroclio implemented the support for different media types (including audio and audiovisual sources) for Historiana learning resources (available in the MySources section of Historiana members).

In this period, we released the Europeana Knowledge Base for aggregators (V1)[5]. We updated the Europeana Publishing Guide into a web-based document using Atlassian's Confluence as a knowledge base software. We used this update to consolidate information and also re-organised all rights information (e.g. a new chapter for technical guidelines related to the Europeana Licensing Framework[6]). We also completed a strategy to encourage the accurate assignment of rights information to Europeana material.

In this period, we organised the ENA Members Council bi-annual meeting and ENA Member Council representatives elected five new ENA Management Board representatives[7]. We also organised the Europeana Conference 'Driving engagement - participatory approaches to digital cultural heritage'[8] in December 2021 in collaboration with the Ministry of Culture of Slovenia (an accompanying event of the Slovenian Presidency). The main aim was to explore aspects of public engagement and participation with digital cultural heritage.

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[2] https://www.europeana.eu/en/collections
[3] https://www.europeana.eu/en/blog/sign-languages-giving-voice-to-the-voiceless
[4] https://www.europeana.eu/es
[5] https://europeana.atlassian.net/wiki/spaces/EF/pages/2059763713/EPF+-+Publishing+guidelines
[6] https://europeana.atlassian.net/wiki/spaces/EF/pages/1988657160/ELF+-+Selecting+accurate+rights+guidelines
[7] https://pro.europeana.eu/post/new-management-board-to-lead-europeana-network-association-1
[8] https://pro.europeana.eu/files/Europeana_Professional/Event_documentation/Events/Presidency/Slovenia-Presidency-2021-Digital-Programme-Public.pdf

Introduction

The periodic report describes work carried out under Europeana DSI-4 from 1 December 2021 (M40) until 31 January 2022 (M41) based on the implementation plan (B.1 deliverable M36). Additionally, this report provides a short update on all ongoing items for the period Sep 2021 - Jan 2022 (DSI-4 Y4 so far).

The report is organised in four work packages (WP), one work package for each of the three priorities of the Europeana strategy 2020-2025[9]. The three strategic priorities are: Priority #1: Strengthen the infrastructure; Priority #2: Improve data quality; and Priority #3: Build capacity. The fourth work package reports on programme management efforts and the balance of efforts as well as the integration of other project outcomes (including Generic Services (GS) projects) into Europeana DSI.

All outcomes to be completed as stated in B.1 Implementation plan M36 are included in this periodic report. All implementation plan outcomes are stated in the overview of outcomes tables with completion rate and expected due date. In case an outcome ends in the reporting period a description is added that highlights the objective and result of the outcome and its value for Europeana DSI. Key Performance Indicators (KPIs) as well as other reporting metrics are also presented, and discussed in case of notable occurrences.

For each task, associated risks are stated and assessed based on probability of occurrence and severity of impact.[10] The risk assessment is reviewed and updated bi-monthly; in the event of changes (e.g. updates or new risks), an explanation is added to the risk assessment.

Explanatory notes for tables reporting - colour codes

	Outcomes as stated in the implementation plan M36[11]
	Colour blue indicates the expected timeframe of the outcome
	Colour black indicates that an outcome was completed in the reporting period
%	Progress until end of current reporting period

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[9] https://pro.europeana.eu/page/strategy-2020-2025-summary
[10] Probability and impact are rated with 5 levels (very high (5), high (4), medium (3), low (2), or very low (1)). The risk rating is probability multiplied by impact. If probability is medium (3) and impact is high (4), then the rating would be 12 (3 x 4). The rating gives an understanding of the risk and its effects on the operations of the Europeana services. A risk rating above 15 can be seen as high risk while a rating of 25 is devastating.
[11] Outcomes as stated in the implementation plan are marked with light blue background to be able to refer back to the initial implementation plan.

Abbreviations

Consortium participants

EF	Europeana Foundation (Coordinator), The Netherlands
AIT-Graz	AIT Angewandte Informationstechnik Forschungsgesellschaft mbH, Austria
AIT-Vienna	AIT Austrian Institute of Technology GmbH, Austria
APEF	Archives Portal Europe Foundation, The Netherlands
BL	The British Library Board, United Kingdom
CARARE	Connecting Archaeology and Architecture in Europe, Ireland
CLARIN	CLARIN ERIC, The Netherlands
DEN	Stichting Digitaal Erfgoed Nederland, The Netherlands
DFF	Deutsches Filminstitut & Filmmuseum e.V., Germany
EFHA	European Fashion Heritage Association, Italy
EUN	EUN Partnership AISBL, Belgium
EuroClio	EuroClio European Association of History Educators, The Netherlands
F&F	Facts & Files Historisches Forschungsinstitut Berlin Drauschke Schreiber Partnerschaftsgesellschaft Archiv-, Geschichts- und Literaturwissenschaftler, Germany
MCA	Michael Culture AISBL, Belgium
NISV	Stichting Nederlands Instituut voor Beeld en Geluid, The Netherlands
NTUA	National Technical University of Athens, Greece
Photocons	International Consortium for Photographic Heritage Photoconsortium, Italy
PSNC	Instytut Chemii Bioorganicznej Polskiej Akademii Nauk - Poznańskie Centrum Superkomputerowo-Sieciowe, Poland
SPK	Stiftung Preussischer Kulturbesitz, Germany

Other

CHIs	Cultural Heritage Institutions
DCHE	Digital Cultural Heritage and Europeana
DPS	Data Partner Services
DSI AGG	DSI aggregators
EAF	Europeana Aggregators' Forum
EDM	Europeana Data Model
ELF	Europeana Licensing Framework
ENA	Europeana Network Association
EPF	Europeana Publishing Framework
IIIF	International Image Interoperability Framework
R&D	Research & Development
SEO	Search Engine Optimisation
UI	User Experience

Formal definitions of terms used frequently can be found in [Annex: Glossary of terms](#).

Work package 1: Strengthen the infrastructure

WP1 maintains and continuously improves Europeana DSI's main services and functionality. It focuses on an easy and rewarding data publishing process (task 1.1.), a satisfying website experience for our users (task 1.2.), and a reliable and high performing platform infrastructure (task 1.3.). The work package also provides engagement activities for users to discover Europeana's digital cultural content (task 1.4.).

Task 1.1. Easy data publishing

Partners: EF and PSNC

Europeana DSI-4 offers a fully functional data and aggregation infrastructure through Metis (https://metis.europeana.eu/) which allows EF to import, transform, validate and enrich metadata for aggregators. This year, developments will continue to revolve around the implementation of the aggregation strategy[12]. We will speed up and enhance the reliability of the publishing process via Metis (objective 1.1.1.), support data providers in the testing of their data via the Metis Sandbox (objective 1.1.2.) and also invest in a fast-track for publishing data in Europeana (objective 1.1.3.).

Overview of outcomes: easy data publishing

Partner	Outcomes	Progress	Due date	Dec M40	Jan M41	Feb M42	Mar M43	Apr M44
Objective 1.1.1. Extend and maintain Metis								
EF, PSNC	Incremental media processing implemented	Not started	Jun '22					
PSNC	eCloud data model reviewed and refactored	15%	Aug '22	■	■	■	■	■
PSNC	Data storage mechanisms in eCloud optimised	20%	Aug '22	■	■	■	■	■
EF, PSNC	System upgrades and performance are maintained (bugs fixing, infrastructure upgrades, refinement of existing features) - 20% of M40/M41	Ongoing	-					
Objective 1.1.2. Enable Metis Sandbox								

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[12] https://pro.europeana.eu/post/europeana-dsi-4-aggregation-strategy

EF, PSNC	Metis *Extended Sandbox* supports one additional data source for conversion to EDM[13]	100%	Dec '21	■					
EF	Tiers calculation module in Metis *Extended Sandbox* available	100%	Jan '22		■				
EF	Training resources (V1) for Metis Sandbox (for Aggregators) developed	60%	Feb '22						
EF	Feedback for further development of the Metis *Extended* Sandbox is collected	20%	Apr '22						
EF, PSNC	Metis *Extended Sandbox* data sources options for conversion to EDMs extended[14]	Not started	Aug '22						
EF	Metis Sandbox consolidated and maintained (bugs fixing, infrastructure upgrades, refinement of existing features) - 20% of M40/M41	Ongoing	-						
Objective 1.1.3. Enable fast track publishing workflow									
EF, PSNC	Report on review and proposed amendments to the Aggregation Strategy roadmap (including progress update)	Not started	Apr '22						
EF, PSNC	Validated Aggregation Strategy roadmap actions implemented	Not started	Jul '22						
EF	MS1 Report on progress on the aggregation strategy delivered (internal)	Not started	Aug '22						

System upgrades and performance are maintained (bugs fixing, infrastructure upgrades, refinement of existing features) (bi-annual update) - recently we have been working on increasing the throughput of our processing. We have identified some technical bottlenecks (for instance regarding data management and file handling) and have managed to achieve a very significant speedup of our record processing. One of the changes (to do with accessing stored files) had an effect of such magnitude that we decided to do a hotfix so that users could benefit from it immediately.

A full Metis release is scheduled for early March, which will contain:
- The last batch of functionality around incremental processing, most importantly including incremental HTTP harvesting, which also includes better integration with the depublication mechanism,
- Subsequent performance improvements,

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[13] Final outcome is planned for completion by the end of DSI-4 Y4 but several iterations will be released throughout the year.
[14] Final outcome is planned for completion by the end of DSI-4 Y4 but several iterations will be released throughout the year.

- The usual bug fixes and code quality improvements.

Items that were worked on earlier this year include:
- Merging several occurrences of the EDM definitions (XSD schemas) to create one source of truth, making it much easier to maintain,
- Support for a new version of XML transformations (XSLT version 3) in our dereferencing code, greatly simplifying the management of our collection of dereferencing vocabularies,
- A new test repository for records, supporting both OAI and HTTP harvesting, which will greatly facilitate our testing process.

Metis Extended Sandbox supports one additional data source for conversion to EDM - we have implemented a feature in the Sandbox by which a user can upload an XSLT transformation when triggering a workflow, along with (a link to) their records. This transformation will be run on each record immediately, before any other processing is done. This functionality allows the user to translate records from another (XML-based) format to the EDM format that's required by the Sandbox, so that they don't have to perform this translation themselves on their own infrastructure. We are running a pilot with the BNF (National Library of France) to see if this could help them with submitting their data.

Tiers calculation module in Metis Extended Sandbox available - this feature in the Sandbox allows a user to examine the quality of any record of their choosing in more detail (after this record has been fully processed). A report is generated for the record that contains a full breakdown of the record's properties and resources that influence the tier calculation. This should give the user an indication of why a certain tier was awarded to the record and what they could do to reach a higher tier. This functionality is meant to be used by data providers to iteratively improve their records before finally sending them to Metis for processing, thus reducing the need for, and the delays that come with, manual feedback from Europeana staff.

Metis Sandbox consolidated and maintained (bugs fixing, infrastructure upgrades, refinement of existing features) (bi-annual update) - we have been doing some refactoring in the Sandbox application. More parts of the harvesting process happen asynchronously, meaning that users will not have to wait anymore before they can start tracking their data through the pipeline. We have also worked on the application's robustness and user experience, for instance making the application more resilient to faulty user input (for instance when it comes to invalid data or datasets that are too large).

Risk assessment: easy data publishing

ID	Risk	Probability	Impact	Rate	Mitigation strategy	Change
R1.1	The work planned for DSI-4 Y4 may require more preparation of requirements analysis	High (4)	Low (2)	8	The work needs to be planned in smaller iterations which means that the products (such as	-

	and design than envisaged which may delay implementation.				Metis or the Sandbox) may not have all the expected functionalities implemented at once.	
R1.2	Too many data providers don't handle their OAI datestamps properly (i.e. according to the intentions behind the OAI standard), thus preventing us from gaining the expected performance benefits of incremental processing.	Medium (3)	Low (2)	6	1) Raising awareness on the OAI specifications with aggregators; 2) An additional feature can be implemented that can detect changed records in a different way. This method would be prone to false positives (i.e. change detected where no change exists), but may perform better.	-
R1.3	The storage space on our Casasandra servers runs out before we manage to put a sustainable deletion cycle in place.	Low (2)	Low (2)	4	A combination of emergency cleanups of old data and more (temporary) storage capacity.	-

Task 1.2. Europeana website experience

Partners: EF and AIT Vienna

The Europeana website (www.europeana.eu) is the single multilingual access point to digital resources of European heritage. This year we aim to see the website maintain 500,000 visits a month (KPI 1.1) with a 15% user return rate (KPI 1.2). To achieve this, the consortium maintains and continuously improves the website with a focus on a satisfying experience for users. We will extend user engagement features to attract more return visitors (objective 1.2.1.). Improvements to search are a key aspect of website experience that we will continue to invest in (objective 1.2.2.). The extension of features to support the multilingual strategy are also critically important for reaching and retaining new audiences (objective 1.2.3.).

Overview of outcomes: Europeana website experience

Partner	Outcomes	Progress	Due date	Dec M40	Jan M41	Feb M42	Mar M43	Apr M44
EF	Europeana website usability and performance maintained (bugs fixing, security & software updates) - 20% of M40/M41	Ongoing	-					
Objective 1.2.1. Extend user engagement features								

Partner	Milestone / Task	Status	Date					
EF	About us page redesigned (implementation)	Done	Nov '21					
EF	Organisation pages available on Collections hub page	100%	Dec '21	■				
EF	Delete functionality for user account available	100%	Jan '22	▨	■			
EF	Classic portal decommissioned	60%	Mar '22	▨	▨	▨	▨	
EF	Homepage redesigned (implementation)	10%	Jun '22	▨	▨	▨	▨	▨
EF	Module to highlight new website features	100%	Jan '22	▨	■			

Objective 1.2.2. Deliver better search experience

Partner	Milestone / Task	Status	Date					
EF	Recommendations service (API and front end) is extended to support entity powered collections and user specific recommendations[15]	100%	Dec '21	■				
EF	New design for search filters implemented	80%	Feb '22	▨	▨	▨		
EF	Update on Search Strategy roadmap	Not started	Feb '22					
EF	New design for entity filters implemented	80%	Mar '22	▨	▨	▨	▨	
EF	Search by location/georeference criteria (indexing implementation) (M-F20)	25%	Apr '22	▨	▨	▨	▨	▨
EF	Tuning the weight of different fields in ranking (M-F8) (first experiments)	Not started	Jun '22					
EF, AIT Vienna	New transcriptions are displayed and searchable live	40%	Aug '22	▨	▨	▨	▨	▨
EF	Search widget for editorial content implemented similar to how the related entity collections appear in search	Not started	Aug '22					
EF	MS2 Report on progress on the search strategy delivered (internal)	Not started	Aug '22					
EF	Search relevance and performance maintained	Ongoing	-					

Objective 1.2.3. Extend multilingual reach

Partner	Milestone / Task	Status	Date					
EF	Multilingual search for the Spanish destination implemented and deployed	100%	Dec '21	■				

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[15] The recommendation engine itself is developed by Europeana XX Generic Services project.

EF	First implementation and evaluation of the metrics and KPIs[16], focusing on entities	75%	Feb '22	■	■	■		
EF	Update on Multilingual Strategy roadmap	Not started	Feb '22					
EF	Multilingual search for the Spanish destination further evaluated for technical quality and further improved and assessed strategically and technically for transposition to other languages	5%	Apr '22	■	■	■	■	■
EF	Prioritise normalisation of not-yet normalised tags (in original and dereferenced data)	10%	Jun '22	■	■	■	■	■
EF	MS3 Report on progress on the multilingual strategy delivered (internal)	Not started	Aug '22					
EF	Maintain user interface translations in supported languages	Ongoing	-					

Europeana website usability and performance maintained (bugs fixing, security & software updates) (bi-annual update) - an update for the Europeana website was provided in the A.1 Platform report (December 2021) including the highlights for DSI-4 Y4 so far. Additionally, we moved the website to use the Kubernetes cluster on the IBM cloud, which improved the website's performance reflected in our uptime metric.

Organisation pages available on Collections hub page - To highlight the possibility of browsing our collection by an organisation, we added a row of organisations to the Collections hub page, which daily features four different organisation pages which are selected alphabetically and refreshed daily (e.g., see the featured organisations at the bottom of this page[17]).

Delete functionality for user account available - we added a 'delete my account' functionality to the 'profile settings' page to make it easier for people to delete their account if they wish. By clicking the 'delete my account' button, people can delete their account and their private and public galleries. To see this feature, log in, go to 'profile settings,' then to 'update information' and click the 'delete my account' button.

Module to highlight new website features - we want to make people aware about new features. Therefore, we released a notification informing people when a new feature is available on the website. To see this notification, visit the website, and it pops up above the cookie banner. If you visited the website recently and dismissed the notification, we advise to view the website in incognito.

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[16] KPIs here stand for targets for data quality or multilinguality we will start measuring and not KPIs we will report on.
[17] https://www.europeana.eu/en/collections

Recommendations service (API and front end) is extended to support entity powered collections and user specific recommendations - the functionality related to supporting recommendations for entity pages is available to a selected number of users which will allow the curation of Entity Pages. The functionality related to user specific recommendations is built on top of the technology delivered by the Europeana XX GS project and additional developments will be done by EF as part of the milestone "Recommendation service is fine-tuned and production ready".

Search relevance and performance maintained (bi-annual update) - an update to search relevance and performance was provided in the A.1 Platform report[18] (December 2021) including the highlights for DSI-4 Y4 so far.

Multilingual search for the Spanish destination implemented and deployed - The queries sent by users on the Spanish portal for Europeana[19] are translated into English, which enables them to find more results, as this English translation can match more metadata records than the original query (usually in Spanish).

Maintain user interface translations in supported languages (bi-annual update) - the website is fully available in the official 24 EU languages. We translate all features before they are released and translations are also validated by native speakers after release (while we place particular attention to Greek and Polish translations as we see most errors in those automated translations).

Reporting metrics: Europeana website experience

No.	Description	Measured by	Frequency	Target	Dec 2020	Dec 2021	Jan 2021	Jan 2022
KPI 1.1	Traffic to Europeana website	Number of visits per month	Monthly	**500,000**	492,100	508,387	536,039	563,413
KPI 1.2	Returning visitors to Europeana website	Percentage of returning visitors	Monthly	**15%**	13.61%	6.34%	13.69%	6.27%
KPI 1.3	Satisfaction rate for Europeana website	Average satisfaction on a 5-point Likert scale[20]	Bi-annual	**75%**		-		Expected Feb '22

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[18] Available on request.
[19] https://www.europeana.eu/es
[20] The average satisfaction on a 5-point Likert scale is translated into % (e.g. an average of 3.6 stars equals a satisfaction rate of 72%).

KPI 1.4	Downloads on the Europeana website	Total number of downloads (cumulative)	Monthly	**240,000**	47,651	59,750	59,526	79,182
RM 1.1	New visitors to the Europeana website	Total number of new visitors per month	Monthly	-	353,000	476,149	394,662	528,062
RM 1.2	Visit duration on the Europeana website	Average time spent per visit	Monthly	-	01:33	01:59	01:31	02:03
RM 1.3	Page views on Europeana website	Average amount of pages viewed per visit	Monthly	-	2.36	2.1[21]	2.4	2.1
RM 1.4	Click-throughs to partner websites	Total number of click-throughs (cumulative)	Bi-monthly	-	-	-	80,788	74,681
RM 1.5	User feedback for the Europeana website	Total number of user feedback received via feedback button (cumulative)	Bi-monthly	-	-	-	271	319

In December 2021/January 2022, we continue to surpass our target of 500,000 visits/month. We continue to see a lower user return rate (compared to previous year) as a result of reduced tracking capabilities. More information is available in the C.2/C.3 Users and usage report M40[22].

Risk assessment: Europeana website experience

ID	Risk	Probability	Impact	Rate	Mitigation strategy	Change
R1.4	Traffic on Europeana website (KPI 1.1) is below target	Low (2)	Medium (3)	3	Continuing our experiments on making record pages more discoverable to Google; expanding editorials with seasons, exhibitions; promotions and activities	-[23]

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[21] Note: we made an error in this metric in the previous reports. The average number so far for DSI-4 Y4 is 2.06s
[22] Available on the Europeana DSI-4 project page in the document section.
https://pro.europeana.eu/project/europeana-dsi-4
[23] The risk was updated from high to low as, on average, the Europeana website received about 527,900 visits per month in DSI-4 Y 4 so far. The mitigation strategy was also updated to include multilingualism.

					engaging users; better promotion of APIs to engage with developer and institutional reuse; and improving the multilingual experience on the website	
R1.5	Returning visitors on Europeana website (KPI 1.2) is below target: product/content not good enough to encourage people to return	Very low (1)	Very low (1)	1	Optimising the browsing and viewing experiences; optimising the searching experiences; optimising multilingual experience; extending user engagement features; expanding editorials with seasons, exhibitions; promotions and activities engaging users	-[24]
R1.6	Satisfaction rate for the Europeana website is low	Medium (3)	High (4)	12	Review europeana.eu user feedback and behaviour and take appropriate actions; monitor website performance; constant improvement of the Europeana website	-
R1.7	Expectations regarding multilingual strategy are higher than what available language technology enables us to implement	High (4)	Low (2)	8	Regularly evaluate and communicate the results of evaluation to stakeholders. Adapt plans to the performance level of technology.	-

Task 1.3. Reliable platforms

Partners: EF and AIT Vienna

High availability and performance (objective 1.3.1.) is an important priority for the Europeana services. With a high-availability architecture design, we aim for our main products to be available 24/7 with an uptime of 99.5% (excluding scheduled outages).

Overview of outcomes: reliable platforms

Partner	Outcomes	Progress	Due date	Dec M40	Jan M41	Feb M42	Mar M43	Apr M44
Objective 1.3.1. APIs and infrastructure are high-performing								

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[24] The risk was adjusted to very low to acknowledge that, due to data protection regulations on the Europeana website and GDPR compliance across Europe, EF is no longer able to track this KPI accurately.

EF, AIT Vienna	Full disaster recovery test completed[25]	Not started	Mar '22					
EF	Recommendation service is fine-tuned and production ready	20%	Jun '22					
EF	Alternative hosting platforms investigated	40%	Jun '22					
EF	Solr and Mongo reindexed[26]	Ongoing	-					
EF, AIT Vienna	Core APIs are maintained (incidents, bugs, technical debt improvements, software updates, releases) - 25% of M40/41	Ongoing	-					
EF	Infrastructure is maintained (bugs, attacks, clean-ups, upgrades, back-ups) - 30% of M40/41	Ongoing	-					

Solr and Mongo reindexed (bi-annual update) - The whole Europeana dataset was re-enriched and re-indexed at the end of October 2021.

Core APIs are maintained (incidents, bugs, technical debt improvements, software updates, releases) (bi-annual update) - an update towards APIs was provided in the A.1 Platform report[27] (December 2021) including the highlights for DSI-4 Y4 so far. Additionally, in December 2021 worldwide security experts reported a very serious vulnerability in the log4j2 library that is being used by many components in the Europeana infrastructure. The vulnerability allows attackers to divert logging and possibly to take over a system entirely. As a first quick response to this, we investigated which systems were likely to be affected and shutdown all non-essential systems. We then continued with a more thorough analysis of affected systems, we applied a quick fix to affected production systems and continued implementing a more permanent fix for all affected products up until the end of January, when we concluded our work. Over the course of January, other slightly less critical vulnerabilities were discovered in log4j2, but after further analysis we concluded that these posed very little risk for Europeana.

Infrastructure is maintained (bugs, attacks, clean-ups, upgrades, back-ups) (bi-annual update) - an update towards the infrastructure was provided in the A.1 Platform report (December 2021) including the highlights for DSI-4 Y4 so far. Besides the Core APIs, and as explained in the previous paragraph, the log4j vulnerability also impacted backend services for which mitigation and preventive measures had to be taken.

Reporting metrics: reliable platforms

No.	Description	Measured by	Frequency	Dec 2020	Dec 2021	Jan 2021	Jan 2022

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[25] This outcome will feed into C.4 Stress and disaster recovery test reports (March 2022).
[26] Outcomes in other tasks require a reindexing activity. The planning will be aligned with those outcomes.
[27] Available on request.

RM 1.8	Response time of Europeana website	Average time (seconds) for single record per month	Monthly	1.36	0.8	1.25	0.8
RM 1.9	Uptime of Europeana website	Average in % for single records per month	Monthly	99.83	99.99	99.87	99.99
RM 1.8	Response time of APIs (all)	Average response time (seconds) per month	Monthly	0.23	0.17	0.24	0.17
RM 1.9	Uptime of APIs (all)	Average in % per month	Monthly	100	100	99.98	100
RM 1.10	Response time of Europeana Pro	Average response time (seconds) per month	Monthly	0.82	1.17	0.83	1.10
RM 1.11	Uptime of Europeana Pro	Average in % per month	Monthly	100	99.99	100	100
RM 1.12	Uptime of Metis	Average in % per month	Monthly	100	100	100	100

Risk assessment: reliable platforms

ID	Risk	Probability	Impact	Rate	Mitigation strategy	Change
R1.8	High traffic in form of attacks can cause interruptions in the service	Low (2)	High (4)	8	Anti-flooding mechanism to limit the traffic to real users;	-

Task 1.4. Discoverability of digital cultural content

Partners: EF, DSI AGG, EUN, and EuroClio

Our efforts to publish digital cultural content can only be valued when material is found and consumed. Therefore, the ability for European citizens, educational audiences and API consumers to discover content is critical to the success of the Europeana Initiative. The foundation of our discoverability efforts are Europeana's high-quality editorial features that will highlight captivating collections and stories (objective 1.4.1.). Through communication and promotion, EF will bring this material to the attention of our audiences, drive traffic to the Europeana website, and engage with digital culture (objective 1.4.2.). Activities with educational communities will cultivate partnerships for teaching and learning (objective 1.4.3.). Efforts to support third-party developers' use of the Europeana APIs will help to diversify the usage of digital cultural content (objective 1.4.4.).

Overview of outcomes: discoverability of digital cultural content

Partner	Outcomes	Progress	Due date	Dec M40	Jan M41	Feb M42	Mar M43	Apr M44
Objective 1.4.1. Deliver high-quality editorial features								
EF	Europeana Sport season content[28] published and promoted	Done	Sep '21					
EF	Black History Month (autumn season)	Done	Oct '21					
EF	Women's History Month	50%	Mar '22	■	■	■	■	
EF, DSI AGG	Editorial content (exhibitions, blogs and galleries)[29] published and promoted	Ongoing	-					
EF, DSI AGG	Stories page[30] and new feature pages[31] published and promoted	Ongoing	-					
EF	New European Bauhaus[32] content published	Ongoing	-					
EF	European Year of Youth content published	Ongoing from Jan 2022	-					
EF	Exhibition 'Women writing birds' published	100%	Jan '22	■	■			
Objective 1.4.2. Communication and dissemination to European citizens								
EF	GIF IT UP organised	Done	Oct '21					
EF	Black History Month promoted	Done	Oct '21					
EF	Women's History Month promoted	Not started	Mar '22					
EF	Digital Storytelling Festival promoted	Not started	May '22					
EF	Newsletter and social media posts (Facebook, Twitter, Instagram, Pinterest) published[33]	Ongoing	-					
Objective 1.4.3. Engage with educational communities								

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[28] Editorials from the Europeana Sport Generic Services project contributed to this outcome https://pro.europeana.eu/project/europeana-sport
[29] Editorials from (Europeana) Generic Services projects contribute to this outcome.
[30] https://www.europeana.eu/stories
[31] For example: https://www.europeana.eu/pandemics
[32] https://www.europeana.eu/new-european-bauhaus
[33] Editorial outcomes of GS projects are promoted.

Partner	Milestone	%	Date	T1	T2	T3	T4	T5
EuroClio	Historiana learning resources support different media types (including audio and audiovisual sources)	100%	Dec '21	■				
EF	Annual Open Education Week: contribution added	20%	Mar '22	▣	▣	▣	▣	
EF	All Digital Week campaign: contribution added	20%	Mar '22	▣	▣	▣	▣	
EUN	4 runs and language versions of the Digital Education with Cultural Heritage MOOC launched	50%	Mar '22	▣	▣	▣	▣	
EuroClio	Training session on partner pages organised	20%	Apr '22	▣	▣	▣	▣	▣
EUN	Europeana Education competition finalised	20%	May '22	▣	▣	▣	▣	▣
EuroClio	Webinar series for Historiana users (4 webinars organised)	25%	May '22	▣	▣	▣	▣	▣
EuroClio	Train-the-trainers sessions organised	20%	Jul '22	▣	▣	▣	▣	▣
EuroClio	15 multilingual Historiana eLearning activities produced	10%	Aug '22	▣	▣	▣	▣	▣
EUN	55 new multilingual learning scenarios produced and curated to publish in the Teaching with Europeana blog	10%	Aug '22	▣	▣	▣	▣	▣
EuroClio	Dashboard on Historiana for partners to gain insights into usage available	Not started	Aug '22					
EF	Blogs and social media posts (LinkedIn, Facebook, Twitter) published	Ongoing	-	░	░	░	░	░
EF	Europeana Education community[34] supported	Ongoing	-	░	░	░	░	░
EF	Built with Bits	100%	Jan' 22	▣	■			
Objective 1.4.4. Attract API users and grow data usage								
EF	API outreach strategy updated (internal)	100%	Jan '22	▣	■			
EF	API libraries, FAQs, and tutorials maintained and updated	40%	Aug '22	▣	▣	▣	▣	▣

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[34] https://pro.europeana.eu/page/europeana-education

EF	Europeana API services presented at relevant CH events	Ongoing	-					
EF	1:1 support and changes/improvements of Europeana API services communicated to users	Ongoing	-					

Editorial content (exhibitions, blogs and galleries) published and promoted (bi-annual update) - During Europeana DSI-4 Y4 so far we published six exhibitions[35], 25 blogs[36] and many galleries[37]. Throughout October 2021, Europeana published and promoted editorial content for Black History Month. New editorial was also published on medieval history, sport, 20th century broadcasting and Chinese culture.

Stories page and new feature pages published and promoted (bi-annual update) - The Stories page was regularly updated to highlight the latest exhibitions and blogs on the Europeana website. New feature pages included winter sports[38], spot the difference[39], and email courses[40].

New European Bauhaus content published (bi-annual update) - no new editorial content published in DSI-4 Y4.

European Year of Youth content published (bi-annual update) - Editorial and promotional opportunities that can support the European Year of Youth during 2022 have been explored and scheduled, including the 2022 Colouring Book and Olympic-themed content developed by sports history students.

Exhibition 'Women writing birds[41]' published - the exhibition about pioneering ornithologists of the 19th century, was created as part of the project EnviroCitizen: Citizen Science for Environmental Citizenship that aims to research how to encourage environmental citizenship through engagement with citizen science.

Newsletter and social media posts (Facebook, Twitter, Instagram, Pinterest) published (bi-annual update) - The newsletter currently reaches over 48,800 subscribers[42]. A detailed overview of content and usage on social media was provided as part of the C.2/C.3 Users and usage report M40 (December 2021).

Historiana learning resources support different media types (including audio and audiovisual sources) - In the MySources section of Historiana members now can find and select AV Europeana sources and/or upload their own sources. To enable the use of AV materials developers extended both the user-interface and back-end to enable the selection / uploading of AV content. Once a video is

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[35] https://www.europeana.eu/en/exhibitions
[36] https://www.europeana.eu/en/blog
[37] https://www.europeana.eu/en/galleries
[38] https://www.europeana.eu/en/winter-sports
[39] https://www.europeana.eu/en/spot-the-difference-sport-puzzle-answers
[40] https://www.europeana.eu/en/email-courses
[41] https://www.europeana.eu/en/exhibitions/women-writing-birds
[42] For example: https://mailchi.mp/europeana/animating-culture-gif-it-up-is-back-520572?e=[UNIQID]

imported as a source it can be used in eActivities as well as in other places. Additional meta-data can be entered via the local edit function. All the details about this new development can be seen in the Historiana Developer and Project documentation[43].

Blogs and social media posts (LinkedIn, Facebook, Twitter) published (bi-annual update) - The most recent editorial pieces on Pro are the MOOC *Digital Education with Cultural Heritage* rerun announcement[44] and the updates on the Education space[45] (with the new resources, webinars and partnerships) as well as the updates on the Built with Bits event page[46], where we have included the winners and links to the open materials produced over the course. From September 2021, the Education Facebook group page has had 54,200+ views, with a total of 78 new posts and 857 reactions and 274 new members. The five most popular posts had over 1,000 views, having the MOOC rerun announcement[47] 8,400+ views. According to the data provided by LinkedIn, over the last 90 days, 465 members (from a total of 1,280) have been actively reading and viewing the group posts. In the same period, there have been 7 posts with a total of 4,032 views. The most popular post was the final ceremony of the Built with Bits event recap[48]. It's worth highlighting the post by Emma Giurlanni, one of the most recent members of the group[49]. News about our activities in education are regularly shared in the Europeana general Twitter account. Particularly interesting for this period on Twitter were the retweets from schools and educators who participated in the Built with Bits programme[50].

Europeana Education community supported (bi-annual update) - The most remarkable activities organised over the last months to support our community have been: 1) strengthen our collaboration with the Copyright community to support educators navigate the new directive and the respective national transpositions with the participants in one of the Copyright Office Hours[51] and 2) the development of the Built with Bits program described below. All the activities planned for 2022 have been just published[52].

Built with Bits - On 19 January we celebrated the final ceremony and winners announcement[53] of the Built with Bits[54] mentoring program and educational challenge. More than 100 people attended the event (educators, students and Ministry of Education representatives). In two months, 26 educators from four European countries (Italy, Spain, Greece and Portugal) participated in the programme, 16 projects were finally submitted, we run 15 hours of synchronous learning, we've produced 25 online resources for capacity building and 536 children were involved in the design of educational metaverses inspired by the #NewEuropeanBauhaus.

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[43] https://historiana.dev/av-integration/
[44] https://pro.europeana.eu/post/sign-up-now-for-the-europeana-mooc-digital-education-with-cultural-heritage
[45] https://pro.europeana.eu/page/education?&page_posts=1
[46] https://pro.europeana.eu/page/built-with-bits-designing-virtual-spaces-for-the-future
[47] https://www.facebook.com/groups/EuropeanaEducation/permalink/1531485547233080/
[48] https://www.linkedin.com/feed/update/urn:li:activity:6892019859807698944
[49] https://www.linkedin.com/feed/update/urn:li:activity:6896495931722985473
[50] https://twitter.com/codemagijon/status/1483878499177930759?s=20&t=BGSCNPpDJVE0Ra8sz9vgIQ
[51] https://pro.europeana.eu/event/copyright-office-hours-use-of-digital-cultural-heritage-in-education
[52] https://pro.europeana.eu/post/education-community-work-plan-2022
[53] https://pro.europeana.eu/event/built-with-bits-final-ceremony-and-winners-announcement
[54] https://pro.europeana.eu/page/built-with-bits-designing-virtual-spaces-for-the-future

API outreach strategy updated (internal) - the API outreach strategy update looked back at the priority areas and tasks identified in MS89 API Engagement strategy[55], updating the status of these tasks and identifying lessons for future API outreach work. In general, most of the task laid out in the original strategy were successfully achieved: the contact with the API community was re-established, feedback was garnered from the API community on what needs they had moving forward, outdated documentation pages were updated, and the Europeana APIs were presented at several events related to software development in the GLAM sector. The API Outreach strategy went on to identify areas of improvement for future implementation plans, focusing on the need for more personal 1:1 support of API users and more insight into the user segments of this community.

Europeana API services presented at relevant CH events (bi-annual update) - the Europeana APIs were presented at events where stakeholders in the use of transnational cultural heritage data were present, such as the Futurs Fantastiques conference[56] and the Europeana 2021 conference [57].

1:1 support and changes/improvements of Europeana API services communicated to users (bi-annual update) - a lot of work was done to provide personal support to users of Europeana's API services in the past few months. New onboarding and checkin messages were created and sent out to keep the connection with the API community strong and to inform API users of this service. When new API users sign up for an API key, they now receive a new onboarding message a few weeks after signing up for the API to provide documentation resources and offer help where it is needed. This has strengthened the ties between external developers and researchers using Europeana's APIs and the Europeana team: it has resulted in several tech support calls with API users, and further dissemination of the Europeana APIs. For example, because of this followup a guest lecture has been given at Leiden University, introducing art history students to the Europeana API suite and helping them to extract datasets from Europeana for use in their research.

Communication and dissemination activities

Partner	Name of event	Activity	Location	Date
ICOM -CECA	Learning and engaging digitally working group meeting	Monthly event to drive the involvement of museum educators in the Europeana Initiative	Online	3/12/ 2021

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[55] Available on request.
[56] https://www.bnf.fr/en/les-futurs-fantastiques
[57] https://pro.europeana.eu/page/conference

eTwinning	Europeana. Language learning and critical engagement with digital cultural data	Event dedicated to language learning teachers and the eTwining media literacy group on how to browse and curate content in Europeana.eu and discover ready-to-use resources built upon the 4 C's: critical thinking, creativity, collaboration and communication.	Online	17/01/ 2022
EF	Built with Bits final ceremony and winners announcement	Announcement of the country winners, as well as two special mentions for Europeana content use and the best project inspired by the New European Bauhaus	Online	19/01/ 2022
EF	GLAM collections and exhibitions in immersive environments[58]	Webinar organised by Data to Power examining dissemination of digital cultural heritage and editorial online.	Online	24/1/ 2022
EF	Public Domain Day Celebration Nigeria 2022	Webinar showcasing the importance of open access cultural heritage in the African context	Online	16/1/ 2022
EF	Futurs Fantastiques[59]	Conference showcasing the use of Europeana's APIs in the creation of training and test datasets for Machine Learning	Paris, France	9-10/12/ 2021

Reporting metrics: discoverability of digital cultural content

No.	Description	Measured by	Frequency	Target	Dec 2020	Dec 2021	Jan 2021	Jan 2022
KPI 1.5	Satisfaction rate for exhibitions	Average satisfaction on a 5-point Likert scale (cumulative)[60]	Monthly	**75%**	88%	88%	88%	85%
KPI 1.6	Reach on social media	Total number of impressions on social media (Facebook, Pinterest, GIPHY, Instagram, Twitter) (cumulative)	Monthly	**450 million**	175.9 million	184.4 million	229.6 million	225.6 million

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[58] https://www.youtube.com/watch?v=VH-Kn5hGabw
[59] https://www.bnf.fr/en/les-futurs-fantastiques
[60] The average satisfaction on a 5-point Likert scale is translated into % (e.g. an average of 3.6 stars equals a satisfaction rate of 72%).

KPI 1.7	Learning resources for education[61]	Total number of resources using Europeana data (cumulative)	Monthly	**50**	11	1	11	25
KPI 1.8	External learning environments for education	Total number of integrations of Europeana educational offers (cumulative)	Monthly	**5**	-	1	2	1
KPI 1.9	Satisfaction rate of educational communities	Average satisfaction on a 5-point Likert scale (cumulative)	Monthly	**75%**	77%	-	77%	83%
RM 1.13	Editorial outcomes: exhibitions	Number of exhibitions created (cumulative)	Bi-Monthly	-	-	-	5	6
RM 1.14	Editorial outcomes: blogs	Number of blogs created (cumulative)	Bi-Monthly	-	-	-	54	52
RM 1.15	Newsletter subscribers	Total number of subscribers	Bi-Monthly	-	-	-	49,898	48,838
RM 1.16	Social media engagement	Total number of likes, shares, comments per month (Facebook, Twitter, Pinterest, Instagram)	Monthly	-	280,525	142,121	334,980	188,313
RM 1.17	Social media followers/fans	Total number on social media (Facebook, Twitter, Pinterest, GIPHY, Instagram)	Monthly	-	220,717	229,968	222,739	230,262

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[61] Metric excludes multilingual resource variations.

RM 1.18	Educators actively involved in creating learning resources (EUN)	Total number of educators (cumulative)	Once a year	-	-	-	-	Expected Aug '22
RM 1.19	Countries coverage of contributing educators (EUN)	Total number of countries (cumulative)	Once a year	-	-	-	-	Expected Aug '22
RM 1.20	Participants completing the MOOC	Total number of participants (cumulative)	Upon occasion	-	-	-	-	Expected Apr '22
RM 1.21	Reach to Europeana Education community	Number of people reached per month (mailing list, LinkedIn, Facebook)	Bi-monthly	-	-	-	7,255	9,139
RM 1.22	API usage (REST API)	Number of API users that exceeded the average of 5 calls a day per month	Monthly	-	58	50	57	49
RM 1.23	API usage (REST API)	Number of API users that were active for more than 5 days in each month	Monthly	-	48	46	52	50
RM 1.24	API usage (REST API)	Total number of requests per month (external traffic)	Monthly	-	19.5 million	15.7 million	23.5 million	19.0 million
RM 1.25	API users (REST API)	Total number of API users per month	Monthly	-	181	147	212	155
RM 1.26	API sign-ups (REST API)	Number of API sign-ups per month	Monthly	-	72	34	106	59

In Dec 2021/Jan 2022 we published 18 new blogs[62] and one new exhibition[63].

Compared to 2021 we see decreased numbers for social media engagement in 2022. This is due to the newly introduced privacy regulations on the platforms that had an impact on our activities and reporting. More information is available in the C.2/C.3 Users and usage report M40[64].

In Dec 2021/Jan 2022 we also produced 25 new learning resources during the Built with Bits event to learn how to create immersive spaces using cultural data, which are available on Notion and accessible via Europeana Pro (including video tutorials, power points and learning pills)[65]. We evaluated the satisfaction rate of educational communities at an eTwinning webinar, *Europeana. Language learning and critical engagement with digital cultural data* on 17th January with a very good average satisfaction rate of 83%.

Risk assessment: discoverability of digital cultural content

ID	Risk	Probability	Impact	Rate	Mitigation strategy	Change
R1.9	Editorials which depend on third party contributions might not progress as planned	Medium (3)	Medium (3)	9	Frequent communication with third party contributors; provide support and advice as required.	-
R1.10	Reach of Europeana data on social media: changes to the algorithms and pricing on social media platforms may impact our reach; stronger privacy measures across the EU make targeting on social media challenging, this might lead to a decrease in reach	High (4)	High (4)	16	Adaptation and diversification of channels, tools and platforms used (especially the channels providing direct contact with users such as email are helping to increase independency from platforms)	-[66]
R1.11	School lockdowns for COVID	High (4)	Medium (3)	12	Most of the activities with teachers are planned for the digital environment but some necessary implementations with	-

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[62] https://www.europeana.eu/en/blog
[63] https://www.europeana.eu/en/exhibitions/a-century-of-technology
[64] Available on the Europeana DSI-4 project page in the document section. https://pro.europeana.eu/project/europeana-dsi-4
[65] https://pro.europeana.eu/page/built-with-bits-designing-virtual-spaces-for-the-future#tutorials
[66] Risk was changed to high probablity and impact and was expanded to acknowledge the limited tracking capabilities and targeting options on social media.

					students might be hampered.	
R1.12	Complete new strategy involving CHIs professionals in the education initiative. Some activities may have lower impact than expected.	Medium (3)	Low (2)	6	Continuation of the strategy in DSI-4 Y4	-
R1.13	Contact info of API key holders is outdated or API key holders are not interested in 1:1 communication and support, leading to loss of contact with API user group	Low (1)	Medium (3)	3	follow up with current API key holders to update information, ensure engaging 1:1 outreach campaigns	-
R1.14	Outreach to new developers does not generate interest and might prevent growing Europeana API community	Medium (3)	Medium (3)	9	Review documentation, improve API user experience.	-

Work package 2: Improve data quality

WP2 will increase high-quality content and metadata (task 2.1) to improve access and reusability of digital content. This will include new technological approaches of enriching data, such as crowdsourcing and machine-learning (task 2.2). These efforts will contribute to a more satisfying user experience on the Europeana website.

Task 2.1. Quality assured data

Partners: EF, SPK, and DSI AGG (APEF, BL, CARARE, MCA, EFHA, DFF, NISV, AIT-Graz, Photocons, NTUA)

The data issues that have developed over the past decade can only be resolved through a multi-year effort. In the next year, EF and DSI AGG will continue to work with data providers to raise the quality of content and metadata (objective 2.1.1.). We will also maintain and further develop our data and publishing frameworks and standards (objective 2.1.2.) while influencing global interoperability and technological innovation through our networks (objective 2.1.3.).

Overview of outcomes: quality assured data

Partner	Outcomes	Progress	Due date	Dec M40	Jan M41	Feb M42	Mar M43	Apr M44

Objective 2.1.1. Raise the quality of content and metadata

Owner	Milestone	Status	Date						
EF	Publishing guide is updated with additional guidance on 3D requirements for content[67]	Done (Nov '21)	Jan '22						
EF	Report on actions taken to re-engage with inactive partners (internal)	30%	Feb '22 Aug '22	█	█	█			
EF, DSI AGG	MS4 DSI AGG annual work plan review (internal)	Not started	Feb '22 Aug '22	█	█	█			
EF	Normalisation of dates in the metadata implemented	20%	Jun '22	█	█		█	█	
EF	Mislabelled 3D content corrected in the Europeana database	10%	Aug '22	█	█		█	█	
EF	Precision of the content tier measurement of 3D content in Europeana is improved	Not started	Aug '22						
EF, DSI AGG	Recommendations for identifying and managing diversity in cultural heritage data (internal)	25%	Aug '22	█	█		█	█	
SPK, EF	Report on OCR full-text processing and quality improvement and its impact on display and search[68] delivered (internal)	Not started	Aug '22						
DSI AGG	Data quality improvements and new content delivered[69]	Ongoing	-						
EF	Data partners supported with data quality improvements and data publication (DSI, Generic services[70], and others)	Ongoing	-						
EF	Regular link resolution process is maintained	Ongoing	-						

Objective 2.1.2. Maintain data and publishing frameworks, standards and documentation

Owner	Milestone	Status	Date						
EF	Training resources (V1) for Statistics Dashboard developed	80%	Mar '22	█	█	█	█		
EF	First implementation of the field warnings concept to flag longtail data issues with titles and descriptions	15%	Jun '22	█	█	█		█	

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[67] https://europeana.atlassian.net/wiki/spaces/EF/pages/2059763713/EPF+-+Publishing+guidelines
[68] Contributes to FT-F3 in the Search Improvement Strategy.
[69] Detailed information on DSI AGG work as well as progress achieved will be provided in the annual review of work plans.
[70] For more information on data quality improvements and data ingestion from the Generic Services projects, please see Annex 5: GS outcomes integration overview.

EF,DSI AGG	MS5 New recommendations and updated requirements for services and products focusing on content in the EPF developed (including a report of the status of EPF) (internal)	25%	Jul '22						
EF	Statistics Dashboard maintained	Ongoing	-						
EF	EDM updated and documented	Ongoing	-						
EF	EDM Annotation Profile published	100%	Dec '21						
Objective 2.1.3. Influence global interoperability and technological innovation									
EF, NISV	EuropeanaTech community[71] is supported	Ongoing	-						
EF	Data Quality Committee[72] is supported	Ongoing	-						
EF	IIIF Discovery Technical Specification Group[73] is supported	Ongoing	-						
EF	Data mapping and conversions with stakeholders is supported	Ongoing	-						

Data quality improvements and new content delivered (bi-annual update) - in Europeana DSI-4 Y4 so far we updated 183 datasets and over 6.2 million records (including 59 new datasets). The updates as well as the depublication of low quality records led to an improvement of data quality available on the Europeana website (1.6% increase for Tier 2+; 3.9% increase for Tier 3+; and 3.4% increase for Tier A+).

Data partners supported with data quality improvements and data publication (DSI, Generic services, and others) (bi-annual update) - The ongoing support for data partners includes feedback about their data with concrete advice on how to improve data quality and solve data modelling problems. One specific achievement of the last few months was an update of our workflow in Jira to be more clear about the progress with data processing and flagging issues in a more clear way to data partners. This new workflow was developed in consultation with data partners to make sure we can provide the best possible support.

Regular link resolution process is maintained (bi-annual update) - we have recently started the next quarterly cycle of creating a consolidated link report to identify datasets that have consistently broken links throughout the last quarter. Data partners are now asked to work on the identified datasets before we resolve the issues at the end of March 2022 and start the new quarterly cycle. More information on broken links was provided in the A.1 Platform report M40 (December 2021)

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[71] https://pro.europeana.eu/page/europeanatech
[72] https://pro.europeana.eu/project/data-quality-committee
[73] https://iiif.io/community/groups/discovery/

[74] and will be available in the upcoming report "Report on actions taken to re-engage with inactive partners (internal)" (February 2022).

Statistics Dashboard maintained (bi-annual update) - Some work has been done to consolidate this very new application, mainly in the front-end. We have fixed some minor bugs and made some improvements in terms of user experience.

EDM updated and documented (bi-annual update) - Europeana has contributed a recipe for the IIIF cookbook on handling multilingual subtitles[75], based on the modelling work done for handling said subtitles in the Europeana (Data Model) context. Various updates have been made for provenance of enrichments, and annotations (see below).

EDM Annotation Profile published - Based on the work of the EuropeanaTech Task Force on annotations[76], we have published the EDM profile for annotations[77], which underlies the annotations API[78] that is used by several GS projects to exchange annotations with Europeana.

EuropeanaTech community, Data Quality Committee, IIIF Discovery Technical Specification Group is supported (bi-annual update) - highlights for Europeana DSI-4 Y4 so far include: the EuropeanaTech community has released its work plan for 2022, and has issued an open call for contributions on the items of this plan[79]. The EuropeanaTech Task Force on annotations (see above) has published its final report. The EuropeanaTech Task Force on Audiovisual playout in Europeana[80] has issued a survey on audiovisual content in Europeana to instruct the making of recommendations for future developments in this area.

Data mapping and conversions with stakeholders is supported (bi-annual update) - we support CHIs and aggregators with questions during ingestion. We also consolidated the efforts on vocabulary mappings for de-referencing, i.e. enabling Europeana to enrich its data with contextual information from Linked Data vocabularies when these are used by its data partners in the metadata they submit. This involved both adding or correcting existing mappings between these vocabularies and EDM, and updating the documentation about which mappings are currently supported[81].

Reporting metrics: quality assured data

No.	Description	Measured by	Frequency	Target	Dec 2020	Dec 2021	Jan 2021	Jan 2022

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[74] Available on request.
[75] https://iiif.io/api/cookbook/recipe/0074-multiple-language-captions/
[76] https://pro.europeana.eu/project/interoperability-of-annotations-and-user-sets
[77] https://pro.europeana.eu/page/edm-profiles#annotations-profile
[78] https://pro.europeana.eu/page/annotations
[79] https://list.ecompass.nl/listserv/cgi-bin/wa?A2=ind2201&L=EUROPEANA-TECH&F=&S=&P=3442
[80] https://pro.europeana.eu/project/audiovisual-playout-in-europeana
[81] https://pro.europeana.eu/page/europeana-semantic-enrichment#enrich-your-own-metadata

KPI 2.1	High quality content	Percentage of Tier 2 + material (excluding content Tier 0)	Monthly	**>70%**	67.72%	69.21%	67.70%	69.82%
KPI 2.2	High quality and reusable content	Percentage of Tier 3+ material (excluding content Tier 0)	Monthly	**>50%**	44.27%	48.78%	45.24%	50.14%
KPI 2.3	High quality metadata (search, browse and explore)	Percentage of Tier A+ material (excluding content Tier 0)	Monthly	**>70%**	59.00%	68.48%	61.00%	68.39%
KPI 2.4	Europeana Research and Development contributions	Total number of reference papers or presentations (cumulative)	Monthly	**10**	4	7	6	7
RM 2.1	Broken links in the repository	Number of broken links (out of total)	Quarterly	-	-	637,554	-	Expected Mar 2022
RM 2.2	Non-EPF compliant content (Tier 0)	Percentage of Tier 0 content	Monthly	-	16.75%	15.87%	16.86%	15.44%
RM 2.3	Updates to datasets	Total number of newly created and updated datasets per month (out of total)	Monthly	-	34	32	59	46
RM 2.4	Updates to records	Total number of newly created and updated records per month (out of total)	Monthly	-	1,216,971	1,559,281	2,203,939	2,436,472
RM 2.5	New CHIs published on Europeana website	Total number of new CHIs (cumulative)	Once a year	-	-	-	-	Expected Aug 2022

RM 2.6	New content on the Europeana website	Total number of new datasets published (cumulative)	Bi-monthly	-	NEW	-	NEW	59
RM 2.7	Records in the data repository	Total number of records (excluding content tier 0)	Monthly	-	52.3 million	51.3 million	51.9 million	51.7 million
RM 2.8	Records in the data repository by accredited aggregators	Total number of records (excluding content tier 0)	Bi-monthly	-	-	-	33.5 million	35.5 million
RM 2.9	Reach to EuropeanaTech community	Number of people reached per month (Mailing list, Twitter)	Bi-monthly		-	-	6,100	6,513

In Dec 2021/Jan 2022, we updated 78 datasets and almost 4 million records which led to an increase of high quality content and metadata. We also reached our target for KPI 2.2 (Tier 3+ material) of >50%. In the period, we published 39 new datasets.

We saw two new research and development reference publications in Dec 2021/Jan 2022:

Partner	Name of activity	Activity	Location	Date
EF	AI4LAM Futurs Fantastiques 2021	Selected session "Dealing with data issues for AI-supported Image Analysis in Cultural Heritage: concrete cases and challenges"	Paris	8-10/12/ 2021
EF	AI4LAM Futurs Fantastiques 2021	Selected presentation "Annotating datasets for computer vision to recognise architectural and artistic styles: lessons from the V4Design project"	Paris	8-10/12/ 2021

Risk assessment: quality assured data

ID	Risk	Probability	Impact	Rate	Mitigation strategy	Change
R2.1	Data partners don't control content quality and have difficulties to	High (4)	Medium (3)	12	The new Europeana website is much better featuring high quality	-

	content related to specific themes, subjects, and people. This can help to have a motivation for CHIs to invest in content quality. In parallel, training on the real message 'the more you give the more you get' of the EPF can help to focus more on publishing with a purpose.	

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incentivise the improvement of content quality.				content related to specific themes, subjects, and people. This can help to have a motivation for CHIs to invest in content quality. In parallel, training on the real message 'the more you give the more you get' of the EPF can help to focus more on publishing with a purpose.	

Task 2.2. Enriched data

Partners: EF, AIT Vienna, F&F, and DSI AGG (AIT Graz, APEF, Photocons)

The focus on enriched data is vitally important to the future of the Europeana Initiative. As the scale of data publishing grows, new technological approaches are needed to improve the accessibility and use of cultural heritage data. The extension of entities to support better browsing will help categorise items more usefully for website visitors (objective 2.2.1.). The use of crowdsourcing will see data quality enriched before it is ingested by Europeana while Artificial Intelligence (AI) technologies will support multilinguality, search and data quality (objective 2.2.2.).

Overview of outcomes: enriched data

Partner	Outcomes	Progress	Due date	Dec M40	Jan M41	Feb M42	Mar M43	Apr M44
Objective 2.2.1. Extend entities to support better browsing								
EF	Enrichment with new entities for new/updated items available	15%	Mar '22	■	■	■	■	
EF, AIT Vienna	Curation pilot within entity pages completed	Not started	Aug '22					
EF	Representation of organisation entities is improved	10%	Aug '22	■	■	■	■	■
EF, AIT Vienna	Entity collection is maintained, improved and expanded	Ongoing	-					
EF	Data enrichments reviewed, assessed and integrated (DSI, Generic Services, and others)	Ongoing	-					
Objective 2.2.2. Use of crowdsourcing and AI to enrich metadata								
EF	Agreement on further AI/ML experiments and assessments	100%	Jan '22	■	■			

EF	Report on two selected areas for experimentation and assessment of AI (including assessment of relevant work in GS projects) (internal)	Not started	Jul '22						
AIT Graz	Curated metadata enrichment and curated content clustering through expert crowdsourcing	25%	Aug '22	■	■	■	■	■	
APEF	Tool for automated topic detection updated to beta version	25%	Aug '22	■	■	■	■	■	
APEF	2 projects on enriching metadata via crowdsourcing completed	25%	Aug '22	■	■	■	■	■	
Photocons	2 crowdsourcing campaigns to enrich data completed	25%	Aug '22	■	■	■	■	■	
F&F, EF	Transcribathon runs/events organised and transcriptions transferred to Europeana	Ongoing	-						
F&F	Transcribathon.eu maintained	Ongoing	-						

Entity collection is maintained, improved and expanded (bi-annual update) - after the launch of the organisation pages we have progressed with improving the organisation entities. We have identified organisation names that were not matched, mismatched or actually missing from our organisation database. We have identified duplicates and wrong spellings of organisation names and established a process to update all of this in our CRM system. Alongside we improved the way organisation information is modelled in our CRM to make sure we record organisation in a consistent way and to cover additional requirements from the portal. All this work will lead to the 2nd iteration of the organisation pages as part of the outcome "Representation of organisation entities is improved" (due Aug 2022).

Data enrichments reviewed, assessed and integrated (bi-annual update) - During the months of December and January, EF has made an assessment of the enrichments that were provided by the Pagode GS project. As part of that assessment, we also got a better insight over the entities that could be beneficial to improve the Europeana collection. A similar exercise is now being undertaken for the Europeana XX GS project through which we expect that additional entities may be identified.

Agreement on further AI/ML experiments and assessments - Following preliminary investigations, we have identified two areas of Artificial Intelligence for further pre-implementation experiments: enhancing the resolution of low-quality images and testing and comparing selected automatic image tagging solutions to Europeana's images.

Transcribathon runs/events organised and transcriptions transferred to Europeana (bi-annual update) - The series of online Stories of the Month runs has been continued throughout the months September (travel), October (culinary), November (19th Century), December and January (Winter). A special training run has been organised in December in preparation for an upcoming event in Dublin in March 2022 (in the context of the Enrich Europeana+[82] project).

Transcribathon.eu maintained (bi-annual update) - maintenance of Transcribathon.eu has been ongoing. An assessment of the UX development, of which implementation of new and revised elements is foreseen under the Enrich Europeana+, is currently taking place.

Risk assessment: enriched data

ID	Risk	Probability	Impact	Rate	Mitigation strategy	Change
R2.2	Some entity relations are currently of low quality.	High (4)	Low (2)	8	Work to improve the quality of the entity relationships is underway in the API team. This includes offering explicit relations coming directly from the entities.	-
R2.3	The existence of plans with regards to employing AI in Europeana raise wrong expectations on the capacity of the technology to fix all of Europeana's data problems	Medium (3)	Low (2)	6	Clearly position Europeana's current effort as being experimental. Regularly report on evaluation and observed limitations of the available technology (especially with respect to scarcity of data to correctly train AI systems)	-

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[82] https://pro.europeana.eu/project/enricheuropeana

Work package 3: Build capacity

WP3 will support professionals and partners to build capacity for digital transformation in three principal areas. We will engage with professionals and partner organisations by organising and supporting events and by providing training and professional development resources (task 3.1.). Secondly, we will nurture our networks, in particular by supporting the governance and operations of the Europeana Network Association (ENA) and Europeana Aggregators' Forum (EAF). This will also include communication and promotion of activities and resources to our networks (task 3.2.). Finally, we will strengthen national infrastructures by supporting the adoption of Europeana standards and frameworks and by reinforcing the value delivered by the Europeana Initiative towards digital transformation of the cultural heritage sector (task 3.3.).

Task 3.1. Build capacity of aggregators and professionals

Partners: EF, F&F, DEN, and DSI AGG (APEF, BL, CARARE, MCA, EFHA, DFF, NISV, AIT-Graz, Photocons, NTUA)

Under this task we will build capacity to support the digital transformation within the cultural sector. We will continue to develop a programme of high quality events and raise the standards of practices and knowledge building activities (objective 3.1.1.). As part of our capacity building activities we will continue to deliver a variety of events for professionals (objective 3.1.2.). To be able to increase the knowledge in the sector we will also organise and support training activities and provide professional development resources (objective 3.1.3.).

Overview of outcomes: build capacity of aggregators and professionals

Partner	Outcomes	Progress	Due date	Dec M40	Jan M41	Feb M42	Mar M43	Apr M44
Objective 3.1.1. Develop event programming and training practices								
EF	Method for assessing satisfaction of training resources implemented	100%	Jan '22	▮	▮			
EF	Impact assessment of Europeana 2021 conference delivered (internal)	60%	Apr '22	▮	▮	▮	▮	
EF	Guidelines for delivering training and development activities developed (public)	15%	Jun '22	▮	▮	▮	▮	▮
EF	Events Toolkit updated (public)	Not started	Jul '22					
EF	Evaluation of CHI satisfaction with capacity building services and tools delivered	10%	Jul '22	▮	▮	▮	▮	▮

EF	Events programme supported and improved (events calendar, formats, tools)	20%	Aug '22	■	■	■	■	■
EF	Activities of the international Events Manager Group coordinated[83]	Ongoing	-					

Objective 3.1.2. Deliver events for professionals and partners

EF	Europeana Annual Conference 2021 organised	100%	Nov '21					
EF	Europeana Aggregators' Forum Fall meeting organised	100%	Nov '21					
EF	Europeana Aggregators' Forum & annual outreach event organised	10%	Jul '22	■	■	■	■	■
EF	Themed programme of events supported and delivered (ENA and communities, EAF, DSI AGG and others)	Ongoing	-					

Objective 3.1.3. Deliver training and professional development resources

EF	Version 1 of Europeana Knowledge Base for aggregators released (public)	100%	Jan '22	■	■			
EF	Report on the assessment of training needs for Europeana technical tools and services completed (internal)	100%	Jan '22	■	■			
DEN	DEN Leadership programme 2nd Cohort completed	80%	Jun '22	■	■	■	■	■
EF, DEN	Feasibility report for DEN Leadership programme for Europeana completed (internal)	40%	Jul '22	■	■	■	■	■
EF	Knowledge sharing activities, training and resources delivered and published	Ongoing	-					
EF	Crowd-sourced open inventory of training opportunities maintained	Ongoing	-					
DSI AGG, F&F	Training workshops, webinars and/or one-to-one support provided	Ongoing	-					

Method for assessing satisfaction of training resources implemented - our objective was to standardise a way of assessing the satisfaction of our training resources. We have done so by

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[83] The Events Managers Group includes several partner organisations including: Liber, Creative Commons, RightsConn, NEMO, Museum Computer Network, GIJN, Accessnow, IFLA, EuropaNostra and WiKi Foundation.

building on the work of past DSI years to standardise how we measure the impact of our digital events programme and the method also draws from the Europeana Impact Framework (and in particular the standardised question bank). In a central guidance document (available on request) we set out the principles and ways in which to measure satisfaction and collect impact and evaluation data. The output and process is designed to empower organisers of a training activity to collect this data themselves, noting that the already-published Phase Two of the Europeana Impact Playbook sets out different data collection methods which can be used. The data will be aggregated and we will review the method and the process every six months.

Activities of the international Events Manager Group coordinated (bi-annual update) - this group meets every other month to support each other by sharing experiences and recommendations on tools and policies and discuss the challenges of organising events nowadays. Currently we are discussing honorarium policies for speakers, conference fees and reimbursement policies.

Themed programme of events supported and delivered (ENA and communities, EAF, DSI AGG and others) (bi-annual update) - During Europeana DSI-4 Y4 so far (Jan 2022) we delivered in total 12 events for professionals reaching 1,480 people in total. The EAF delivered 7 events reaching 290 people. The events revolved around themes such as the importance of democratic access to digital public spaces, the social role of digital technologies, sustainable digital transformation, Education, Digital Storytelling, Copyright, Machine Translation, Research, Carbon Footprinting IIIF, Impact, AI in Archives and Fostering Diversity and Inclusion.

Version 1 of Europeana Knowledge Base for aggregators released (public) - Following up with the Recommendations for how to improve the usefulness of guidance material[84] (December 2020), we updated the Europeana Publishing Guide[85] into a web-based document using Atlassian's Confluence as a knowledge base software. EF is actively and successfully using other Atlassian products, such as Jira and Trello, which greatly supports the work done internally at EF as well as the collaboration with the data partners.

The motivation for this publication was brought up by the need of data partners to have a clearer presentation of the guidelines, easier to access and navigate while EF was looking to make the updates transparent and instantaneously shared with the data partners. In this context publishing the Publishing Guide as a web-based document was used as a pilot that covered a long overdue revision and update of the guide. We used this update to consolidate information that helps data partners to publish data compliant to the Europeana Publishing Framework. We have also organised all rights information in a different way to make sure that we have no redundant information in different places. For more technical guidelines we have created a Europeana Licensing Framework[86] chapter in the knowledge base to keep it aside from the Europeana Publishing Framework.

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[84] Available on request.
[85] https://europeana.atlassian.net/wiki/spaces/EF/pages/2059763713/EPF+-+Publishing+guidelines
[86] https://europeana.atlassian.net/wiki/spaces/EF/pages/1988657160/ELF+-+Selecting+accurate+rights+guidelines

Report on the assessment of training needs for Europeana technical tools and services completed (internal)[87] - EF managers have been interviewed about possible training needs and opportunities to support the use of technical tools and services that support the digital transformation of CHI's. These interviews addressed this question from the EF perspective, from their point of view as managers and what training requests they have already received from the stakeholders they work with. Planning is being undertaken and developed to address the indicated needs as well as to work holistically to continue to identify future training opportunities. This will feed directly into the next version of the capacity building framework/playbook.

Knowledge sharing activities, training and resources delivered and published (bi-annual update) - The Europeana Events guide was replaced by the Events Toolkit[88] on Europeana Pro. The content was updated and is now offered as a web page instead of a PDF. This makes it easier to update the information and to add new tools and insights in future.

Crowd-sourced open inventory of training opportunities maintained (bi-annual update) - The training course inventorisation[89] remains available on Europeana Pro. Responses remain low, we will re-evaluate the value it adds in the coming months.

Training workshops, webinars and/or one-to-one support provided (bi-annual update) - During Europeana DSI-4 Y4 so far (Jan 2022) we delivered in total 12 events for professionals reaching 1,480 people in total. The EAF delivered 7 events reaching 290 people. During Europeana DSI-4 Y4 so far DSI AGG supported 121 CHIs from 28 countries (including 23 new CHIs collaborating with DSI AGG). DSI AGG forwarded organisational and expert knowledge needed to prepare and ingest high-quality datasets for inclusion in the Europeana website. DSI AGG also provided support for mappings, promote the uptake of multilingual vocabularies and of Europeana frameworks and guidelines.

Reporting metrics: build capacity of aggregators and professionals

No.	Description	Measured by	Frequency	Target	Dec 2020	Dec 2021	Jan 2021	Jan 2022
KPI 3.1	Aggregator satisfaction with Europeana (accredited aggregators)	Average satisfaction on a 5-point Likert scale[90]	Once a year	**75%**	-	-	-	Expected Aug '22
KPI 3.2	CHI satisfaction with aggregator (partner in Europeana DSI-4)	Average satisfaction on a 5-point Likert scale	Once a year	**75%**	-	-	-	Expected Jul '22

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[87] Available on request.
[88] https://pro.europeana.eu/page/events-toolkit
[89] https://pro.europeana.eu/page/building-digital-capacity#step-3-training-courses-inventorisation
[90] The average satisfaction on a 5-point Likert scale is translated into % (e.g. an average of 3.6 stars equals a satisfaction rate of 72%).

RM	Indicator	Measure	Frequency					
RM 3.1	Events organised for professionals	Number of events (cumulative)	Bi-monthly	-	-	-		12
RM 3.2	Participants attending events for professionals	Number of participants (cumulative)	Bi-monthly	-	-	-		1,480
RM 3.3	Satisfaction rate for events for professionals[91]	Average satisfaction on a 5-point Likert scale (cumulative)	Bi-monthly	-	NEW	-	NEW	82%
RM 3.4	Satisfaction rate for annual conference (Europeana 2021)	Average satisfaction on a 5-point Likert scale	Once a year	-	-	-	-	81%
RM 3.5	CHIs supported by DSI aggregators	Total number of CHIs supported by individual consultation (cumulative)	Bi-annual	-	-	-	-	Expected Feb '21
RM 3.6	Coverage of CHIs supported by DSI aggregators	Total number of countries that received support by individual consultation (cumulative)	Bi-annual	-	-	-	-	Expected Feb '21
RM 3.7	Outreach to CHIs	Total number of new CHIs collaborating with DSI aggregators (cumulative)	Bi-annual	-	-	-	-	Expected Feb '21
RM 3.8	Events delivered through the EAF training	Number of events delivered by DSI AGG and	Bi-monthly		-	-		8[92]

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[91] We measure the satisfaction at a selected number of events and acknowledge the survey as valid once it reaches a minimum number of respondents.
[92] Due to later notice, we added one additional event to this number that was done in October 2021.

	programme	EF (cumulative)						
RM 3.9	Participants attending EAF training programme	Number of participants in events delivered by DSI AGG and EF (cumulative)	Bi-monthly		NEW	-	NEW	353

In Dec 2021/Jan 2022, EF held two events for professionals[93] with 241 participants attending in total. Events organised in Europeana DSI-4 Y4 so far received a high average satisfaction of 82%. DSI AGG (co)organised five training events with 236 people attending in the period (such as workshops, webinars or presentations at an outreach event).

Overview of communication and dissemination efforts: build capacity of aggregators and professionals

Partner	Name of event	Activity	Location	Date
Events organised for professionals				
EF	Europeana conference under the Slovenian Presidency[94]	Meeting/Webinar	Online	02-03 /12/ 2021
EF	Build with Bits[95]	Education	Online	19/01/ 2022
Events organised by EAF				
EFHA	EFHA in context	Training presentation (private event for the students of IUAV university in Venice)	Online	01/12/ 2021
APEF	Introduction to the Archives Portal Europe's dashboard with focus on EDM conversion, sharing with Europeana and related rights and licensing questions (for new Country Managers)	Training workshop (internal event for APEF network members)	Online	01/12/ 2021
BL	MINT demonstration for RescueStation (community interest company)	Training presentation	Online webinar	03/12/ 2021
MCA	EVA MINERVA Sao Paulo Conference	Training presentation	Online	07-08/12/ 2021

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[93] https://pro.europeana.eu/page/webinars
[94] https://pro.europeana.eu/post/discuss-participation-with-digital-heritage-at-an-accompanying-event-of-the-slovenian-presidency
[95] https://pro.europeana.eu/event/built-with-bits-final-ceremony-and-winners-announcement

| MCA | MEMEX Professional meeting | Training presentation | Paris | 24/01/2022 |

Risk assessment: build capacity of aggregators and professionals

ID	Risk	Probability	Impact	Rate	Mitigation strategy	Change
R3.1	Professionals/ Aggregator training and development activities do not meet the needs of the partners, and we do not grow the audience for these	Low (2)	High (4)	8	We work with the ENA and EAF to develop a training and development approach that can be implemented and measured under the capacity building framework. We will regularly review feedback from participants, and implement a holistic approach to promoting these activities to reach a wide audience.	-
R3.2	Capacity Building Framework does not meet partner expectations or needs	Low (2)	High (4)	8	Ensure the framework is developed and implemented collaboratively with stakeholders, and an effective feedback cycle is established.	-

Task 3.2. Nurture networks

Partners: EF, CLARIN and NISV

Under this task we will maintain and develop effective governance as well as the operational activities of the Europeana Network Association (ENA)[96] and Europeana Aggregators' Forum (EAF) [97] (objective 3.2.1. and objective 3.2.2.). We will facilitate digital change by developing connections with professionals, partners and other networks, such as research communities (objective 3.2.3.). We will continue to improve our offers by undertaking user and market research (objective 3.2.4.) and we will communicate and promote the value of the Europeana Initiative to our networks and beyond (objective 3.2.5.).

Overview of outcomes: nurture networks

Partner	Outcomes	Progress	Due date	Dec M40	Jan M41	Feb M42	Mar M43	Apr M44
Objective 3.2.1. Effective governance of Network services (ENA/EAF)								

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[96] https://pro.europeana.eu/network-association/sign-up
[97] https://pro.europeana.eu/page/aggregators

Partner	Milestone	Status	Date
EF	ENA General Assembly organised	Done	Nov '21
EF	ENA Governance renewed (MC election and MB appointment)	100%	Jan '22
EF	ENA Governance working group[98] supported	Ongoing	-
EF	ENA and EAF periodic meetings organised (incl. ENA MB and MC, and EAF Steering Group and Forum)	Ongoing	-
EF	MC bi-annual meeting	100%	Dec '21

Objective 3.2.2. Maintain and develop operational activities of ENA/EAF

Partner	Milestone	Status	Date
EF	Climate Action Community launched	Done	Nov '21
EF	ENA community work plans 2022 published	90%	Feb '22
NISV, EF	Annual reports 2021 (ENA and EAF) published	90%	Feb '22
NISV, EF	Annual work plans 2022 (ENA and EAF) published	90%	Feb '22
EF	Recommendations on how to feedback task force recommendations to wider community (internal)	75%	Feb '22
EF	Report of Diversity & Inclusivity Task Force published	5%	Jun '22
EF	Reporting model for network engagement extended	Not started	Jul '22
EF	New aggregators reviewed for accreditation	Ongoing	-
EF	General management support for Task Forces, Working Groups and communities (ENA/EAF/Europeana Initiative)	Ongoing	-
EF	Recommendations for collecting diversity data in the Europeana Initiative developed and shared	100%	Jan '22

Objective 3.2.3. Reach out and engage with other communities and networks

Partner	Milestone	Status	Date
EF	Events of Research Grants Programme 2021 completed	Not started	Aug '22

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[98] https://pro.europeana.eu/project/governance-working-group

Owner	Task	Status	Date					
EF, CLARIN	Outreach outcomes to research communities published	Not started	Aug '22					
EF	Europeana Research community[99] and Research Advisory Board[100] supported	Ongoing	-					
EF	Partnerships supporting the digital transformation of the cultural sector nurtured	Ongoing	-					
EF	Partnership with Europeans Students Association for Cultural Heritage developed	Ongoing	-					
EF	Europeana Research community videos published	90%	Feb '22	■	■	■		
CLARIN	Adding high-level resources to resource families in the VLO	70%	Feb '22	■	■	■		
CLARIN	Organise training on how to use Europeana data sets for processing with Natural Language Processing tools	30%	Jun '22	■	■	■	■	■
EF	Partnership to foster engagement with cultural heritage and academic communities (LIBER[101], GLAM LABs[102])	Ongoing	-					
Objective 3.2.4. Develop user and market research								
EF	Pro user survey completed	50%	Mar '22	■	■	■	■	
EF	Report on improved offers for professional audiences in the cultural sector completed (internal)	20%	Apr '22	■	■	■	■	■
EF	Marketing, communications and product development benchmarking and insight developed	Ongoing	-					
Objective 3.2.5. Communicate and promote activities to professionals and partners								
EF	Dissemination strategies for key channels (Twitter, LinkedIn, Europeana Pro) delivered (internal)	80%	Feb '22	■	■	■		

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[99] https://pro.europeana.eu/page/europeana-research
[100] https://pro.europeana.eu/page/research-advisory-board
[101] https://libereurope.eu/working-group/digital-scholarship-and-digital-cultural-heritage-collections-working-group/.
The LIBER WG had its first meeting on 15 November 2021.
[102] https://glamlabs.io/

EF	Europeana Pro maintained and improved (technical infrastructure, user journeys, accessibility)	Ongoing	-						
EF	Pro editorials published (e.g. Pro News and themes)	Ongoing	-						
EF	Promotional activities promoted (Newsletter, Twitter, LinkedIn)[103]	Ongoing	-						
EF	Europeana Communicators community[104] supported	Ongoing	-						
EF	Accessibility review on Europeana Pro	70%	Apr '22						

ENA Governance renewed (MC election and MB appointment) - In the ENA Members Council elections[105] in November 2021, 73 candidates came forward, and ENA Members chose 27 of them to fill the open seats in the Members Council. In January 2022, seven of these Councillors came forward as candidates for the ENA Management Board. From 18 to 23 January 2022, the 36 Council representatives elected five of the nominees to form the new Board[106]. The ENA governance is renewed almost annually depending on the end terms of elected Councillors and Board members (3 years).

ENA Governance working group supported (bi-annual update) - The secretariat has supported activities of the working group by preparing monthly agendas, meeting reports and supporting proposal development to refine the existing ENA governance, as well as running the ENA MC and MB elections, which the working group supervises.

ENA and EAF periodic meetings organised (incl. ENA MB and MC, and EAF Steering Group and Forum) (bi-annual update) - The ENA and EAF secretariat prepared, organised and carried out the EAF autumn meeting (26-27 October 2021), monthly EAF Steering Group meetings, monthly MB meetings and MC meeting on 9 December 2021.

MC bi-annual meeting - About 47 leaving and newly elected councillors attended the meeting. The objective of the meeting was to provide the Councillors with an update on recent activities of the Europeana Initiative related to digital transformation and capacity building, diversity and inclusion, ENA governance, budget, and communities[107].

New aggregators reviewed for accreditation (bi-annual update) - since September 2021 we have not seen any new applications for accreditation. We know of a few new aggregators that may come forward as new candidates, but they are not ready yet to apply for accreditation.

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[103] Including GS editorials published on Europeana Pro.
[104] https://pro.europeana.eu/page/europeana-communicators-group
[105] https://pro.europeana.eu/post/europeana-network-association-welcomes-its-27-new-members-councillors
[106] https://pro.europeana.eu/post/new-management-board-to-lead-europeana-network-association-1
[107] https://docs.google.com/presentation/d/1a8-1TNqQLv6cjUKLCcRusjHCWeY_ikSWaHEf_j4SheY/edit?usp=sharing

General management support for Task Forces, Working Groups and communities (ENA/EAF/Europeana Initiative) (bi-annual update) - in DSI-4 Y4 so far we support all the existing ENA, EAF and Europeana Initiative wide Task Forces and Working Groups and provided overall management and guidance to the seven ENA communities.

Recommendations for collecting diversity data in the Europeana Initiative developed and shared [108] - based on the discussion from the Impact Community and D&I cross-team webinar held in November 2021[109] recommendations were prepared to support the better capturing of diversity data across the Europeana Initiative. These recommendations have been shared with the ENA Membership Working Group and Governance Working Group and should also be addressed by the D&I Task Force.

Europeana Research community and Research Advisory Board supported (bi-annual update) - the community's Steering Group was restructured and worked on the planning of initiatives for 2022, e.g. the Research Community Cafes as informal virtual spaces with an invited speaker per session who will decide the theme to bring to the attention of the community.

Partnerships supporting the digital transformation of the cultural sector nurtured (bi-annual update) - EF continued to invest in partnerships that can support the Europeana Initiative in its aim to digitally transform the sector including partnerships such as the Network of European Museum Organisations (NEMO), Europa Nostra[110], UNESCO[111], IIIF[112], and the Competence Centers[113].

Partnership with Europeans Students Association for Cultural Heritage developed (bi-annual update) - we are in contact, and have been exploring possibilities for collaboration, with several branches of ESACH, including their leadership, events team and publications team. We are also profiling activities as part of a Europeana Pro news theme highlighting initiatives supporting new professionals in the cultural heritage sector[114]. This has also been a valuable way to grow our connections with other organisations working with new professionals, including The Future is Heritage.

Partnership to foster engagement with cultural heritage and academic communities (LIBER, GLAM LABs) (bi-annual update) - the LIBER WG on Digital Scholarship and Digital Cultural Heritage has established a new sub-group on Impact to which Europeana contributes; the GLAM Labs community is strongly interested in Europeana's activities and can support the network with experience in setting up a Lab at cultural heritage institutions or at universities.

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[108] Available on request.

[109] https://pro.europeana.eu/event/collecting-diversity-data-for-audiences-and-professionals-in-the-cultural-heritage-sector-in-europe

[110] https://www.europanostra.org/

[111] https://en.unesco.org/

[112] https://iiif.io/

[113] https://www.4ch-project.eu/

[114] https://pro.europeana.eu/tags/new-professionals-interviews

Marketing, communications and product development benchmarking and insight developed (bi-annual update) - we have worked on ways to improve the understanding we get from our Marketing and promotional activities to help inform both the products we develop and how we promote them. We have implemented a 'content taxonomy' system which allows us to categorise and filter content shared through Pro and our social media, based on 'topic' (i.e Impact/Copyright/Tech), 'content type' (i.e tool/update/event), and 'body' (i.e Europeana body/project partner/other). The aim of this taxonomy is to help us understand the level of interest and engagement our work receives from our audiences, in order to finetune and improve our offer/product development, in a way that serves the needs of our audience. Evaluation of 2021 is due to take place in February 2022. Overall, in 2021, compared to 2020, we increased impressions of our 'professional' focused activity on social media by three million, engagement by over twelve thousand and visits to Europeana Pro by over thirty thousand.

Europeana Pro maintained and improved (technical infrastructure, user journeys, accessibility) (bi-annual update) - detailed information including the highlights for Europeana DSI-4 Y4 so far was provided in the A.1 Platform report (Dec 2021).

Pro editorials published (e.g. Pro News and themes) (bi-annual update) - From September 2021 - January 2022, we have published on average three Europeana Pro news pieces a week on topics related to the digital transformation of the cultural heritage sector and of interest to our audience of cultural heritage professionals. Dedicated themes in this period have covered Europeana Education, Black History Month, annual reflections and Heritage in Motion. Ongoing series in this period have covered ENA Members Council Members ('Professionals in Focus'), Europeana's quarterly highlights and the Europeana Foundation Business plan 2022[115]. In 2022, we also began a series on the Copyright in the Digital Single Market (CDSM) Directive.

Promotional activities promoted (Newsletter, Twitter, LinkedIn) (bi-annual update) - in the period between September 2021 and January 2022 we continued to amplify our Pro editorial work and also promoted calls relevant to professional audiences via relevant channels. Europeana 2021 promotion was the most popular activity in this period, followed by promotion of the Climate Manifesto, launched during the conference.

Europeana Communicators community supported (bi-annual update) - in this period, the Community has been supported both by a dedicated community manager and adviser from EF. They have provided regular administrative support to the Community through facilitating monthly community meetings, managing the agenda and ongoing actions; ongoing reporting; and Community communications (including a Basecamp group for the Steering Group and monthly newsletter). They have also facilitated the community to organise events at Europeana 2021, explore options for future events, and facilitated the renewal of the Steering Group, which gained three new members in January 2022.

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[115] https://pro.europeana.eu/post/europeana-foundation-business-plan-2022

Communication and dissemination activities

Partner	Name of event	Activity	Location	Date
EF	The Past meets the future. Cultural Goods, in which terms?[116]	Contribution to a panel on Cultural Heritage, with a focus on heritage communities	Hybrid	14/12/ 2021
EF	Public Domain Day in Indonesia[117]	Seminar on 'Europeana and the FAIR principles (in collaboration with R&D). Organised with Goethe Institut in Indonesia, with Wikipedia and Creative Commons	Online	29/01/ 2022

Reporting metrics: nurture networks

No.	Description	Measured by	Frequency	Target	Dec 2020	Dec 2021	Jan 2021	Jan 2022
KPI 3.3	Growth of Europeana Network Association members	Number of members in the ENA	Monthly	**3,000**	-	3,332	2,545	3,377
KPI 3.4	Satisfaction of the Europeana Network Association members with the ENA	Average satisfaction on a 5-point Likert scale[118]	Once a year	**75%**	-	-	-	Expected Jun '22
KPI 3.5	Communities in the Europeana Network Association	Number of active communities	Once a year	**6**		-	-	Expected Aug '22
KPI 3.6	Task forces in the Europeana Initiative	Number of active task forces per month (ENA, EAF, Initiative)	Monthly	**5**	8	2	8	2
RM 3.10	Working groups in the Europeana Initiative	Number of active working groups per month (ENA, EAF, Initiative)	Bi-monthly	-	-	-	2	3

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[116] https://www.unior.it/agenda/view_event/1341/il-passato-incontra-il-futuro-in-che-termini.html
[117] https://www.goethe.de/ins/id/id/ver.cfm?event_id=22630590
[118] The average satisfaction on a 5-point Likert scale is translated into % (e.g. an average of 3.6 stars equals a satisfaction rate of 72%).

RM	Name	Description	Frequency					
RM 3.11	Active members in the Europeana Initiative	Number of members participating in task forces and working groups per month (ENA, EAF, Initiative)	Bi-monthly	-	-	-	140	150
RM 3.12	Reach to Europeana Climate Action community	Number of people reached per month (Basecamp, mailing list)	Bi-monthly	-	NEW	-	NEW	80
RM 3.13	Research events and tutorials	Total number delivered (cumulative)	Bi-monthly	-	-	-	2	Expected Mar '22
RM 3.14	People reached with research events and tutorials	Total number of people participating (cumulative)	Bi-monthly	-	-	-	240	Expected Mar '22
RM 3.15	Research Grants outcomes	Total number of outcomes delivered (cumulative)	Bi-monthly	-	-	-	2	Expected Jul '22
RM 3.16	Reach to Europeana Research community	Number of people reached per month (Discussion list, Twitter)	Bi-monthly	-	-	-	5,504	6,485
RM 3.17	Traffic to Europeana Pro	Number of visits per month	Monthly	-	23,067	22,508	26,574	23,598
RM 3.18	Returning visitors to Europeana Pro	Percentage of visitors returning	Monthly	-	34.90%	11.80%	33.30%	13.80%
RM 3.19	New visitors to Europeana Pro	Total number of new visitors per month	Monthly	-	15,010	19,841	17,726	20,343

| RM 3.20 | Satisfaction rate for Europeana Pro | Average satisfaction on a 5-point Likert scale[119] | Once a year | - | - | - | - | Expected Jul '22 |
| RM 3.21 | Reach to Europeana Communicators community | Number of people reached per month (Newsletter, LinkedIn, mailing list) | Bi-monthly | - | - | - | 2,000 | 2,720 |

The EuropeanaTech TF on Interoperability of annotations and user sets[120] officially ended its work. This Task Force was active since 2019 and aimed to foster interoperability across the applications and projects in the Europeana context that produce, publish and/or consume annotations and user sets, by maturing the specifications that are used in the process, notably in terms of data models and APIs.

In January 2022, we started to reach out to the climate community members via Listserv and Basecamp; currently the channels reach 80 people.

Risk assessment: nurture networks

ID	Risk	Probability	Impact	Rate	Mitigation strategy	Change
R3.3	Task forces do not finish recommendations on time	Medium (3)	Low (2)	6	Manage expectations and be aware of potential impact for Europeana DSI; accommodate extension of task force work	-
R3.4	Community members show little activity and engagement	Medium (3)	Low (2)	6	Provide calls to action, meeting and webinars, useful tools and material, active information flow	-
R3.5	CHIs are not aware of research development contributions	Medium (3)	Low (2)	6	All research developments should benefit CHIs, benefits should be communicated to CHIs, initiatives (conferences/workshops) to improve digital skills and literacy of CHI professionals	-

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[119] The average satisfaction on a 5-point Likert scale is translated into % (e.g. an average of 3.6 stars equals a satisfaction rate of 72%).
[120] https://pro.europeana.eu/project/interoperability-of-annotations-and-user-sets

| R3.6 | Digital collections do not comply with the FAIR principles[121] and are not considered to meet the quality criteria to be used in academic research | High (4) | Low (2) | 8 | Create awareness of the importance of the FAIR principles in the GLAM sector. | - |
| R3.7 | Research grants: format of the events to be adapted on the basis of the pandemic's course | High (4) | Low (2) | ~~8~~ | The COVID-19 pandemic may oblige us to change the format (from in-person to digital) for the in person events planned for the first half of 2022. In this case, the amount of the grant will be reduced (per contract). If the grant recipients ask to cancel their events, the contract will be withdrawn. | - |

Task 3.3. Strengthen national infrastructures

Partners: EF

Under this task we will maintain and develop activities that demonstrate the value of the Europeana Initiative to national infrastructures. We will manage and further develop Europeana frameworks and standards (objective 3.3.1.) and we will develop policies and standards that enable open access to digital cultural heritage (objective 3.3.2.). We will also continue to develop the Europeana Impact and Capacity Building Frameworks to enable activity and evidence of digital transformation in the sector (objective 3.3.3.). Finally, we will engage with EU Member States to raise awareness of the Europeana Initiative (objective 3.3.4.).

Overview of outcomes: strengthen national infrastructures

Partner	Outcomes	Progress	Due date	Dec M40	Jan M41	Feb M42	Mar M43	Apr M44
Objective 3.3.1. Manage and develop Europeana frameworks and standards								
EF	Europeana general framework design developed (V1)	85%	Feb '22	■	■	■		
EF	Europeana Glossary updated to harmonise framework design and management components (internal)	75%	Feb '22	■	■	■		

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[121] Http s://www.go-fair.org/fair-principles/

EF	Europeana frameworks compliance with framework design evaluated	30%	Mar '22	■	■	■	■	
EF	EPF updated following the Europeana general framework design (public)	Not started	Jul '22					
EF	Europeana Glossary[122] updated and maintained	Ongoing	-					

Objective 3.3.2. Develop and maintain an interoperable licensing framework

EF	Strategy to encourage the accurate assignment of rights information to Europeana material created (internal)	100%	Dec '21	■				
EF	Data protection guidance for the Europeana Initiative developed (internal)	80%	Feb '22	■	■	■		
EF	Training resources (V1) to support the choice of accurate rights statements developed (public)	50%	Feb '22	■	■			
EF	CB Playbook tested with Europeana Copyright community	30%	Jun '22	■	■	■	■	■
EF	Europeana Copyright community[123] supported	Ongoing	-					
EF	Page[124] with multilingual and multi-jurisdictional copyright tools maintained and developed	Ongoing	-					
EF	RightsStatements.org consortium supported	Ongoing	-					

Objective 3.3.3. Develop processes and enable evidence of digital transformation

EF	Europeana Capacity Building Framework (V2) developed (internal)	30%	Apr '22	■	■	■	■	■
EF	Enumerate survey completed	15%	Jun '22	■	■	■	■	■
EF	Capacity Building for Digital Transformation Task Force: outcomes published	50%	Jun '22	■	■	■	■	■
EF	Europeana Impact Playbook Phase four published	30%	Jun '22	■	■	■	■	■

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[122] https://pro.europeana.eu/page/glossary
[123] https://pro.europeana.eu/page/europeana-copyright
[124] https://pro.europeana.eu/page/copyright-tools-and-resources

EF	Metrics framework to evidence digital transformation developed and implemented	Ongoing	-						
EF	Supportive tools and resources for capacity building developed and made available	Ongoing	-						
EF	Europeana Impact community[125] supported	Ongoing	-						
EF	Capacity Building for Digital Transformation Task Force: updated	100%	Dec '21	■					
EF	Workshops on digital transformation (ENA, EAF, EF, external stakeholders)	100%	Jan '22	🟦	■				
Objective 3.3.4. Engage with Member States									
EF	Slovenian Presidency event organised	100%	Dec '21	■					
EF	Slovenian Presidency Europeana conference report published	Not started	Mar '22						
EF	French Presidency event organised	70%	Mar '22	🟦	🟦	🟦	🟦		
EF	French Presidency Europeana conference report published	Not started	Aug '22						
EF	Country reports[126] updated	Ongoing	-						

Europeana Glossary updated and maintained (bi-annual update) - we have agreed on a function and way forward for the Europeana Glossary, and identified updates required. These are being implemented following consultation with relevant Europeana staff. Maintenance of the glossary will continue in line with updates to the relevant work areas that it covers (e.g. see related outcome 'Europeana Glossary updated to harmonise framework design and management components' (due February 2022)).

Strategy to encourage the accurate assignment of rights information to Europeana material created (internal)[127] - rights statements on Europeana continue to be inaccurately used. As such, their contribution to overall data quality and the reusability of the digital objects can significantly diminish, they can create confusion to the user, and disincentivize the reuse of Europeana content. This strategy provides a central place to establish clear objectives and keep track of all relevant products, activities, services and actors involved in this to address this challenge in collaboration with a range of stakeholders from across the Europeana Initiative.

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[125] https://pro.europeana.eu/page/europeana-impact-community
[126] https://pro.europeana.eu/page/member-states
[127] Available on request.

Europeana Copyright community supported (bi-annual update) - as part of the support provided to the Europeana Copyright Community, we set up monthly meetings with the Steering Group, plus regular meetings with the chair and co-chair. We maintain and populate their communication channels with relevant information for the sector. We publish information and update Pro pages where necessary. We write reports with suggestions for activities for the community for members of the steering group to review. We also set up events where relevant, such as the Copyright Office Hours.

Page with multilingual and multi-jurisdictional copyright tools maintained and developed (bi-annual update) - we continue to populate the page with relevant tools for cultural heritage professionals when identified.

RightsStatements.org consortium supported (bi-annual update) - we continue to provide secretarial services for the RightsStatements.org Consortium. In the past months, we have supported translation partners and make the translations available online. We also support the work of the Implementation Working Group.

Capacity Building for Digital Transformation Task Force: updated[128] - The initiative wide Task Force for Capacity Building for Digital Transformation has been set up with representatives from ENA, EAF, EF and two independent members to develop an initiative wide action plan. This is the first time an initiative wide Task Force has been set up. Developing the process of how an initiative wide Task Force works is also an important outcome in addition to the plan it will produce.

Workshops on digital transformation (ENA, EAF, EF, external stakeholders) - the Digital Transformation Task Force has organised 3 open consultation workshops to gather input from various stakeholders in November 2021, December 2021 and January 2022. Over 90 people registered and 44 participants from 19 countries have given input in the workshops. The input gathered during these workshops is currently being processed and fed into the Task Forces action plan and vision of what digital transformation looks like in the sector in all its different facets.

Metrics framework to evidence digital transformation developed and implemented (bi-annual update) - The ENUMERATE survey has been developed and it will be available alongside the InDICEs self-assessment tool (developed as part of the InDICEs project[129]). The survey and Self Assessment tool will collect much of the data needed to report on the evidence of digital transformation. In November 2021, EF led a workshop group focussing on this topic at the two-day InDICEs bootcamp.

Supportive tools and resources for capacity building developed and made available (bi-annual update) - internal guidelines for the development of training resources have been developed and are currently being tested and validated together with the development of training material of the

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[128] https://pro.europeana.eu/project/digital-transformation-task-force
[129] https://pro.europeana.eu/project/indices

Metis Sandbox, Data Statistics Dashboard and Rights Statements. The alpha version of the capacity building playbook has been used with the Copyright Community and WEAVE project to identify capacity building needs. Internal training in supportive audiovisual tools for events (Open Broadcaster Software - OBS[130]) has taken place and the need for expanding this offer is currently being evaluated.

Europeana Impact community supported (bi-annual update) - we created and launched the first Listserv for the Impact Community; delivered three newsletters; had monthly meetings of the Impact Community Steering Group; led one event (Nov 2021) in collaboration with the Europeana D&I cross-team on diversity data; regularly posted content in the LinkedIn group; finalised our 2022 workplan; and had approved the Impact Lite Task Force #2.

Slovenian Presidency event organised - an accompanying event of the Slovenian Presidency, the Europeana Conference 'Driving engagement - participatory approaches to digital cultural heritage' on 2-3 December 2021 was held in collaboration with the Ministry of Culture of Slovenia. It involved 106 participants over two days. The event brought together policymakers from the CEDCHE Expert Group, the European ministries of culture, and digital cultural heritage experts and professionals. The main aim was to explore aspects of public engagement and participation with digital cultural heritage, showcasing real-world examples. It explored opportunities for public participation in collecting, classifying, translating, analysing, and contextualising elements of digital cultural heritage. The attendees were introduced to current practices and fresh perspectives on public participation - its benefits, opportunities and challenges. The key outcomes of the conference will include insights, guidelines, and inspiration to drive effective participation and will be published in March 2022. The conference programme can be seen here[131].

Country reports updated (bi-annual update) - the reports provide information about the Europeana conferences under the presidencies of the Council of EU; Europeana highlights relevant to the Member States, information on the country's fund contribution to Europeana projects over years, country's participants in Europeana Network Association; country's culture and cultural content showcased in Europeana.eu; and information on the country's open data in Europeana. The reports are available on the Member States page[132] on Europeana.

Communication and dissemination activities

Partner	Name of event	Activity	Location	Date
Asociación Española de Documenta	Jornada AEDOM sobre Propiedad	Presentation on some of the copyright limitations and exceptions that cultural heritage institutions can rely on for the	Online	16/12/ 2022

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[130] https://obsproject.com/

[131]

https://pro.europeana.eu/files/Europeana_Professional/Event_documentation/Events/Presidency/Slovenia-Presidency-2021-Digital-Programme-Public.pdf

[132] https://pro.europeana.eu/page/member-states

		digitisation and dissemination of their collections.		
ción Musical (AEDOM)	Intelectual y Derechos de Autor			
Creative Commons	Open GLAM Platform Call	Presentation on the Europeana Public Domain Charter	Online	16/12/ 2022

Reporting metrics: strengthen national infrastructures

No.	Description	Measured by	Frequency	Target	Dec 2020	Dec 2021	Jan 2021	Jan 2022
KPI 3.7	Take up of rs.org	Percentage of active aggregators that integrated rs.org in their infrastructure	Once a year	**35%**	-	-	-	Expected Aug '22
RM 3.22	Use of rs.org by accredited aggregators	Percentage of accredited aggregators that share data on Europeana using a rights statements from the rs.org	Once a year	-	-	-	-	Expected Aug '22
RM 3.23	Use of rs.org rights statements	Number of objects published on the Europeana website with a rs.org rights statement (excluding content Tier 0)	Bi-annual	-	-	-	-	Expected Feb '22
RM 3.24	Reach to Europeana Copyright community	Number of people reached per month (Mailing list, Twitter)	Bi-Monthly	-	-	-	3,281	3,969
RM 3.25	Reach to Europeana Impact community	Number of people reached per month (Newsletter, LinkedIn)	Bi-Monthly	-	-	-	1,607	2,268

RM 3.26	Satisfaction with the Europeana EU presidency events	Average satisfaction on a 5-point Likert scale[133]	Upon occasion	-	-	-	-	76%[134]

Risk assessment: strengthen national infrastructures

ID	Risk	Probability	Impact	Rate	Mitigation strategy	Change
R3.8	Rightsstatement.org: Challenge to build a sustainable consortium 2021 - especially more challenging post-covid	Low (2)	Medium (3)	6	The new membership model is operational in 2020, and a revision of services offered by the consortium will together be used to attract new members. Post-covid we are taking steps to specifically re-review the model and simplify in light of the perceived impact.	-
R3.9	Ongoing Impact research cannot be completed or updated in a timely manner due to external factors during the process (e.g. insufficient data collection)	Medium (3)	Medium (3)	9	Involve internal stakeholders and members of the network to provide motivation and opportunity to support this work to ensure a timely completion. Set out work to date and a framework and plan (including surveys, etc) in which impact assessment might be completed at a later date, for those impact assessments where it is felt that communication with the sector is affected.	-
R3.10	Impact toolkit is not being used	Low (2)	Medium (3)	6	Work with the community to help people learn how to use it and to make it more accessible for them to use. We are scheduling webinars to guide professionals through the toolkit and to introduce the resources available. We	-

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[133] The average satisfaction on a 5-point Likert scale is translated into % (e.g. an average of 3.6 stars equals a satisfaction rate of 72%).
[134] The satisfaction rate is based on 7 respondents (out of 52 attendees).

					are also developing a question bank to make the process of using the toolkit even more accessible.	
R3.11	In online and hybrid environments, co-creation sessions and workshops as part of the presidency conferences are challenging.	Medium (3)	Mediu m (3)	9	Explore and use methods and tools that allow for ideation and collaborative co-creation resulting in shared understanding and actionable insights amongst the participants.	-[135]

Work package 4: Programme management

EF will provide high-quality programme management for Europeana DSI-4 (task 4.1.). We will manage good relations with Europeana DSI Generic services (GS) projects and the integration of GS project outcomes (task 4.2.). We will work closely with the European Commission, the Expert Group on Digital Cultural Heritage and Europeana (DCHE) and its subgroups to review activities and developments of the Europeana Initiative (task 4.3.). Full documentation of Europeana DSI will also be provided to facilitate the transfer processes to a successor supplier (task 4.4.).

Task 4.1. Programme management of Europeana DSI-4

Partners: EF

EF will coordinate Europeana DSI-4 as described in the tender and B.1 Implementation plan M36.

Overview of outcomes

Partner	Outcomes	Progress	Dec M40	Jan M41	Feb M42	Mar M43	Apr M44
EF	Programme management	Ongoing					
EF	A.1 Platform report M40	100%	■				
EF	B.2/B.3 Periodic reports M40	100%	■				
EF	C.2/C.3 Users and usage report M40	100%	■				

Balance of efforts
The balance of efforts table states the foreseen and actual percentages of resources allocated to each of the four work packages and its related tasks.

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[135] Phrasing of risk description was updated.

Balance of efforts per Work Package

Work package	Foreseen	Actual Jan 2022
WP 1: Strengthen the infrastructure	**49.50%**	**48.09%**
Task 1.1. Easy data publishing	11.60%	12.01%
Task 1.2. Europeana website experience	14.90%	14.77%
Task 1.3. Reliable platforms	8.40%	6.24%
Task 1.4. Discoverability of digital cultural content	14.60%	15.07%
Work package 2: Improve data quality	**17.50%**	**19.61%**
Task 2.1. Quality assured data	12.50%	14.08%
Task 2.2. Enriched data	5.00%	5.53%
Work package 3: Build capacity	**26.50%**	**25.40%**
Task 3.1. Build capacity of aggregators and professionals	10.80%	10.93%
Task 3.2. Nurture networks	9.60%	9.06%
Task 3.3. Strengthen national infrastructures	6.10%	5.41%
Work package 4: Programme management	**6.50%**	**6.90%**
Task 4.1. Programme management of Europeana DSI-4	6.00%	6.29%
Task 4.2. Relations with Europeana DSI Generic Services projects	0.20%	0.37%
Task 4.3. Governance (DCHE)	0.10%	0.18%
Task 4.4. Phasing-in and phasing-out periods	0.20%	0.06%
TOTAL	100%	100%

Major changes in staff, if applicable

Europeana DSI-4 Consortium parter BL - Michelle Clewer has taken over from Richard Gibby as Head of Governance at the British Library, and is therefore the new LEAR for BL.

Risk assessment: Programme management of Europeana DSI-4

ID	Risk	Probability	Impact	Rate	Mitigation strategy	Change
R4.1	Individual outcomes require more work than anticipated which might	Low (2)	Medium (3)	6	Careful planning of efforts and resources needed for individual work,	-

	affect other outcomes committed to				communication and awareness building of challenges, agreeing on priorities	
R4.2	Additional work or extended scope of work is done which might affect other outcomes committed to	Medium (3)	Medium (3)	9	Management of expectations towards individual outcomes, communication and awareness building of challenges, agreeing on priorities	

Task 4.2. Relations with Europeana Generic Services projects[136]

Partners: EF

EF maintains regular contact with the funded Europeana and other Generic Services (GS) projects (e.g. via Basecamp groups) and supports them with ingestion of content and metadata (if applicable), consultation on the Europeana frameworks, policy and development guidelines, tool integration into Europeana CSP and dissemination of the project results. Specific work undertaken in the reporting period is described in the respective subject areas of this report (e.g. technical developments, editorial contributions). The table below shows the progress against Annex 5 of the implementation plan of all Generic Services project outcomes that are related to Europeana DSI-4.

During this period, a new project was funded under the Erasmus+ KA2 call[137]. The 'Watching videos like a historian'[138] is led by EuroClio, the European Association of History Educators. The 'Watching videos like a historian' aims to address digital transformation through development of digital readiness, resilience and capacity by using audiovisual material for education. The consortium has six partners from across Europe, incl. EF and EuroClio. The project is expected to start on 1 March 2022 and it will run for 36 months. EF will start reporting on the project once the project starts.

Overview of progress: Generic Services projects against Annex 5 (project start - end of the current reporting period)

Objective 4.2.2. Supporting Europeana Generic Services (CEF-TC-2019-1) call						
Partner	Outcomes	DSI-4 contribution	Due Date	**Progress**	Status	Comments

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[136] This section also highlights other projects the DSI platform is involved with.

[137] https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/erasmus-edu-2021-pcoop-engo

[138] https://pro.europeana.eu/project/watching-videos-like-a-historian-watchlikeahist

Europeana XX: Century of Change[139]

GS/DSI	100,000 new high quality objects and 15,000 upgraded records	Task 2.1 Quality assured data	Nov 21	95%	Delayed	EF has received the remaining records and will published them during Feb 2022. It is expected that with the new records the project overachieve their target.
GS/DSI	2.5 million enrichments (semantic and translation enrichments) via EDM ingestion.	Task 2.2 Enriched data	Nov 21	tbc[140]	Delayed	Partners' data was delivered later than the agreed plan.
GS	Extension of the recommendation engine to support entity powered collections	Task 1.2. Europeana website experience	Nov 21	100%	Done	During the month of December, the new version of the recommendation engine was deployed and is available in the Europeana website. As mentioned in the IP and under Task 1.2 of this report, the user-specific recommendations were not integrated into ECSP.
GS	Improvement in Europeana Media Player to support the display of subtitles in multiple languages for a single video.	Task 1.2. Europeana website experience	Sep 21	90%	Delayed	EF tests identified ongoing issues with the delivered functionality. EF is discussing their resolution with the project partners.
GS/DSI	Publication of subtitles on Europeana.eu	Task 2.2 Enriched data	Nov 21	20%	Delayed	By the end of Jan 22 the partners submitted the subtitles that have been officially approved by the data partners. The revision and publication of the subtitles is blocked due to the update needed in the media player (see previous point).

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[139] Project officially requested an extension of three months until 31 November 2021. https://pro.europeana.eu/project/europeana-xx
[140] The progress related to data enrichments will be shown once all associated records have been ingested.

GS	35 editorials in Europeana.eu	Task 1.4 Discoverability of digital cultural content	Nov 21	100%[141]	Done	By Sep 21 more than the promised amount of editorials were delivered. By the end of Nov 21, 49 editorials were published. The project delivered 14 editorials more than the ones promised.
GS	16 editorials in Europeana Pro	Task 3.2. Nurture networks	Nov 21	50%[142]	Delayed	During this period 6 project related editorials were finalised and they expect to be published mid-Feb 22. The remaining editorial is expected to be published during Q2 of 2022.
Europeana Sport[143][144]						
GS/DSI	23.900 new digital objects and 5.050 improved digital objects	Task 2.1 Quality assured data	March 21	77%	On track [145]	Project partners requested an official extension for 3 months to complete the ingestion of content to Europeana.
GS/DSI	250 user-generated content (stories and associated objects)	Task 2.1 Quality assured data	Sep 21 [146]	100%	Done	At the end of Jan 22, the project delivered more user-generated stories in total 291 stories were made available on Europeana. We expect to have more user-generated stories until the end of the project.

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[141] 49 editorials published (22 galleries, 25 blogs, 2 exhibitions)
[142] 8 editorials published (4 event pages, 3 news pieces, 1 project page)
[143] https://pro.europeana.eu/project/europeana-sport
[144] The project got an official extension for 3 months, new end date is 30 April 2022. Currently, new GA is under revision and expected to be signed soon.
[145] The project received an official extension for 3 months, the new end date for this activity is 31 Marchl 2022
[146] There is no clear project deadline for aggregation of user-generated content, so we have decided to assign the same deadline as the one for content aggregation.

GS	40 editorials in Europeana.eu	Task 1.4 Discoverability of digital cultural content	Dec 21	100%[147]	Done	During Jan 22 the project worked on a Sport exhibition which was not part of the GA. It is scheduled to be published in Feb 222
GS/DSI	8 related editorials in Europeana Pro	Task 3.2. Nurture networks and Task 4.2. Relations with Europeana Generic Services projects	April 22	87%[148]	On track	One editorial missing, this oen is expected to be published during Q2 of 2022.
GS	10 collections days events held	Task 3.1. Build capacity of aggregators and professionals	Sep 21	100%	Done	13 collection day events were held, 3 more than the ones promised. Both as online campaigns (3) and in-person events (9) or hybrid events (1)
GS	2 workshops held	Task 3.1. Build capacity of aggregators and professionals	Dec 21	100%	Done	2 workshops 'Copyright in the aggregation of sports content'[149] and 'Copyright in the user contribution of sports content'[150]
ARMA - The Art of Reading in The Middle Ages[151][152]						
GS/DSI	21,300 new records (50 of these will be 3D)	Task 2.1 Quality assured data	July 22[153]	3%	On track	One set is published. (ULEI, 608 records)
GS	20 editorials in Europeana.eu.	Task 1.4 Discoverability of digital cultural content	Feb 22	80%[154]	On track	Partners delivered 21 drafts until this date. 15 editorials have been published. The remaining 5 editorials are scheduled to be published in Feb 22 (2

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[147] 48 editorials have been published (31 blogs, 7 galleries, 10 browse discovery points)
[148] editorials pieces have been published (2 event pages, 4 news pieces, 1 project page)
[149] https://www.youtube.com/watch?v=h2wEbKuTGtI
[150] https://www.youtube.com/watch?v=E0j1xp-KKlw
[151] https://pro.europeana.eu/project/pagode-europeana-china
[152] Project coordinator received a confirmation of that extension was approved for 4 months, which will extend all remaining MS deadlines until 31 August 2022. New GA has not yet been signed.
[153] Project received confirmation of the project extension. This activity was granted an extension until 31 July 2022
[154] 15 editorials have been published (3 galleries, 12 blogs)

						galleries and 3 blogs)
GS	1 online exhibition available in five languages[155]	Task 1.4 Discoverability of digital cultural content	Oct 21	75%	On track	During this period EF has not yet received the translations of the exhibition. It is expected to have them Feb-March 22.
GS	25 curatorial activities in Europeana.eu (11 learning activities - blogs, instructional videos, learning scenarios, 5 instagram stories, 1 online activity pack, 1 multi online learning pack,1 feature page, 6 topic pages[156] or cards groups[157])	Task 1.4 Discoverability of digital cultural content	May 22 [158]	5%	On track	Curatorial activities are being produced. Currently 7 out of 8 videos have been released in the project website[159]. EF is investigating how to integrate them in Europeana Classroom
GS	Recommendation on the implementation of IIIF	Task 2.1 Quality assured data	July 22[160]	0%	Not started	
Objective 4.2.3. Supporting Europeana Generic Services (CEF-TC-2020-1) call						
Jewish History Tour[161]						
GS/DSI	30,000 new records and 5 updated records without enrichments	Task 2.1 Quality assured data	April 22	8%	On track	The project has delivered and published 3 datasets from the 19 datasets that are expected.
GS	Validation methodology for enrichments is ready	Task 1.2. Europeana website experience	Jun 22	5%	On track	
GS/DSI	Enhancement of Europeana API with geospatial querying	Task 2.2 Enriched data	Jul 22	15%	On track	EF started working on Geo-index to have it ready by end of Q1 beginning of Q2 of 2022.

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[155] English, Dutch, German, Czech, Slovenian and French
[156] A type of automatically created Collection page that presents items for an entity-defined theme or subject, for example, music.
[157] Cards groups are manually curated subtopics within a feature page.
[158] Acivity extended until 31 May 2022
[159] https://www.medieval-reads.eu/activities/learning/postsecondary-education/video-series
[160] Extended until 31 July 2022
[161] https://pro.europeana.eu/project/jewish-history-tours

GS/DSI	Editorials in Pro	Task 3.2. Nurture networks and Task 4.2. Relations with Europeana Generic Services projects	Aug 22	20%[162]	On track	More editorials in Pro are foreseen until the end of the project Sep 22.
GS	1 webinar with a series of 3 sessions	Task 3.1. Build capacity of aggregators and professionals	Sep 21	100%	Done	
WEAVE - Widen European Access to Cultural Communities Via Europeana						
GS/DSI	5,265 new records (165 3D objects, 100 videos and 5000 photographs)	Task 2.1 Quality assured data	Aug 22	1%	On track	WEAVE partners started working on the data and are started submitting small sets for publication.
GS/DSI	Integration of the WEAVE toolkit into Europeana CSP	Task 1.4 Discoverability of digital cultural content	Aug 22	5%	On track	
GS	6 editorials in Europeana Pro[163]	Task 3.2. Nurture networks and Task 4.2. Relations with Europeana Generic Services projects	Aug 22	25%	On track	More editorials in Pro are foreseen until the end of the project Sep 22.
GS	Editorials in Europeana.eu	Task 1.4 Discoverability of digital cultural content	Aug 22	5%	On trak	Planning of writing editorials have started. Editorials are foreseen to be published periodically during DSI-4 Y4.
GS	1 Europeana WEAVE LabDay and 4 Europeana WEAVE	Task 3.1. Build capacity of aggregators	Mar 22	25%	On track	Europeana WEAVE LabDay was held on 18 Oct.

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[162] 1 project page and 1 event page
[163] 3 editorial piece published (1 project page, 1 project news and 2 event page)

	cafés	and professionals				
GS	1 capacity building webinar	Task 3.1. Build capacity of aggregators and professionals	Mar 22	100%	Done	1 webinar as a result of the Europeana WEAVE LabDay.
GS	Best practices in intangible heritage content and recommendations for metadata enrichment of community (and minority) collections	Task 3.1. Build capacity of aggregators and professionals	Mar 22	0%	On track	
GS	4 online events for minority communities	Task 3.1. Build capacity of aggregators and professionals	Mar 22	0%	On track	EF together with the project partners have preparing the work for the event series on D&I.
Europeana Enrich+[164]						
GS/DSI	100,000 new records	Task 2.1 Quality assured data	Nov 21 [165]	5%	On track [166]	Almost 5,000 records have been published.
GS/DSI	10 Editorials in Pro[167] and or Editorials in Europeana.eu	Task 3.2. Nurture networks and Task 1.4 Discoverability of digital cultural content	Aug 22	10%	On track	Editorials are foreseen to be published during DSI 4-year and before end project Sep 22.
Europeana Subtitled[168]						
GS/DSI	6,000 AV records	Task 2.1 Quality assured data	May 22	0%	On track	Partners started delivering sample data.

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[164] https://pro.europeana.eu/project/enricheuropeana
[165] During Nov 21-Dec21 the project delivered (4.7% or 4,684 records) of the expected 100,000 records. According to the project partners, *MS3 Content aggregation* - first ingestion into Europeana was achieved (due date 30 Nov 21). The partners will ingest the remaining records during the project scope. The progress column will show the updates related to the % of records that have been publish in Euroepana.
[166] According to the project partners, the respective MS was completed.. EF will show in the progress column the & related to the records that have been published in Europeana.
[167] 1 project page has been published
[168] https://pro.europeana.eu/project/europeana-subtitled

GS/DSI	Enrichments	Task 2.2 Enriched data	Aug 22	0%	On track	
GS/DSI	Integration of the AI pipeline with the Europeana CSP via de Europeana APIs; adaptations to the Annotation API and Full-text API for subtitles and transcriptions to meet project requirements; support for multilingual subtitles display on the Europeana Media Player	Task 2.2 Enriched data	Mar 22	70%	On track	The changes to the Annotations API have been implemented and also the pipeline between Annotations and the Full-text API. However, the release into production is on-hold until the Media player is updated to support multiple subtitles.
GS	2 Editorials in Pro[169]	Task 3.2. Nurture networks and Task 4.2. Relations with Europeana Generic Services projects	Aug 22	50%	On track	
GS	24 editorials in Europeana.eu[170]	Task 1.4 Discoverability of digital cultural conte	Aug 22	8%[171]	On track	Editorials will be published periodically starting Oct 21 until end project Nov 22
CRAFTED - Enrich and promote traditional and contemporary crafts[172]						
GS	Editorials in Pro	Task 3.2. Nurture networks and Task 4.2. Relations with Europeana Generic Services projects	Aug 22	15%[173]	On track	
GS	Editorial in	Task 1.4	Aug 22	15%	On	Curational plan

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[169] 1 editorial published (1 project page)
[170] 24 editorials in Europeana.eu (4 blogs, 9 galleries, 1 exhibition)
[171] 2 editorials in Europeana.eu (2 blogs)
[172] https://pro.europeana.eu/project/crafted
[173] 2 editorials have been published (1 project page, 1 event page)

	Europeana.eu	Discoverability of digital cultural content			Track	milestone has been achieved, first blogs and galleries have been published, a feature page has been launched.[174]
Other GS projects with outcomes to be integrated in DSI						
Europeana Translate[175]						
GS	Editorials in Pro	Task 3.2. Nurture networks and Task 4.2. Relations with Europeana Generic Services projects	Aug 22	10%[176]	On track	
J-Ark European Jewish Community Archive[177]						
GS	Europeana Pro piece	Task 3.2. Nurture networks and Task 4.2. Relations with Europeana Generic Services projects	Aug 21	10%[178]	On track	

Risk assessment: relations with Europeana Generic Services projects

ID	Risk	Probability	Impact	Rate	Mitigation strategy	Change
R4.3	Several Generic Services projects are extended or requested an extension to fulfill the ingestion work. Therefore, DSI work might be delayed to accommodate the updated ingestion load.	Medium (3)	High (4)	12	Monthly internal GS team meeting for better coordination and risk mitigation. Continuous collaboration with project partners to flag and mitigate possible risks.	-

[174] 4 editorials have been published (1 blogs, 2 galleries, 1 feature page)
[175] https://pro.europeana.eu/project/europeana-translate
[176] 1 editorial published (1 project page)
[177] https://pro.europeana.eu/project/j-ark-european-jewish-community-archive
[178] 1 editorial published (1 project page)

Task 4.3. Governance (CEDCHE)

Partners: EF

Under this task EF reports to the European Commission and the Commission expert Group on the common European Data Space for Cultural Heritage (CEDCHE)[179] the status of the Europeana DSI platform, activities and developments as well as re-prioritise developments of the platform based on received feedback and validation with users.

No activities in M40/M41.

Task 4.4. Phasing-in and phasing-out periods

Partners: EF

The task provides up-to-date information to the European Commission on assets and liabilities related to the Europeana platform and tests phasing-out and transfer processes to a successor supplier.

No activities in M40/M41.

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[179] https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/consult?lang=en&groupID=3800

Annex: Updates towards milestones

The table states milestones to be delivered in Europeana DSI-4 Y4 (1 September 2021 - 31 August 2022) .

MS No.	WP	Description	Verification	Due date	Status
MS1	WP1	MS1 Report on progress on the aggregation strategy delivered (internal)	Milestone document sent to EC	M48 (Aug 2022)	Due
MS2	WP1	MS2 Report on progress on the search strategy delivered (internal)	Milestone document sent to EC	M48 (Aug 2022)	Due
MS3	WP1	MS3 Report on progress on the multilingual strategy delivered (internal)	Milestone document sent to EC	M48 (Aug 2022)	Due
MS4	WP2	MS4 DSI AGG annual work plan review (internal)	Milestone document sent to EC	M42 (Feb 2022) M48 (Aug 2022)	Done Due
MS5	WP2	MS5 New recommendations and updated requirements for services and products focusing on content in the EPF developed (including a report of the status of EPF) (internal)	Milestone document sent to EC	M47 (Jul 2022)	Due

Annex: Progress on deliverables (M37-M48)

This table states progress on deliverables and what deliverables were submitted to EC (1 September 2021 - 31 August 2022).[180]

ID	Description	Due month	Due	Done
A.1	Platform reports	Every 10 months, starting M10	-	M40 (Dec 2021)
B.1	Implementation Plan	M01 and every 12 months thereafter	-	-
B.2/B.3	Periodic reports	Every 2 months, starting M2	M44 (Apr 2022) - M48 (Aug 2022)	M38 (Oct 2021) - M42 (Feb 2022)
B.4	Annual report	Every 12 months, starting M12	M48 (Aug 2022)	-
B.5	Final report	M48 (Aug 2022) in case of renewals	M48 (Aug 2022)	-
C.1	Technical documentation	Every 12 months, starting M32	M44 (Apr 2022)	-
C.2/C.3	Users and usage report	Every 5 months, starting M5	M45 (May 2022)	M40 (Dec 2021)
C.4	Stress and disaster recovery test reports	Every 12 months, starting M31	M43 (Mar 2022)	-
D.1	Communication and dissemination plan	Every 9 months, starting M9	M45 (May 2022)	-
D.2	Study on impact of digitisation and reuse of cultural heritage	October every second year, starting Y2[181]	M47 (Jul 2022)	-
E.1	Transfer of assets and liabilities report	4 months before the contract ends: M44 (April 2022) in case of renewals	M44 (April 2022)	-
E.2	Transfer process report			
E.3	Employed staff report			

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[180] Note: the schedule of deliverables was updated in January 2020, August 2020 and February 2022. Changes to the schedule have been confirmed by EC.
[181] EF proposed to postpone the deliverable. The change was confirmed by EC.

Annex: Glossary of terms

Formal definitions of terms used frequently are detailed in the glossary of terms[182] on Europeana Pro. Additional terms are listed below.

DC	Dublin Core (DC) is a small set of vocabulary terms that can be used to describe digital resources (video, images, web pages, etc.), as well as physical resources such as books or CDs, and objects like artworks.
eCloud	eCloud is a cloud-based infrastructure that allows to efficiently store, share and provide access to digital cultural heritage. The data storage part of eCloud relies on the Cassandra database.
eCloud component: IIIF image server	The IIIF image server allows to efficiently store, share and provide access to IIIF images as one component of eCloud.
ELK	'ELK' is the acronym for three open source projects: Elasticsearch, Logstash, and Kibana. ELK enables the collection, storage, search and visualisation of log data.
Entities	Entities (such as persons, topics and places) are part of the Europeana Entity Collection, a collection of entities in the context of Europeana harvested from and linked to controlled vocabularies, such as Geonames, Dbpedia and Wikidata.
Entity pages	Entity pages showcase related entities towards persons, topics and places. For example: https://www.europeana.eu/portal/en/explore/people/61016-alphonse-mucha.html
Entity API	The Entities API allows to search on or retrieve information from named entities.
MARC21	Format for Bibliographic Data
Metis	Data and aggregation infrastructure through which allows to import, transform, validate and enrich metadata. https://metis.europeana.eu/home
Metis component: Link Checking service	This service allows the checking of links in the EDM data during the aggregation process (when the data is imported the first time but also after it has been published).
Metis component: Media service	This service is responsible for technical metadata extraction and thumbnail generation.
MINT	Mapping tool to define semantic mappings between source and target

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[182] https://pro.europeana.eu/resources/standardization-tools/glossary

schemas.

Mongo database	MongoDB is a document database that stores the Europeana data in JSON-like documents. The Europeana APIs relies on Solr to search for records while the metadata associated to those data comes from Mongo.
Newspaper full-text service	This service allows to search for a term in the full-text of newspapers .
Schema.org	Webmasters use this shared vocabulary to structure metadata on their websites and to help search engines understand the published content, a technique known as search engine optimization. https://en.wikipedia.org/wiki/Schema.org
Solr index	It is the search engine powering the Europeana Collections portal. Apache Solr is an open-source platform used at Europeana for full-text (e.g. metadata) index and search.
UIM infrastructure	The United Ingestion Manager is the suite of tools used to run the data aggregation activities prior to Metis.