CNECT/LUX/2021/OP/0070
Deployment of a common European data space for cultural heritage

PM. Implementation plan M1

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REVISION HISTORY AND STATEMENT OF ORIGINALITY

Revision History

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1.0	14-10-2022	Management team and Julia Schellenberg	Europeana Foundation	Final draft
1.1	15-11-2022	Management team and Julia Schellenberg	Europeana Foundation	Updates based on EC comments
1.2	29-11-2022	Management team and Julia Schellenberg	Europeana Foundation	Updates based on EC comments
1.3	05-12-2022	Management team and Julia Schellenberg	Europeana Foundation	Updates based on EC comments
1.4.1	09-12-2022	Management team and Julia Schellenberg	Europeana Foundation	Updates based on EC comments

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Abbreviations

Consortium participants

EF	Europeana Foundation, The Netherlands (Coordinator)
AIT-Graz	AIT Angewandte Informationstechnik Forschungsgesellschaft mbH, Austria
AIT-Vienna	AIT Austrian Institute of Technology GmbH, Austria
APEF	Archives Portal Europe Foundation, The Netherlands
CAPG	Capgemini Nederland BV, The Netherlands
CARARE	Connecting Archaeology and Architecture in Europe, Ireland
DARIAH	Digital Research Infrastructure for the Arts and Humanities, France
DATO	Datoptron P.C., Greece
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 Digital Services GmbH, Germany
INCEPTION	Inception s.r.l, Italy
MCA	Michael Culture AISBL, Belgium
NISV	Stichting Nederlands Instituut voor Beeld en Geluid, The Netherlands
Photocons	International Consortium for Photographic Heritage Photoconsortium, Italy
PSNC	Instytut Chemii Bioorganicznej Polskiej Akademii Nauk - Poznańskie Centrum Superkomputerowo-Sieciowe, Poland
TMO	Time Machine Organisation, Austria

Other

AI	Artificial Intelligence
CHIs	Cultural Heritage Institutions
CEDCHE	Common European Data Space for Cultural Heritage Expert Group
DS AGG	DS aggregators
EAF	Europeana Aggregators' Forum
EDM	Europeana Data Model
EIF	Europeana Impact Framework
ELF	Europeana Licensing Framework
ENA	Europeana Network Association
EPF	Europeana Publishing Framework
GS	Generic Services
IIIF	International Image Interoperability Framework

Introduction

The common European data space for cultural heritage is an initiative of the European Union and funded under the European Union's Digital Europe programme[1]. The project deploys the data space for cultural heritage, building on and expanding the existing functionalities and services of the Europeana Digital Service Infrastructure (Europeana DSI). The service is provided by a consortium of 19 partners (Europeana DS Consortium), coordinated by the Europeana Foundation.

This plan contains implementation outcomes for Y1 (1 Sep 2022 - 31 Aug 2023) of the service based on the awarded tender (Deployment of a common European data space for cultural heritage - CNECT/LUX/2021/OP/0070). The tender was developed in line with the tender specifications and the Europeana 2020-2025 strategy[2].

A detailed description of the work performed can be found under each Work Package (WP). Each WP will be led by a member of EF staff, who is responsible for the resources assigned to the tasks and the delivery of the outcomes as described. All WPs will be coordinated by the EF Programme team, under the jurisdiction of the EF General Director. The Programme team assures proper governance and cohesion of the consortium and its work.

All activities are planned in a detailed (product) roadmap, and are reviewed through our change development process. The identified outcomes are indicative of the types of interventions we will take over the next year to add value for stakeholders, partners and audiences. Work is expected to evolve based on how well they are contributing to activities and performance indicators.

Performance metrics are listed in Annex 1: Overview of performance indicators. EF will report back to the European Commission (EC) on progress and performance via various deliverables listed in Annex 2: Overview of deliverables, and will also report frequently on any significant risks (initially identified in Annex 5: Risk management plan). Annex 3: Balance of efforts shows the distribution of efforts foreseen per work package. Annex 4: EU-funded projects' outcomes integration overview lists the outcomes from other projects contributing to the European data space for cultural heritage that are expected to be delivered and integrated by the end of Y1 (up until August 2023).

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[1] https://digital-strategy.ec.europa.eu/en/activities/digital-programme
[2] https://pro.europeana.eu/page/strategy-2020-2025-summary

Work package 1: Development and operation of the data space infrastructure

This work package aims to provide a reliable data space infrastructure and quality of service, as well as foster innovation, interoperability and compliance with other data spaces. For this purpose, it will deliver the data space infrastructure according to the tender requirements and to a high level of quality; moreover, it will expand the aggregation infrastructure and services to support the growth of the underlying data repository. The WP will also improve Europeana identifiers towards a permanent and reliable unique identification system for the data space to increase the accessibility, security and resilience of the data repository.

Europeana DS will continue the further development of the API suite in response to identified users needs. It will manage and facilitate change development to address changing user needs and strategic priority changes. Finally, the WP will prepare the data space infrastructure to further connect with the overall data space ecosystem and more specifically with the common data space underlying infrastructure.

Task 1.1. Provide reliable data space infrastructure and quality of services

The data space infrastructure will build upon the current Europeana Digital Service Infrastructure (Europeana DSI). Europeana DSI consists of four digital products: the Europeana website, Europeana Pro website, APIs, and aggregation systems. Underlying all of these products is the infrastructure to host, monitor, and recover systems.

Under this task, the Europeana DS consortium will extend and maintain the overarching platform infrastructure and services (Activity 1.1.1), aggregation systems (Activity 1.1.2), and APIs (Activity 1.1.3). The Europeana website will be further developed as part of WP4: Digital services for the public and the Europeana Pro website as part of WP3: Capacity building and fostering reuse.

EF will deliver the DS. Infrastructure report containing a detailed overview of the infrastructure of the data space for cultural heritage, the evolution of its architecture and services as well as quality and use of services.

Activity 1.1.1. Extend and maintain platform infrastructure and services

Partner: EF, AIT-Vienna

This task will cover work in the following three areas:
- Improve permanent and common identification system for the data space
- Establish new enrichment post-publication pipeline
- Maintain quality of service, data security and disaster recovery

Improve permanent and common identification system for the data space

The Europeana DS consortium will enhance its understanding of the persistent identifiers ecosystem and its use by CHIs and aggregators working with Europeana. EF will make an inventory in collaboration with the aggregators and CHIs of the current identification schemes used in the metadata submitted to the core platform. This assessment will provide the metric reporting on the amount of records with a unique and permanent identifier in the data repository.

EF will review its current identification system within the core service platform to better support the identification, deduplication and permanent access to resources in the data repository. EF will prioritise the services that need to be developed or further improved to better support interoperability within the data space infrastructure. As a result, these developments will improve interoperability within the platform and contribute to the reduction of broken link issues across the data space. A report delivered in July 2023 will provide an update on the area of development selected and the status of the services, the overall identification landscape in the data space, and recommendations for the further development of the Data Space identification system. Recommendations will be discussed with EC and decisions taken on scheduling of future work to be reflected in the PM. Implementation plan M12.

Establish new post publication enrichment pipeline

EF will continue improving the overall enrichment framework and extend it as a post publication activity. This activity will enable the continuous improvement of items after publication to allow for a constant and immediate impact on the digital services built on it. EF will start by establishing a prototype framework for a post publication pipeline that will be used to investigate, assess the functionality and performance of the enrichment service(s).

<u>Maintain quality of service, data security and disaster recovery</u>

The Europeana DS consortium will maintain the infrastructure and develop the mechanisms to ensure its high performance and reliability.

In year one, EF will define and implement metrics to assess the performance of the aggregation infrastructure and implement the logging needed to measure the metrics (reporting on the metrics will be available as part of the year 2 metrics framework)[3].

EF will review the services supporting the logging infrastructure so as to ensure that all the interactions made by end-users and API customers are captured in compliance with data protection and other legal requirements. EF will further exploit logging information of end-user and API customers to run search performance evaluations and extract key performance metrics. This activity will enable the development of more personalised user recommendations and visualisations as part of the digital services for the public (Activity 4.1.2.).

EF, PSNC and AIT Vienna will improve the performance and security tests procedures and maintain the current hosting infrastructure. EF will continue the transition of the core platform infrastructure to a new hosting infrastructure (Kubernetes). To ensure continuous platform reliability, EF will perform routine and ongoing tasks, such as the regular reindexing of Solr (search index) and Mongo (metadata storage), as well as patching and upgrading components of the platform and supporting infrastructure.

EF will improve the accessibility to its websites, specifically the Europeana website and Europeana Pro in compliance with terms from the Directive (EU) 2016/2102 of the European Parliament and of the Council of 26 October 2016 on the accessibility of the websites and mobile applications of public sector bodies.[4]

Technical documentation will be updated to cover the set-up, configuration and monitoring of the platform (DS. Technical documentation). EF will also improve disaster recovery procedures (DS. Disaster recovery) and report on stress testing (DS. Stress test reports).

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[3] The time it takes for a dataset to be processed through Metis will start being measured in Y1 (RM 1.6 Average time required for publication of datasets in Metis).
[4] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32016L2102 The standard is EN 301 549 and the last version is v3.2.1, linked and explained in https://digital-strategy.ec.europa.eu/en/policies/web-accessibility-directive%20standards-and-harmonisation

Overview of outcomes

Partners	Outcomes	Expected due date
EF	Inventory of the current identifications schemes used in the data repository delivered	Feb 2023
EF	Requirements for improved persistence and unique identification system in the core platform gathered	Feb 2023
PSNC	eCloud processing model reviewed and refactored	Jun 2023
EF	Report on one selected area for experimentation and assessment of permanent and unique identifiers completed (including recommendations for future work)	Jul 2023
EF	Logging infrastructure further extended	Aug 2023
EF, AIT Vienna	Prototype framework for post publication enrichment pipeline delivered	Aug 2023
EF	New metrics to assess the performance of the Metis aggregation infrastructure defined and implemented	Aug 2023
EF	Full disaster recovery test completed[5]	Ongoing
EF	Europeana database reprocessing activities[6]	Ongoing
EF	Infrastructure supporting products and services are maintained	Ongoing
EF	Compliance with data protection maintained[7]	Ongoing

Overview of indicators

KEY PERFORMANCE INDICATORS					
ID	Description	Measured by	Frequency	Baseline Aug 2022	Target Aug 2023
KPI 1.1	Records with a unique permanent identifier in the data	Total number of records	Annually	N/A	TBC[8]

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[5] This outcome will feed into DS. Stress test reports.

[6] Outcomes in other tasks might require a reprocessing activity. The planning will be aligned with those outcomes.

[7] According to the Regulation (EU) 2018/1725 concerning the processing of personal data by the EU institutions (IDPR)

[8] The associated technology and processes first need to be established. EF will identify the baseline in February 2023 and a future target by August 2023 (a target will be added to the Y2 metrics framework).

	repository				
KPI 1.2	Response time of Europeana website	Average time (seconds) for single record per month	Monthly	1.8s	1.5s
KPI 1.3	Uptime of Europeana website	Average in % for single record per month	Monthly	99.84	99.9%
KPI 1.4	Uptime of public APIs (all)	Average in % per month	Monthly	99.91	99.9%
KPI 1.5	Uptime of Europeana Pro	Average in % per month	Monthly	99.92	99.9%

REPORTING INDICATORS			
ID	**Description**	**Measured by**	**Frequency**
RM 1.1	Europeana website meets the WCAG 2.1 conformance level AA[9]	Homepage and item pages (except for the media) meet the WCAG 2.1 conformance level AA accessibility standard	Annually
RM 1.2	Response time of all public APIs[10]	Average response time (seconds) per month	Monthly
RM 1.3	Response time of Europeana Pro	Average response time (seconds) per month	Monthly
RM 1.4	Europeana Pro meets the WCAG 2.1 conformance level AA	Homepage and main landing pages in IA meet the WCAG 2.1 conformance level AA accessibility standard	Annually
RM 1.5	Uptime of Metis	Average in % per month	Monthly

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[9] https://www.w3.org/TR/WCAG21/

[10] Public APIs are the APIs serving external users requests: the Search and Record APIs, the Annotation, user sets and entity APIs and the IIIF dedicated APIs.

RM 1.6	Data publication in Metis	Average time required for publication of datasets in Metis	Bi-annually

Activity 1.1.2. Extend and maintain aggregation systems and services

Partners: EF, PSNC, DATO, and AIT Graz

EF, PSNC and DATO will continue the developments outlined by the Aggregation strategy to make data aggregation easier and assist providers in increasing the quality of their data. This task will focus on integrating the services underlying the current aggregation infrastructure with the Europeana DS Aggregators' aggregation infrastructures. These integrations will improve the data publication journey of CHIs and Aggregators.

For this purpose, EF, in consultation with Aggregators and CHIs, will provide a first API implementation of one of the services of the Metis suite. More specifically, EF will work with DATO to progressively integrate the Metis services with the MINT based aggregators' infrastructures. Lessons learned through this activity will be shared with the wider Aggregators' Forum so aggregators can replicate these efforts within their own infrastructures.

Data quality recommendations and standards will continue to be implemented in the Metis Suite as those evolve. EF will expand the field warnings mechanism in the Metis Suite by including more problem patterns as prioritised by the Data Quality Committee.

The Europeana DS consortium will continue optimising the core service aggregation infrastructure to increase its availability, performance and scalability. EF will review and improve the current data processing architecture and configuration. More specifically, EF will scale the Metis Sandbox data processing capabilities to accommodate increased usage. EF will also improve the deployment mechanisms of all components of the aggregation services. PSNC will focus on making eCloud, the core Metis data storage, sustainable for the future.

The Europeana DS consortium will extend the support of IIIF technology within the data space for cultural heritage. AIT-Graz will increase the use of IIIF within aggregators infrastructure and PSNC will support the transition of the currently implemented IIIF image service to a more openly licensed software.

Overview of outcomes

Partners	Outcomes	Expected due date
EF	API allowing the integration of the Metis service(s) decided and validated for implementation	Jan 2023
EF	Metis infrastructure migrated to Kubernetes	Jun 2023
EF, DATO	API allowing the integration of one of the Metis services developed	Aug 2023
PSNC	IIIF image service updated to use a more openly licensed software	Aug 2023
DATO	MINT based infrastructures upgraded to support incremental harvesting	Aug 2023
AIT-Graz	Use of IIIF within aggregators' infrastructure supported	Aug 2023
EF	Field warnings mechanism in the Metis Suite extended with new problem patterns	Ongoing
EF, PSNC	The Metis applications are maintained and kept up-to-date	Ongoing

Activity 1.1.3. Extend and maintain Application Programming Interfaces (APIs)

Partners: EF, AIT-Vienna

EF and AIT-Vienna will continue to maintain and support the Europeana APIs. These new activities will contribute to an improved and extended experience for API users and consequently to an improved user experience within the Europeana website, more specifically, towards a better and fully multilingual search and exploration (Search & Record APIs, translation broker API), personalisation (Recommendations API) and participation (User Set API, Annotations API).

API key & KeyCloak will be reviewed and further integrated to allow for API users to manage their keys within the Europeana account. All APIs will undergo adaptations to allow them to be dockerized and be fine-tuned to support the migration into a Kubernetes environment.

Redesign Search & Record APIs

The Search & Record APIs are the oldest of the Europeana APIs, designed in 2013. Starting with the Record API, they will be split and redesigned in newer versions that will follow today's standards and best practices for API design, development and Linked

Open Data, in the same spirit as the APIs that have more recently been added to Europeanas' API offer. The new design will help reduce the learning curve for new API customers and thus foster reuse. It will also take into account the user experience feedback collected over the years to better align with users' expectations. The redesign will, in the medium term, increase the speed of internal development, improve the quality of the API service and the usability of the APIs by third-parties.

EF will complete a satisfaction survey for the alpha version of the Record API with alpha users. The feedback obtained will be taken into account to further improve the Record API before its release.

Improve personalisation of recommendations

EF will start by reviewing and redesigning the recommendation engine delivered within the Europeana XX Generic Service Project before extending it with user interactions collected live within the logging infrastructure. The revised recommendation algorithm will better recognise and take into account users' interests and recent interactions (as opposed to a static copy of these interactions - current implementation).

Develop a broker API to external translation services

EF and AIT-Vienna will develop a new API to allow internal Europeana products to connect to and use translation services from different translation service providers. For the 1st version of the API, we will focus on the design and development of the core framework and migration of the implementations for Google Cloud Translation (being used for query and item metadata translation) and Pangeanic APIs (being used in the Europeana Translate GS Project) that were developed for the Search & Record APIs. We will also investigate the integration of translation services offered by the eTranslation DS. The broker API will be designed based on open standards interfaces and (besides the dedicated plugins) will offer default plugins for standard multilingual interfaces.

Finally, we will explore ways to optimise the use of translation services by better managing the amount of requests made to the services (e.g. by means of caching) and by switching to an alternative service when a translation limit is reached.

This development will directly contribute to Activity 4.1.4 Expand multilingual coverage to include all EU official languages.

Overview of outcomes

Partners	Outcomes	Expected due date
EF	Record API is redesigned	May 2023
EF, AIT Vienna	All APIs migrated to Kubernetes	Jun 2023
EF	Satisfaction survey for the alpha version of the Record API completed	Jul 2023
EF	Recommendation service redeveloped	Aug 2023
EF, AIT Vienna	First version of a Translation API is established	Aug 2023
EF, AIT Vienna	Europeana APIs are maintained and well performing	Ongoing

Task 1.2. Foster innovation, interoperability and compliance with other data spaces

Under this task, the Europeana DS consortium will continue to innovate the core service infrastructure to make it interoperable with the data spaces ecosystem. More specifically, the partners will review the aggregation operational model in light of the data governance model for the data space and the new technologies available to support the exchange of semantic data (Activity 1.2.1). The consortium will also run investigations to become fully compliant with the Data Spaces Technical Framework and the Data Space Support Centre recommendations (Activity 1.2.2). For this purpose, the consortium will gather and communicate the needs and requirements of the data space for cultural heritage to the Data Space Support Centre and, reciprocally, follow the Centre's procedures and requirements to ensure seamless and sustainable operation of the data space for cultural heritage.

The consortium will keep supporting the EuropeanaTech community as a space for technological innovation, development and sharing of best practices (notably about interoperability) for digital cultural heritage (Activity 1.2.3).

Activity 1.2.1. Investigate innovative scenarios for aggregation models

Partners: EF, NISV, DATO, AIT Vienna, CAPG

We will review the current Europeana Aggregation model based on the definition of the Data Space and the principles it stands for. Requirements supporting the needs of the Data Space in terms of operational model will be defined. The consortium will apply a

use case approach to investigate several linked data technologies which would support a transition to a more decentralised aggregation model. In order to ensure the transition between the current Aggregation Strategy and the revised version planned for 2024 we will create a new roadmap covering the two years of this contract.

Overview of outcomes

Partners	Outcomes	Expected due date
EF	Roadmap for the Aggregation Strategy reviewed and updated	Dec 2022
EF	Response to ENA/EAF task force reports[11] from the perspective of the Aggregation Strategy	Jun 2023
EF, NISV, DATO	List of functional requirements for data aggregation in the data space delivered	Aug 2023

Activity 1.2.2. Synergies with other European data spaces

Partners: EF, AIT Vienna, NISV, CAPG

The Europeana DS consortium will establish and maintain close collaboration with relevant European, national and regional initiatives and platforms to ensure interoperability within and outside the data space for cultural heritage.

In particular, the consortium will liaise with the Data Space Support Centre to achieve higher levels of standardisation and interoperability with other European data spaces in a progressive, evolutionary manner. The DS consortium will gather and communicate requirements to the Data Spaces Support Centre and, reciprocally, will follow the centre's procedures and requirements, aiming to implement these relevant to our data space. The consortium will also evaluate the compliance of the data space with the European Interoperability Framework to ensure the seamless delivery of digital public services.

The consortium will follow and where relevant shape the developments of the cloud-to-edge platform and services and the European Data Spaces Technical Framework and will evaluate their applicability to the Cultural Heritage DS Architecture.

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[11] Reports of ENA and EAF task forces on the topics of Linked Data and Solid technologies respectively (launched Nov 2022).

EF will continue to work together with the eTranslation DSI and the future language data space to ensure the implementation of the multilingual requirements for the digital services specified in the tender.

Overview of outcomes

Partners	Outcomes	Expected due date
EF, AIT Vienna, NISV, CAPG	Report to update on synergies with other European data spaces	Jun 2023
EF	Collaboration with the Data Space Support Center	Ongoing

Activity 1.2.3. Support interoperability and technological innovation for digital cultural heritage

Partners: EF, NISV

The Europeana DS consortium will continue to steer the data spaces' interoperability and innovation agenda, leveraging the established EuropeanaTech community as the various Working Groups, Committees and Task Forces.

The tender partners will also maintain the Europeana Data Model to the level of coverage and quality that is needed to keep it positioned as a cornerstone for semantic interoperability within the data space for cultural heritage and with other EU data spaces. The consortium will continue its general coordination and support activities contributing to other activities in this plan, from multilingual support to improvement of the EDM to interoperability for 3D content.

The standing Data Quality Committee (established 2017) will support addressing key data quality issues with a particular focus on reuse and discovery of cultural heritage objects.

Overview of outcomes

Partners	Outcomes	Expected due date
EF, NISV	EuropeanaTech community[12] is supported	Ongoing
EF	EDM coordinated and documented	Ongoing

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[12] https://pro.europeana.eu/page/europeanatech

EF	Data mapping and conversions with stakeholders is supported	Ongoing
EF	Continuous involvement in IIIF community (e.g. IIIF Executive Committee, Technical Review Committee)	Ongoing
EF	Data Quality Committee[13] is supported	Ongoing

Overview of indicators

REPORTING INDICATORS			
ID	**Description**	**Measured by**	**Frequency**
RM 1.7	Reach to EuropeanaTech community	Number of people reached per month (Mailing list, Twitter)	Quarterly

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Work package 2: Integration of high-quality data

This work package aims to contribute to a significant and sustained increase of high quality, usable and accessible data in the data space, with a special focus on 3D. The efforts will contribute to an increase in high quality tiers by at least 10% each year. The consortium aims, to the best of its capacity, for all new data to be in tier 2 for content and tier A for metadata, as defined by the current Europeana Publishing Framework. EF will also work with the cultural heritage community to determine high-value cultural heritage datasets of any kind, size and nature, with particular attention to 3D data, and to support their availability through the data space.

To achieve these objectives, the Europeana DS consortium will integrate the requirements needed to implement the EC recommendations and the Digital Europe programme[14] and will collaborate closely with the cultural heritage community, the member states (in the framework of the CEDCHE) and the European Commission. New and extended data governance mechanisms will also be developed to support the provision and management of data within the data space.

Task 2.1. Develop and manage data governance mechanisms

The Data Space governs data through various organisational tools, principles, processes and standards that are harmonised so that the data is interoperable, manageable, reliable and remains useful in the future. These will progressively evolve to enable new objectives of the data space for cultural heritage, stronger safeguards for privacy and data protection, more and varied partners, more decentralised data systems, and opportunities for cooperation with other data spaces, in the form of a Data Governance Mechanism for the Data Space which will be reported on in the DS. Data Governance deliverable.

The Europeana Publishing Framework (EPF), the Europeana Data Model (EDM) and the Europeana Licensing Framework (ELF) will be reviewed to accommodate new activities and areas, for instance, for better representing 3D.

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https://digital-strategy.ec.europa.eu/en/news/commission-proposes-common-european-data-space-cultural-heritage

Activity 2.1.1. Identify data governance requirements and objectives

Partners: EF, CAPG

EF, with support from CAPG, noting the limitations and boundaries of the governance blueprint, will research and identify data governance requirements or mechanisms stemming from legal obligations, from opportunities for cooperation with other data spaces, or from other organisational objectives of the data space for cultural heritage requiring a shift in data governance. The data governance requirements will be reported on as part of DS. Data Governance deliverable (March 2023, and subsequent updates).

This work will also encompass insights into particular elements of the Europeana frameworks, and the definition of institutional objectives or visions that lead to a consistent development of data space frameworks and standards. These developments combined with the update and refinement of existing frameworks, will ensure a progressively expanding and efficient approach to data governance. The work will also lead to an expanded and revised version of the Data Exchange Agreement to facilitate better data cooperation as a data space.

EF will also develop a set of conditions to be complied with when working with machine or human generated enrichments (including transcriptions and translations) of digital cultural heritage aggregated or otherwise collected within the Data Space. This work will result in an enrichment policy framing among others the activities in Task 2.3 Automated approaches towards data quality.

Overview of outcomes

Partners	Outcomes	Expected due date
EF, CAPG	Strategy and plan for the development of a Data Governance Mechanism v1 for the data space developed (internal)	Dec 2022
EF	Strategy and plan for the Data Governance Mechanism published	Jan 2023
EF	Enrichment policy v1 developed (internal)	Jan 2023
EF	Progress report on the strategy and plan for the development of Data Governance Mechanism, including on the cooperation agreement (internal)	Mar 2023
EF	Enrichment policy v2 validated (public)	Aug 2023
EF, CAPG	Strategy and plan for the development of the Data Governance Mechanism v2 updated (internal)	Aug 2023

EF, CAPG	Report evaluating European and national practices, objectives, requirements and mechanisms on the governance of cultural heritage sector data, including licensing and data protection completed	Aug 2023

Activity 2.1.2. Develop and expand data governance frameworks and standards

Partners: EF, CARARE, INCEPTION

In this task, the consortium will review the EPF, ELF and EDM to address requirements and opportunities in data governance for the data space for cultural heritage and to accommodate the needs raised by the aggregation of more types of data, to use data in more ways, and to facilitate the sharing of trustworthy data for the end user.

The ELF and EPF will gradually be developed to ensure that (within the limitations of what is legally and technically possible, and ethical) any type of data (e.g. enrichments such as subtitles, translations, annotations and transcriptions), regardless of its provenance (e.g. user contributed or sourced from a third-party platform), and for any use (e.g. mass analysis of data) fall within their scope. EF will collaborate with the RightsStatements.org consortium and with Creative Commons to ensure that an adequate set of rights statements to be used by Europeana aggregators is available. This work will be supported by the outcomes under 2.1.1 and lead to articulating and creating a data governance mechanism.

The consortium will continuously update EDM in response to requests from partners and the Europeana Data Quality Committee. A working group will be set up (under Activity 2.2.4.) to provide the initial requirements for the support of 3D in EDM and in the EPF, which can also lead to improvements and developments in the ELF.

Overview of outcomes

Partners	Outcomes	Expected due date
EF	Proposal for EPF as a tool to measure enrichment improvements	Dec 2022
EF, INCEPTION, CARARE	Initial review of EDM to support 3D completed	Mar 2023
EF	Validation of the EPF as a tool to measure enrichment improvements	Jun 2023

EF, CARARE	Review EPF for 3D completed	Aug 2023
EF	Review of EPF to support transcriptions & subtitles	Aug 2023

Activity 2.1.3. Manage data governance frameworks and standards

Partners: EF, DS AGG

This activity will ensure a coordinated management of the EPF and ELF in line with the management of other Europeana frameworks and standards.

EF will identify clearer implementation targets and metrics for the ELF. EF will consider broader ownership models to ensure the strong involvement of key stakeholders and the adoption and use by the wider sector. EF will also develop and maintain strategies and processes that enable the provision of accurate rights information.

EF will continuously review the EPF to identify new areas of development that improve its usefulness and address data quality issues currently not captured in the EPF.

Guidelines will be refined throughout the period of this tender to reflect the updates of EDM and the EPF. In this context we will also review the language of our guidelines to make them more accessible for non-technical audiences and promote the benefits of adopting good practices in order to provide high quality data. We will also add guidance on how aggregators and data partners can contribute to the improvement of the Entity Collection, the backbone of the browsing experience within the Europeana Website. The transfer of data and publishing knowledge will also be part of training and events for professionals and aggregators (Activity 3.5.1).

Overview of outcomes

Partners	Outcomes	Expected due date
EF	Ownership models and consultation processes to ensure wider stakeholder involvement in the adoption, development, and implementation of data governance standards and frameworks defined	May 2023
EF	Implementation metrics for ELF and its core elements defined	Aug 2023
EF	Areas for development, gaps & opportunities of EPF services and products identified and specified using the Framework Management Template	Aug 2023

EF, DS AGG	List of metadata and content issues patterns is maintained	Ongoing
EF	Data Quality Committee[15] is supported	Ongoing
EF	Europeana Copyright Community is supported	Ongoing
EF	Rights Statements Consortium is supported	Ongoing
EF	Continuous involvement in the Rights Statements Consortium community (e.g. Steering Committee, Statements Working Group)	Ongoing

Overview of indicators

REPORTING INDICATORS			
ID	**Description**	**Measured by**	**Frequency**
RM 2.1	Reach to Europeana Copyright community	Number of people reached per month (Mailing list, Twitter)	Quarterly

Task 2.2. Data acquisition and data improvements

This task will aim to develop processes and practices to support efficient data acquisitions and data improvements. The Europeana DS consortium will improve the communication mechanism around data quality. Reports and feedback about data quality will be better integrated in the data producers workflows so the communication about data quality issues can be more productive and directly contribute to a quality increase.

EF and the Europeana DS aggregators will work together to improve the quality of data in key areas directly impacting the digital services made available in the data space, for instance, the multilingual accessibility across all services. The consortium will identify opportunities for data cleaning, data conversion or general data quality improvements through clear data quality reports provided by the Metis Suite throughout the data aggregation workflow. EF will proactively contact data aggregators to make sure data issues are solved at source as much as possible.

The data quality increase will be supported by bringing new CHIs in. The consortium will reactivate dormant collaborations with existing aggregators to make new and updated content and metadata available to the data space. A data campaign will also be run by the Europeana DS consortium together with the Europeana Aggregators' Forum to

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[15] https://pro.europeana.eu/project/data-quality-committee

actively seek CHIs owning 3D content and channel the content to the data space for cultural heritage.

Activity 2.2.1. Develop workflows and practices that support efficient data acquisitions and data improvements

Partners: EF, DS AGG

In this activity, EF will improve the mechanisms to communicate and report about data to CHIs and Aggregators.

EF will align the feedback and data processing prioritisation policy with our data quality increase objectives. Data updates contributing to a direct increase of the tiers as well as datasets being tested via the Metis Sandbox will be prioritised over other requests. The definition and implementation of the detailed workflow will be done together with the Europeana Aggregators' Forum. In order to facilitate the increased usage of the Metis Sandbox, EF will optimise the selection of dataset samples to be uploaded in the tool. Supported by user feedback and user testing we will improve the overall usability and user experience of the tool through a redesign.

EF will also continue to improve the clarity and usefulness of the different data quality reports provided to Aggregators and CHIs about their data during the data aggregation process (e.g EDM validation, media related issues, broken links). The Metis Sandbox will be extended to provide the reports aggregators need to identify and better understand the issues identified in their data at dataset and record level. EF will particularly continue to improve the reporting about content and metadata tiers. EF will also continue working on the flagging of data quality issues currently not captured in the EPF through field warnings. The Data Quality Committee will support the identification of new content and metadata patterns.

EF will collect requirements to personalise interactions between the Aggregators and EF and will make a plan for the further development of user account based features. These features will be developed in alignment with Auth Service in use for the Europeana website and APIs. A Welcome Pack will be developed to further engage CHIs in their contribution to the Data Space.

EF will continue to improve its broken link detection tool Clio and improve the access to the broken links reports throughout the Metis suite. EF will also define a process to identify and correct inaccurate rights information.

EF will review the processes for the provision of accurate (or improvement of) rights information as well as for the analysis, notification and take down of materials with personal or sensitive data.

Furthermore, EF will continue to promote the Data Statistics Dashboard as a tool to be used to 1) get statistics about the data held in the data repository, 2) identify the gaps in the data and 3) plan for the future data quality improvements.

Overview of outcomes

Partners	Outcomes	Expected due date
EF	Selection process for dataset samples in the Sandbox adjusted and optimised	Dec 2022
EF	Mechanism to prevent the publication of content tier 0 records in Metis implemented	Dec 2022
EF	Prioritisation process for managing the data ingestion backlog refined	Feb 2023
EF	User experience in the Metis Sandbox improved	Apr 2023
EF	Requirements for user account in the Metis Suite collected and prioritised	May 2023
EF	Welcome pack to CHIs developed and disseminated	Aug 2023
EF	Data Quality reports in the Metis Suite improved	Aug 2023
EF, DS AGG	Status update on usage and engagement of DS aggregators with the Metis Sandbox	Aug 2023
EF	Statistics Dashboard maintained and kept up-to-date	Ongoing
EF	Processes for the provision of accurate (or improvement of) rights information reviewed	Ongoing
EF	Process for the analysis, notification and take down of materials with personal or sensitive data reviewed	Ongoing

Activity 2.2.2. Raise the quality and access to existing content and metadata

Partners: EF, DATO, DS AGG

A list of data quality issues common or specific to each Europeana DS Aggregator and a selection of issues will be defined as part of the aggregators' work plans. The plans indicate how each aggregator plans to contribute to data quality goals and tier improvements. The plans are reviewed, refined and updated at least once per year to reflect progress made and new opportunities for quality improvements. EF and the DS aggregators will work with other aggregators from the Europeana Aggregators' Forum and the data partners (including as part of other projects) to improve their data, publish new high quality data and source high-value datasets. More specifically, this activity will include work on:

- Improve metadata and content to reach tier 2+ and tier A+. This includes the provision of language information for metadata to fill the gaps identified in the Europeana Publishing Framework and other metrics on multilingual data (Activity 4.1.4). This work will be done by EF and all Europeana DS Aggregators in close collaboration with the Europeana Aggregators' Forum.
- Identify solutions to encourage the solving of issues flagged as part of the field warnings. This work will be done in close collaboration between EF and EFHA. When the desire is to fix those issues at source, the consortium will also investigate more automated solutions.
- Increase the contextual relations between items by the addition of contextual resources (as new entities) that can help link more items together. This effort will be made in alignment with the new experience for Theme pages to maximise the entry points to our Collections. EF will take the lead. AIT-Graz will work more specifically on this issue; other DS aggregators interested will be also invited to contribute.
- Address legacy data quality issues, e.g. as identified during past projects. DFF, NISV, PhotoCons, EFHA will work more specifically on those issues. This work will also happen in close collaboration with the Europeana Aggregators' Forum.
- Raise the quality of media links in the repository (i.e. address broken links, update media links to have https URLs).
  - Addressing broken links is an activity requiring continuous communication from all aggregators to their data partners and is organised in quarterly cycles.
  - The update of links to web resources to have https URLs instead of http URLs is needed for secured data exchange. EF will pilot with AIT Graz and

EFHA to explore solutions to support data partners making the transition. Other Europeana DS Aggregators may be involved where possible.

- Address invalid rights statements in metadata with the aim to have 100% of the metadata records to include a technically valid rights statement (i.e. rights statements conforming to the URI patterns as specified by Creative Commons and RightsStatements.org).
- Contribute to increase the quality and completeness of the organisation pages (e.g. adding descriptions, logos). Part of this activity is also to use the entity curation flow mechanism to curate the content shown on the organisation pages. The objective of this activity is to transition progressively to the management of data provider and provider information as entities throughout the core platform.
- EF will develop the guidance and workflow supporting the entity curation flow (Activity 4.1.3). The consortium will coordinate via the Europeana Aggregators' Forum to invite other thematic and national aggregators to contribute to this activity.
- Contribute to the extension of the multilingual coverage of entities from the Entity Collection. This activity would be seen as a proof of concept, working with the expertise on subjects across the domain and thematic aggregators present in the consortium. When translating entities, a curation of the entity pages using the entity curation flow mechanism will be performed.
- We will continue to promote the use of controlled vocabularies and terms from multilingual thesauri and encourage aggregators and CHIs to provide a mapping of their vocabularies so that the core platform can benefit from the rich semantic and multilingual labels.
- Continue/follow up on the Europeana DSI work to tackle issues of discrimination and the lack of representation of minority communities in metadata, collections descriptions and (audiovisual) representations (based on recommendations for next steps published in August 2022 as an outcome of Europeana DSI-4 Y4 delivered by the Europeana DSI).

In addition, EF will continue its activities towards the increase of quality and accuracy of rights information.

The results from this activity will contribute to the deliverable DS. Data supply and reuse report.

Overview of outcomes

Partners	Outcomes	Expected

		due date
DS AGG	Europeana DS AGG annual work plans including quality objectives and/or targets per aggregator (internal) completed	Oct 2022
EF	Third iteration of organisation pages delivered	Jul 2023
DS AGG	Europeana DS AGG annual progress report completed	Aug 2023
EF	Report on the coverage of the entity collection and precision of relationships to items in entity collection	Aug 2023
DATO	Support to the MINT based infrastructures	Ongoing
EF	Data quality improvements and new content delivered	Ongoing
EF	Data partners supported with data quality improvements and data publication	Ongoing
EF	Regular link resolution process is maintained	Ongoing

Overview of indicators

KEY PERFORMANCE INDICATORS					
ID	Description	Measured by	Frequency	Baseline Aug 2022	Target Aug 2023
KPI 2.1	High quality data	Number of Tier 2+ material in Tier A+ (excl. content Tier 0)	Monthly	26.6 million	27.15 million
KPI 2.2	High quality content	Percentage of Tier 2 + material (excl. content Tier 0)	Monthly	70.69%	>75%
KPI 2.3	High quality and reusable content	Percentage of Tier 3+ material (excl. content Tier 0)	Monthly	50.82%	>55%
KPI 2.4	High quality metadata (search, browse and explore)	Percentage of Tier A+ material (excl. content Tier 0)	Monthly	70.75%	>75%
KPI 2.5	Broken links in the repository	Percentage of broken links (out of total, incl. content Tier 0)	Quarterly	2.9%[16]	<1%

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[16] The number of broken links varies quarterly and depends highly on recent occurrences and the size of datasets with broken links. In the past year, we saw occurrences between 300,000 up to 1.8 million broken links per quarterly measurement. The last measurement was done in June 2022 with 2.9% of broken links.

KPI 2.6	Non-EPF compliant content (Tier 0)	Percentage of Tier 0 content	Quarterly	12.34%	<10%

REPORTING INDICATORS

ID	Description	Measured by	Frequency
RM 2.2	Updates to datasets	Total number of newly created and updated datasets per month (out of total)	Monthly
RM 2.3	Updates to records	Total number of newly created and updated records per month (out of total)	Monthly
RM 2.4	New CHIs published on Europeana website	Total number of new CHIs (cumulative)	Annually
RM 2.5	New content on the Europeana website	Total number of new datasets published (cumulative)	Quarterly
RM 2.6	Records in the data repository	Total number of records (excluding content tier 0)	Quarterly
RM 2.7	Records in the data repository by accredited aggregators	Total number of records (excluding content tier 0)	Quarterly
RM 2.8	3D content available in Europeana (items)	Total number of 3D items published (Tier 2+ and Tier A+ material)	Quarterly
RM 2.9	3D content available in Europeana (CHIs)	Total number of CHIs sharing 3D content with Europeana (Tier 2+ and Tier A+ material)	Quarterly
RM 2.10	Coverage of entity collection (items)	Total number of items linked to (at least) one entity collection	Quarterly
RM 2.11	Coverage of entity collection (collections)	Total number of entity collections with items	Quarterly

Activity 2.2.3. Engage with inactive and new data partners

Partners: EF, DS AGG

In this activity, the Europeana DS consortium will continue the above mentioned efforts. EF together with the DS Aggregators and using the Library Working Group will continue the work with inactive data partners. Collections with broken links are a quarterly

trigger to review the relationships with data partners and approach those that are inactive.

Some Europeana DS aggregators will support rerouting activities to find a suitable aggregator for CHIs that worked with an aggregator that is not in operation anymore. MCA has the most significant contribution to this task among the Europeana DS aggregators, working with the former partners of the Athena and LinkedHeritage projects to merge their collections under the MUSEU aggregator and thus establish a fresh connection with the data space for cultural heritage.

The consortium will undertake several activities to bring in new data partners to share and publish high quality data in the data space and source high-value datasets. Photoconsortium, MCA and DFF have already plans in place for outreach activities to increase the number of new data partners. EF will also collaborate with national aggregators via the Europeana Aggregators' Forum to reach additional data partners in their country. Additional CHIs will also be contacted in the context of the 3D campaign.

Overview of outcomes

Partners	Outcomes	Expected due date
EF	Report on actions taken and results achieved to re-engage with inactive partners (internal) completed	Aug 2023

Activity 2.2.4. Aggregate 3D content

Partners: EF, CARARE, INCEPTION, TMO

In this activity, the Europeana DS consortium will source and aggregate 3D content for the data space. The activities will be developed as part of a large campaign engaging with domain, national aggregators and other data partners. EF will work with Europeana DS consortium members CARARE, INCEPTION and TMO to identify the most suitable approach for sourcing 3D content and build cooperation with CHIs. CARARE will support the consortium members in implementing the workflow leading to data publication. The identified content will serve as use cases to contribute to review of the EDM and EPF for 3D (Activity 2.1.2) and as a showcase for reuse scenarios. These activities will be developed as part of the brief for the 3D campaign (Feb 2023) and will be reported on as part of the update on the availability of high quality 3D content available in the data space (Aug 2023).

In addition to the ingestion of new collections, the consortium will also work on improving the quality of the already published 3D collections. The work in this activity will be supported by a working group gathering experts in 3D and involving the Europeana Aggregators' Forum.

We will report on the various aspects of 3D data as part of the outcome "Update on the availability of high quality 3D content available in the data space".

Overview of outcomes

Partners	Outcomes	Expected due date
EF	3D working group is created	Dec 2022
EF, TMO	Brief for the 3D campaign developed	Feb 2023
EF, CARARE, INCEPTION, TMO	Update on the availability of high quality 3D content available in the data space	Aug 2023
CARARE, EF	Specifications and guidelines for the provision of 3D content developed	Aug 2023
EF	Knowledge Base pages for 3D available and updated	Ongoing

Task 2.3. Automated approaches towards data quality

In this task, EF will continue work on automated approaches to address data quality issues at scale. EF and DATO will continue to improve the data enrichment process to create accurate links between cultural heritage item descriptions and contextual resources. EF will also continue testing and implementing AI technologies. This work will be accompanied by refinement and publication of methodologies to better validate and evaluate the results from automated approaches to data quality. EF will promote the use of AI solutions and the datasets developed for cultural heritage to other data spaces.

Activity 2.3.1. Use of AI to enrich metadata and content

Partners: EF, DATO

In this activity, EF will continue experimenting and implementing machine learning and AI technologies for improving data quality, enriching and curating metadata and content. Results of these experiments will be made publicly available in the most relevant AI platforms. One of the experiments conducted before this contract will be

deployed following the steps envisioned in the setting of the latest Europeana DSI-4 AI experiments which are as follows: 1) stress and performance tests, 2) definition of requirements for integration 3) handling policy risks and implement required policy change actions, if appropriate and possible (for example, regarding dependencies on cooperation agreements), among others by including relevant stakeholders.

The experience with recent projects clearly shows a need for better coordination of the AI-based data enrichment work related to the data space for cultural heritage. EF will develop a process and resources (including both human capacity and documentation) to better share requirements, guidelines and lessons from past efforts, with the goal to advise the planning, execution and reporting of future data-driven efforts, as well as their integration in existing data aggregation pipelines. For example, EF will review, unify and publish validation and evaluation methodologies resulting from past projects. EF will also continue to work on the selection and labelling of cultural heritage datasets for AI experiments. Finally, EF will promote and advocate the use of datasets and AI tools developed for cultural heritage to other data spaces, whenever appropriate.

EF and DATO will also improve the metadata-based enrichment algorithm used by EF, especially focusing on addressing issues caused by ambiguous metadata values, i.e., when a metadata value could be linked to two (or more) entities that share the same label, and the enrichment process selects the wrong one.

Overview of outcomes

Partners	Outcomes	Expected due date
EF, DATO	Enrichment algorithm is improved (e.g. addressing ambiguity)	Jun 2023
EF	One AI solution (image resolution enhancement) deployed at scale	Aug 2023
EF	Validation and evaluation methodology of (AI) enrichment results (V1) published	Aug 2023
EF	Report on two new selected areas for experimentation and assessment of AI (including assessment of relevant work in GS projects) completed	Aug 2023

Work package 3: Capacity building and fostering reuse

The overarching objective of WP3 is to strengthen the capacity of professionals and reuse communities working with digital cultural heritage.

Specifically, it will develop capacity among cultural heritage professionals to create high quality data that can be used in a wide range of user scenarios. This WP will work with the Europeana Network Association (ENA) and the Europeana Aggregator's Forum (EAF) to develop training, events and interaction programmes that will allow its members, and cultural heritage professionals at large, to learn to use the tools and services provided by the data space and become agents of change in their organisations and in the sector.

Equally, this work package will develop capacity for the use and reuse of high quality data in specified communities such as education, research and the developer communities and it will investigate possibilities for closer collaboration with the Media and Tourism data spaces.

Both of these efforts will be underpinned by a solid user and market research programme, a further development of our tools and services for collaboration that enable the communities to thrive, and an outreach and dissemination strategy to strengthen the position of the data space with key identified professional audiences.

Task 3.1. Enhance cooperation throughout the data space

Under this task the Europeana DS consortium will support, maintain and develop effective coordination of activities of the data space, with specific emphasis on leveraging the synergies of the Europeana Network Association (ENA)[17] and the Europeana Aggregators' Forum (EAF)[18] (Activity 3.1.1 - Activity 3.1.3).

It will support the aims of the data space to enable cross border cooperation and collaboration, utilising the expertise of professionals from the ENA and EAF.

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

Activity 3.1.1. Develop methods of cooperation

Partners: EF

EF will enhance cooperation and alignment between the actors in the data space by developing:
- Models that facilitate the collective oversight over shared priorities.
- New areas and enhanced partnerships relevant to the data space.

EF together with ENA and EAF will develop and implement effective models of cooperation that meet the needs of the data space. We will leverage our synergies to identify and manage collective actions that facilitate a rewarding and motivating experience for CHI's as well as facilitate data reuse. And enable the Initiative and its partners to cooperate effectively with partnerships throughout the data space.

During the first year, we will focus on actions that reinforce the models for collaboration that we deploy through the Initiative, such as the current approach and use of Task Forces (TFs) and Working Groups (WGs). As well as review the tools for collaboration, with the aim of increasing transparency, effectiveness and accountability of the outputs delivered by the groups. Additionally, we will explore collaboration with stakeholders that enable connections with other data spaces such as Media and Tourism, and with stakeholders such as with 4CH[19] and the Data Space Support Centre.

We will develop and pilot an improved model of cooperation across the initiative in year one, and implement the method in year two. This will include the update of ENA and EAF policies and processes as needed to reflect the updated models of cooperation.

Representatives of EF, ENA, and EAF will meet monthly to discuss and align common areas of work, the development and management of new priorities, and progress towards them.

A tentative list of subjects for cross initiative collaboration includes:
- Permanent and Unique identifiers (Activity 1.1.1)
- Developing a shared vision for a decentralised data sharing mechanism (Activity 1.2.1)
- Aggregation of 3D content in the data space (Activity 2.2.4)
- Data governance mechanisms that drive data quality and facilitate reuse (Task 2.1)

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[19] 4CH is the Horizon 2020 project aiming to develop a Competence Centre for CH - https://www.4ch-project.eu/

- Engaging cultural heritage professionals with the data space and motivating the exchange of knowledge (Task 3.4)
- Developing a common approach that promotes diverse, inclusive and enriched high quality data (Task 3.5)

EF will ensure that the thematic programme of activity will be developed and maintained continuously.

Overview of outcomes

Partners	Outcomes	Expected due date
EF	Approach to creating a rewarding experience for CHI evaluated	Mar 2023
EF	Thematic programme of activity across the data space ecosystem developed	Apr 2023
EF	Improved model of cooperation across the data space ecosystem developed (V1)	May 2023
EF	Pilot for improved model of cooperation completed	Aug 2023
EF	Thematic programme of activity developed and maintained	Ongoing

Activity 3.1.2. Provide secretariat for Europeana Aggregators' Forum (EAF) and Europeana Network Association (ENA)

Partners: EF, DFF, NISV

EF will continue to provide secretariat functions for the ENA (including community management, Task Forces, and Working Groups) and EAF and will further develop simpler and aligned processes and policies to ensure optimal contribution to the Data Space.

EF will organise periodic meetings (incl. ENA Management Board and Members Council, and EAF Steering Group and EAF meetings), manage memberships of ENA (and communities) and EAF and provide financial and administrative support.

EF will develop the outreach and engagement models for the EAF and ENA using the Impact Framework to create a strategy and plan that serve to strengthen connections between the work of the Europeana Initiative partners and facilitate knowledge transfer activities (Activity 3.4.2)

Stronger connections will be explored through the improvements of our CRM systems (Activity 3.3.3) between the membership of the ENA, EAF and EF enabling a more cohesive approach to developing and enhancing cooperation and collaboration between professionals interacting across the products, tools and services provided.

Building on this work, the models for implementation and management of accreditation of the EAF members will be updated by EF, DFF and NISV to further strengthen the role of accredited aggregators in the Data Space. Additionally, the methods for managing communities (including ENA Communities) across the Europeana Initiative will be reviewed and recommendations to enhance the management approach prepared.

Overview of outcomes

Partners	Outcomes	Expected due date
EF	ENA General Assembly organised	Nov 2022
EF	Annual reporting for ENA and EAF activities published	Jan 2023
EF	Strategy for ENA/EAF outreach and engagement developed	Jun 2023
EF, DFF, NISV	Evaluation report of accreditation scheme (internal)	Aug 2023
EF	Assessment of connection between ENA and EAF members completed	Aug 2023
EF	New aggregators reviewed for accreditation	Ongoing
EF	EF, ENA and EAF periodic meetings organised (incl. ENA MB and MC, and EAF Steering Group and EAF meeting)	Ongoing
EF	General management support for Task Forces, Working Groups and communities (ENA/EAF/Europeana Initiative)	Ongoing

Overview of indicators

KEY PERFORMANCE INDICATORS					
ID	Description	Measured by	Frequency	Baseline Aug 2022	Target 2023
KPI 3.1	Satisfaction of the Europeana Network	Total % of 'satisfied' and 'completely	Annually	N/A[20]	75%

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[20] The method of measuring the satisfaction rate (compared to Europeana DSI-4) changed from reporting on the average satisfaction to reporting on the % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale.

	Association members with the ENA	satisfied' responses on a 5-point Likert scale			
KPI 3.2	Growth of Europeana Network Association members	Number of members in the ENA	Quarterly	3,759	4,250

REPORTING INDICATORS

ID	Description	Measured by	Frequency
R.M 3.1	Number of participants engaged in EI activities	Number of participants i.e. contributing time and expertise to EI activities and actions (such as TFs, WGs and in response to CTA to engage with other activities in ENA, EAF, Initiative) (cumulative)	Quarterly
RM 3.2	Task forces in the Europeana Initiative	Number of active task forces per month (ENA, EAF, Initiative)	Quarterly
RM 3.3	ENA membership enables knowledge transfer	% of surveyed ENA members reporting membership helps them staying up to date with best practices and new trends	Annually
RM 3.4	ENA membership delivers practical knowledge	% of surveyed ENA members reporting membership enables them to learn knowledge, skills and information they use in their job	Annually
RM 3.5	ENA membership facilitates knowledge sharing	% of surveyed ENA members reporting membership enables them to learn new information they can share with others	Annually

Activity 3.1.3. Support national digital strategies to increase high quality data

Partners: EF

While many Member States already have a digital strategy in place, the harmonisation of these strategies between Member States and between Member States and the Data Space is still a significant challenge. EF will support the Member States to progress their national digital strategies in line with the requirements of the Data Space and enable their implementation. This support will concern, in particular, advancing towards the targets set out in the Recommendation. It will do so by:

- Providing a state of the art aggregation and developing best practices for the aggregation of 3D (Task 2.2).
- Work in close collaboration with the EAF, ENA and 4CH on sharing knowledge and best practices.
- Work with the Presidencies of the Council of the EU on actions that strengthen digital strategies at national, regional and European level.

EF, together with the Member State holding each presidency of the Council of the EU, will invite the CEDCHE Expert Group members, relevant experts and policy makers to discuss, align visions and expectations, or form a shared understanding of important, challenging, or new topics for the creation and development of the Data Space. EF Presidency activities will be designed to spark new ideas, provide space for new insights and innovation, and inform policy and future direction. At the same time, they reinforce the value of partnership-working and dialogue. EF will develop the concept and format of the presidency activity together with the sitting presidency, in consultation with the European Commission, and in line with the ambitions and priorities of the Data Space.

EF will develop mechanisms to keep Member States informed about and engaged in their contribution of content to the DS.

Overview of outcomes

Partners	Outcomes	Expected due date
EF	Czech Republic Presidency Europeana activity organised	Dec 2022
EF	Czech Republic Presidency Europeana activity evaluated and reported	Mar 2023
EF	Swedish Presidency Europeana activity organised	Jun 2023
EF	Develop and implement mechanisms to engage and inform Member States	Ongoing

Overview of indicators

REPORTING INDICATORS			
ID	Description	Measured by	Frequency
RM 3.6	Satisfaction with the Europeana EU presidency activities	Total % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale	Quarterly

Task 3.2. Identify needs of user groups

Under this task, EF will continuously explore the needs of professional audiences in the cultural heritage sector (Activity 3.2.1) as well as the needs of potential groups interested in reuse of cultural heritage data, such as education, research and the creative industries. EF will also work with other European data spaces, including tourism and media, to better understand the needs of these user groups in relation to the Data Space (Activity 3.2.2). User research will guide the development of tools and services and will identify which data, tools, and services should be offered as a priority.

Activity 3.2.1. Conduct user research among professional audiences

Partners: EF

EF will accelerate its efforts to understand what professionals in the cultural heritage sector want and need from the data space, both within our core group, e.g. ENA, EAF, and within the not-yet sufficiently tapped wider cohort of cultural heritage professionals.

By undertaking qualitative and quantitative (primary and secondary/desk) research among these audiences, EF will develop a baseline of the size, potential, and needs of segments - which could vary demographically (e.g., size of institution, location), or attitudinally or circumstantially (for example, needs in digital transformation, or community support). The ENUMERATE Self-Assessment Tool[21] (formerly the ENUMERATE survey) will provide a further baseline of data from which to design additional research.

Secondary research (i.e., the use of existing data tracking, website heatmaps, user feedback collected with surveys and on social networks as well as lessons learned from analysing communication and dissemination activities) and analytics (delving into those data, as well as comparing different data sources) will enable us to monitor performance and will inform our decisions about activities. Notably, user feedback received via the Europeana and Pro websites (Activity 3.3.3) will help us understand usability of both of those, which will feed into our desk research.

This audience-led, market research approach will result in recommendations for product development for professionals in cultural heritage and other related fields.

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https://pro.europeana.eu/post/the-enumerate-self-assessment-tool-gain-insight-into-your-institution-s-digit al-transformation

We will report on progress and results as part of the DS. Communication and dissemination plans.

Overview of outcomes

Partner	Outcomes	Expected due date
EF	Europeana Pro user survey completed	Mar 2023
EF	Report on indicators of digital transformation across Europe (incl. assessment of value of previous ENUMERATE research)	Jul 2023
EF	Qualitative and quantitative (primary and secondary/desk) research among professional audiences undertaken	Ongoing

Activity 3.2.2. Perform user and market research to foster reuse

Partners: EF

With knowledge gained about our various audiences over the past years, EF is now able to focus its efforts and approaches towards these audiences via an aligned, consolidated, cross-organisation effort.

EF will continue to learn more about audiences within education (Activity 3.5.1), research and academia (Activity 3.5.2), and begin to explore the needs of those in tourism, media, and the cultural/creative sectors. Learning about needs and behaviours, tools and resources they use and/or seek, as well as understanding better which organisations and people they currently look to for support and leadership (the influencers) will be key to determining how we communicate with and pursue relationships with people in these areas.

EF will undertake qualitative and quantitative (secondary/desk) research among these audiences to understand the size, potential, and needs of segments.

Understanding current needs and current reuse will help us to identify data that meets the needs of these users and allow us to source similar items to include in the data space. EF will regularly communicate "in demand" data topics (learned from user feedback and research) to the EAF, and potentially seek new partners that have such data.

Moving forward, EF will set priorities about which segments to approach (based on size, potential, etc.), determine networks to use to familiarise ourselves with and learn more

about how to reach people in those segments, and, ultimately, work with influencers and decision makers to bring high quality, openly licensed, pan-European cultural heritage items to these audiences.

Overview of outcomes

Partner	Outcomes	Expected due date
EF	Decision-makers and influencers among reuse communities identified	Feb 2023
EF	Qualitative research among decision-makers and influencers completed	Apr 2023
EF	Report on areas of potential reuse among education, research and academia completed (incl. recommendations for product and service developments)	Apr 2023
EF	Report on areas of potential reuse among cultural enthusiasts completed (incl. recommendations for product and service developments)	Aug 2023
EF	Primary research conducted among audiences	Ongoing
EF	Market and user research on audiences interested in reuse undertaken	Ongoing

Task 3.3. Build awareness and engagement

Under this task, EF will build awareness and engagement of the activities in and around the data space among our professional audiences. We will ensure and deliver a strategic approach to marketing and communications (Activity 3.3.1), offer event programming (Activity 3.3.2), and ensure that audiences engage with our activities (Activity 3.3.3).

Activity 3.3.1. Ensure strategic approach to marketing and communications

Partners: EF

The data space approach to communications will be based on a strategic and joined-up approach for key channels, supported by clear and consistent organisational narratives and messaging. The activities will be informed by insights gathered from user and market research (Activity 3.2.1) and ongoing evaluation of marketing and communications activities.

EF will communicate and disseminate Europeana's wide-ranging activities to professionals and partners by delivering high quality and engaging editorial content on Europeana Pro (e.g. Pro News and themes) and by sharing content on other key communication channels (e.g. Twitter, LinkedIn). Activities will be aligned across EF, ENA and its communities, and the EAF.

EF will report on the strategic approach taken towards communication and dissemination, achievements and lessons learned in the DS. Communication and dissemination plan.

Overview of outcomes

Partner	Outcomes	Expected due date
EF	Dissemination strategies for key channels (Twitter, LinkedIn, Europeana Pro) delivered (internal)	Feb 2023
EF	Pro editorials published (e.g. Pro News and themes)	Ongoing
EF	Promotional activities promoted (Newsletters, Twitter, LinkedIn)	Ongoing

Overview of indicators

KEY PERFORMANCE INDICATORS					
ID	**Description**	**Measured by**	**Frequency**	**Baseline Aug 2022**	**Target 2023**
KPI 3.3	Satisfaction rate for Europeana Pro	Total % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale	Annually	N/A[22]	75%

REPORTING INDICATORS			
ID	**Description**	**Measured by**	**Frequency**
RM 3.7	Traffic to Europeana Pro	Number of visits per month	Monthly
RM 3.8	Traffic to Knowledge Base for Aggregators	Total number of views (cumulative)	Quarterly

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[22] The method of measuring the satisfaction rate (compared to Europeana DSI-4) changed from reporting on the average satisfaction to reporting on the % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale.

Activity 3.3.2. Develop event programming

Partners: EF

EF will use its expertise and work collaboratively with professionals, ENA and EAF to develop and improve the quality of event management and programming.

The annual conference is our flagship event which supports building brand awareness and sector-wide recognition. It will target a wide range of people working in, with, and around digital cultural heritage, and will address key areas of the Europeana Strategy 2020-2025[23].

We will explore better ways of displaying and archiving the repository of online events and training resources. We will also continue to investigate approaches that promote diversity and inclusion, ensuring our inclusive engagement guidelines are used, referred to and monitored.

We will refine approaches to engaging audiences with online, hybrid and in-person events and training. Our work will be supported by the Events Managers Group[24] that will contribute to the sharing of good and emerging practices. We will continuously monitor and evaluate our programme, formats, tools and resources to provide best practices for engaging and stimulating our audiences. For example, we will continue to build data validating the impact we create by convening the sector in our annual conferences and evaluate the satisfaction of events with a focus on capacity building activities. Experiences and lessons learned will be documented and published in an updated events toolkit.

Overview of outcomes

Partner	Outcomes	Expected due date
EF	Europeana Annual Conference organised	Sep 2022
EF	Europeana events strategy delivered (internal)	Feb 2023
EF	Learnings and recommendations from Impact Assessment implemented - Annually	Apr 2023

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[23] https://pro.europeana.eu/page/strategy-2020-2025-summary
[24] The Events Managers Group includes several partner organisations including: Liber, Creative Commons, RightsConn, NEMO, Museum Computer Network, GIJN, Accessnow, IFLA, EuropaNostra and Wikimedia Foundation.

EF	Events programme delivered and improved (events calendar, events toolkit, etc.)	Ongoing
EF	Activities of the international Events Manager Group coordinated	Ongoing
EF	Compliance with data protection maintained[25]	Ongoing

Overview of indicators

REPORTING INDICATORS			
ID	**Description**	**Measured by**	**Frequency**
RM 3.9	Number of Europeana events	Number of events held by Europeana DS consortium, EAF, and ENA (cumulative)	Quarterly
RM 3.10	Reach of Europeana events	Number of participants (cumulative)	Quarterly
RM 3.11	Satisfaction rate for events	Total % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale (cumulative)	Quarterly

Activity 3.3.3. Engage professional audiences

Partners: EF

In this activity, EF will reinforce and refine the tools and platforms used to engage with professional audiences and CHIs. We will develop requirements for a community collaboration platform that can enhance the cooperation of ENA and EAF communities and members, with the desired outcome of providing a rewarding experience and increasing engagement and collaboration. This builds on the greater understanding of connections between ENA and EAF members (Activity 3.1.2.), the development of an outreach and engagement strategy for ENA and EAF (Activity 3.1.2.) and the approaches to enhanced models for cooperation (Activity 3.1.1.). EF will also further develop online training spaces, specifically to support capacity building that facilitates the provision of high quality data (Task 3.5) and reuse of data (Task 3.6), reviewing user journeys as this work develops.

EF will identify target audience needs and map those against existing platforms to identify gaps and opportunities for alignment (Task 3.2). The insights from these activities will support what we add in and how we develop and maintain our platforms for professional audiences in line with development of CRM capabilities, while ensuring

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[25] According to the Regulation (EU) 2018/1725 concerning the processing of personal data by the EU institutions (IDPR)

compliance with data protection legislation. EF will review processes and touchpoints for CRM data collection with the aim to better understand intersections between audiences.

Overview of outcomes

Partner	Outcomes	Expected due date
EF	Requirements for a community collaboration tool defined	Jun 2023
EF	Workflows for data collection in CRM reviewed	Jun 2023
EF	Online training spaces for capacity building improved	Ongoing
EF	Platforms for professional audiences maintained (technical infrastructure, user journeys, accessibility)	Ongoing

Task 3.4. Develop capacity building as a service

Under this task we will develop capacity building tools and services (Activity 3.4.1) and manage and develop mechanisms for the training programme (Activity 3.4.2).

Activity 3.4.1. Develop capacity building tools and services

Partners: EF, CAPG

In collaboration with the ENA and EAF, EF will further refine and develop the EIF, ECBF and implement its components across the data space. We will identify and respond to user needs and iteratively refine the services and tools of the EIF and ECBF. Implementation will be supported by offering training opportunities on the use of the core elements of the EIF and ECBF.

A Capacity Building Working Group will be launched to bring together representatives of EF, ENA and EAF in the development and oversight of capacity building activities. It will co-create a model for motivating and engaging professionals in capacity building that can be delivered through an online environment, such as through certification. The Europeana Impact community further supports this work to share good practices, case studies and information around the assessment of the impact of capacity building and collaboration around digital heritage.

EF will embed the impact and capacity building frameworks and tools in our product development and management cycle to facilitate a holistic approach that creates a

strong connection between capacity building activities and the products and services developed. Identifying user needs through research (Activity 3.2.1) will be an integral part of the product and services development and management cycle. This will contribute to increasing the overall impact of the data space with particular focus on supporting higher quality data publication and data reuse. EF will evaluate the approach in year two and update it based on lessons learned.

In collaboration with ENA and communities, we will develop a ENA Community Impact model including 1) shared community metrics common to all communities and 2) specific metrics most relevant to each community. We will test and validate the model and report on results and data gathered during this process.

Finally, capacity building as a service for the data space will be reinforced by understanding sectoral-wide approaches towards digital transformation. EF will make connections with other initiatives developing skills and capabilities for professionals in the cultural heritage sector (for example, Charter Alliance[26], Pact4Skills[27]) and research possibilities for inclusion of each other's products and services and promotional activities into the data space (Activity 3.4.1).

Overview of outcomes

Partner	Outcomes	Expected due date
EF	Capacity Building Working Group launched	Dec 2022
EF	Europeana Capacity Building Framework (V3) developed (internal)	Jan 2023
EF	Holistic approach to product and service design and development developed (V1)	Jan 2023
EF, CAPG	Motivation and engagement model for capacity building developed	Mar 2023
EF	ENA Community Impact model developed and validated	Jul 2023
EF	Europeana Impact community[28] supported	Ongoing
EF	Training activity/resources for EIF/ECBF developed/provided	Ongoing

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[26] https://charter-alliance.eu/

[27] https://digital-skills-jobs.europa.eu/en/latest/news/pact-skills-new-partnership-culture-and-creative-industries

[28] https://pro.europeana.eu/page/europeana-impact-community

Overview of indicators

REPORTING INDICATORS			
ID	**Description**	**Measured by**	**Frequency**
RM 3.12	Reach to Europeana Impact community	Number of people reached per month (Newsletter, mailing list, LinkedIn)	Quarterly

Activity 3.4.2. Manage and develop mechanisms for the training programme

Partners: EF, CAPG and DS AGG

EF together with CAPG will build on the current offer by developing and implementing a training programme and online academy that enhances participation in, and the resulting impact of, the data space. The training programme will facilitate a train-the-trainer approach, and include standalone resources. The academy will provide an online environment supporting the delivery of the training programme.

Note: the tender specifications request to deliver train-the-trainer activities. This offer refers to developing a training programme that enables, incorporates, and facilitates a train-the-trainer approach, as well as more independent learning styles and identified user needs. Therefore the term training programme is used to refer to this more holistic approach of training.

We will undertake user research and align requirements for a training programme with national strategies, working in close partnership with representatives of ENA and EAF through the Capacity Building Working Group (Activity 3.4.1) to further test and validate the outcomes. The inventory of existing training and informal capacity building activities will be maintained, complementing the cataloguing of sector-wide approaches (Activity 3.4.1).

CAPG and EF will translate validated requirements into a training programme, and in collaboration with the Capacity Building Working Group identify areas of focus to prioritise in the development of training (Activity 3.5.1). The training programme will include a train-the-trainer programme to enable professionals to train others using the training resources developed by EF, stakeholders in the data space (Activity 3.5.1) and draw from pre-existing and relevant trainings (such as the Open Data Portal[29]).

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[29] https://data.europa.eu/en/academy

The requirements for an online training environment will be gathered and aligned with the holistic approach to developing platforms to engage professional audiences (Activity 3.3.3). A pilot will explore features that build an inclusive online environment by lowering barriers to participation and ensuring that multilingual or accessibility needs of participants can be accommodated. Iterative developments to the academy will be responsive to user feedback gathered.

The EIF will be applied to provide a structure to measure and evaluate the impact of the training programme and academy that facilitates participation in the Data Space. An evaluation process for the training programme will be implemented to further support the constant iterative improvement of our capacity building offer.

Overview of outcomes

Partner	Outcomes	Expected due date
EF, CAPG	Impact pathway for training programme developed	Feb 2023
EF, CAPG	Requirements and objectives for training programme defined	Feb 2023
EF, CAPG	Training programme (v1) developed	Apr 2023
EF, CAPG	Training programme improved and delivered	Ongoing
EF	Inventory of existing training (and other capacity building resources) maintained and updated	Ongoing

Task 3.5. Facilitate the provision of high quality data

The aggregation infrastructure of the data space is an essential enabler for the contribution of high quality data, together with the frameworks that govern how data is created, enriched and shared and the building of necessary capacity. EF will support data providers in making use of the infrastructure and of framework requirements through capacity building efforts, including training solutions, dynamic knowledge transfer (such as through working groups), events and knowledge repositories.

The Europeana DS consortium will manage and implement a training programme that supports the provision of high quality data (Activity 3.5.1). Aggregators and data partners will benefit from the training programme by receiving knowledge on the use of products and tools available in the data space for the provision of high quality data (Activity 3.5.1). The consortium together with EAF and ENA will also support peer to peer

knowledge exchange with the aim to increase the quality of data available for reuse (Activity 3.5.2).

Activity 3.5.1. Deliver training programme for aggregators and data partners

Partners: EF, DS AGG

Under this activity, the consortium will expand, manage and deliver the training programme developed (Activity 3.4.2) with a focus on aggregators and data providers. Training (i.e. video, documentation, courses) will be developed and delivered in line with the Training Programme (Activity 3.4.2) utilising the skills and expertise of the Europeana DS consortium, ENA and EAF. CAPG will advise and contribute to the quality control as the activity unfolds. A holistic approach to engaging professionals will be developed, to strengthen the activities that drive participation in online training, through training events and resources available through platforms such as Europeana Pro, or a pilot academy.

A principal outcome of this Activity will be on creation, publication and delivery of training that facilitates the provision of high quality data of all types of digital cultural heritage using the tools and services available in the data space (Metis, Metis Sandbox, and the Data Statistics Dashboard, the use of ELF and EPF). It will draw from the expertise within the consortium to develop training on how to create, enrich and make available data in the data space as well as how to improve the quality of existing data (structurally as well as expanding content) (Activity 4.2.2). We will place particular attention on how to create, capture, process, describe and share high quality 3D content and also offer training that shows how to enrich data (including metadata) through Artificial Intelligence (AI). And reflect the developments and opportunities created through enhancements to the Data Governance Mechanisms (Task 2.1).

The Training programme will further enhance the opportunities for professional development through access to training on train-the trainer concepts, training that underpins the digital skills needed for Digital Transformation and knowledge transfer through communities, networks and stakeholders operating in the data space (Activity 3.5.2). The DEN Leadership programme will run annually to provide future sector leaders with the skills and insights to support their professional growth in the data space.

Additionally, we will support training on digital curation, including reaching and involving audiences e.g. in science and in education (for example via partner pages on

Historiana) and establish connections with the training developed to support enhanced use and reuse (Task 3.6) and digital services to the public (Task 4.2).

Training will be available through the online academy (Activity 3.4.2), and we will identify opportunities to drive participation through online, hybrid and in person events (Activity 3.3.2). Facilitating this, an engagement plan will be developed and implemented, as part of the strategic approach to Marketing and Communications (Activity 3.3.1). The impact approach outlined (Activity 3.4.2) will ensure that the training programme contributes to achieving higher quality data and increased reuse.

Overview of outcomes

Partner	Outcomes	Expected due date
EF	Priorities and primary focus areas for train-the-trainer programme for the provision of high quality data identified	Mar 2023
EF, DS AGG	Roadmap for the creation of training created (internal)	Apr 2023
EF	DEN Leadership programme Cohort completed and evaluated - once annually	Jun 2023
EF, DS AGG	Training for the provision and reuse of high quality data published online	Ongoing
EF, DS AGG	Training Events delivered	Ongoing

Overview of indicators

KEY PERFORMANCE INDICATORS					
ID	Description	Measured by	Frequency	Baseline Aug 2022	Target 2023
KPI 3.4	Aggregator satisfaction with data space products and services (accredited aggregators)	Total % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale	Annually	N/A[30]	75%

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[30] The method of measuring the satisfaction rate (compared to Europeana DSI-4) changed from reporting on the average satisfaction to reporting on the % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale.

KPI 3.5	CHI satisfaction with data space products and services	Total % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale	Annually	N/A[31]	75%

REPORTING INDICATORS

ID	Description	Measured by	Frequency
RM 3.13	Participants attending Europeana training	Number of participants taking part in instructor led training using Europeana training resources (including training delivered by DS AGG and EF) (cumulative)	Quarterly
RM 3.14	Satisfaction rate of participants undertaking training	Total % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale (cumulative)	Quarterly

Activity 3.5.2. Support the transfer of knowledge between professionals

Partners: EF, DS AGG

EF, ENA and EAF will build on its role in convening the sector to further enhance and develop knowledge transfer. We will build on our efforts to strengthen national infrastructures, facilitate the sharing of challenges, solutions and expertise across borders and cultural heritage domains. We will seek to develop mechanisms that can motivate professionals to engage further in capacity building activities. Underpinning our work is an established and successful methodology that seeks to identify and build on our common ground, whilst responding to diverse needs and emerging trends and challenges.

EF together with ENA and EAF will continue supporting knowledge sharing between aggregators and data providers through our events programming (Activity 3.3.2) and engagement activities (3.3.1). ENA and EAF perform a critical role in surfacing content, opportunities and topics that can be shared through these activities. Building on enhanced CRM capabilities and the development of a community engagement platform (Activity 3.3.3), we will harness the potential of ENA and EAF members by developing mechanisms that enable individual and organisation expertise to be gathered, shared and accessed.

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[31] The metric was not considered valid in Europeana DSI-4 because of a low response rate.

In close collaboration with ENA and communities, we will provide opportunities for professionals to build and exchange professional expertise. We will secure representation from all cultural heritage domains, in order to increase the mutual understanding of differences that exist in creating, enriching and sharing the various types of cultural data that can be found in the data space. We will strengthen our collaboration with ESACH to enhance the support we provide to emerging professionals, and undertake further activities that contribute to our collective goals to cultivate an inclusive, diverse and equitable data space. For example, we can explore fellowships, mentoring and ambassador programmes, dedicated matchmaking or networking events that provide opportunities for the establishment of new connections and partnerships.

Building on the motivational and engagement model for the training programme (Activity 3.4.1) the implementation of an improved model of community management (Activity 3.1.1) and refined EAF Accreditation Scheme (Activity 3.1.1) we will undertake activities that advocate the wide scale uptake of training offered through the online academy. We will identify opportunities to contribute to thematic or strategic areas of the data space (Activity 3.1.1) and those which support the implementation of national strategies (Activity 3.1.3). These activities will further strengthen the value of EAF and ENA membership and contribute to the successful growth of the data space.

EF and DS Aggregators will complement the training programme (Activity 3.4.1) with developing further opportunities and activities that exchange knowledge in topics related to the experiences and insights gained as accredited aggregators. Complementing the enhanced accreditation scheme (Activity 3.1.2), opportunities for peer-to-peer support between aggregators and one-to-one support between EF and aggregators and between aggregators and CHIs will be developed and implemented.

EF, together with ENA and EAF will disseminate community and network-building opportunities through Europeana Pro, the Europeana LinkedIn group and a monthly newsletter[32]. By exploring platforms, mechanisms and opportunities to support both the interaction between professionals and the growth of membership and the interactivity of Network members (see Activity 3.3.3) will contribute to the development of target audiences for increasing data quality and reuse.

Overview of outcomes

Partner	Outcomes	Expected due date

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[32] https://pro.europeana.eu/resources/document-archive/newsletters-and-updates

EF	Approach to identifying, cataloguing and sharing professional expertise with EAF and ENA developed	Apr 2023
EF	Model for enhancing knowledge transfer of professional expertise developed (i.e. fellowships, mentoring)	Jul 2023
EF	Partnership with European Students Association for Cultural Heritage (ESACH) developed	Ongoing
EF	Activities that promote the value of participating in training and knowledge transfer by ENA and EAF delivered	Ongoing
DS AGG	Activities that facilitates knowledge transfer of expertise (ie one-to-one support and helpdesk for CHIs, peer-to-peer support between aggregators) developed	Ongoing
EF	Activities engaging networks and communities (IIIF WG, DQ committee, ethics WG, accurate rights information) supporting the delivery of high quality data undertaken	Ongoing
EF, DS AGG	Knowledge transfer delivered and peer-to-peer / one-to-one support provided	Ongoing
EF	Europeana Communicators community[33] supported	Ongoing
EF	Europeana Climate Action Community supported	Ongoing

Overview of indicators

REPORTING INDICATORS			
ID	**Description**	**Measured by**	**Frequency**
RM 3.15	Reach to Europeana Communicators community	Number of people reached per month (Newsletter, LinkedIn, mailing list)	Quarterly
RM 3.16	Reach to Europeana Climate Action community	Number of people reached per month (Basecamp, mailing list)	Quarterly
RM 3.17	CHIs supported by DS AGG	Total number of CHIs supported by individual consultation (cumulative)	Quarterly
RM 3.18	Coverage of CHIs supported by DS AGG	Total number of countries that received support by individual consultation (cumulative)	Quarterly

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RM 3.19	Outreach to CHIs	Total number of new CHIs collaborating with DS AGG (cumulative)	Quarterly

Task 3.6. Facilitate the reuse of high quality data

Based on preliminary user research and secondary data gleaned over the past years, we know there are audiences who consistently use and reuse digital cultural heritage (e.g., professionals in aggregation and cultural heritage - both those who do and do not yet share data; education (primary, secondary, and tertiary) professionals; and researchers and students). For other audiences (media, tourism, cultural/creative industries), we can envision potential reuse cases, and thus we will reach out to these audiences and explore the potential for further cooperation.

EF will report on activities and results towards use and reuse by relevant user groups in the DS. Data supply and reuse reports.

Activity 3.6.1. Engage with educational communities

Partners: EF, EUN, EuroClio, F&F

The future citizens of Europe, individuals, students and educators in primary and secondary institutions across Europe, can benefit from the cultural heritage materials offered in the data space. While the materials themselves can be useful, we will also work together to raise their digital skills and capacity, and foster the use and reuse of existing resources.

Through events, webinars, workshops, and articles, EF will work together with the Europeana Education community to embed digital cultural heritage in education and foster innovation.

EF will nurture and design activities with other established partners like the School Education Platform (previously known as School Education Gateway and eTwinning), national communities of educators, and interested Ministries of Education. We will strengthen our collaboration with non-formal education organisations or initiatives like Centrum Cyfrowe, All Digital or the LEM Group of NEMO.

Together with EUN and EuroClio, EF will raise awareness of the educational value of digital cultural content, and encourage the use of digital cultural heritage in formal and

non-formal education and test the use of our resources by higher educational audiences.

We will focus on reusability, curation, and translation of existing resources and regularly publish the best examples for formal and non-formal professionals to use. With both partners, we will follow up using the 'train the trainer' methodology[34] to increase our national communities' outreach.

In pursuit of making resources more accessible to speakers of different languages, EUN will revamp the *Europeana Educators Network*[35] to focus more on reusability, running national trainings and providing multilingual learning materials to publish on the *Teaching with Europeana*[36]. We will also revamp the Europeana MOOC 'Digital Education with Cultural Heritage' to make it more inclusive to different educational audiences and run it in English and another European language in the next school year.

EF will also collaborate with EuroClio to further develop their partner pages and encourage CHIs to create a partner page that uses Europeana APIs and profiles Europeana material. EuroClio will also develop training and co-creation sessions for CHIs (with the potential involvement of the DS AGG) and other educational organisations that want to have a partner page. To build capacity among educators, in 2023 they will design and pilot an online self-paced course for potential users and organise a train-the-trainer event, bringing together teachers and Cultural Heritage Professionals. The new EuroClio trainers will organise national training in 2024.

Together with Facts & Files (F&F), EF will continue to foster participation via the website Transcribathon.eu, which offers educators, their students, and European citizens, more broadly, the chance to interact with cultural heritage by transcribing and editing metadata. Transcribathon.eu users can transcribe and edit a variety of historical documents in different languages, either individually or in teams, and the tool can enrich school and university teaching.

We will maintain the connection between Transcribathon.eu and the Europeana website, in the organisation of Transcribathon events with content of their choice.

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https://pro.europeana.eu/post/euroclio-s-new-training-programme-brings-historiana-to-educators-across-europe
[35] https://pro.europeana.eu/page/europeana-education-ambassadors-network
[36] https://teachwitheuropeana.eun.org/

Overview of outcomes

Partners	Outcomes	Expected due date
EUN	English version of the updated Digital Education with Cultural Heritage MOOC launched	Feb 2023
EuroClio	'Train the trainer event' organised	Mar 2023
EF	Annual Open Education Week: contribution added	Mar 2023
EF	All Digital Week campaign: contribution added	Mar 2023
EUN	Second language version (TBD) of the updated Digital Education with Cultural Heritage MOOC launched	Apr 2023
EUN	Europeana Education competition organised	May 2023
EuroClio	Historiana online self-paced course designed and piloted	May 2023
EUN	EUN national trainings organised (10 trainings)	Aug 2023
EuroClio	10 New learning materials and 15 new translations of existent content published on Historiana	Aug 2023
EUN	New stories of implementation/use and reuse on the Teaching with Europeana blog published (500 stories)	Aug 2023
EF, F&F	3 Transcribathon events and 1 workshop organised per year	Ongoing
F&F	Transcribathon platform maintained	Ongoing
EF	Blogs and social media posts (LinkedIn, Facebook, Twitter) published	Ongoing
EF	Europeana Education community[37] supported	Ongoing

Overview of indicators

KEY PERFORMANCE INDICATORS					
ID	Description	Measured by	Frequency	Baseline Aug 2022	Target 2023

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

KPI 3.6	Educators reached in national training events[38]	Total number of educators (cumulative)	Bi-annually	NEW	TBC[39]
KPI 3.7	Satisfaction rate of educational communities	Total % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale (cumulative)	Quarterly	N/A[40]	75%

REPORTING INDICATORS					
ID	**Description**	**Measured by**			**Frequency**
RM 3.20	New learning resources for education	Total number of new resources using Europeana data (cumulative)			Quarterly
RM 3.21	Language variations of existing learning resources	Total number of new translations of learning resources (cumulative)			Bi-annually
RM 3.22	Participants completing the online courses[41]	Total number of participants (cumulative)			Bi-annually
RM 3.23	Traffic to educational platforms (TwE blog and Historiana)	Number of visits to educational resources (cumulative)			Bi-annually
RM 3.24	Reach to Europeana Education community	Number of people reached per month (mailing list, LinkedIn, Facebook)			Quarterly

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[38] Y1 includes educators reached by EUN training; Y2 will include both educational partners (EUN and EuroClio). Euroclio will first build capacity in Y1 by training the trainers to enable trainers to reach educators through national training in Y2.

[39] EF will use the first measurements to identify targets.

[40] The method of measuring the satisfaction rate (compared to Europeana DSI-4) changed from reporting on the average satisfaction to reporting on the % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale.

[41] Y1 will include participants completing the online courses (MOOCs) organised by EUN. In Y2 this metric will also count participants of the Historiana online course done by EuroClio.

Activity 3.6.2. Engage with academic and research communities

Partners: EF and DARIAH

Higher education and research institutions are increasingly focused on digitally-enabled teaching, learning, and research. University teaching staff members are engaged in educational and research activities, and are optimal intermediaries and guides for students in higher education, able to advise on using the data space and guiding use and reuse of digital cultural heritage. Other audiences include PhD students and early-career scholars, cultural heritage professionals engaged in research, and non-professional researchers (e.g,. citizen scientists).

These higher education and research audiences already represent a large fraction of users of Europeana.eu and Europeana Pro, and are well-represented by participation in the ENA, especially in the Europeana Research community.

We will engage academic and research professionals in developing products, like training materials and notebooks, that can facilitate the use and reuse of digital cultural heritage in innovative ways. EF will continue nurturing collaborations with research infrastructures and projects. In particular, EF and DARIAH (European Digital Research Infrastructure for the Arts and Humanities) will continue ensuring Europeana's visibility on platforms like the SSHOC (Social Sciences and Humanities) Marketplace within the EOSC (European Open Science Cloud), and gathering requirements from academic and research communities. We will conduct research on digital cultural heritage as an emerging subject in universities and increase the visibility of the role of the data space in this sector.

EF will organise events that continue to foster collaboration between the cultural heritage, academic and research sectors, and will continue acting as liaison between the Europeana Research community and other cultural heritage communities, such as LIBER and the International GLAM Labs Community. In particular, EF will test the success of events designed at a national level and run in the native language of that country, to increase our impact with speakers of a variety of European languages.

EF will continue leveraging the support of the Europeana Research Advisory Board, composed of internationally known university professors of Digital Humanities and Information Science, in analysing users' interests and motivations, tailoring the Europeana offering of content, including 3D content, and APIs and increasing the visibility and reliability of Europeana products.

Overview of outcomes

Partners	Outcomes	Expected due date
EF	Research on digital cultural heritage as an emerging university subject completed	Aug 2023
DARIAH	Training resources for academic and research data users published on the SSHOC Marketplace	Aug 2023
EF	Europeana Research community[42] and Research Advisory Board[43] supported	Ongoing
EF	Outreach events for academic and research communities organised	Ongoing

Overview of indicators

REPORTING INDICATORS			
ID	**Description**	**Measured by**	**Frequency**
RM 3.25	Outreach events to academic and research communities organised	Total number of events delivered (cumulative)	Quarterly
RM 3.26	Reach to Europeana Research community	Number of people reached per month (Discussion list, Twitter)	Quarterly

Activity 3.6.3. Engage with the developer communities and API customers

Partners: EF

To engage with the developer and creative communities, we will focus on redeveloping the API documentation and maintain it in tandem with API development, while we continue to connect with the user community to understand needs, and explore new potential reuse communities.

Maintain and improve API documentation & client libraries

In tandem with development efforts in Activity 1.1.3, the Europeana API documentation pages will be updated to reflect the changes in the APIs, provide better support to existing API users and improve the onboarding of potential new API users. After

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[42] https://pro.europeana.eu/page/europeana-research
[43] https://pro.europeana.eu/page/research-advisory-board

bringing the API registration out from Europeana Pro and into the Europeana website, EF will update the Europeana Pro pages and will investigate a more suitable option for API documentation.

In addition to rewriting and maintaining the technical API documentation, further resources will be developed to support the capacity building work. This will include collaborating with Europeana's API community and gathering input from the wider Europeana initiative to learn which capacity building resources are needed and most valuable. Based on that input, new capacity building resources will be created, (for example, FAQ pages, example API calls and code snippets, and multimedia tutorials) that help people get acquainted with the API and support existing API customers to update their own integrations.

The goal of these capacity building resources is to provide multiple learning pathways for users to learn about and start using Europeana's APIs for the reuse of digital cultural heritage. It will connect with the data space Support Centre to answer needs and questions that are provided from that Support Centre, and will complement the activities which engage the education and research communities.

Client libraries will be further maintained, developed and explored to ensure multiple ways of development using Europeana's APIs. Europeana's Java Client Libraries will be further maintained and promoted to a wider audience, user research and requirements gathering will uncover which needs exist for new or expanded client libraries in different coding languages. In the context of recent AI work, we have begun to develop a first prototype for a Python client library, PyEuropeana, intended to replace unmaintained and obsolete third-party Python client libraries. We will investigate the interest from users for client libraries such as Python and explore the possibility of expanding to Javascript client libraries. Special effort will be made to ensure the usability and sustainability of these libraries to cope with new versions of the APIs.

Support partnership integrations with external services

Our current service offer provides personal technical support to anyone who wants to use Europeana's APIs for their own reuse project. Potential reusers, often from the cultural and creative industries, reach out to Europeana through portal, email, social media, or technical forums to ask for help in their projects, and are subsequently assisted by Europeana staff. This support includes, for one, having meetings where the reuser explains their use case and Europeana provides guidance related to which APIs and other tools to use, which datasets are most relevant for their project, and by providing code and API call examples. Europeana also provides promotion and

dissemination of reuse projects by offering Europeana Pro as a platform to publish news posts about new integrations, and promotion of a new integration through its social media channels. The support extends to keeping in touch with the reuser to update them about new API versions, helping them update their project and dealing with bugs and other issues.

This task will work in tandem with activity 1.1.3 (Extend and maintain Application Programming Interfaces) to ensure that reusers are aware of the capacity building resources available to them, that reusers have the opportunity to have their projects promoted using channels like Europeana Pro and Europeana's social media channels, and that reusers will stay updated with any updates made to the API. Lastly, it will also ensure that other related data spaces are aware of the technical support offer from Europeana, inviting them to create links between the data spaces using Europeana's APIs through the provided support and guidance.

Support capacity building for Europeana APIs

Once capacity building resources have been created and potential events and outreach activities have been identified, new API developments will be marketed toward developer communities and potential new users of the Europeana APIs and the data space from cultural and creative industries.

Other new features and updates to Europeana's API suite will be promoted at relevant community events and with direct contact to existing Europeana API users. Newly developed features from Activity 1.1.1. Extend and maintain platform infrastructure and services, like the new versions of the Search and Record APIs and integration of API registration and management with user accounts, will be promoted to potential new users at these community events. Existing users will also be made aware of new features through newsletters and support emails.

The learning pathways developed during year one will be used to hold capacity building events across different communities, also supporting the Education and Research engagement efforts, to increase the uptake of Europeana APIs in sectors related to or interested in digital cultural heritage. New business relationships will be sought out to create more connections and integrations between Europeana APIs and the rest of the data space. These efforts will also foster collaboration and interoperability between data spaces.

Specific work will be undertaken to promote the parts of our service offer that allow for user participation, such as the User Sets API and Annotations API to encourage new

integrations that take advantage of these services.

We will also expand our account functionality to include the API registration and make it easier for API users to learn how to best make use of the API to develop their applications by looking at the website.

We will monitor API usage and report on it in the DS. Users and usage report (including segmentation of API usage in educational sector, research, creatives etc.).

Overview of outcomes

Partners	Outcomes	Expected due date
EF	Capacity building resources for API users developed	Aug 2023
EF	API documentation maintained and updated	Aug 2023
EF	New business relationships to foster reuse of Europeana APIs created	Ongoing
EF	New integrations or updated integrations or reuse projects in collaboration with developers or creatives promoted through Europeana Pro and/or EF social media	Ongoing
EF	Europeana API services and capacity building resources presented at relevant CH events	Ongoing
EF	Changes/improvements of Europeana API services communicated to reusers	Ongoing
EF	FAQs, tutorials, and example API calls created and maintained in line with new API iterations	Ongoing

Overview of indicators

KEY PERFORMANCE INDICATORS					
ID	**Description**	**Measured by**	**Frequency**	**Baseline Aug 2022**	**Target Aug 2023**
KPI 3.8	API users (external)	Total number of (external) API users per month	Monthly	150[44]	175
REPORTING INDICATORS					

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[44] Estimated baseline based on previous measurements.

ID	Description	Measured by	Frequency
RM 3.27	API usage (REST API)	Total number of requests per month (external traffic)	Monthly
RM 3.28	API sign-ups (REST API)	Number of API sign-ups per month (cumulative)	Quarterly

Work package 4: Digital services for the public

Experience from Europeana DSI-4 shows that the primary audiences that the Europeana Initiative successfully reaches are overwhelmingly cultural heritage professionals, and, even more successfully, educators, researchers, and students. The foundation for the data space for cultural heritage is the well-established Europeana website. Specific attention going forward will be given to how EF can better serve current audiences and position the DS as an attractive option to the new audiences (media, tourism, cultural/creative industries). This will involve continued optimisation (and communication) of existing functionalities and exploring additional features, with input and feedback from audiences, and determining where to focus our efforts (Task 4.1).

The consortium will also engage audiences with digital cultural heritage by expanding pan-European themes and perspectives, inspiring use, reuse, and participation, and communicating activities to audiences (Task 4.2).

Task 4.1. Deliver high-performing Europeana website

Europeana.eu offers pan-European content to anyone with an interest in cultural heritage. People can search, browse and access the website's content in all 24 official languages of the EU (the breadth and depth differs from one language to another). Most of the people visiting the website are new visitors coming from organic search. The website also has a steady flow of loyal visitors who come once a week or month to find and download items, and curate content using user galleries.

The ability to explore a vast range and volume of cultural heritage in one place, and make connections across European collections, is what makes Europeana.eu unique. We will ensure the website is easy to access, looks appealing, and functions well on all devices – and ready to take advantage of 5G infrastructure as it continues to expand across Europe.

EF aims to turn new visitors into returning visitors by improving the findability of content and turn returning visitors into brand ambassadors who help us improve the website by providing feedback and curating content. EF will do this by extending user participation features (Activity 4.1.5) and optimising the user feedback mechanism (Activity 4.1.7).

The majority of visitors come to the website to search, so EF will continue to improve our search accuracy by adjusting our algorithm, extending our filters, and expanding multilingual coverage of our content. EF will achieve this by optimising the search experience, prioritising relevance and data quality (Activity 4.1.2), and expanding the multilingual coverage to include all EU official languages (Activity 4.1.4).

To encourage use and reuse of materials visitors can find on the website, EF will introduce new and extend existing participation features, and invest in communication mechanisms to regularly remind people of what they can find and reuse on the website.

Activity 4.1.1. Optimise the responsiveness of the website

Partners: EF

EF will make the website fully responsive on all screen sizes, large and small. EF will change the design and development practices to adopt a gridless approach which will ensure that the design adjusts itself to render well on any size screen. These activities include improving the mobile experience and optimising it to take advantage of the 5G infrastructure being deployed across Europe.

Overview of outcomes

Partners	Outcomes	Expected due date
EF	Website look good on every screen (including mobile)	Jun 2023
EF	Website is fully responsive and 5G-ready (implementation)	Ongoing

Overview of indicators

KEY PERFORMANCE INDICATORS					
ID	Description	Measured by	Frequency	Baseline Aug 2022	Target 2023
KPI 4.1	Traffic to the website	Number of visits per year (cumulative)	Monthly	6.0 million[45]	6.5 million
KPI 4.2	User satisfaction rate with	Total % of 'satisfied' and 'completely	Bi-annually	N/A[46]	75%

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[45] Estimated baseline based on previous measurements.

[46] The method of measuring the satisfaction rate (compared to Europeana DSI-4) changed from reporting on the average satisfaction to reporting on the % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale.

	Europeana website	satisfied' responses on a 5-point Likert scale			

Activity 4.1.2. Optimise search experience, prioritising relevance and data quality

Partners: EF

EF will continue to improve the search experience, building on and complementing the earlier progress made against the DSI Search Improvement Strategy[47]. People will be able to use advanced filters to search using metadata. Searching by dates will be improved through a more suitable indexing of date information and enhanced by covering a wider range of date formats via the normalisation of values obtained from the (heterogeneous) original data.

EF will improve ranking of search results by tuning the weight of different metadata fields, boosting elements that bring the most relevant results. In the meantime, EF will employ the extended usage logging system developed as part of Activity 1.1.1, collecting data needed to better evaluate search components (search box, autosuggest, etc.). Collected data, for example, the rank of specific items clicked on by users for specific queries, will allow us to implement the performance metrics presented in the search Strategy to assess the impact of the changes made to the search function.

In parallel, EF will extend the scope of the search functionality on the website by allowing users to search within subtitles for audio/visual material and activate search within a (textual) items' transcription at the level of that items' page.

Overview of outcomes

Partners	Outcomes	Expected due date
EF	Tuning the weight of different fields in ranking (M-F8) (two iterations deployed)	Mar 2023
EF	Item-page level search within transcriptions	Mar 2023
EF	Re-activating advanced search (filters) (M-F14)	May 2023
EF	Search within subtitles (FT-F5)	Jun 2023

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[47] Roadmap avaliable at https://pro.europeana.eu/post/europeana-search-strategy. Actions are flagged with their associated reference number for cross-reference purpose.

EF	Reinstating search logs and associated evaluation metrics (EVAL-5, EVAL-6, EVAL-7)	Aug 2023
EF	Search relevance and performance maintained	Ongoing

Activity 4.1.3. Optimise browse experience to improve content discovery

Partners: EF

To improve the browsing experience of users on the website, EF will make the finding and exploration of items easier and more rewarding for visitors. Items will be presented through more logical and meaningful relationships. EF will maximise the opportunities for visitors to be exposed to diverse and high quality materials. EF will increase automation to regularly refresh and highlight new and interesting content. EF will also expand the design of the Theme pages[48] making those the primary entry points into our collection. A new page will be designed to browse through Place entities. Additional tooltips on the website will work as tutorials and guided tours aiding the discovery of content.

Work on the expansion of the entity collections and precision of the item to entity collection relationships is covered by the work described in WP2.

Overview of outcomes

Partners	Outcomes	Expected due date
EF	Place entities exist on the website	Dec 2022
EF	Design of the Theme pages expanded	Dec 2022
EF	Tooltips introduced	May 2023

Activity 4.1.4. Expand multilingual coverage to include all EU official languages

Partners: EF

EF will further progress the Europeana multilingual strategy both by efforts within this service contract and by integrating the data and services produced by Europeana partner projects, such as the Europeana Translate[49] translation service.

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[48] https://www.europeana.eu/themes
[49] https://pro.europeana.eu/project/europeana-translate

The first line of work regards the establishment of more multilingual (meta) data. Using the translation infrastructure produced in Activity 1.1.1, EF will work on providing more (automated) translations of the metadata, in addition to those obtained thanks to the work of Europeana's partners, by augmenting their metadata with multilingual vocabularies that EF integrates in its aggregation process (Activity 2.2.2). Progress will be measured using the multilinguality and enrichment indicators developed in Europeana DSI. These indicators will be reported on as part of Activity 2.2.2. and outcome "Report on the coverage of the entity collection and precision of relationships to items in entity collection".

The second line of work regards improving multilingual access to the Europeana website. We will continue to provide all static elements from website elements in all EU languages, in line with the Europeana multilingual strategy. We will continue sourcing translations of editorial content (as part of Activity 4.2.2) from partners, and continue to select high-quality, engaging editorial for translation into multiple languages. We will improve the quality of translations by strengthening our quality-checking process, using native speakers who are familiar with the context and vocabulary of the cultural heritage sector.

To expand the reach of our editorial content, EF will focus on improving multilingual accessibility to this material by increasing the number of languages in which editorial content is accessible – both within the data space and in our outreach. To do this, EF will refine its strategy to identify what content should be translated, into which languages, and the level of translation necessary for various editorial pieces.

We will expand earlier efforts on multilingual search. The technical basis for translation of dynamic content (now applicable for real-time translation of search queries and metadata records) will be expanded to make the website able to display translated search results. We will work towards more integration with the eTranslation data space. We will provide requirements for real-time translation in the context of the CH data space and further evaluate the applicability of the eTranslation service for the use cases identified in the Europeana multilingual strategy.

Finally, to support the validation of translations and to increase the quality of translations, we will develop an approach to leverage the multilingual capabilities of professionals engaged through the Europeana Network Association (ENA) and the Europeana Aggregator Forum (EAF) (i.e. by engaging members with Call to Actions to crowdsource feedback in their native or spoken languages).

Overview of outcomes

Partners	Outcomes	Expected due date
EF	Refine our approach for prioritising translations of editorial pieces and share with EC for discussion	Dec 2022
EF	Approach(es) and workflow(s) for the validation of website translations in operation	Dec 2022
EF	Further evaluation and integration with the eTranslation service completed	Aug 2023
EF	Multilingual search infrastructure expanded with search results translation (in the context of the Spanish pilot)	Aug 2023
EF	ENA/EAF engaged to support validation of static translations on europeana.eu	Ongoing
EF	Multilingual coverage of editorial content increased	Ongoing
EF	Maintain user interface translations in supported languages	Ongoing

Overview of indicators

REPORTING INDICATORS			
ID	**Description**	**Measured by**	**Frequency**
RM 4.1	Multilingual coverage of editorial content	Percentage of stories (blogs and exhibitions) published in more than one language during contract year	Annually
RM 4.2	Multilingual coverage of editorial content	Percentage of stories (blogs and exhibitions) published in all 24 EU languages during contract year	Annually

Activity 4.1.5. Extend user participation features

Partners: EF

No outcomes planned to be completed in Y1. We will report on the user behaviour on the Europeana website (including average visit duration) as part of the DS. Users and usage report. EF will start reporting on outcomes in Y2 of the contract.

Overview of outcomes

Partners	Outcomes	Expected

		due date
EF	Compliance with data protection maintained[50]	Ongoing

Overview of indicators

REPORTING INDICATORS			
ID	**Description**	**Measured by**	**Frequency**
RM 4.3	User participation: accounts	Number of account holders (cumulative)	Quarterly
RM 4.4	User participation: accounts	Number of items liked by users (cumulative)	Quarterly
RM 4.5	User participation: galleries	Number of user-created galleries (cumulative)	Quarterly
RM 4.6	Downloads on the Europeana website	Total number of downloads (cumulative)	Quarterly

Activity 4.1.6. Optimise user interaction and display of content

Partners: EF

EF will continue promoting a more visual experience for its users. The website will include new visualisation and display mechanisms to showcase the 3D content aggregated during the contract. Improved visualisation and display of 3D content relies on work delivered in other activities during Y1, such as the work of the 3D working group under Activity 2.2.4. Aggregate 3D content. Based on work undertaken in Y1 we will further develop the visualisation and display of 3D content on the Europeana website in Y2.

EF will also improve the way users interact with media on the website. EF will consolidate the current experience supported by diverse media players into a more user-friendly experience using fewer media players for each media type. This effort will not only improve the user experience of the website, it will also aid the maintenance of the website. EF will start working on the consolidation of the media players in Y1.

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[50] According to the Regulation (EU) 2018/1725 concerning the processing of personal data by the EU institutions (IDPR).

No outcomes are planned to be completed in Y1. EF will start reporting on completed outcomes in Y2 of the contract.

Activity 4.1.7. Optimise user feedback mechanism

Partners: EF

EF will continue to improve the overall feedback mechanism to make it easier and more rewarding for users taking the time to provide feedback on the data space services. EF will speed up the response time for the feedback mechanism so people receive a response within 24 hours. EF will also create a page of frequently asked questions (FAQ) which people can query to find an answer, on their own, almost immediately in many cases.

EF will also improve error messages so they clearly communicate what's causing the error. Additionally, EF will look into other methods (e.g., chatbots) both to provide people with automated feedback and to gauge their satisfaction with the response.

To streamline its operational workflow for responding to feedback for all user-facing products (such as Europeana Pro, the Data Statistics Dashboard), EF will consolidate its existing user feedback workflow and hub to manage user feedback in a more centralised manner across the data space.

Relevant user feedback will also be incorporated into the desk research we will conduct in Task 3.2. We will report on user feedback (including number and type of user feedback received as well as actions taken to address user feedback) as part of DS. Infrastructure report and/or DS. Users and usage reports.

Overview of outcomes

Partners	Outcomes	Expected due date
EF	Precise and informative error messages for broken links available	Nov 2022
EF	FAQ for people using the website available in 24 EU languages	Dec 2022
EF	Current feedback mechanism is consolidated and extended to other data space's products	Aug 2023

Overview of indicators

REPORTING INDICATORS

ID	Description	Measured by	Frequency
RM 4.7	Average of initial response time to user feedback	Number of hours	Quarterly
RM 4.8	Average of total resolution time to user feedback (excl. user feedback where the responsibility lies outside of Europeana DS consortium)	Number of hours	Quarterly

Task 4.2. Engage audiences with digital cultural heritage

Under this task, EF will expand digital opportunities for the public by driving participation with cultural heritage (Activity 4.2.1) in and around the data space. EF will work with consortium members, cultural heritage institutions and other partners to produce impactful content on pan-European themes and perspectives (Activity 4.2.2). EF will promote engaging, high-quality cultural heritage and editorial content on the Europeana website, via its social media channels, newsletters and on external platforms (Activity 4.2.3).

EF will report on activities engaging audiences with digital cultural heritage in the DS. Users and usage report.

Activity 4.2.1. Drive participation with cultural heritage

Partners: EF

To expand digital opportunities for the public to participate with and reuse cultural heritage, EF will showcase high-quality and open access data on the Europeana website, highlight user-created galleries and the Europeana account functionality, and promote the interactive features of the website. EF will use feedback received from users to expand and develop activities under Activity 2.1.2 for the ELF, and to encourage raising the quality (including the openness) of rights information by data providers under Activities 2.2.1 and 2.2.2.

To highlight 3D content on the Europeana website to audiences and encourage cultural heritage institutions to contribute more 3D items, EF will work with partners to showcase high-quality 3D content in the Europeana website. CARARE, INCEPTION, TMO will be providing feedback to this activity.

EF will programme, host, and join online events like the Digital Storytelling Festival[51] and GIF IT UP[52] to foster digital skills and participation with cultural heritage, teaching people how to find and use open access cultural heritage data. By showcasing inspiring examples of digital storytelling and content reuse, EF will encourage audiences to reuse cultural heritage and promote the data space as a treasure trove of open access heritage data.

EF will create new partnerships and nurture existing high-value partnerships with organisations and SMEs to reach new audiences and raise public awareness of the material available in the European data space for cultural heritage. EF will regularly review and optimise its events and partnerships to deliver maximum impact and audience growth.

To raise awareness of digital cultural heritage available for use and reuse, EF will continue to participate in major online campaigns that include a geographic and thematic variety of cultural heritage institutions, such as #ColorOurCollections.

Overview of outcomes

Partners	Outcomes	Expected due date
EF	GIF IT UP organised	Oct 2022
EF	Digital Storytelling Festival organised	Jun 2023
EF	Europeana website (incl. account functionality, user-created galleries) promoted	Ongoing
EF	High-quality open access data promoted, including 3D	Ongoing

Overview of indicators

REPORTING INDICATORS			
ID	Description	Measured by	Frequency
RM 4.9	Participation in Digital Storytelling Festival	Number of registered participants for Digital Storytelling Festival events	Annually
RM 4.10	Participation in GIF IT UP	Total number of submitted GIFs	Annually

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[51] https://pro.europeana.eu/tags/digital-storytelling
[52] https://pro.europeana.eu/page/gif-it-up

Activity 4.2.2. Broaden impact of cultural heritage by expanding pan-European themes and perspectives

Partners: EF, DS AGG

To demonstrate the relevance of cultural heritage to our audiences, EF will develop and publish editorial content that connects history and culture across borders to contemporary themes and events that audiences care about, like climate change, social issues, historical anniversaries, and current events.

EF will work with consortium members and external partners to curate, publish and promote content that discusses cultural heritage and history from a range of pan-European perspectives, with many efforts happening in partnership with cultural institutions across Europe. We will expand the reach of our editorial content, by promoting it as much as possible in the native language of our users (see multilingual strategy for editorial developed in Activity 4.1.4)

Working collaboratively with European Commission colleagues on initiatives like the New European Bauhaus[53] and European Year of Youth[54] EF will continue to develop and promote content that demonstrates the role of cultural heritage in these campaigns.

EF will showcase cultural destinations across Europe by collaborating with the Cultural Routes of the Council of Europe[55] programme and other partners. EF will explore similar opportunities with the common European data space for tourism, as it develops.

Overview of outcomes

Partners	Outcomes	Expected due date
EF, DS AGG	Editorial content (exhibitions, blogs, and galleries)[56] published and promoted	Ongoing
EF	Collaborations with European Union initiatives sharing cultural heritage promoted	Ongoing

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[53] https://www.europeana.eu/new-european-bauhaus
[54] European Year of Youth 2022: Commission kick-starts work
[55] https://www.coe.int/en/web/cultural-routes
[56] Editorials from (Europeana) Generic Services projects contribute to this outcome.

Overview of indicators

KEY PERFORMANCE INDICATORS					
ID	**Description**	**Measured by**	**Frequency**	**Baseline Aug 2022**	**Target 2023**
KPI 4.3	Audience satisfaction with editorial (exhibitions, blogs)	Total % of 'satisfied' and 'completely satisfied' responses on 5-point Likert scale (cumulative)	Quarterly	N/A[57]	80%
REPORTING INDICATORS					
ID	**Description**	**Measured by**			**Frequency**
RM 4.11	Traffic to exhibitions and blogs	Number of visits to all exhibitions and blogs (cumulative)			Quarterly

Activity 4.2.3. Communicate the data space for cultural heritage activities

Partners: EF

Communicating the value and opportunities of the data space for cultural heritage to European citizens is critical for its success. Communicating directly across EF's own channels and those of cultural heritage organisations and other partners, EF will promote the uniquely pan-European, high-quality and multilingual experience of the data space. This will be done in full compliance with data protection legislation.

In collaboration with Activity 3.3.1, where the overall communication strategy and action plan will be developed, EF will promote high-quality collections and editorial content on the Europeana website, via its social media channels, newsletters, and on external platforms. Content promotion will be optimised to the characteristics of each platform and its possibilities, and EF will make use of platforms' interactive features, such as quizzes and polls, to create welcoming and accessible ways to interact with cultural heritage content.

To broaden its reach into audiences with limited knowledge of digital heritage and how to access it, EF will also pursue collaborations, such as social media account take-overs, with relevant organisations.

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[57] The method of measuring the satisfaction rate (compared to Europeana DSI-4) changed from reporting on the average satisfaction to reporting on the % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale.

Overview of outcomes

Partners	Outcomes	Expected due date
EF	Newsletter and social media posts (Facebook, Twitter, Instagram, Medium, Pinterest) published[58]	Ongoing
EF	Compliance with data protection maintained	Ongoing

Overview of indicators

KEY PERFORMANCE INDICATORS					
ID	**Description**	**Measured by**	**Frequency**	**Baseline Aug 2022**	**Target 2023**
KPI 4.4	Social media reach	Total number of impressions on social media (Facebook, Pinterest, GIPHY, Instagram, Twitter, Medium, LinkedIn) (cumulative)	Monthly	450 million	425 million

REPORTING INDICATORS			
ID	**Description**	**Measured by**	**Frequency**
RM 4.12	Social media engagement	Total number of likes, shares, comments per month (Facebook, Twitter, Pinterest, Instagram, Medium, LinkedIn)	Monthly

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[58] Editorial outcomes of GS projects are promoted.

Work package 5: Programme management

EF will provide high-quality programme management of the data space for cultural heritage, including continuous progress monitoring and reporting (task 5.1). We will work closely with the European Commission, the Commission Expert Group on the Common European Data Space for Cultural Heritage (CEDCHE) and its subgroups to review activities and developments of the data space for cultural heritage (task 5.2.). We will manage the relations with the projects funded under the Digital Europe, Horizon 2020 and Horizon Europe programmes and ensure the smooth integration of their results into the data space for cultural heritage (task 5.3.).

The work in this WP will be reported in the deliverables PM. Implementation plan, PM. Risk-management plan, PM. Periodic reports, and PM. Annual report.

Task 5.1. Ensure continuous progress monitoring and reporting

Partners: EF

Under this task, EF will manage and coordinate the programme as described in the tender and in the work package sections of this implementation plan.

EF will, as group leader of the consortium, continuously monitor the progress of the consortiums' work towards the set commitments and KPIs and provide regular reports to the Commission on its performance. Furthermore, EF will ensure the quality and timely delivery of deliverables to the Commission as set in the tender specifications and the tender.

The current implementation plan provides an overview of the planned outcomes in the first DS year (September 2022 - August 2023). EF will report back on progress and performance every three months in PM. Periodic reports. In case an outcome is completed in the reporting period a description will be added that highlights the objective and result of the outcome and its value for the data space for cultural heritage.

Risk management is an essential part of the data space programme management. EF will provide a PM. Risk Management Plan that (a) describes the risk management

strategy and the methodology followed[59] for managing risks throughout the contract duration and (b) nominate the relevant people responsible[60]. The accompanying Risk Log registers the assessment of risks following the rules of the plan, including proper risk responses (avoidance, mitigation, acceptance, transfer) and relevant details. It also shows the historic assessment of each risk. The Risk log will be updated periodically and any relevant changes will be communicated to the Commission in the PM. Periodic reports and/or ad hoc via direct communication (for example, via email).

An overview of our approach and a list of assessed risks foreseen at the beginning of the project are provided in [Annex 5: Risk management plan](#).

Task 5.2. Governance

Partners: EF

Under this task, EF will report regularly to the European Commission and, by invitation, to the Commission Expert Group on the Common European Data Space for Cultural Heritage (CEDCHE) on the status of the data space activities and developments, risks and performance indicators. Any strategic direction or advice shared by the Commission and CEDCHE (subgroups) will be taken into account and will be reviewed for impact, relation to strategy and business planning. If the CEDCHE requests re-prioritisation, adjustment or redistribution of effort, EF, as group leader of the Europeana DS consortium, will aim to accommodate them.

The Commission and EF will meet monthly in Operational Management Board (OMB) meetings to review and discuss deliverables, operational matters, contractual matters, coordination and other implementation aspects. Additional ad-hoc meetings might be scheduled when necessary. Within five days following each meeting, EF will circulate minutes of the meeting to all participants, together with copies of presentations made during the meeting or other related documents. The minutes will be concise and concentrate on major decisions and will list the open action points for the next reporting period. In addition, the Commission and EF will have annual meetings to evaluate overall performance at the end of the first DS year and to make recommendations for the next project period.

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[59] The methodology will explain in particular how to identify and classify risks (management, technical, communication, data protection, etc.), how to assess them (at least in terms of impact and likelihood, in five levels each), and their response development and control. It will also indicate who and how often will assess the DS risks, how to log them, and an escalation plan, including the governance.

[60] A RACI (Responsible, Accountable, Consulted, Informed) approach will be used for this purpose.

The Europeana DS consortium will meet several times during the contract period. EF will organise a kick-off meeting at the start of the contract. All consortium partners will be invited to the Europeana DS General Assembly, which will be held online every three months. EF will also plan specific Europeana DS meetings during the Europeana Network Association annual event.

Furthermore, the Europeana DS consortium will conclude a consortium agreement which describes the responsibilities and liabilities of the project partners as well as the governance and management of the tender commitments. Special attention will be granted to the identification of pre-existing rights, as required by the tender specifications. EF will make sure that all consortium members (partners and subcontractors) declare pre-existing rights (if applicable) before signing of the contract, and before submission of each PM. Periodic report. A declaration of these will be communicated to the Commission with each PM. Periodic report.

Task 5.3. Manage relations with other EU-funded projects

Partners: EF

As operator of the data space for cultural heritage, EF will support projects funded under the CEF Telecom Generic Services calls for Europeana, eTranslation, Public Open Data, Archiving Digital Europe and Horizon Europe, Erasmus+ programmes that contribute to the further development of the data space for cultural heritage with the following:

- Advice on the correct implementation of Europeana frameworks and policies relevant and/or requested by the Digital Europe and Horizon Europe calls, e.g. Europeana Publishing Framework, Europeana Data Model, Editorial Guidelines, Impact Framework.
- Sustainable integration of the project results into the data space for cultural heritage, e.g. ingestion of content, enrichments, tools, services and editorials.
- Promotion of the project outcomes on Europeana Pro, mainly in the Tools and Services section[61] and Projects space[62], as well as dissemination to the relevant audiences in cultural heritage, education, research, tourism and the creative industries.

EF will also organise an online annual event that will bring together representatives of all running EU-funded projects, Europeana Foundation, EC DG Connect and HaDEA to

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[61] https://pro.europeana.eu/about-us/services-and-tools
[62] https://pro.europeana.eu/page/generic-services-projects

discuss common challenges, find synergies and strengthen connections to the benefit of the data space for cultural heritage.

Below an overview of the relevant EU-funded projects which run in this contractual period (September 2022 - August 2023).

EU funding programme	Project Name	Project Duration
Europeana CEF-TC-2020-1[63]	EnrichEuropeana+'[64]	Apr 21 - Mar 23
	JHT- Jewish History Tours[65]	Apr 21 - Mar 23
	WEAVE - Widen European Access to cultural communities Via Europeana[66]	Apr 21 - Sep 22
	Europeana Subtitled[67]	Jun 21 - Nov 22
	Crafted - Enrich and promote traditional and contemporary crafts[68]	Sep 21 - Jun 23
Public Open Data CEF-TC-2018-5[69]	SGoaB - Saint George on a Bike[70]	Sep 19 - Feb 23
eTranslation CEF-TC-2020-1[71]	Europeana Translate[72]	May 21- April 23
eArchiving CEF-TC-2020-2[73]	J-Ark - European Jewish Community Archive[74]	Sep 21 - Feb 23

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[63] https://ec.europa.eu/inea/en/connecting-europe-facility/cef-telecom/apply-funding/2020-europeana
[64] https://pro.europeana.eu/project/enricheuropeana
[65] https://pro.europeana.eu/project/jewish-history-tours
[66] https://pro.europeana.eu/project/weave-widen-european-access-to-cultural-communities-via-europeana
[67] https://pro.europeana.eu/project/europeana-subtitled
[68] https://pro.europeana.eu/project/crafted
[69]
https://ec.europa.eu/inea/en/connecting-europe-facility/cef-telecom/apply-funding/2018-cef-telecom-call-public-open-data
[70] https://pro.europeana.eu/project/saint-george-on-a-bike
[71]
https://ec.europa.eu/inea/en/connecting-europe-facility/cef-telecom/apply-funding/2020-automated-translation
[72] https://pro.europeana.eu/project/europeana-translate
[73] https://ec.europa.eu/inea/en/connecting-europe-facility/cef-telecom/apply-funding/2020-earchiving
[74] https://pro.europeana.eu/project/j-ark-european-jewish-community-archive

H2020 DT Governance[75]	InDICEs[76]	Jan 20 - Mar 23
Erasmus+ call K2[77]	WATCHLIKEAHIST - Watching videos like historian[78]	Apr 22- Mar 25
DIGITAL-2022-CULTURAL-02[79]	'5Dculture' - Deploying and Demonstrating a 3D cultural heritage space	24 months[80]
	'DE-BIAS' - Detecting and cur(at)ing harmful language in cultural heritage collections	24 months
	'EUreka3D' - European Union's REKonstructed content in 3D	24 months
	'AI4Europeana' - An AI platform for the cultural heritage data space	24 months

"Annex 4: EU-funded projects outcomes integration overview" presents the project results expected to be delivered and integrated in the data space for cultural heritage during that period. EF will provide a progress update against this overview as part of the PM. Periodic reports to the Commission. Risks and issues related to the integration of the project results into the data space for cultural heritage will be reported and addressed according to the PM. Risk management plan as described in Task 5.1.

Task 5.4. Phasing-in and phasing-out periods

Partners: EF

As EF is the current Europeana DSI operator, no phasing-in period would be required. The work related to the phasing-out and transfer processes to a successor contractor (i.e. a third party contractor awarded by the Commission to continue the operation, in full or in part, of the DS) will start in the second contractual year if a contract takeover is required from 1 July 2024.

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[75] https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/dt-governance-13-2019
[76] https://pro.europeana.eu/project/indices
[77] https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/erasmus-edu-2021-pcoop-engo
[78] https://pro.europeana.eu/project/watching-videos-like-a-historian-watchlikeahist
[79] https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/digital/wp-call/2022/call-fiche_digital-2022-cultural-02_en.pdf
[80] All recently funded DS projects are expected to start first Q1 2023, most likely Jan 2023.

Annex 1: Overview of performance indicators

ID	Description	Measured by	Frequency	Baseline Aug 2022	Target Aug 2023
WP1: Development and operation of the data space infrastructure					
KPI 1.1	Records with a unique permanent identifier in the data repository	Total number of records	Annually	N/A	TBC[81]
KPI 1.2	Response time of Europeana website	Average time (seconds) for single record per month	Monthly	1.8s	1.5s
KPI 1.3	Uptime of Europeana website	Average in % for single record per month	Monthly	99.84	99.9%
KPI 1.4	Uptime of public APIs (all)	Average in % per month	Monthly	99.91	99.9%
KPI 1.5	Uptime of Europeana Pro	Average in % per month	Monthly	99.92	99.9%
RM 1.1	Europeana website meets the WCAG 2.1 conformance level AA[82]	Homepage and item pages (except for the media) meet the WCAG 2.1 conformance level AA accessibility standard	Annually	-	-
RM 1.2	Response time of all public APIs[83]	Average response time (seconds) per month	Monthly	-	-
RM 1.3	Response time of Europeana Pro	Average response time (seconds) per month	Monthly	-	-
RM 1.4	Europeana Pro meets the WCAG 2.1 conformance level AA	Homepage and main landing pages in IA meet the WCAG 2.1	Annually	-	-

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[81] The associated technology and processes first need to be established. EF will identify the baseline in February 2023 and a future target by August 2023 (a target will be added to the Y2 metrics framework).
[82] https://www.w3.org/TR/WCAG21/
[83] Public APIs are the APIs serving external users requests: the Search and Record APIs, the Annotation, user sets and entity APIs and the IIIF dedicated APIs.

		conformance level AA accessibility standard				
RM 1.5	Uptime of Metis	Average in % per month	Monthly	-	-	
RM 1.6	Data publication in Metis	Average time required for publication of datasets	Bi-annually	-	-	
RM 1.7	Reach to EuropeanaTech community	Number of people reached per month (Mailing list, Twitter)	Quarterly	-	-	
WP2: Integration of high-quality data						
KPI 2.1	High quality data	Number of Tier 2+ material in Tier A+ (excl. content Tier 0)	Monthly	26.6 million	27.15 million	
KPI 2.2	High quality content	Percentage of Tier 2 + material (excl. content Tier 0)	Monthly	70.69%	>75%	
KPI 2.3	High quality and reusable content	Percentage of Tier 3+ material (excl. content Tier 0)	Monthly	50.82%	>55%	
KPI 2.4	High quality metadata (search, browse and explore)	Percentage of Tier A+ material (excl. content Tier 0)	Monthly	70.75%	>75%	
KPI 2.5	Broken links in the repository	Number of broken links (out of total, incl. content Tier 0)	Quarterly	-[84]	<1%	
KPI 2.6	Non-EPF compliant content (Tier 0)	Percentage of Tier 0 content	Quarterly	12.34%	<10%	
RM 2.1	Reach to Europeana Copyright community	Number of people reached per month (Mailing list, Twitter)	Quarterly	-	-	
RM 2.2	Updates to datasets	Total number of newly created and updated datasets per month (out of total)	Monthly	-	-	

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[84] The number of broken links varies quarterly and depends highly on recent occurrences and the size of datasets with broken links. In the past year, we saw occurrences between 300,000 up to 1.8 million broken links per quarterly measurement. Hence a baseline is hard to establish.

RM 2.3	Updates to records	Total number of newly created and updated records per month (out of total)	Monthly	-	-
RM 2.4	New CHIs published on Europeana website	Total number of new CHIs (cumulative)	Annually	-	-
RM 2.5	New content on the Europeana website	Total number of new datasets published (cumulative)	Quarterly	-	-
RM 2.6	Records in the data repository	Total number of records (excl. content tier 0)	Quarterly	-	-
RM 2.7	Records in the data repository by accredited aggregators	Total number of records (excl. content tier 0)	Quarterly	-	-
RM 2.8	3D content available in Europeana (items)	Total number of 3D items published (Tier 2+ and Tier A+ material)	Quarterly	-	-
RM 2.9	3D content available in Europeana (CHIs)	Total number of CHIs sharing 3D content with Europeana (Tier 2+ and Tier A+ material)	Quarterly	-	-
RM 2.10	Coverage of entity collection (items)	Total number of items linked to (at least) one entity collection	Quarterly	-	-
RM 2.11	Coverage of entity collection (collections)	Total number of entity collections with items	Quarterly	-	-
WP3: Capacity building and fostering re-use					
KPI 3.1	Satisfaction of the Europeana Network Association members with the ENA	Total % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale	Annually	N/A[85]	75%
KPI 3.2	Growth of Europeana Network Association members	Number of members in the ENA	Quarterly	3,759	4,250

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[85] The method of measuring the satisfaction rate (compared to Europeana DSI-4) changed from reporting on the average satisfaction to reporting on the % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale.

KPI 3.3	Satisfaction rate for Europeana Pro	Total % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale	Annually	N/A	75%
KPI 3.4	Aggregator satisfaction with data space products and services (accredited aggregators)	Total % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale	Annually	N/A	75%
KPI 3.5	CHI satisfaction with data space products and services	Total % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale	Annually	N/A[86]	75%
KPI 3.6	Educators reached in national training events[87]	Total number of educators (cumulative)	Bi-annually	NEW	TBC[88]
KPI 3.7	Satisfaction rate of educational communities	Total % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale (cumulative)	Quarterly	N/A	75%
KPI 3.8	API users (external)	Total number of (external) API users per month	Monthly	150[89]	175
RM 3.1	Number of participants engaged in EI activities	Number of participants i.e. contributing time and expertise to EI activities and actions (such as TFs, WGs and in response to CTA to engage with other activities in ENA, EAF, Initiative) (cumulative)	Quarterly	-	-
RM 3.2	Task forces in the Europeana Initiative	Number of active task forces per month (ENA, EAF, Initiative)	Quarterly	-	-
RM 3.3	ENA membership enables knowledge	% of surveyed ENA members reporting	Annually	-	-

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[86] The metric was not considered valid in Europeana DSI-4 because of a low response rate.

[87] Y1 includes educators reached by EUN training; Y2 will include both educational partners (EUN and EuroClio). Euroclio will first build capacity in Y1 by training the trainers to enable trainers to reach educators through national training in Y2.

[88] EF will use the first measurements to identify targets.

[89] Estimated baseline based on previous measurements.

	transfer	membership helps them staying up to date with best practices and new trends			
RM 3.4	ENA membership delivers practical knowledge	% of surveyed ENA members reporting membership enables them to learn knowledge, skills and information they use in their job	Annually	-	-
RM 3.5	ENA membership facilitates knowledge sharing	% of surveyed ENA members reporting membership enables them to learn new information they can share with others	Annually	-	-
RM 3.6	Satisfaction with the Europeana EU presidency activities	Total % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale	Quarterly	-	-
RM 3.7	Traffic to Europeana Pro	Number of visits per month	Monthly	-	-
RM 3.8	Traffic to Knowledge Base for Aggregators	Total number of views (cumulative)	Quarterly	-	-
RM 3.9	Number of Europeana events	Number of events held by Europeana DS consortium, EAF, and ENA (cumulative)	Quarterly	-	-
RM 3.10	Reach of Europeana events	Number of participants (cumulative)	Quarterly	-	-
RM 3.11	Satisfaction rate for events	Total % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale (cumulative)	Quarterly	-	-
RM 3.12	Reach to Europeana Impact community	Number of people reached per month (Newsletter, mailing list, LinkedIn)	Quarterly	-	-
RM 3.13	Participants attending Europeana training	Number of participants taking part in instructor	Quarterly	-	-

		led training using Europeana training resources (including training delivered by DS AGG and EF) (cumulative)			-	-
RM 3.14	Satisfaction rate of participants undertaking training	Total % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale (cumulative)	Quarterly	-	-
RM 3.15	Reach to Europeana Communicators community	Number of people reached per month (Newsletter, LinkedIn, mailing list)	Quarterly	-	-
RM 3.16	Reach to Europeana Climate Action community	Number of people reached per month (Basecamp, mailing list)	Quarterly	-	-
RM 3.17	CHIs supported by DS AGG	Total number of CHIs supported by individual consultation (cumulative)	Quarterly	-	-
RM 3.18	Coverage of CHIs supported by DS AGG	Total number of countries that received support by individual consultation (cumulative)	Quarterly	-	-
RM 3.19	Outreach to CHIs	Total number of new CHIs collaborating with DS AGG (cumulative)	Quarterly	-	-
RM 3.20	New learning resources for education	Total number of new resources using Europeana data (cumulative)	Quarterly	-	-
RM 3.21	Language variations of existing learning resources	Total number of new translations of learning resources (cumulative)	Bi-annually	-	-
RM 3.22	Participants completing the online courses[90]	Total number of participants (cumulative)	Bi-annually	-	-

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[90] Y1 will include participants completing the online courses (MOOCs) organised by EUN. In Y2 this metric will also count participants of the Historiana online course done by EuroClio.

RM 3.23	Traffic to educational platforms (TwE blog and Historiana)	Number of visits to educational resources (cumulative)	Bi-annually	-	-
RM 3.24	Reach to Europeana Education community	Number of people reached per month (mailing list, LinkedIn, Facebook)	Quarterly	-	-
RM 3.25	Outreach events to academic and research communities organised	Total number of events delivered (cumulative)	Quarterly	-	-
RM 3.26	Reach to Europeana Research community	Number of people reached per month (Discussion list, Twitter)	Quarterly	-	-
RM 3.27	API usage (REST API)	Total number of requests per month (external traffic)	Monthly	-	-
RM 3.28	API sign-ups (REST API)	Number of API sign-ups per month (cumulative)	Quarterly	-	-
WP4: Digital services for the public					
KPI 4.1	Traffic to the website	Number of visits per year (cumulative)	Monthly	6.0 million[91]	6.5 million
KPI 4.2	User satisfaction rate with Europeana website	Total % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale	Bi-annually	N/A[92]	75%
KPI 4.3	Audience satisfaction with editorial (exhibitions, blogs)	Total % of 'satisfied' and 'completely satisfied' responses on 5-point Likert scale (cumulative)	Quarterly	N/A	80%
KPI 4.4	Social media reach	Total number of impressions on social media (Facebook, Pinterest, GIPHY, Instagram, Twitter, Medium, LinkedIn) (cumulative)	Monthly	450 million	425 million

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[91] Estimated baseline based on previous measurements.

[92] The method of measuring the satisfaction rate (compared to Europeana DSI-4) changed from reporting on the average satisfaction to reporting on the % of 'satisfied' and 'completely satisfied' responses on a 5-point Likert scale.

RM 4.1	Multilingual coverage of editorial content	Percentage of stories (blogs and exhibitions) published in more than one language during contract year	Annually	-	-
RM 4.2	Multilingual coverage of editorial content	Percentage of stories (blogs and exhibitions) published in all 24 EU languages during contract year	Annually	-	-
RM 4.3	User participation: accounts	Number of account holders (cumulative)	Quarterly	-	-
RM 4.4	User participation: accounts	Number of items liked by users (cumulative)	Quarterly	-	-
RM 4.5	User participation: galleries	Number of user-created galleries (cumulative)	Quarterly	-	-
RM 4.6	Downloads on the Europeana website	Total number of downloads (cumulative)	Quarterly	-	-
RM 4.7	Average of initial response time to user feedback	Number of hours	Quarterly	-	-
RM 4.8	Average of total resolution time to user feedback (excl. user feedback where the responsibility lies outside of Europeana DS consortium)	Number of hours	Quarterly	-	-
RM 4.9	Participation in Digital Storytelling Festival	Number of registered participants for Digital Storytelling Festival events	Annually	-	-
RM 4.10	Participation in GIF IT UP	Total number of submitted GIFs	Annually	-	-
RM 4.11	Traffic to exhibitions and blogs	Number of visits to all exhibitions and blogs (cumulative)	Quarterly	-	-
RM 4.12	Social media engagement	Total number of likes, shares, comments per month (Facebook,	Monthly	-	-

		Twitter, Pinterest, Instagram, Medium, LinkedIn)			

Annex 2: Overview of deliverables

This table states the schedule of deliverables for the upcoming year (1 September 2022 - 31 August 2023).

Service	Title	Description	Due Month
PM.	Implementation plan	The document will contain detailed implementation plans for the objectives and activities in the tender specifications. The report will include all tactical and operational activities planned for all strategic objectives throughout the year, as well as the proposed methodology. The plan will be updated based on input by the DS governance.	M1, M12
PM.	Risk management plan	The document will describe the methodology and determine the relevant responsible people in the Europeana DS consortium following the RACI approach. The plan will also outline roles and responsibilities for identifying, assessing, and controlling risks as well as planning for and/or implementing corrective action. The plan will present information to the DS risk log.	M3
PM.	Periodic report	The report will describe the work carried out by the consortium over the past three-month period for the delivery of the services described in this tender. The report will include all information concerning the tasks planned in the annual Implementation plan for the respective three-month period. The reports will detail the progress made with respect to the activities carried out, the problems encountered, and any delay and remedial actions taken. They will also include results obtained and measured according to the indicators defined in the tender specifications and additional indicators defined in the tender. The reports will also identify any outstanding problems or risks for the contract and the consortium's plans for addressing them.	M3, M6, M9, M12
PM.	Annual report	This report will contain an executive summary of the work performed by the Europeana DS	M12

		consortium over the past contractual year. The summary will be fit for publication and will include a description of the content available in the data space, their distribution by provider, country of origin of the data, statistics on the access and usage of the platform and an analysis of its impact in the traditional news, web news and social media.	
DS.	Data governance	This document will contain the rules about the data governance mechanism, including the legislative and administrative framework, and the stakeholders that participated in it.	M7
DS.	Infrastructure report	The document will contain a detailed overview of the infrastructure of the data space for cultural heritage, the evolution of its architecture and services and its main performance. It will also include indicators from the relevant requirements, reporting on development and maintenance activities, quality of service, as well as the evolution and use of services.	M9
DS.	Technical documentation	The document will cover all technical aspects on how to set-up, configure, operate and monitor the data space.	M10
DS.	Stress test reports	The report will detail the result of simulations in which the platform is exposed to extremely high levels of traffic, hacking of user data and any other thief or unwanted modification of data.	M11
DS.	Disaster recovery	The report will detail the result of a simulation in which the platform runs a catastrophic failure and the results obtained (including time spent) in order to bring the platform's full functionality back online.	M11
DS.	Data supply and reuse report	The document will cover the supply of new or updated datasets in the reporting period. It will include a definition of high-value datasets as well as an inventory of high-value datasets in the data space. It will also report on links providing interoperable access to other data spaces or platforms in Europe. The report will detail activities and results of data providers support, community engagement and the work done and results achieved in adoption of frameworks and standardisation. The report will also detail activities and results towards reuse by relevant user groups, the offered tools and services for data providers and data users, as well as the evolution in use of the data space. The document will also provide suggestions and comments on suggested	M8

		follow-ups, showing evidence that the offered services are being systematically enriched and improved over time.	
DS.	Users and usage report	The report will include overview and analysis of the activities to reach out to the public and their performance. The report will build on the interaction logs and analytics maintained by the DS operator. The document will also include figures and an analysis on feedback received through user feedback mechanisms and on actions taken in response to the user feedback. The document will also provide suggestions and comments on suggested follow-ups, showing evidence that the offered services are being systematically enriched and improved over time.	M6
DS.	Communication and dissemination plan	The plan will outline the key target audiences and the planned actions to reach and engage with these audiences and the respective KPIs. All subsequent iterations of the plan after the initial version will also report back on results of the work undertaken towards user groups over the past reporting period.	M2, M11

Annex 3: Balance of efforts

The table below provides an overview over the balance of efforts for Y1 of the data space for cultural heritage.

Work packages & tasks	Foreseen % of the full contract value
WP 1: Development and operation of the data space infrastructure	**25.4%**
Task 1.1 Provide reliable data space infrastructure and quality of services	22.7%
Task 1.2 Foster innovation, interoperability & compliance with other data spaces	2.7%
Work package 2: Integration of high-quality data	**17.8%**
Task 2.1 Develop and manage data governance mechanisms	3.6%
Task 2.2 Data acquisition and data improvements	10.9%
Task 2.3 Automated approaches towards data quality	3.3%
Work package 3: Capacity building and fostering reuse	**30.6%**
Task 3.1 Enhance cooperation throughout the Data Space	4.4%
Task 3.2 Identify needs of user groups	1.7%
Task 3.3 Build awareness and engagement	6.9%
Task 3.4 Develop capacity building as a service	3.9%
Task 3.5 Facilitate the provision of high quality data	4.4%
Task 3.6 Facilitating the reuse of high quality data	9.3%
Work package 4: Digital services for the public	**18.7%**
Task 4.1 Deliver high-performing Europeana websites	11.8%
Task 4.2 Engage audiences with digital cultural heritage	6.9%
Work package 5: Programme management	**7.5%**
Task 5.1 Ensure continuous progress monitoring and reporting	6.0%
Task 5.2 Governance	0.6%
Task 5.3 Manage relations with other EU-funded projects	0.7%
Task 5.4 Phasing-in and phasing-out periods	0.2%
TOTAL	**100%**

Annex 4: EU-funded projects' integration overview

This annex showcases the outcomes from the projects funded under the CEF Telecom, Horizon 2020, Erasmus+ and Horizon Europe that are expected to be delivered and integrated in the data space for cultural heritage by the end of the first DS contractual year. It also provides information on outcomes' integration timeline, the DS work area they contribute to and, if applicable, the division between Europeana DS consortium's and project's efforts needed to complete this outcome.

The table below will be updated once the final Grant Agreements for the new Data Space projects are signed.

Supporting Europeana Generic Services (CEF-TC-2020-1) call[93]				
Partner	**Expected Outcomes**	**DS contribution**	**Due Date**	**Comments**
WEAVE - Widen European Access to Cultural Communities Via Europeana[94]				
GS	Integration of the WEAVE experience into Europeana CSP	Task 1.1 Provide reliable data space infrastructure and quality services/ Task 2.2 Data acquisition and data improvements / Task 3.6 Facilitate the reuse of high quality data	Sep 22	The WEAVE experience consists of 3 tools: WEAVEx tool, MotionNotes and WEAVE 3D Asset Manager. The level of integration varies depending on the needs of each specific tool, e.g use of oEmbed or Europeana APIs.
GS/DS	11 project entries[95] on Europeana Pro	Task 3.3 Build awareness and engagement	Sep 22	6 project entries have been published under DSI4-Y4.
GS	10 editorials on Europeana.eu, incl. online exhibition	Task 4.2 Engage audiences with cultural heritage	Sep 22	6 editorials have been published under DSI4-Y4.

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[93] All projects funded under (CEF-TC-2020-1) call end after the end of the reporting period DSI-4 Y4.
[94] https://pro.europeana.eu/project/weave-widen-european-access-to-cultural-communities-via-europeana
[95] Project-related entries refer to entries such as project pages, news, events and more on Europeana Pro.

Jewish History Tour[96]				
GS	35,000 new and upgraded records with geospatial enrichments (incl. 5,000 newly digitised records in Tier4) available on Europeana.eu	Task 2.2 Data acquisition and data improvements	Nov 22[97]	7,540 records with enrichments have been published and 42,237 are in preview during DSI4-Y4.
GS	Validation methodology for enrichments is ready	Task 2.3 Automated approaches towards data quality	Nov 22	-
GS/DS	Enhancement of Europeana API with geospatial querying	Task 1.1 Provide reliable data space infrastructure and quality services	Nov 22[98]	First implementation has been done but it will undergo one last change before release.
GS	Tours available on Europeana.eu via oEmbed	Task 4.2 Engage audiences with cultural heritage	Mar 23	It is expected to link the tours on a blog/blogs (editorials) on Europeana.eu
GS	Contribution to the recommendation engine	Task 1.1 Provide reliable data space infrastructure and quality services	Mar 23	-
GS/DS	Project entries on Pro	Task 3.3 Build awareness and engagement	Mar 23	-
GS	Impact assessment study	Task 3.4 Develop capacity building as a service	Oct 22	-
GS	Multilingual package of training materials (at least 3 EU languages)	Task 3.5. Facilitate the provision of high quality data	Jan 23	-
GS	Recommendations on the cooperation of Europeana Initiative and Cultural Routes of the Council of Europe Programme	Task 3.1. Enhance cooperation throughout the data space	Jan 23	-

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[96] https://pro.europeana.eu/project/jewish-history-tours
[97] The original deadline was July 22 but it was extended by project partners to November 22 to meet all requirements. The new deadline is within the project scope.
[98] The original deadline was July 22 but it was extended by project partners to November 22 to meet all requirements. The new deadline is within the project scope.

EnrichEuropeana+[99][100]				
GS	100,000 new records	Task 2.2 Data acquisition and data improvements	Dec 22	35,000 new records have been published during DSI4-Y4.
GS/DS	100,000 records with enrichments (translations, transcriptions, semantic enrichments)	Task 2.2 Data acquisition and data improvements	Mar 23	Second ingestion of records with enrichments (combination of recently submitted records and records already available on Europeana.eu)
GS	Integration Transcribathon platform and Europeana CSP by implementing single sign-on on Transcribathon platform	Task 1.1 Provide reliable data space infrastructure and quality services	Mar 23	Partners' input implemented by EF in the Europeana CSP.
GS	Call to action button on Europeana.eu	Task 1.1 Provide reliable data space infrastructure and quality services	Mar23	Partners' input implemented by EF in the Europeana CSP.
GS	Automatization of the selection of data on Europeana.eu to be enriched on the Transcribathon tool	Task 1.1 Provide reliable data space infrastructure and quality services	Mar23	Partners' input implemented by EF in the Europeana CSP, plus pending on curatorial requirements such as copyrights and type of content.
GS	2 webinars for CH professionals	Task 3.4 Develop capacity building as a service	Nov 22	1 webinar was held during DSI4-Y4.
GS	3 workshops CHIs and educational institutions	Task 3.4 Develop capacity building as a service	Mar 23	2 workshops were held during DSI4-Y4.
GS	3 transcribathons events	Task 3.6. Facilitate the reuse of high quality data	Nov 22	2 transcribathons were held during DSI4-Y4.
GS/DS	10 editorials pieces on Pro and/or editorials on Europeana.eu	Task 4.2 Engage audiences with cultural heritage/ Task 3.3 Build awareness and engagement	Mar 23	4 editorials have been published during DSI4-Y4. (2 on Europeana Pro and 2 on Europeana.eu)

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[99] https://pro.europeana.eu/project/enricheuropeana
[100] The project was extended for 6 months.

GS	Impact assessment	Task 3.4 Develop capacity building as a service	Feb 23	-
Europeana Subtitled[101]				
GS	6,000 AV records	Task 2.2 Data acquisition and data improvements	Nov 22[102]	4,791 out of 6,000 new records published. The remaining records are expected to be published by the end of the project, 30 Noc 22.
GS	3 Crowdsourced/correction campaigns (edit-a-thons)	Task 3.6. Facilitate the reuse of high quality data	Nov 22	-
GS	3 Subtitle-a-thons campaigns	Task 3.6. Facilitate the reuse of high quality data	Nov 22	-
Gs	Submission of the results of the campaigns to Europeana CSP (subtitles and captions available)	Task 2.2 Data acquisition and data improvements	Nov 22	-
DS	Differentiation of subtitle/caption enrichments on the display at Europeana.eu	Task 3.6 Facilitate the reuse of high quality data	Nov 22	This was an additional request by the data partners of the project. EF aims to deliver by the end of the project in Nov 22.
GS	Online training suite and materials	Task 3.4 Develop capacity building as a service	Sep 22	-
GS	3 capacity building events	Task 3.4 Develop capacity building as a service	Nov 22	-
GS	2 project entries on Europeana Pro.	Task 3.3 Build awareness and engagement	Nov 22	3 editorials available on Europeana Pro.
GS	24 editorials on Europeana.eu (incl. exhibition)	Task 4.2 Engage audiences with	Nov 22	19 editorials have been published during DSI4-Y4

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[101] https://pro.europeana.eu/project/europeana-subtitled
[102] The original deadline was May 22 but it was extended by project partners to November 22 to meet all requirements. The new deadline is within the project scope.

		cultural heritage		
GS	Learning scenarios and lessons plans created and available on Europeana classroom	Task 3.6. Facilitate the reuse of high quality data	Nov 22	-
CRAFTED - Enrich and promote traditional and contemporary crafts[103]				
GS	189,660 new records and 26,300 upgraded records.	Task 2.2 Data acquisition and data improvements	Jun 23[104]	-
GS	100,000 records enriched	Task 2.2 Data acquisition and data improvements5	Jun 23[105]	-
GS	Extension to handle and display enrichments on Europeana.eu	Task 4.2 Engage audiences with cultural heritage	May 23	-
GS	Human-in-the-loop methodology for the enrichment of CH metadata	Task 1.1 Provide reliable data space infrastructure and quality services	Sep 22	-
GS	Crafted toolset	Task 1.1 Provide reliable data space infrastructure and quality services	May 23	-
GS	Crafted guidelines and documentation materials for CH professionals	Task 3.4 Develop capacity building as a service	May 23	-
GS	Crafted training resources on AI and crowdsourcing technologies for education	Task 3.6. Facilitate the reuse of high quality data	June 23	-
GS	24 editorials available on Europeana.eu (incl. 3 exhibitions and 9 blog posts using the media player)	Task 4.2 Engage audiences with cultural heritage	June 23	19 editorials (incl. exhibition) have been published during DSI4-Y4.

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[103] https://pro.europeana.eu/project/crafted
[104] The original deadline was October 22 but it was extended by project partners to June 23 to meet all requirements. The new deadline is within the project scope.
[105] The original deadline was October 22 but it was extended by project partners to June 23 to meet all requirements. The new deadline is within the project scope.

GS	Project entries on Pro	Task 3.3 Build awareness and engagement	June 23	3 project entries have been published on Europeana Pro DSI4-Y4.
GS	3 edit-a-thons campaigns	Task 3.5. Facilitate the provision of high quality data	Jun 23	-
GS	3 workshops for CH professionals	Task 3.5. Facilitate the provision of high quality data	Jun 23	-

Other projects with outcomes to be integrated in DSI

SGoaB- Saint George on a Bike[106]

GS/DS	2 project entries on Pro	Task 3.3 Build awareness and engagement	Feb 23	-
GS	2 crowdsourcing campaigns	Task 2.2. Data acquisition and data improvements	Feb 23	-
GS	1 workshop	Task 3.4 Develop capacity building as a service	Feb 23	-

Europeana Translate[107]

GS	Niche-sourcing campaigns and experts evaluation completed (3 campaigns; selected translated fields from 500 records to be evaluated per language by linguist experts; near human quality (over 89% score on average) for the majority of languages)	Task 2.3 Automated approaches towards data quality	Jan 23	An evaluation of automatic translations will be produced by the engine by linguist experts. 3 crowdsourcing campaigns will be organised by Europeana aggregators for validation of the translation produced by the engines.
GS	Cultural heritage-related datasets with 10 million records (multilingual and monolingual metadata records) sourced from Europeana API, processed	Task 1.2 Foster innovation, interoperability and compliance with other data services Task 2.3 Automated	Jan 23	

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[106] https://pro.europeana.eu/project/saint-george-on-a-bike
[107] https://pro.europeana.eu/project/europeana-translate

	and tagged. Resources will cover the 24 EU official languages. All resources have a free reuse licence (CC0)	approaches towards data quality		
GS	Toolset for processing the multilingual cultural heritage metadata and publishing it to the Europeana platform (23 translation engines deployed)	Task 1.1. Provide reliable data space infrastructure and quality of services Task 1.2 Foster innovation, interoperability and compliance with other data services Task 4.1. Deliver high-performing Europeana website	Mar 23	The tools, pipeline and engine will be connected with Europeana CSP Europeana.eu back and user front will be updated to support multilingual search and item view.
GS	Impact Assessment report prepared	Task 3.4 Develop capacity building as a service	Apr 23	Impact assessment of multilingual translation and engines on European CSP and end-users.
GS	Dissemination report prepared	Task 3.3 Build awareness and engagement Task 3.4 Develop capacity building as a service	Apr 23	Project entries on Pro, so far 1 entry has been published during Europeana DSI4-Y4. A capacity building workshop will be organised and relevant documentation about the overall workflow as well as the technical tools will be created. The documentation will be available online to further support capacity building.
GS	Sustainability plan prepared	Task 1.1. Provide reliable data space infrastructure and quality of services Task 4.1. Deliver high-performing Europeana website	Apr 23	
GS	Metadata records with translations available to Europeana	Task 2.2 Data acquisition and data improvements	Apr 23	A quality assessment and definition of quality filters for the translation suitable

		Task 4.1. Deliver high-performing Europeana website		for Europeana CSP will be done. 25 million metadata records with translation will be available on Europeana.

J-ARK- European Jewish Community Archive[108]

GS	Project entries on Pro	Task 3.3 Build awareness and engagement	Feb 23	-

WATCHLIKEAHIST - Watching videos like historian[109]

Erasmus+	Project entries on Pro	Task 3.3 Build awareness and engagement	Aug 23	-
Erasmus+	Impact assessment	Task 3.4 Develop capacity building as a service	Oct 22	-
Erasmus+	Practitioner guide for AV collections holder available on Europeana Pro	Task 3.5. Facilitate the provision of high quality data	Jun 23	-

InDICEs[110]

H2020	Project entries on Pro	Task 3.3 Build awareness and engagement	Mar 23	-

[108] https://pro.europeana.eu/project/j-ark-european-jewish-community-archive
[109] https://pro.europeana.eu/project/watching-videos-like-a-historian-watchlikeahist
[110] https://pro.europeana.eu/project/indices

Annex 5: Risk management plan

Approach to Risk Management

Europeana Foundation (EF), as the group leader of the Europeana DS consortium, will be responsible and accountable for formally managing risks. Below, an overview is given for the risk management methodology and plan, followed by an initial assessment of risks, presented in the form of a risk log. The detailed risk management methodology, plan and updated risk log will be included in the formal deliverable PM. Risk management plan M3 to be submitted in Nov 2022. The risk log will be reviewed and updated periodically and on an adhoc basis if and as required.

Methodology

The methodology for risk management that will be applied by EF is based on the Prince2 risk management approach. The latter provides guidance regarding the process, procedures, techniques and responsibilities in order to correctly identify, assess, plan and implement risk responses, as well as to clearly communicate risks internally and externally. The approach is used to manage risks at EF and was tailored to comply fully with the tender specifications (for example, to manage governance).

In Prince2, a risk is defined as an uncertain event as it may or may not happen and can impact the project positively (opportunity) or negatively (threat).[111] A contingency plan might be required in order to minimise/enhance the probability or impact of the risk.

Example of a risk - threat: *High traffic in the form of attacks can cause interruptions in the service.*

Example of a risk - opportunity*: A project EF is involved in is planning to develop a tool that will enhance the user experience of disabled visitors. This tool can have great business potential for the data space and it might be possible to integrate it into the platform if some extra work on EF and partners' side is done to ensure alignment of technical requirements with the Europeana website.*

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[111] The traditional view of risks has a negative connotation as they are usually characterised as threats with adverse consequences on project objectives. The Prince2 methodology recognises that risks can have a beneficial effect on the organisation. These types of risks are considered opportunities. Risks with a negative impact (threat) and a positive impact (opportunities) are managed almost the same way.

Risk Management plan

The risk management plan describes the methodology, roles and responsibilities for identifying, assessing, and controlling risks as well as planning for and/or implementing corrective action. It specifies the relevant people/entities responsible, accountable, consulted, and informed (using the RACI approach). This facilitates an effective approach towards governance and efficient liaising with networks of relevant stakeholder groups as well as the relevant public bodies in the EU Member States and at the European level.

The risk management plan outlines roles and responsibilities and presents information towards a risk log. Everyone with an interest in the data space for cultural heritage can flag risks to EF, as the group leader of the consortium, at any time. EF will update the risk log periodically and will communicate any relevant changes to the Commission in the periodic reports and/or ad hoc via direct communication (for example via email).

Roles and responsibilities

There are five roles defined under the risk management plan based on the RACI method. Responsibilities are assigned based on roles: Responsible, Accountable, Consulted, Informed. Additionally, the role of Support is added. Roles and responsibilities for each risk (especially the roles for Consulted and Informed) will be further defined in the governance section of the contingency plan (if applicable).

Role description	Responsible entity
Support	
➔ Ensures overall feasibility of the Europeana DS risk management plan and correct use of the risk log ➔ Ensures that the risk log is up-to-date (after the periodical reviews) ➔ Ensures proper and up-to-date communication of risk to the Commission (via the periodic reports and/or ad hoc via direct communication)	➔ Europeana DS (Europeana Foundation)
➔ Ensures that relevant entities involved in the risk assessment and response are informed and/or consulted.	➔ Europeana DS (Europeana Foundation) ➔ Project Officers (European Commission)
Responsible	

➔ Assesses the risk, proposes plans for and/or implements corrective action (if needed) ➔ Consults with other entities (if needed) ➔ Maintains and updates risk log (and contingency plan) as needed	➔ Europeana DS (Europeana Foundation)
Accountable	
➔ Reviews and provides feedback on the assessment of risks and to contingency plans and/or corrective actions (if needed)	➔ Europeana DS (Europeana Foundation)
Consulted	
➔ Reviews and provides feedback on the assessment of risks, contingency plans and corrective actions (if needed)	➔ Project Officers (European Commission) ➔ Other entities (see section governance of the contingency plan, if applicable)
Informed	
➔ Is informed about the risk and provides feedback (if needed)	➔ Project Officers (European Commission) ➔ Other entities (see section governance of the contingency plan, if applicable)

Risk log

The assessment of risks will be registered in a dedicated risk log (accessible to the contracting authority). A draft version of the risk log is available below including an initial list of assessed risks foreseen for the data space for cultural heritage.

Risks in the log are classified according to the five Work Packages (WPs) and further identified by tasks as presented in the technical tender. This allows managing the risk by area of work to be delivered. Each risk is further assessed in terms of impact, probability, and priority. Risks responses are controlled and planned for with dedicated contingency plans (if needed). The contingency plan will also manage risk governance and show the historic assessment of each risk. The templates provided below are used for developing and following up risk contingency plans for identified risks.

Risk revision history of contingency plan

Date of update	Person adding the update	Entities involved in revision	Comment on update

Governance

Entity	Europeana DS	EC	CEDCHE	ENA	EAF	Others
Role						
Comments						

Please assign roles to the table above based on the RACI method.

Role	Explanation
R	Entity is responsible for the risk.
A	Entity is accountable for the risk.
C	Entity will be or is consulted with the risk.
I	Entity will be or is informed about the risk.

Risk contingency plan

Date	
Performance Area	
Risk ID	
Impact *If negative add Threat if positive add Opportunity*	
Response	

Key responsibilities	
Who?	**What?**
Timeline	
What?	**When?**

Initial Risk Log

The risk log provided below is based on an initial assessment of risks associated with the deployment of the DS.