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DEGLI STUDI  
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PER LE BIBLIOTECHE

# Towards 'A FAIR-enabling citation model for Cultural Heritage Objects'

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## Open Science and citability of data

Data citation can bring benefits in terms of:



Researcher  
accreditation and  
recognition



data reuse



transparency and  
reproducibility



Evaluation of  
research results

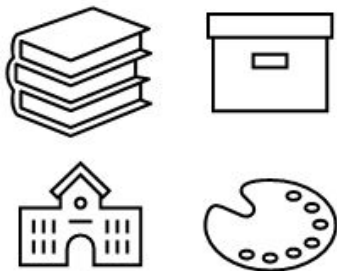
Making data citable can be seen as a cornerstone  
for achieving Open Science.

## Cultural Heritage objects and data

- Inherently cross-disciplinary

### Domain of provenance

GLAM (Galleries, Libraries, Archives and Museums)



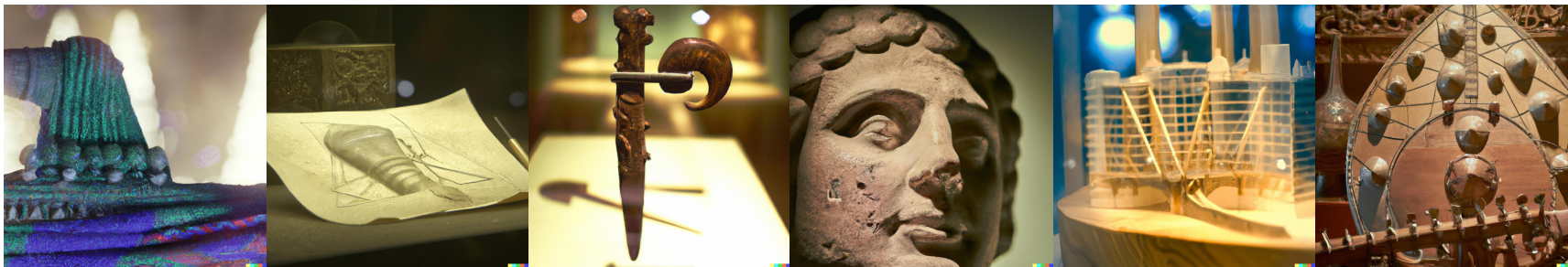
### Domain of research

Heritage Science and Digital Humanities



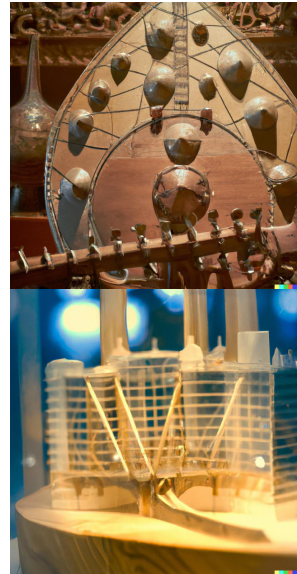
## Cross-disciplinarity, cross-disciplinary

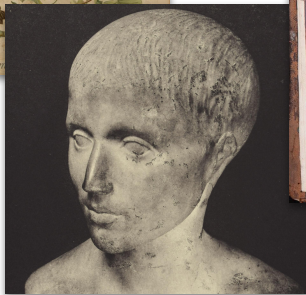
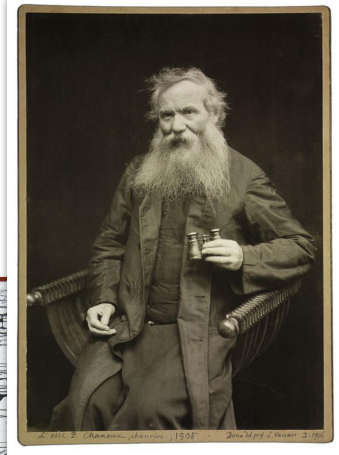
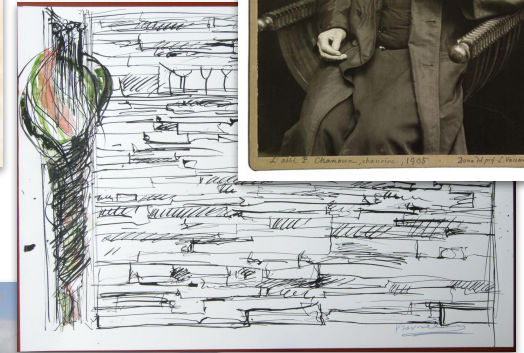
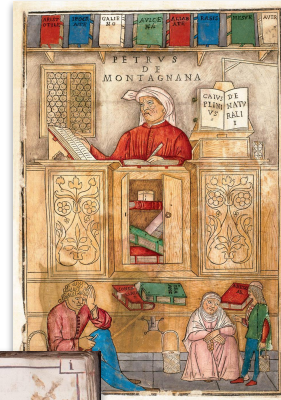
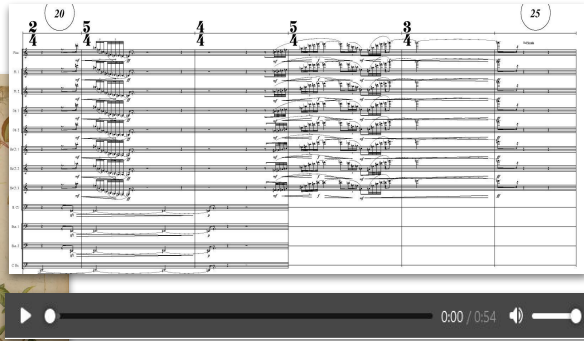
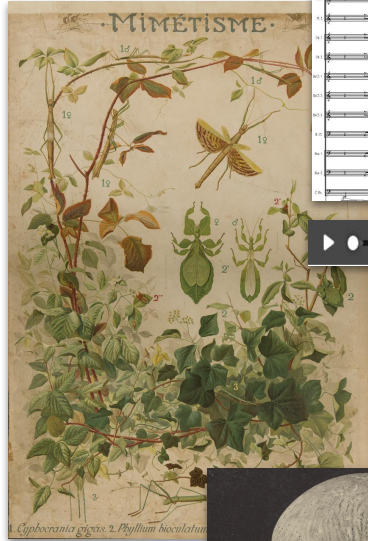
Integration from the point of view of the disciplinary perspective and the research methods, and interaction from the point of view of the research skills and the level of disciplinary collaboration.



## Digital Cultural Heritage Object

*By definition, the digital cultural heritage object (CHO) represents a complex aggregation of information, the integrative level of which is established by the conflation of the dual physical and digital valences, where the information resource and the type of media inform the vehicle of the represented cultural artefact.*







## Digital Cultural Heritage

*DCH [Digital Cultural Heritage] is represented by the ecosystem of processes, entities, digitised and born-digital records, which capture in metadata and other structural and content components the information and narratives about their creation, transformations and user interactions over time, serving as sources of knowledge and historical memory for future generations, and thus becoming testimonies of the evolution of communities in the Digital Age.*

(Nicola Barbuti. *La digitalizzazione dei beni documentali: metodi, tecniche, buone prassi*. Milano: Bibliografica, 2022, p. 108)

See also: *Piano nazionale di digitalizzazione del patrimonio culturale*, pp. 5 ff. <https://digitallibrary.cultura.gov.it/il-piano/>.



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A FAIR-enabling citation model  
for Cultural Heritage Objects

# How to cite?





## The project “A FAIR-enabling citation model for Cultural Heritage Objects”

### Aim

To design a sustainable, robust, and FAIR-enabler cross-domain citation model, specifically addressed to Cultural Heritage Objects (CHO)

### Goal

To demonstrate the multidimensionality of the citation property of the cultural heritage object

### Context

*Cross disciplinary science adoption RDA Open Call*

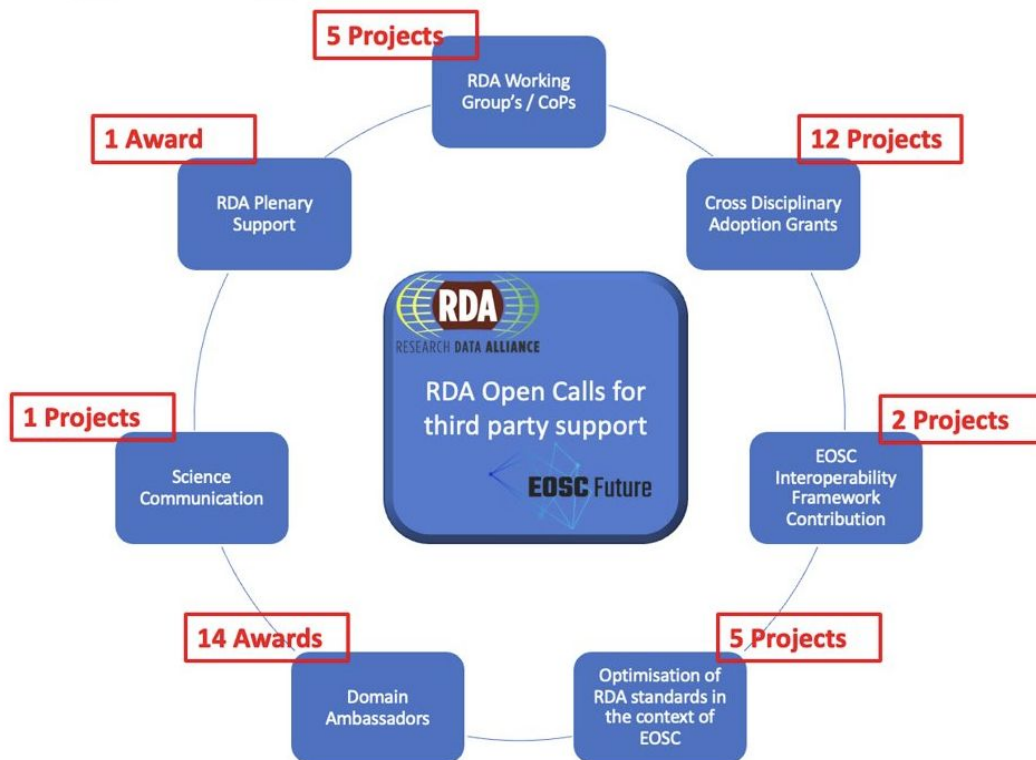
### Duration

8 months



- **Objective:** ensure the engagement with and involvement of diverse stakeholders to achieve the overall project goals & RDA contribution to EOSC at different stages over the lifetime of the project.
- **Target:** European Third Parties
- **Total Budget:** €1,000,000
- **Total Calls:** 25+ (using Cascading grant mechanism)
- **Timeline:** June 2021 – July 2023





41 Grants  
14 Ambassadors  
27 Projects

### Ambassadorship

Individual grant, ~12 months  
networking focus

### Projects

Team grant ~6 months  
deliverable focus

Source: RDA/EOSC Future Open  
Calls



## Cross disciplinary science adoption RDA Open Call

- **Call focus:** Scientific discipline and domain specific support (For individuals and organisations)
- **Topic:** Cross disciplinary science adoption grants
- **Funding categories:** Domain and discipline specific organisations not represented in the project adopting RDA outputs in support of EOSC implementation
- **Support criteria:** Dedicated infrastructure, service, etc. for implementation of technical or domain specific solutions
- **Expected EU impact:** Implementation and maintenance of open and community based standards and solutions for EOSC by scientific communities in discipline specific repositories and infrastructures to support EOSC interoperability and, ultimately, uptake
- **Total budget:** € 400,000.00; **estimate unit rate:** € 50,000



## Cross disciplinary science adoption RDA Open Call, grantees' projects

- **11 projects:** 5 funded through the 1st open call edition (July 2022) and 6 funded through the second one (September 2022)
- **Countries:** Serbia (1) - Romania (1) - Germany (1) - Germany and Luxembourg (1) - United Kingdom (1) - Latvia (2) - Switzerland (2) - Poland (2) - France (2) - Austria (2) - Italy (2)
- **Scientific Domains:** Social sciences - Psychology and cognitive sciences; Sociology - Economics - Geography - Spatial planning; Semantic web - structured metadata - life sciences; Biocomputational models; Bioinformatics; Occupational Health and Safety; Wind energy; Interdisciplinary; Data Science; Geo-Science - Biodiversity - Ecological Engineering - IT & Data Consultant; Digital Humanities, Heritage Science, Library and Information Studies, Computer and Information sciences
- **Awardees profile:** group/organisation 9, 6 of which are led by research units; individual researcher/professional (2)
- **Active period:** from October 2022 to September 2023

See: <https://www.rd-alliance.org/eosc-future-open-call-projects>





## RDA - Research Data Alliance

- Planned and launched in 2013
- An international grassroots member-based organisation focused on the development of infrastructure and community activities that reduce barriers to data sharing and exchange, and the acceleration of data-driven innovation worldwide
- With more than 13,900 members globally representing 151 countries, RDA includes researchers, scientists, and data science professionals working in multiple disciplines, domains and thematic fields and from different types of organisations across the globe.



***RDA is building the social and technical bridges that enable open sharing of data to achieve its vision of researchers and innovators openly sharing data across technologies, disciplines, and countries to address the grand challenges of society.***

## What does RDA do: Working and Interest groups



- Members come together through self-formed, volunteer and focused **Working Groups and exploratory Interest Groups** to exchange knowledge, share discoveries, discuss barriers and potential solutions, explore and define policies and test as well as harmonise standards to enhance and facilitate global data sharing & re-use.
- Working and Interest groups are the heart of RDA:

**Working Groups** conduct short-lived, 12-18 month efforts that implement specific tools, code, best practices, standards, etc., at multiple institutions

**Interest Groups** have a broader scope and longer life. They work to define common issues and interests that ultimately lead to the creation of more focused Working Groups.





## RDA Categories of Recommendations & Outputs

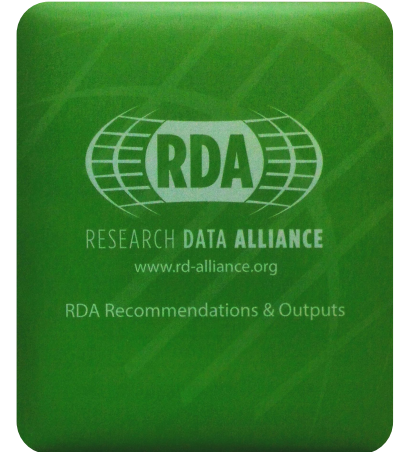
**Recommendations:** RDA's flagship outputs and the equivalent of “specifications” or “standards” that other organisations create and endorse.

**Supporting Outputs:** RDA outputs that originate from the work of RDA groups, but not always adoptable by other organisations. “Upon request” by RDA groups, these outputs are reviewed by the RDA member community and if no major objections or gaps are identified, they are approved to use the RDA Brand.

**Other Outputs:** These are workshop reports, published articles, survey results, etc. produced by RDA groups. Upon request by the groups, these outputs are posted on the RDA website but have no level of endorsement.

**38 RDA Recommendations - of which 8 ICT Technical Specifications - & 37 Supporting Outputs currently in the RDA Catalogue:**

<https://www.rd-alliance.org/recommendations-and-outputs/catalogue>





## EOSC, EOSC Future, and RDA Open Calls. What EOSC is



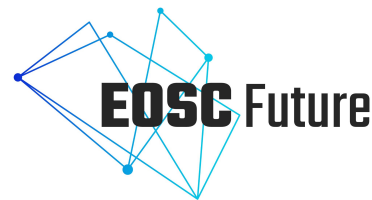
**EOSC (European Open Science Cloud)** is an envisioned federation of research (data) infrastructures that will create a **web of FAIR data and services for science**.

EOSC will be a **key enabler for Open Science** and will support researchers in sharing and exploiting research products (e.g. as data, publications, and code) through **value-added horizontal (i.e. cross-disciplinary) and thematic (i.e. discipline-specific) services**.

*To unlock the full potential of research data  
to accelerate discoveries and innovation*



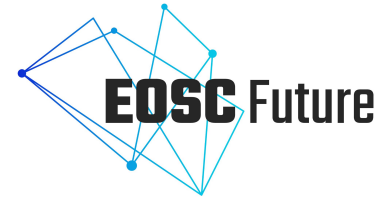
## EOSC, EOSC Future, and RDA Open Calls. What EOSC Future is



- Horizon 2020 project (Grant agreement ID: 101017536 )
- Funded under the program EXCELLENT SCIENCE - Research Infrastructures, funding scheme RIA - Research and Innovation action (e.g., TRIPLE; SSHOC; FAIRsFAIR; EOSC Nordic)
- Start date 1 April 2021 - End date 30 September 2023
- Total cost € 42.077.088,84
- Coordinated by Athena Research Centre (=ATHINA-EREVNITIKO KENTRO KAINOTOMIAS STIS TECHNOLOGIES TIS PLIROFORIAS, TON EPIKOINONION KAI TIS GNOSIS)
- 92 participants, among them the Italian CINECA, CNR, INFN, SNS... etc.



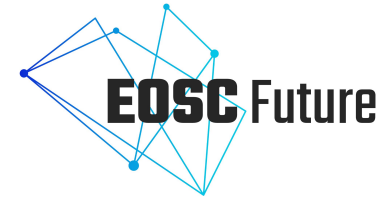
## EOSC, EOSC Future, and RDA Open Calls. What EOSC Future is and plans



- EOSC Future responds to **INFRAEOSC-03-2020 call** in order to integrate, consolidate, and connect e-infrastructures, research communities, and initiatives in Open Science to further develop the EOSC Portal, EOSC-Core and EOSC-Exchange of the European Open Science Cloud (EOSC)
- Designed on **6 thematic pillars** organised in **11 Working packages**, aimed to make incremental improvements to the European Open Science Cloud platform in **3 phases**
- Develop a virtual environment with professional data services, open research products and infrastructure with the objective to create a so-called ‘system of systems’ that will support European researchers in managing the entire lifecycle of data: from sharing, managing, and exploiting their own data to discovering, re-using and recombining the data sets of others

See: <https://cordis.europa.eu/project/id/101017536>

## EOSC, EOSC Future, and RDA Open Calls. what RDA Open Calls is, rationale



- Allowing the EOSC expand project to ensure the engagement with and involvement of diverse stakeholders to achieve the overall EOSC Future goals at different stages over the lifetime of the project
- Cascading Grant mechanism (as per Annex K H2020 EC work programme)  
Budget earmarked amounts to €1,000,000 entrusted to Technopolis Group Belgium
- Distributed across **6 (--> 7) different calls** (also in double editions) in the following way: focus, topic, support criteria, expected EU impact, total budget, estimated unit rate (June 2021-June 2023)
- **WP1 T1.5** for contractual management and coordination of the Annex K – RDA Open Call / Cascading Grant mechanism and **WP10 Activity 10.2.3**, responsible for the scientific and research orientation and content of the calls in close collaboration with **WP3, 4, 5 and 6**
- The open calls will be designed within the framework of the RDA Guiding principles of **Openness, Consensus, Inclusivity, Harmonisation, Community-driven, Nonprofit, and technology-neutral.**



**RDA Europe**  
@RDA\_Europe

 **Closing!** RDA [@EOSCFuture](#) Open Call for Cross-Disciplinary Adoption. Just a week to go to apply.

✓ max €50 000 (each)

✓ closing: 15/09 @ 16.00 CEST

Learn more: [eoscfuture-grants.eu/provider/resea...](https://eoscfuture-grants.eu/provider/resea...)

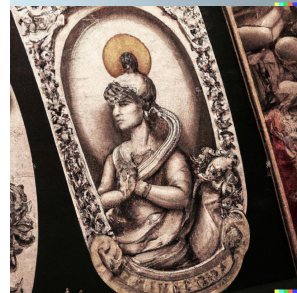
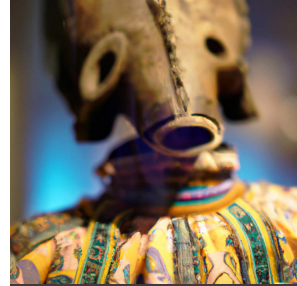
[#Openscience](#) [#FAIRdata](#) [#Funding](#) [#Grants](#) [#Research](#) [#EUfunded](#)  
[#EOSC](#)



# A FAIR-enabling citation model for Cultural Heritage Objects

## Driven research questions

- What is meant by a digital cultural object / Cultural Heritage Object (CHO)?
- What are the functional citation requirements that can identify the citability of the digital representation of the cultural artefact?
- How to ensure the inheritance of provenance from the adopted data model to certify its reliability in terms of the FAIR guiding principles of Findability, Accessibility, Interoperability, and Reusability?

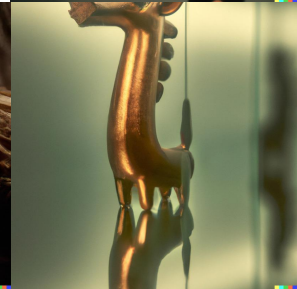
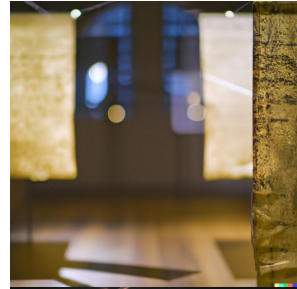




## How, purposes

By defining a citation model whose reliability and trustworthiness are established according to:

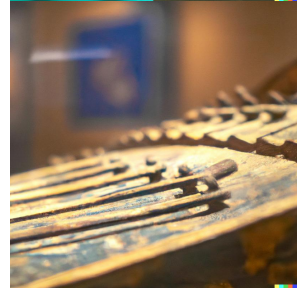
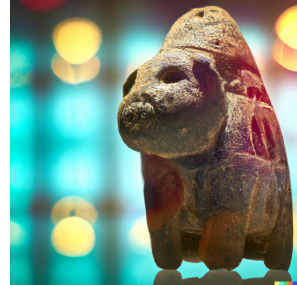
- the application, purposes, and relevance assumed by the reference citation context,
- while preserving the cross-domain inheritance of the citation instance of cultural data.







*From this perspective, the citation model itself can be regarded as a semantic artefact, keeping memory of the entire data citation chain, the evidence for which should be demonstrated on the basis of the purpose of use, level of applicability, and relevance assumed with respect to the context of the citation of cultural data, as well as with respect to the relevant disciplinary domain, while preserving the provenance of the cited cultural data, and thus the whole traceability of its inherent authenticity.*



## Methodology

The project grew out of a spark of intuition. It was designed by:



The identification of replicable methodologies for each phase of the project.



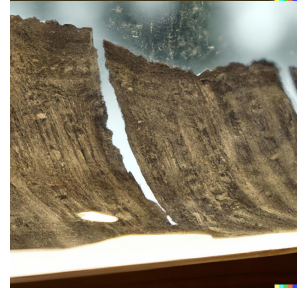
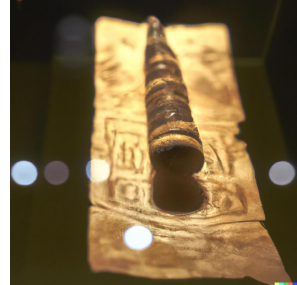
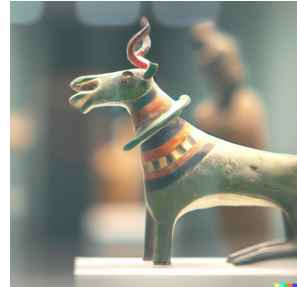
The setting up and analysis of a variety of different typologies of case studies



## How, methodology & key-phases

1. Definition of the archetype of digital Cultural Heritage Object
2. Definition of the critical citation elements of a Cultural Heritage Object
3. Development, both in terms of content and functionality, of a context-sensitive schema extension in the Metadata Standards Catalog to support dynamic citation of CHOs in non-native contexts.

Evaluation of the FAIRness of the Cultural Heritage Object citation model





## Macro-activities

**A1** / Digital-CHO-Representation consisting of reviewing the literature and creating the FAIR-CHO Citation Model Zotero Library Group Bibliography

**A2** / Examination of three different types of case studies aimed at capturing the citation relevance of cultural heritage objects and data from a cross-disciplinary perspective: 1. Cross disciplinary exploratory interviews; 2. Digital repositories data citation practices; 3. Cultural data and data metrics

**A3** / Study of three digital archives selected as case studies for the identification of the critical citation elements in support of the development of the citation model

**A4** / Schema Extension Development dealing with the evaluation and development, both in terms of content coverage and functionality, of a context-sensitive schema extension in the RDA Metadata Standards Catalog (MSC)

**A5** / Elaboration of an ontological citation model aligned with CIDOC CRM to formulate extended and semantically structured bibliographic citations for cultural objects, while adhering to the FAIR principles.

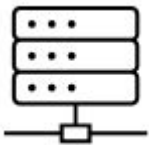
## Cultural entities citation in act. Questions



Literature review



Exploratory interviews



Quantitative analysis of  
the citation practices of  
digital repositories



Citation analysis of  
cultural entities

## ...and emergences



Limited coverage of the topic, as revealed by the literature review



Researchers struggle to cite cultural objects



Lack of guidance from digital archives



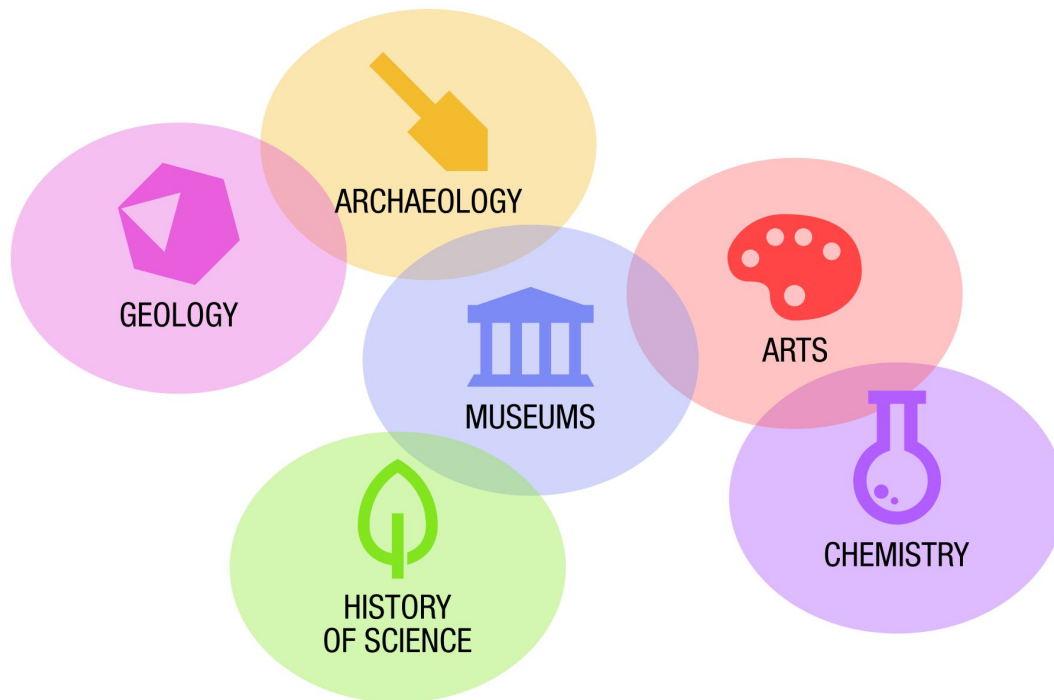
The cultural object is generally "missing" from citations



## Exploratory interviews. Rationale

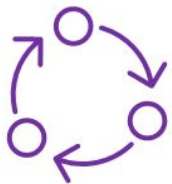
- Point of view of CHO consumer, user, producer
- What is meant by a digital cultural object / Cultural Heritage Object (CHO)?
- Reference models for the representation of a CHO
- Identification of sources used for the retrieval of cultural objects
- Experiences in direct and indirect CHO citation
- Problems in CHO citation experiences
- Definition of the CHO critical citation elements

## Cross-disciplinarity of the cultural object: interviewees' research domains





## Exploratory interviews. Methodology



Cross-disciplinary domains

Free sharing of ideas,  
experiences and stimuli



Canvas with

12

questions



10

Semi-structured  
interviews



Qualitative research  
(grounded theory)



UniPd research community

30

Minutes (planned time)





*“From your point of view and research perspective, what do you mean by cultural object?”*

«Un oggetto è culturale quando è comunemente riconosciuto da una popolazione di riferimento come oggetto che riveste un valore storico, artistico, antropologico...»

«Il mio oggetto culturale privilegiato è il corpo. Gli oggetti che uso per fare ricerca sono film, video, fotografie»

«C'è un qualcosa di intangibile che trasforma l'oggetto tangibile in oggetto culturale»

*«Uno stesso oggetto può avere un interesse culturale per me, ma non averlo per qualcun altro»*

«I confini stessi dell'idea di interesse culturale si sono molto allargati... La definizione dovrebbe essere molto vasta»

«Il mio oggetto culturale preferito è la terra: è il tramite per il quale altri oggetti culturali acquistano un valore, un mediatore fondamentale per dare interesse culturale agli oggetti che contiene»

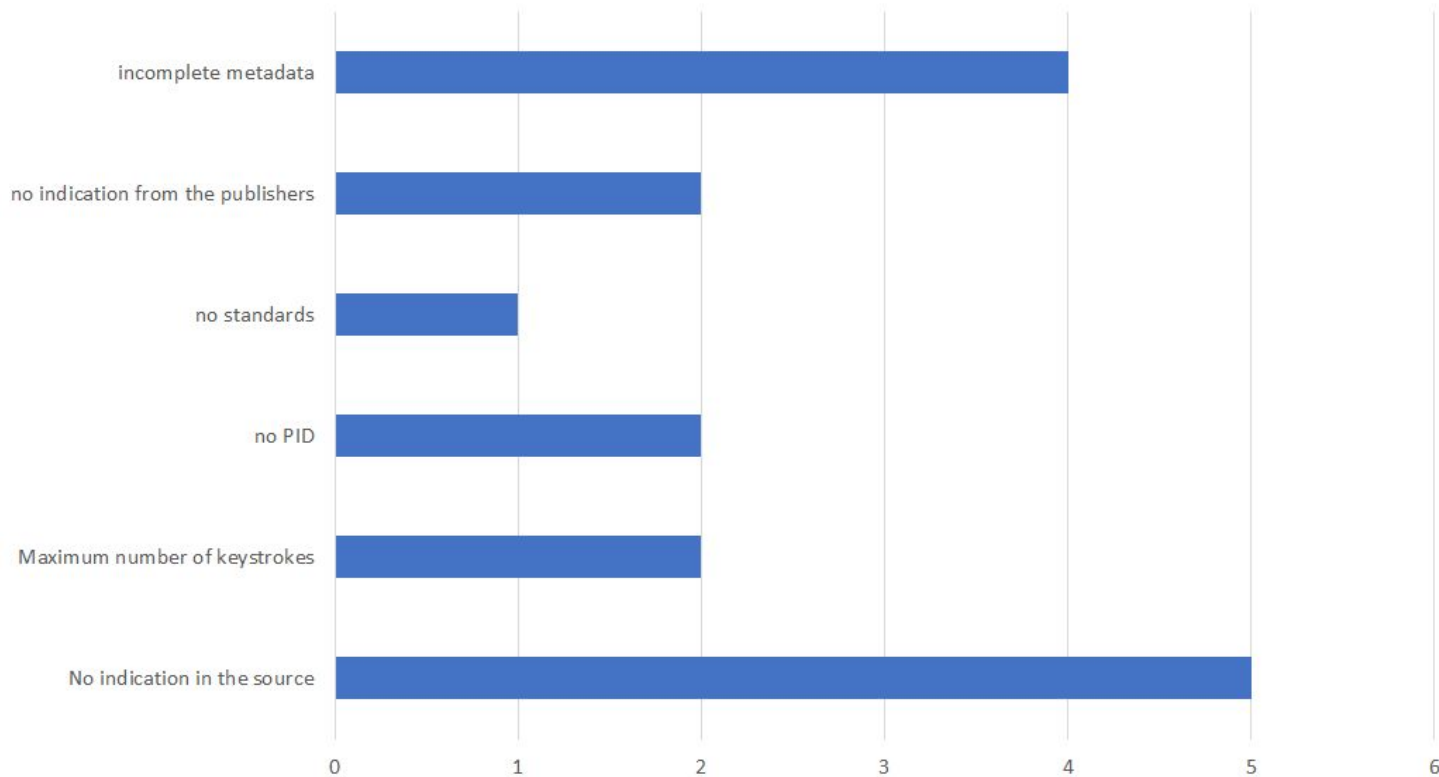
*«Anche i luoghi sono oggetti culturali, in quanto portatori di informazioni e di significati»*

*“Which elements should never be missing in the citation of a digital (cultural) object?”*

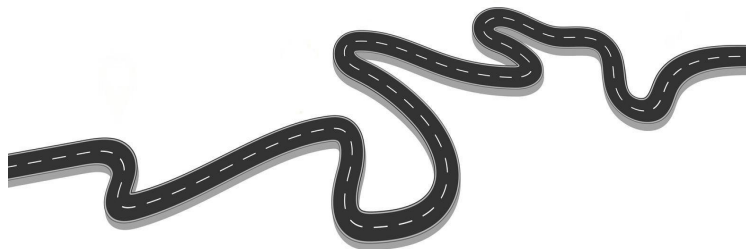
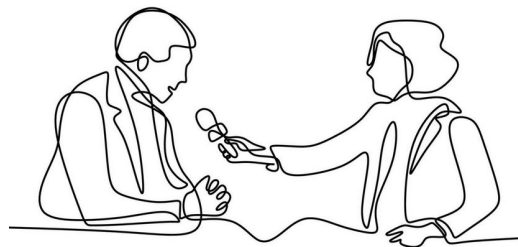




*“Which problems did you experience in cultural objects citation?”*



## The interviews evolution



From  
*Exploratory Interviews*

To  
*Open Conversations*



## Data repositories citation practices. Rationale

Investigate the citation practices of data repositories.

*Do data repositories – indexed in repository registries – provide guidelines to cite data deposited in the repositories?*



## What is a repository registry?

A searchable database indexing metadata records that describe data repositories

- re3data.org  
<https://www.re3data.org/search>
- FAIRsharing.org  
<https://fairsharing.org/search?fairsharingRegistry=Database>
- OpenDOAR  
<https://v2.sherpa.ac.uk/opendoar/>

How to describe a data repository? [RDA Data Repository Attributes WG](#)

# PHAIDRA repositories registry records

GENERAL INFORMATION

**PHAIDRA - University of Padua (Phaidra)**

[10.25504/FAIRsharing.692301](https://doi.org/10.25504/FAIRsharing.692301)

Type

Repository

Registry

Database

Description

Phaidra (Permanent Hosting, Archiving and Indexing of Digital Resources and Assets) is the University of Padua Library System's platform for long-term archiving of digital collections. Phaidra hosts various types of digital objects (antiquarian books, manuscripts, photographs, wallcharts, maps, learning objects, films, archive material and museum objects). Phaidra offers a search facility to identify specific objects, and each object can be viewed, downloaded, used and reused to the extent permitted by law and by its associated licences. The objects in the digital collections on the Phaidra platform are sourced from libraries (in large part due to the digitisation projects promoted by the Library System itself), museums and archives at the University of Padua and other institutions, including the Ca' Foscari University and the Università Iuav in Venice.

Homepage

<https://phaidra.cab.unipd.it/>

Year of Creation

2010

Repository details



## PHAIDRA - University of Padua

General	Institutions	Terms	Standards
Name of repository	<b>PHAIDRA - University of Padua</b>		
Additional name(s)	Digital collections of the University of Padua		
Repository URL	<a href="https://phaidra.cab.unipd.it/">https://phaidra.cab.unipd.it/</a>		
Subject(s)	<b>Humanities and Social Sciences</b>		
Description	<p>Phaidra (Permanent Hosting, Archiving and Indexing of Digital Resources and Assets) is the University of Padua Library System's platform for long-term archiving of digital collections. Phaidra hosts various types of digital objects (antiquarian books, manuscripts, photographs, wallcharts, maps, learning objects, films, archive material and museum objects). Phaidra offers a search facility to identify specific objects, and each object can be viewed, downloaded, used and reused to the extent permitted by law and by its associated licences. The objects in the digital collections on the Phaidra platform are sourced from libraries (in large part due to the digitisation projects promoted by the Library System itself), museums and archives at the University of Padua and other institutions, including the Ca' Foscari University and the Università Iuav in Venice.</p>		
Contact	<a href="https://phaidra.cab.unipd.it/info/contact">https://phaidra.cab.unipd.it/info/contact</a> <a href="https://bibliotecadigitale.cab.unipd.it/en/helpline">https://bibliotecadigitale.cab.unipd.it/en/helpline</a>		
Content type(s)	<a href="#">Other</a> <a href="#">Structured text</a> <a href="#">Plain text</a> <a href="#">Raw data</a> <a href="#">Audiovisual data</a> <a href="#">Images</a>		
Certificates and Standards	<b>CoreTrustSeal</b>		
Keyword(s)	<a href="#">Italy</a> <a href="#">academic</a> <a href="#">cultural heritage</a> <a href="#">digital preservation</a> <a href="#">libraries</a> <a href="#">museums</a>		
Persistent identifier(s) of the repository	<a href="https://doi.org/10.25430/phaidra">doi.org/10.25430/phaidra</a> <a href="https://doi.org/10.25504/FAIRsharing.692301">FAIRsharing_doi:10.25504/FAIRsharing.692301</a>		
Repository size	426.000 digital objects		
Repository type(s)	institutional		
Mission statement for designated community	<a href="https://bibliotecadigitale.cab.unipd.it/biblioteca-digitale/archivi-istituzionali/mantenimento-infrastruttura-tecnologica">https://bibliotecadigitale.cab.unipd.it/biblioteca-digitale/archivi-istituzionali/mantenimento-infrastruttura-tecnologica</a>		





## Analysis workflow

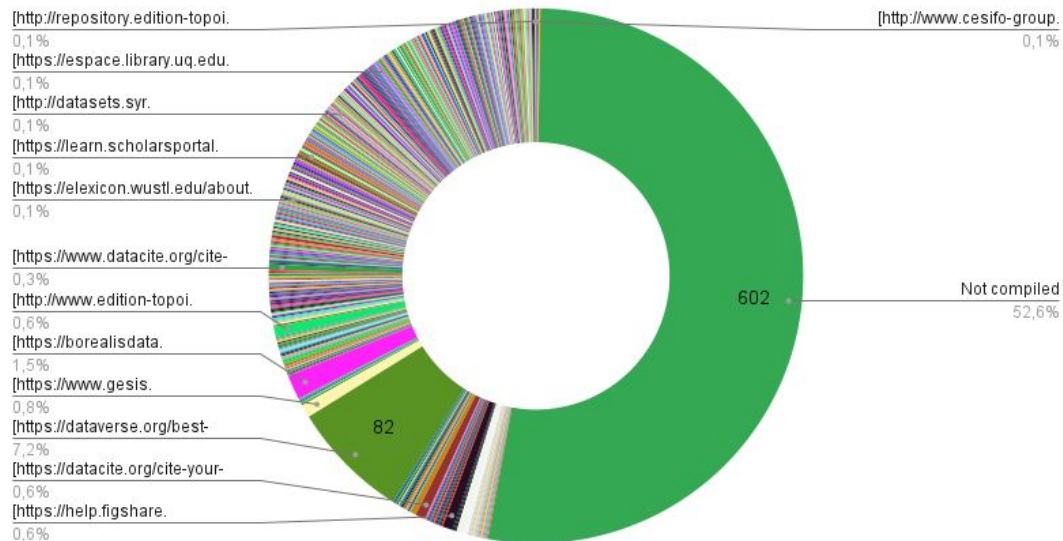
- Based on public data available in **re3data.org** repositories registry
- Metadata records (re3data.org Metadata Schema v2.2) retrieved via re3data.org API and refined using **OpenRefine** tool
- Focused on **Social Sciences and Humanities** domain where we expected to find most of the Cultural Heritage data repositories records

## r3d:CitationGuidelineURL

Compiled	Not compiled	Total
542	602	1144

### SSH Repositories - Citation Guideline URL

Data retrieved: 23 February 2023

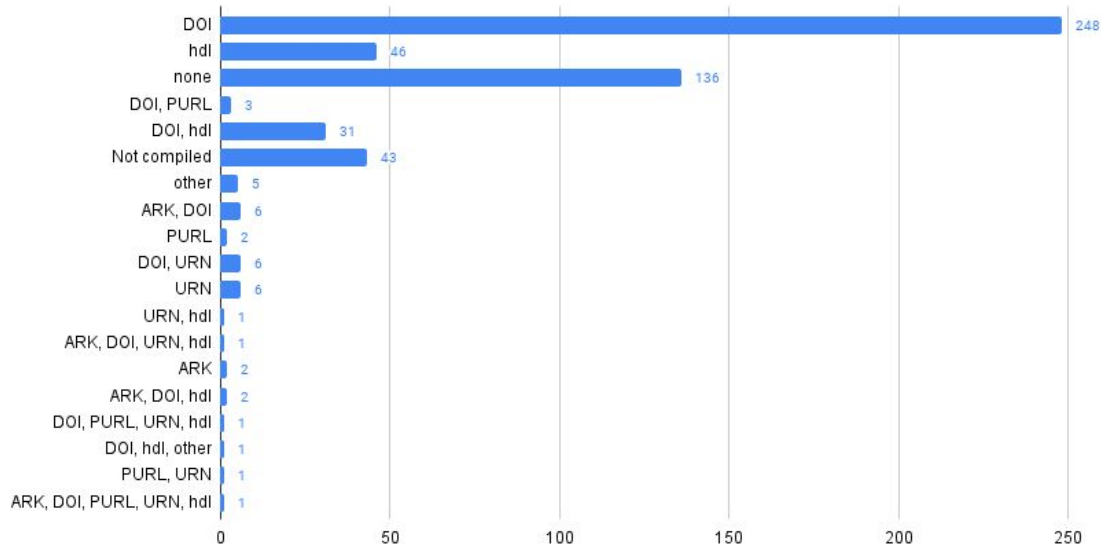




## r3d:PIDSystem

### SSH Repositories - PID System where Citation URL is not empty

Data retrieved: 23 February 2023





## Findings

- Less than half of the records in the “Humanities and Social Sciences” subject area have the “Citation Guideline URL” metadata element filled in. A non-negligible part of those records links to the same web page ([Dataverse Best Practice on Data Citation](#)).
- Around one-third of the records providing the “Citation Guideline URL” don’t declare any persistent identifier.

*Are data repositories aware of the importance of providing guidelines to cite the deposited data?*



## Further developments

In-depth analysis on a subset of European repositories selected as case studies. The selection criteria are:

- Cultural Heritage domain
- Typology of service provided (repository/aggregator/catalogue)
- Feedback gathered from the Cultural Heritage community project interviews/consultations

## The missing tile. Rationale

- The FAIR Principles and their implementation
- Persistent identifiers and where to find them
- Define identities for digital and cultural objects ...
  - ... and avoid confusing them!
- Linking resources the proper way
  - *the missing tiles*
- Towards a new (and possibly more efficient) citation model





## The FAIR Principles



# F1: (Meta) data are assigned globally unique and persistent identifiers

*«Globally unique and persistent identifiers remove ambiguity in the meaning of your published data by assigning a unique identifier to every element of metadata and every concept/measurement in your dataset»*

### **Concepts:**

introducing the digital representation of real-world concepts in the domain of discourse (i.e., the digital world)

### **Interoperability (the “I” of FAIR)**

Define unambiguous digital identities for data and concepts for linking resources



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## Persistent Identifiers for:

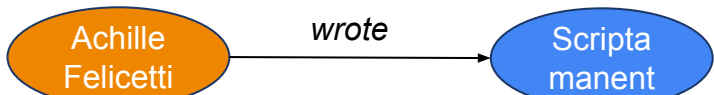
- People (VIAF, ORCID, ...)
- Organisations (GRID, ROR, ...)
- Places (TGN, Geonames, ...)
- Publications (ISNI, VIAF, ISBN)
- Objects (Handle, DOI, ARK, ...)
  - Physical Objects
  - Conceptual Objects
  - Digital Objects
  - [Cultural Objects]

ORCID

Connecting Research and Researchers

### Article title

Author A , Author B , Author C, Author D, Author E 



ORCID: 0000-0003-4733-3171

DOI: 10.1007/s00799-016-0189-z

Is this you? [Sign in to start editing](#)

Printable version

Name

**Achille Felicetti**



<https://orcid.org/>

**0000-0003-4733-3171**

Work

Sort

#### Heritage Science and Cultural Heritage: standards and tools for establishing cross-domain data interoperability

International Journal on Digital Libraries

2021-09-03 | Journal article

DOI: [10.1007/s00799-019-00275-2](https://doi.org/10.1007/s00799-019-00275-2)

CONTRIBUTORS: Lisa Castelli; Achille Felicetti; Fabio Proietti

[Show more detail](#)

Source: Crossref

#### Enabling European Archaeological Research: The ARIADNE E-Infrastructure

Internet Archaeology

2017 | Journal article

DOI: [10.11141/ia.43.11](https://doi.org/10.11141/ia.43.11)

CONTRIBUTORS: Nicola Aloia; Ceri Binding; Sebastian Cuy; Martin Doerr; Bruno Fanini; Achille Felicetti; Johan Fihn; Dimitris Gavriilis; Guntram Geser; Hella Hollander et al.

[Show more detail](#)

Source: Crossref

#### Scripta manent: a CIDOC CRM semiotic reading of ancient texts

International Journal on Digital Libraries

2017-11 | Journal article

DOI: [10.1007/s00799-016-0189-z](https://doi.org/10.1007/s00799-016-0189-z)

CONTRIBUTORS: Achille Felicetti; Francesca Murano

[Show more detail](#)

Source: Crossref

#### Open Source Free Software e Open Format nei processi di ricerca archeologica

Il Workshop Open Source, Free Software e formati aperti nei processi di ricer-ca archeologica, Istituto

Internazionale di Studi Liguri

2013-07-31 | Journal article

DOI: [10.5334/bae](https://doi.org/10.5334/bae)

[Show more detail](#)






# What about Cultural Objects? A matter of identity

**National Gallery of Art** Admission is always free Open today: 10:00 to 5:00 Directions Play Artie

Visit Collection Exhibitions Calendar Learn Conservation Research Support Shop

Home > Collection > Woman with a Parasol - Madame Monet and Her Son



**Claude Monet**  
*Woman with a Parasol - Madame Monet and Her Son, 1875*

West Building, Main Floor - Gallery 85

**Medium** oil on canvas

**Dimensions** overall: 100 x 81 cm (39 3/8 x 31 7/8 in.)  
framed: 119.4 x 99.7 cm (47 x 39 1/4 in.)

**Credit Line** Collection of Mr. and Mrs. Paul Mellon

**Accession Number** 1983.1.29

**Artists / Makers** Claude Monet (artist) French, 1840 - 1926

**Image Use** This image is in the public domain.  
Read our full Open Access policy for images.

**Custom Prints** Order reproductions from the Gallery Shop

Image Description

**LIBRARY** LIBRARY OF CONGRESS

Everything

The Library of Congress > Linked Data Service > LC Name Authority File (LCNAF)

**Monet, Claude, 1840-1926. Woman with a parasol**

**URI(s)**  
- <http://id.loc.gov/authorities/names/n2005026057>

**Components**  
- Monet, Claude, 1840-1926.  
- Woman with a parasol

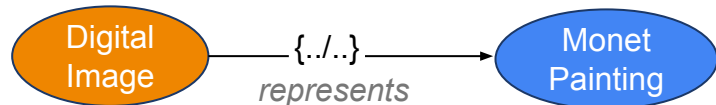
**Exact Matching Concepts from Other Schemes**  
- <http://viaf.org/viaf/sourceID/LC%7Cn+2005026057#skos:Concept>

**Closely Matching Concepts from Other Schemes**  
- [Woman with a Parasol - Madame Monet and Her Son](#) [Label from public data source Wikidata](#)  
- [Woman with a parasol \(Monet, Claude\)](#)

**Sources**  
- found: Monet, Claude. Woman with a parasol, 2004:p. 7 (painted in 1875)  
- found: Havlice, P. World painting index, 1977, v. 2:(Woman with a parasol; C. Monet)

**Instance Of**  
- MADS/RDF NameTitle  
- MADS/RDF Authority  
- SKOS Concept

«Ceci n'est pas un Monet»





# Persistent identifiers and institutions Who should assign them?

## {BnF} Archives et manuscrits

Accueil Présentation de l'IR

ACTUALITÉS

UNE QUE:

Département des Manuscrits > Latin > Latin > Latin 8823-11503 [Nouveau fonds latin] > Latin 8823-8921

### Latin 8846



Cote : Latin 8846

Ancienne cote : Supplément français 1132bis

Ancienne cote : Supplément latin 1194

Psalterium Cantuariense [Psautier anglo-catalan, dit Psautier de Canterbury]

XII<sup>e</sup> siècle (quatrième quart).

Angleterre (Canterbury).

Réserver

#### Documents de substitution

Il existe une version numérisée de ce document.

Numérisation effectuée à partir d'un document original

Ce manuscrit a été numérisé dans le cadre de « France-Angleterre, 700-1200 : manuscrits, médiateurs de la Bibliothèque nationale de France et de la British Library, un programme de la Fondation Polonsky ».

[Voir le document numérisé](#)

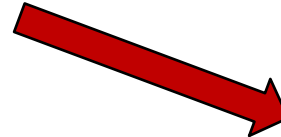


<http://archivesetmanuscrits.bnf.fr/ark:/12148/cc62380>

6



Cross references between  
cultural and digital objects





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# Persistent identifiers and institutions

## Digital objects vs. cultural objects

Digital Object Persistent ID:  
<https://gallica.bnf.fr/ark:/12148/btv1b10551125c>



*"Relationship"*

Cultural Object Persistent ID:  
<http://archivesetmanuscris.bnf.fr/ark:/12148/cc623806>

← → ↻ 🏠 <https://gallica.bnf.fr/ark:/12148/btv1b10551125c>

**(BnF Gallica)** ALL

PAR TYPES DE DOCUMENTS PAR THÉMATIQUES PAR AIRES GÉOGRAPHIQUES BLOG

Homepage > Consultazione

**Psalterium Cantuariense [Psautier anglo-catalan, dit Psautier de Canterbury]**  
Hieronymus (saint ; 0345?-0420). Auteur du texte

SYNTHESIS >

ABOUT >

Title : Psalterium Cantuariense [Psautier anglo-catalan, dit Psautier de Canterbury]  
Author : Hieronymus (saint ; 0345?-0420). Auteur du texte  
Author : Anselmus Laudunensis (1050?-1117). Auteur présumé du commentaire  
Publication date : 1176-1200  
Contributor : Christ Church de Canterbury. Ancien possesseur  
Contributor : Jean (duc de Berry ; 1340-1416). Ancien possesseur  
Contributor : Marguerite d'Autriche (1480-1530). Ancien possesseur  
Contributor : Marie (reine de Hongrie ; 1505-1558). Ancien possesseur  
Contributor : Croÿ, Charles (1560-1612 ; duc de)  
Subject : Bibliothèque nationale de France. Département des manuscrits -- Manuscrit Latin 8846

**Relationship :**  
<http://archivesetmanuscris.bnf.fr/ark:/12148/cc623806>

Type : manuscript  
Language : latin  
Language : french, old  
Language : english, old  
Format : Angleterre (Canterbury). - Copié à Christ Church de Canterbury sur le Psautier d'Eadwine ; cf. infra. - Écriture de différents modules : celui employé pour la version

**mea a unbus**  
meum ad te  
ad vocem cla  
moris mei.  
deus meus  
quia te depre  
cor Domine  
meum ad te ora  
bo domine

**In fine p ea que**  
bereditate con  
sequit ps dauid  
vgr ecclē.

**In finem pro ea que**  
bereditate confequi  
tur ps no ugr ecclē.

**mea a unbus**  
pepe domine  
mellige clamorem meum.

**Intende uoci orationis mee**  
meus & deus meus  
mam ad te orabo domine.

# Citations and metadata: the missing tile ...

## Digital and Cultural Objects: Where is Stonehenge?

Wessex Archaeology (2005) *Stonehenge 20th Century Excavations Databases* [data-set]. York: Archaeology Data Service [distributor] <https://doi.org/10.5284/1000258>



iD

iD

iD

iD

iD

David Nash, Jake Ciborowski, Tobias Salge, Magret Damaschke, Steven Goderis (2021) *Petrography, Geochemistry and Mineralogy of the Stonehenge Sarsens: Digital Data Collection* [data-set]. York: Archaeology Data Service [distributor] <https://doi.org/10.5284/1084808>



Historic England (2018) *HE7238 - Stonehenge Southern World Heritage Site Survey* [data-set]. York: Archaeology Data Service [distributor] <https://doi.org/10.5284/1047612>



i Title:	Stonehenge Southern WHS Project: Vespasian's Camp, Amesbury, Wiltshire: analytical earthwork survey
i Series:	Historic England Research Reports
i Downloads:	<a href="#">englishh2-280433_1.pdf (17 MB)</a> <a href="#">Download</a>
i Licence Type:	ads ADS Terms of Use and Access
i DOI:	<a href="https://doi.org/10.5284/1042244">https://doi.org/10.5284/1042244</a>
i Author:	Mark Bowden
i Publisher:	Historic England
i Other Person/Org:	Historic England (OASIS Reviewer) Wiltshire and Swindon HER (OASIS Reviewer)
i Year of Publication:	2016
i Locations:	Site: Vespasian's Camp County: Wiltshire District: Wiltshire Parish: AMESBURY Country: England Grid Reference: 414600, 141600 (Easting, Northing)
i Subjects / Periods:	HILLFORT (Monument Type England) FIELD SURVEY (Event)
i Identifiers:	OASIS Id: englishh2-280433 OBIB: 49/2016
i Note:	A4 bound report of 35pp.
i Source:	OASIS OASIS (OASIS)
i Relations:	Project archive: <a href="https://doi.org/10.5284/1047612">https://doi.org/10.5284/1047612</a>
i Created Date:	18 Aug 2017

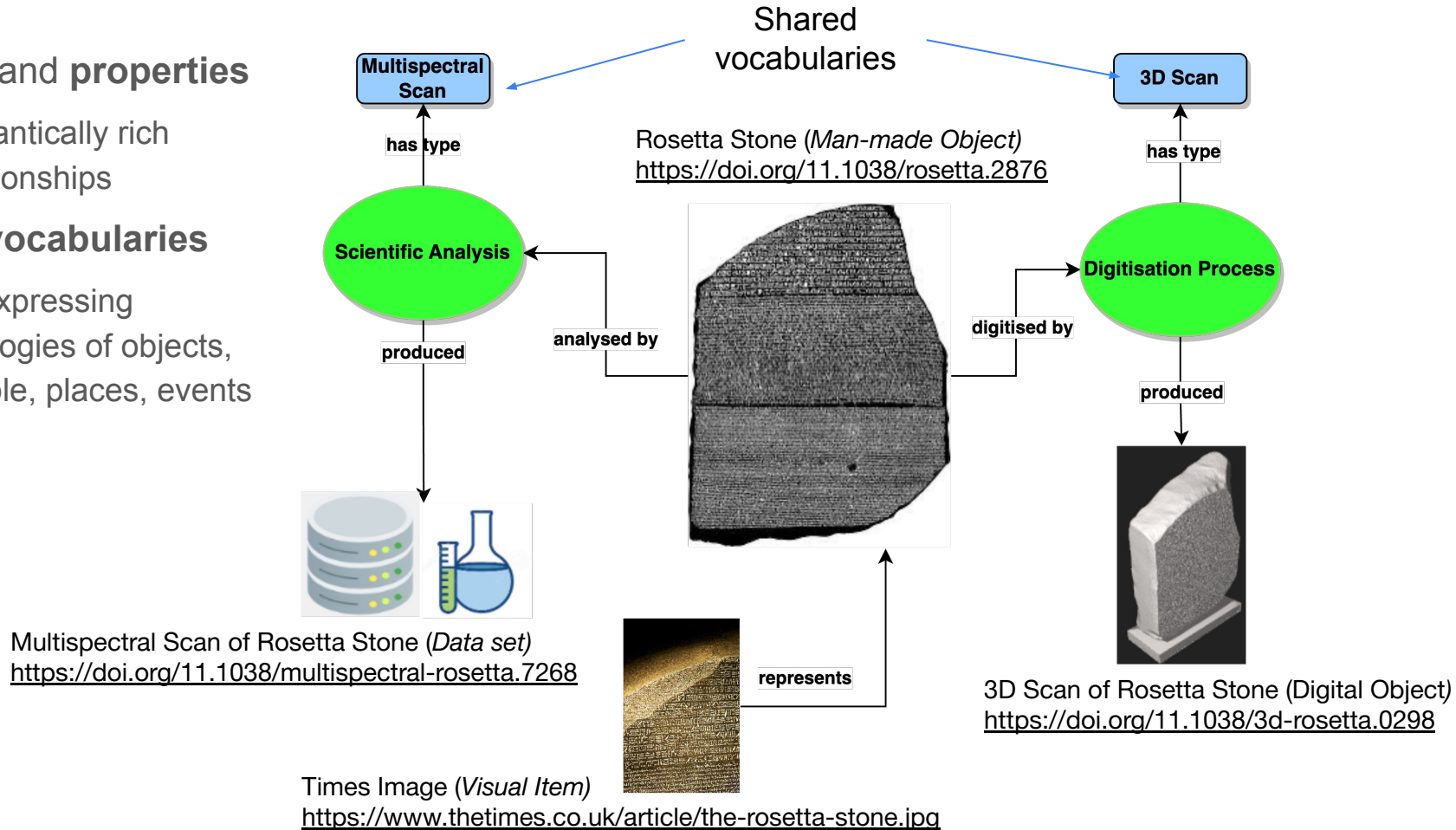
# Ontologies: creating meaningful knowledge ...

## Classes and properties

semantically rich relationships

## Shared vocabularies

for expressing typologies of objects, people, places, events





# ... towards a meaningful citation model

Achille Felicetti (2023). 3D Model of Rosetta Stone. PIN, Università degli Studi di Firenze, Prato. [Digital obj]. <https://doi.org/11.1038/3d-rosetta.0298>.  
[ 3D Scan of <https://doi.org/11.1038/rosetta.2876>. ]

Relationship  
Clause

Cultural Object  
Identifier

Relationship clauses → Shared Vocabularies

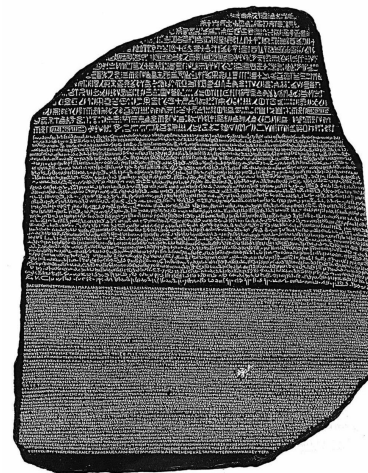
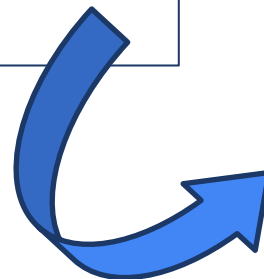
About

Scan of  
Laser Scan of  
3D Scan of  
[...]

Analysis of  
Imaging of  
XRF of  
Tomography of  
Multiscan of  
[...]

Study of  
Archaeological Study of  
Linguistic Study of  
[...]

[...]



Lisa Castelli (2023). Advanced Multispectral Scan of Rosetta Stone. INFN Firenze. [Data set]. <https://doi.org/11.1038/multispectral-rosetta.7268>.  
[ **Multispectral of** <https://doi.org/11.1038/rosetta.2876>. ]

Relationship  
Clause

Cultural Object  
Identifier



## **Rationale. Schema extension development: The RDA Metadata Standards Catalog as a home for citation practices**

Investigate tools to use the citation practices

*Can we use the Metadata Standards Catalog to provide guidelines  
and tools for citation practices?*



## What is the Metadata Standards Catalog?

A collaborative, open directory of metadata standards applicable to research data.

- Website  
<https://rdamsc.bath.ac.uk/>
- created by the RDAMSC Working Group  
<https://www.rd-alliance.org/groups/metadata-standards-catalog-working-group.html> and maintained by RDA Metadata IG  
<https://rd-alliance.org/groups/metadata-ig.html>
- Uses UNESCO Thesaurus  
<https://vocabularies.unesco.org/browser/thesaurus/en/>

## Metadata Standards Catalog

The RDA Metadata Standards Catalog is a collaborative, open directory of metadata standards applicable to research data. It is offered to the international academic community to help address infrastructure challenges.

[Read more details about the scope of the Catalog](#)

[Read our terms of use](#)

[Read our accessibility statement](#)

[Contribute to the Catalog](#)

[Explore our API](#)

### Metadata standards, profiles and schemes

[Browse by scheme name](#)

[Browse by subject](#)

[Search](#)

### Metadata-related entities

[Browse mappings between schemes](#)

[Browse metadata-related tools](#)

[Browse organizations](#)

[Browse funders](#)

[Browse organizations that maintain schemes](#)

[Browse known users of schemes](#)

[Browse organizations that have endorsed schemes](#)

[Browse endorsements](#)



## How to describe a metadata standard? A brief tour in the data model

Source: [Metadata Standards Catalog WG Final Report | RDA](#)

License: <http://creativecommons.org/licenses/by/4.0/>



**Table 1.1:** The entities of the MSC data model and their elements.

Metadata Scheme	Tool	Mapping	Organization	Endorsement
identifiers	identifiers	identifiers	identifiers	identifiers
locations	locations	locations	locations	locations
title	title		name	
data types	types		type	
description	description	description		citation
versions	versions	versions		
keywords	creators	creators		date issued
samples				date valid

**Table 1.2:** Relationships between entities in the MSC data model.

Entity	has...	Entity
Metadata Scheme	parent scheme	Metadata Scheme
Metadata Scheme	maintainer	Organization
Metadata Scheme	funder	Organization
Metadata Scheme	user	Organization
Tool	supported scheme	Metadata Scheme
Tool	maintainer	Organization
Tool	funder	Organization
Mapping	input scheme	Metadata Scheme
Mapping	output scheme	Metadata Scheme
Mapping	maintainer	Organization
Mapping	funder	Organization
Endorsement	endorsed scheme	Metadata Scheme

More details on entities schemas: <https://app.swaggerhub.com/apis-docs/alex-ball/rda-metadata-standards-catalog/2.0.0#/Slug>

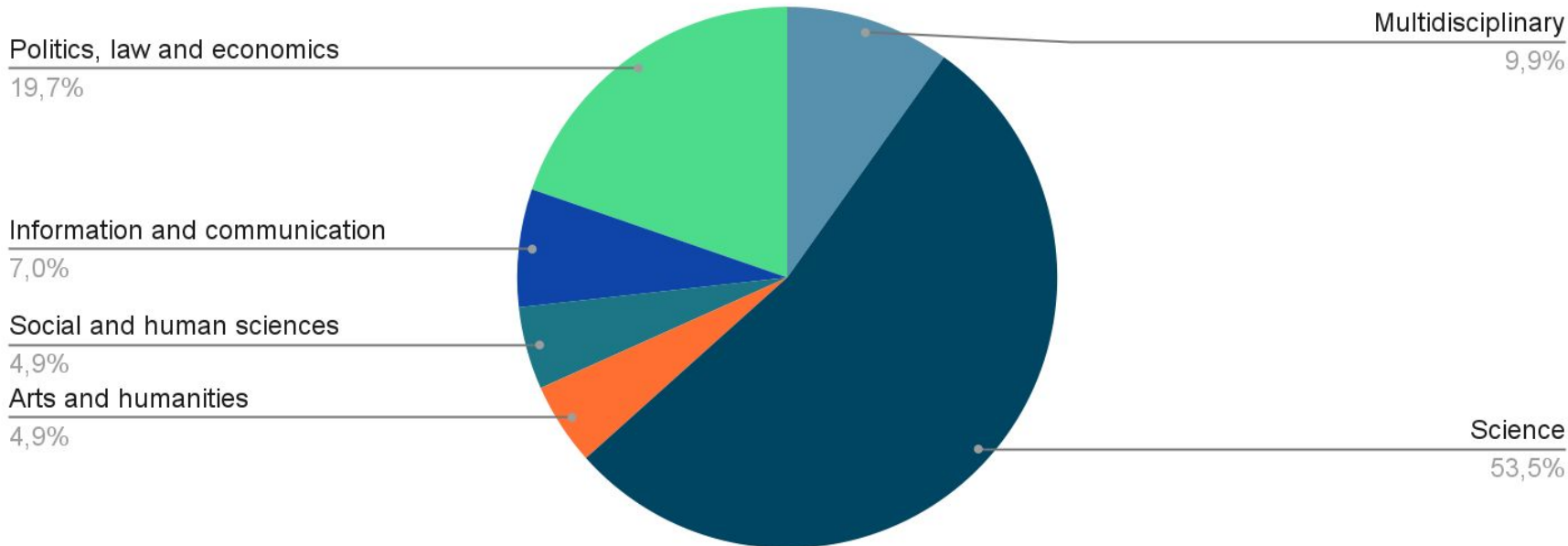


## Highlights on the RDA Metadata Standards Catalog

- This activity is based on evolving project analysis and outcomes (case studies, essential metadata, ...)
- Catalog records (custom schema) retrieved via Metadata Standards Catalog version 2.0.0 API (data retrieved on May 2023)

## Highlights on the RDA Metadata Standards Catalog

### Schema distribution by subject



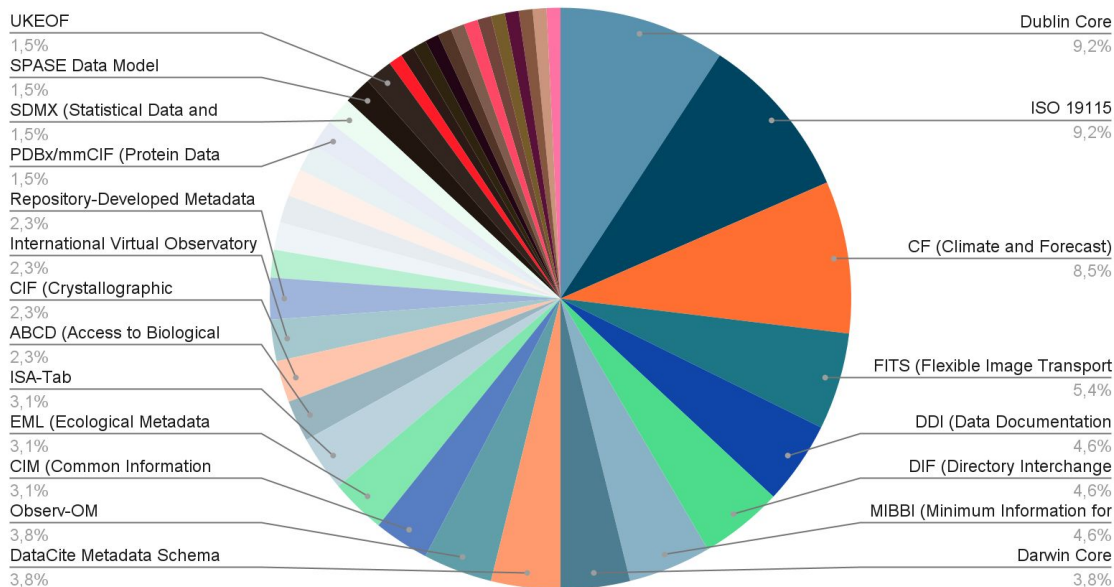


## Highlights on the RDA Metadata Standards Catalog

### Standards with most known users

(\*) Warning: this data just represents the Catalog records

Standards with most known users





## Provide a tool and practice guidelines: a proposal

- Domain subject categories: consistency and assessment of the cultural heritage domain on a cross-disciplinary basis
- Guidelines on citation: how to cite research data described by a specific metadata schema in a specific subject domain

*Are the metadata schema of the cultural heritage domain currently well represented by the catalogue?*



## Provide a tool and practice guidelines: a proposal

- Implementation of a guide on essential metadata elements to cite the CHO based on the context of the discipline or domain.
- A descriptive guide describing the procedures to identify and use the citational elements using the context/domain as a further refinement. For a particular use case, create a small prototype to implement the use case crosswalk.



# Outcomes



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## A4 Schema Extension Development (<https://zenodo.org/records/8224167>)

In the context of the Cultural Heritage domain, we examined the consistency and evaluated the MSC subject domains with a view to enriching the Catalog with the metadata standards widely used by the Cultural Heritage research community.



## Outcomes

### 3.3 Findings and Discussion

As a detailed analysis of all Catalog metadata standards is beyond the scope of the project analysis, we decided to focus on metadata standards with non-CH subject domains that already adopt the citation as part of the data model, such as the GBIF metadata standard<sup>17</sup>.

As further evidence, we can think of citation as the common ground that interconnects “things”, i.e. the need to identify and provide information that allows the “thing” to be found. From this perspective, citation can be seen as

- part of the data model (metadata schemas, applied ontologies)
- part of the hosting context (repositories “Cite as” feature, museum record cards, library catalogues)
- used to refer to the “thing” itself.

This last role of the citation can be found mainly on “things” with a strong cultural background, such as Cultural Heritage Objects.

#### 3.3.1 Citation as part of the data model

Especially in scientific metadata schemas, the resources that are the subject of the study are not easy to identify, or may not be mentioned at all. For example, a dataset collecting axial tomography data or chemical analyses rarely cites the CHO that is the subject of the study.

The GBIF metadata standard provides detailed guidelines for data citation<sup>18</sup>, including extensive examples<sup>19</sup> and descriptions<sup>20</sup>.

“This more consistent, standardized approach has now enabled us to auto-generate all text citations for datasets”, states the GBIF FAQs, and “encourage consistent citation of data use”<sup>21</sup>. This clearly

## A4 Schema Extension Development (<https://zenodo.org/records/8224167>)

We investigated whether the MSC could play a role in guiding researchers to include relevant citation information in their project metadata, disciplinary metadata and dataset metadata, thereby fostering cross-disciplinary information integration while proving, at the same time, how citation can act as a FAIR-enabling factor.





## Outcomes

### Implement the Citation Documentation field in Scheme and Organization #11

Draft yurj wants to merge 3 commits into rd-alliance:live from yurj:live

Conversation 6 Commits 3 Checks 0 Files changed 7

yurj commented on Jul 27 • edited ▾ ...

To strengthen the FAIR enabling of CH citation, we propose to add the "Citation Documentation" property to the metadata standard descriptors to describe the support for citation by the metadata standard and to describe how to cite resources (for example, CHOs).

Also, repositories can have citation guidelines, so we propose to add "Citation Documentation" to the Organisations fields, to fill in when applicable.

As a prototype implementation of this proposal, we implemented those fields in this PR.

The proposal is part of "[A FAIR-enabling citation model for Cultural Heritage Objects](#)" project activities.

### A4 Schema Extension Development (<https://zenodo.org/records/8224167>)

Created a pull request on the main repository of the RDA Metadata Standards Catalog:  
<https://github.com/rd-alliance/metadata-catalog-v2/pull/11>

(<https://zenodo.org/records/8191748>)

supplementing the proposal of addition of citation-specific fields to the metadata standards description in the RDA Metadata Standards Catalog (MSC)



## CHO Citation Elements. Repository Case Studies

- Defining the critical citation elements of a cultural heritage object (CHO) constitutes one of the key activities of the project A FAIR-enabling citation model for Cultural Heritage Objects and represents the foundational core upon which the establishment of the citation model is hinged
- The definition of a methodological approach based on applied qualitative analysis
- The development of descriptive model specifically designed to meet semantic citation criteria from a cit(ation)-actionability perspective to capture relevant information about the repositories under study and their data citation practices.



## Case studies: the template

The template is articulated into three sections:

- General
- Data citation
- Use cases

<p>Data model</p> <p>Brief description of the data model and/or related documentation URL.</p>	<p>E.g.:</p> <p>Phaidra data model is... <a href="https://phaidra.univie.ac.at/metadata-fields-help">https://phaidra.univie.ac.at/metadata-fields-help</a></p>
<p>Resource types</p> <p><i>r3d:contentType - All types of resources available in the research data repository.</i></p> <p>Term from <a href="#">COAR Resource Types Vocabulary 3.1</a>.</p>	<p>E.g.:</p> <p>Image</p> <p>Sound</p> <p>Video</p> <p>Text</p> <p>Other (e.g. 3D Object)</p>
<p>Metadata standards</p> <p><i>r3d:metadataStandard - The metadata standard the research data repository complies with.</i></p> <p>Standard name and URI from the <a href="#">RDA Metadata Standards Catalog</a> (preferable) or the <a href="#">Bartoc.org - Basic Register of Thesauri, Ontologies &amp; Classifications</a>, or Other (provide related URL).</p>	<p>E.g.:</p> <p>Dublin Core &lt;<a href="https://rdamsc.bath.ac.uk/msc/m15">https://rdamsc.bath.ac.uk/msc/m15</a>&gt;</p> <p>MODS &lt;<a href="https://rdamsc.bath.ac.uk/msc/m97">https://rdamsc.bath.ac.uk/msc/m97</a>&gt;</p> <p>DataCite Metadata Schema &lt;<a href="https://rdamsc.bath.ac.uk/msc/m11">https://rdamsc.bath.ac.uk/msc/m11</a>&gt;</p> <p>CIDOC CRM &lt;<a href="https://bartoc.org/en/node/1644">https://bartoc.org/en/node/1644</a>&gt;</p>
<p>Object landing page metadata</p>	<p>E.g.:</p>



## Case studies: the selected digital repositories



### Archaeology Data Service

National Archive of the UK for data on archaeology and the historic environment



### Digital Repository of Ireland

Irish national archive dedicated to data from the domains of the humanities, cultural heritage and social sciences



### Phaidra - University of Padua

Platform of the University Library System of the University of Padua that hosts the cultural heritage digitised by the institutional users of the University and by the collaborating institutions.



## Case Studies: general principles

A3 CHO Citation Elements. Repository Case Studies. [Zenodo](#) (2023)  
[Distributor]. <https://doi.org/10.5281/zenodo.8249060>, [is about] [citations](#)

- A citation model for CHOs is the conflation of cultural heritage object and digital representation in such a way that those who cite or use the citation can transparently understand what each component of the citation refers to.
- If the act of citation occurs in the context of a collection of data or a complex citation context, the context may provide a source for the citation.



## Case Studies: general principles

- A citation model for CHOs always refers to both the CHO and its digital representation, and consistently uses events, relationships, properties to relate to the “objects in the middle” in the citation. For instance, to cite the digitisation of a photograph of a painting, the citation will reflect a component part about the painting, a component part about the digitisation, and then use a property to add information pertaining to the photograph that describes the event of digitisation.
- A citation model for CHOs can make use of ontologies or semantic qualifications to make the citation components explicit when appropriate.



## Case Studies: Digital Repository of Ireland

HOME REPOSITORY - DEPOSIT - RESOURCES - OUR WORK - NEWS & EVENTS - ABOUT - WORKSPACE

Irish Orchestral Music - a selected list / Akanos by Gráinne Mulvey

**Akanos by Gráinne Mulvey** -- Back to Search

Browse 1 of 2 →

Object Tools

- Full Metadata
- Export and Note
- Cite

Download asset

**DOI**  
10.7486/DRI.5999vs329

**Title**  
Akanos by Gráinne Mulvey

**Description**  
Score sample and audio excerpt

**Creators**  
Mulvey, Gráinne  
Contemporary Music Centre

**Composer**  
Mulvey, Gráinne

**Creation Date**  
2006

**Publishers**  
Unpublished

**Subjects**  
Music  
Orchestral Music  
Ireland  
Irish Composers

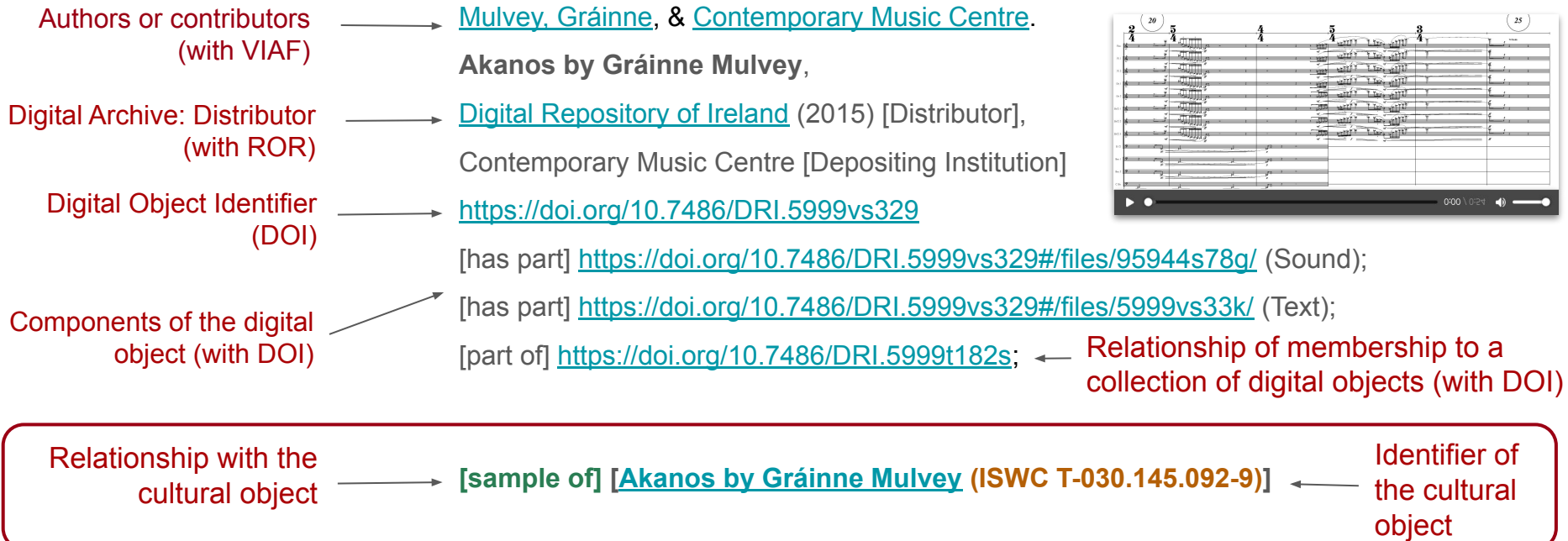


### Cite

Mulvey, Gráinne, & Contemporary Music Centre. (2015) Akanos by Gráinne Mulvey, Digital Repository of Ireland [Distributor], Contemporary Music Centre [Depositing Institution], <https://doi.org/10.7486/DRI.5999vs329>

Citation Style: dri v Copy to Clipboard Close

## Model proposal: an example





## Model proposal: an example

PHAIDRA



Author —> Fra Giorgio da Venezia

Lepidio, Consolida, Consolida Regale

Digital Archive: Distributor  
(with ROR)

[PHAIDRA - University of Padua](#) [Distributor] (2023)

Digital Object Identifier  
(Handle)

<https://hdl.handle.net/11168/11.332593> [Image, Book part]

Relationship of membership  
to a collection of digital  
objects (with Handle)

[is about] [Lepidium latifolium L.](#), [Consolida regalis S.F. Gray cv.](#)

[part of] [Erbario farmaceutico c. 1730](#)

Topic of the digital  
object (GBIF  
taxonomy)

Relationship with the  
cultural object

**[image of]** [Erbario farmaceutico c. 1730 \(1730\)](#)

**[Biblioteca dell'Orto Botanico - Ar.54]**

**[Manuscripts (documents), Herbaria (documents), Natural history specimens]**

Signature of  
the cultural  
object

Getty AAT  
Thesaurus



## A FAIR-enabling Citation Model for Cultural Heritage Objects: relevance in the RDA context

- Close correlation with the recommendations and outputs issued by the working and interest groups promoted by RDA
- Three main axes, embodied in actions concerning
  - **CHO identification**
  - **CHO representation and description**
  - **CHO attribution and citability**

Date	RDA I/W Groups	RDA I/W Groups Focus	FAIR-CHO Citation Model	RDA Endorsed Recommendations	Date
2022	<a href="#">Working with PIDs in Tools IG</a>		<b>IDENTIFYING</b> Identification - Identify		
2014	<a href="#">PID IG</a>		<b>IDENTIFYING</b> Identification - Identify		2014
2017	<a href="#">Physical Samples and Collections in the Research Data Ecosystem IG</a>		<b>IDENTIFYING</b> Identification - Identify	23 Things Physical Samples	2021
2021	<a href="#">National PID Strategies WG</a>		<b>IDENTIFYING</b> Identification - Identify		2021
2021	<a href="#">Scientific Knowledge Open Science Graphs for FAIR Data IG</a>		<b>IDENTIFYING</b> Identification - Identify		
			<b>REPRESENTING/DESCRIBING</b> Representation/Description - Describe/Represent		
			<b>CITING - ATTRIBUTING</b> Citability - Cite Attribution - Attribute		
	<a href="#">FAIR Data Maturity Model WG</a>	Data Management - Disseminate, Link, and Find	<b>IDENTIFYING</b> Identification - Identify	<a href="#">FAIR Data Maturity Model: specification and guidelines</a>	2020
			<b>REPRESENTING/DESCRIBING</b> Representation/Description - Describe/Represent		
			<b>CITING - ATTRIBUTING</b> Citability - Cite Attribution - Attribute		



## Cross disciplinary adoption RDA Open Call: A FAIR-enabling Citation Model for Cultural Heritage Objects, impact on EOSC

- Cultural Heritage cross-disciplinarity
- European Cultural Heritage Data Space
- Fair Digital Object (FDO) infrastructure
- FAIR-CHO Citation as semantic artefact
- Cultural Heritage Data Metrics



## Wrap up

- The key relevance of attributing persistent identifiers to cultural heritage objects and collections
- The value of the identification of the cultural entity in the citation
- The data model of the digital archive should be sufficiently representative in terms of applicable metadata and relationships
- Citation should be machine-actionable to ensure semantic interoperability and conformance with FAIR principles
- Citation is part of the 5 recommendations of the Cultural Heritage image sharing recommendations report of the WorldFAIR project
- EOSC portal Onboarding: Unipd as EOSC Provider and Research Data Unipd as EOSC Data Source



## Lesson learned so far (with epistemic humility)

- Placing and imagining a project in an inter/intra/multi-disciplinary research dimension and perspective (cross-disciplinarity)
- Unveiling the cross-disciplinary dimension of our university research
- Understanding the founding function of the principle of openness, “FAIR-enabling”, of cross disciplinarity in the infrastructural realisation of research and open science (also and especially for and in EOSC)
- Learning the ecosystem and vocabulary of the RDA community and EOSC, getting out of one's comfort zone by amplifying and expanding knowledge relationships. Also, the challenge and commitment to design and develop a research project from scratch as library professionals.



## Lesson learned so far (with epistemic humility)

- Understand that if data is gold, the citation property of data, i.e. metadata, is an essential building block of the information-data environment as it determines "the provenance of the epistemic environment from which the data was created" restoring trustworthiness, attribution and authenticity
- The cognisance that metadata are the sources of informational accreditation (reputation -> trust)
- Acknowledge that semantics is a serious issue... and that building, participating and educating in a common and shared culture of data and of FAIR data is fundamental.



## Work in progress

- Implementation of the new citation model in Phaidra - University of Padua
- Discussion with partners Digital Repository of Ireland and Archaeology Data Service for the semantic expansion of the citation model of their respective digital repositories
- Proceed with the enrichment of the RDA Metadata Standard Catalog by collaborating with the Metadata Standard Catalog WG
- Public panel “L’image qui manque: on Cultural Heritage and citability”
- Hypothesis of the creation of a Cultural Heritage Interest Group in the Research Data Alliance





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Project outputs:

<https://zenodo.org/communities/fair-cho>



## Image credits

### Slides 4-5, 23-25, 27

Images generated by Artificial Intelligence.

### Slides 6, 19-21, 23, 52, 71-73

- **Phaidra - University of Padua**

*Mimétisme* - [11168/11.12650](https://doi.org/10.11168/11.12650); *Planche LXXIII. Buste d'adolescent (fin de la république)* - [11168/11.469396](https://doi.org/10.11168/11.469396);  
*Lepidio, Consolida, Consolida Regale* - [11168/11.332593](https://doi.org/10.11168/11.332593); *In comincia el dignissimo Fasciculo de medicina in volgare...* - [11168/11.56177](https://doi.org/10.11168/11.56177); *Jannis Kounellis - bozzetto studio per il monumento "Resistenza e Liberazione* - [11168/11.535272](https://doi.org/10.11168/11.535272); *L'abbé P. Chanoux* - [11168/11.3241](https://doi.org/10.11168/11.3241)

- **Digital Repository of Ireland**

*Akanos by Gráinne Mulvey* - <https://doi.org/10.7486/DRI.5999vs329>

- **Wikimedia Commons**

[https://commons.wikimedia.org/w/index.php?title=File:Stonehenge\\_-\\_England.JPG&oldid=469476534](https://commons.wikimedia.org/w/index.php?title=File:Stonehenge_-_England.JPG&oldid=469476534)

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