

THE ZERI

PHOTO ARCHIVE

TO LINKED
OPEN DATA

MEMORIAV

LE PATRIMOINE

PHOTOGRAPHIQUE

A L'ERE NUMERIQUE

15-16 novembre 2018

Lausanne / IDHEAP - Unil

MARILENA

DAQUINO

University of Bologna

marilena.daquino2@unibo.it

@emmedaquino

OUTLINE

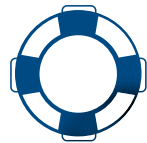


PHOTO ARCHIVES

[some] problems with data



ZERI PHOTO ARCHIVE



LINKED OPEN DATA

approaches & benefits



ZERI & LOD

LOD for photo archives

COMMUNICA- TION

STANDARDS

every institution adopts national / community / technological standards that fit-for-purpose. Sharing requires a lot of effort.

VISIBILITY & ACCESS

NOT INTEGRATED

users are lazy, they need

to consult heterogeneous information and they want everything in one place.

PROPRIETARY SOFTWARE

sometimes not even cataloguers can access their own data and reuse them in other contexts.

CATALOGUING PROCESS

NOT UPDATED

the cataloguing process is an expensive and time-con-

suming activity. Data may be affected by information quality issues over time.

MISSING/PARTIAL

missing/partial information can affect the reliability of an institution and draw people to look somewhere else for more complete information.

COMMON PROBLEMS IN GLAMs

EXPECTATIONS

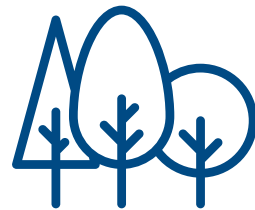


users easily discover
your website



users can find what they are looking for
(even when they do not know what it is)

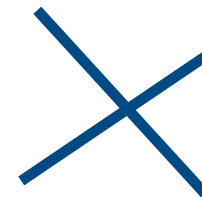
users retrieve
more information
than they expected
(serendipity)



users look for other information
clearly connected to the original
source (follow your nose)



users can answer
complex research
questions



users can formulate
new hypotheses

REALITY

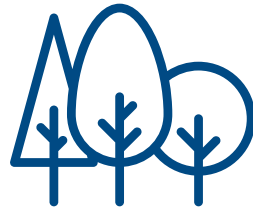


only experts know
how to find you

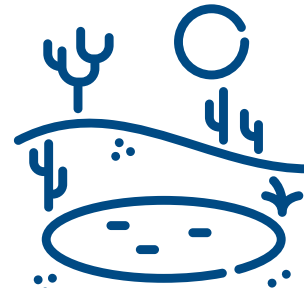


users do not understand whether you
have what they are looking for or not

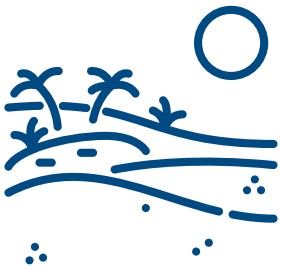
users cannot use
properly aid tools
you give them



users
get frustrated



users do not know how
you organised your knowledge
and what they
can discover



users search
in Google



THE ZERI PHOTO ARCHIVE

- an art historical photo archive
- the bequest of Federico Zeri to the University of Bologna
- a strong focus on subjects (artworks)
- the first Italian photo archive creating detailed LOD

<http://data.fondazionezeri.unibo.it>

The background of the slide is a white surface covered with a dense, repeating pattern of small blue dots. These dots are arranged in a grid that is slightly skewed, creating a sense of depth and movement. The dots are evenly spaced and cover the entire area of the slide.

WHAT ARE LOD

AND WHAT THEY CAN DO FOR

PHOTO ARCHIVES

ANONYMOUS, *PERUZZI BALDASSARRE*

- SEC. XVI - TRE GRAZIE

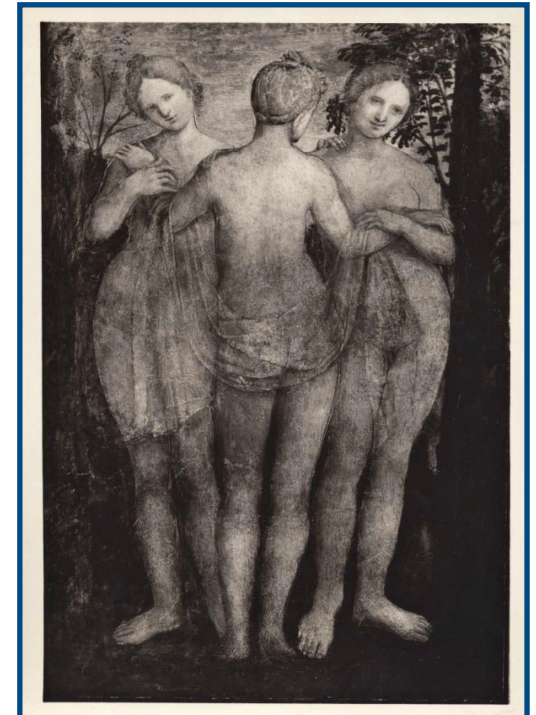
OBJECT	
Object	positivo
Number of elements	1
Type	m
BW/C - Material and technique	BN - gelatina ai sali d'argento/ carta baritata
Dimensions	mm 237 × 160 (supporto primario)
SUBJECT / TITLE	
Subject	Tre Grazie — dipinto murale
Artist / Milieu	Peruzzi Baldassarre
Attributed title	Peruzzi Baldassarre - sec. XVI - Tre Grazie
Source of title	del catalogatore
Detail / Whole	insieme
PHOTOGRAPHER	
Author	Anonimo
Reason for attribution	n.r.

the online cataloguing record
of a photograph @Zeri

AUTHOR	
Author	Peruzzi Baldassarre [ULAN] [DBPEDIA]
Personal data	1481/ 1536
Reason for attribution	Bibliografia
DIFFERENT ATTRIBUTIONS	
Author	Luini Bernardino, scuola [VIAF] [ULAN] [DBPEDIA]
Reason for attribution	Asta Christie's (1994)
DATING	
Century	sec. XVI
Dates (from – to)	1500 - 1535
LOCATIONS	
Last known	Asta Christie's, New York (NY) (New York)
Precise location	18 maggio 1994, n. 206

the online cataloguing record
of the artwork depicted in a
photograph @Zeri

THE WEB WE KNOW



an image attached
to the record

web documents linked together by means of hyperlinks

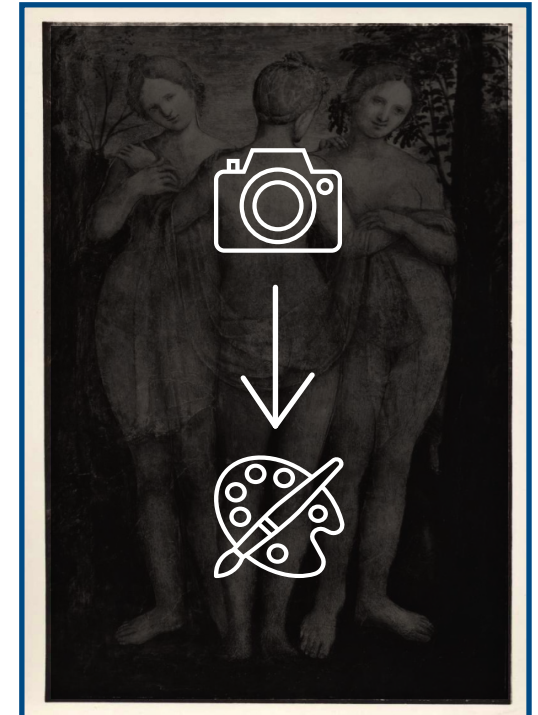
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- SEC. XVI - TRE GRAZIE

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AUTHOR	
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Personal data	1481/ 1536
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Author	<u>Luini Bernardino, scuola</u> (VIAF) (ULAN) (LCCN)
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THE SEMANTIC WEB



a photograph depicting
an artwork

machine-readable data linked by meaningful relations

ANONYMOUS, *PERUZZI BALDASSARRE*

- SEC. XVI - TRE GRAZIE

THE SEMANTIC WEB

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Attributed title	Peruzzi Baldassarre - sec. XVI - Tre Grazie
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PHOTOGRAPHER	
Author	<u>Anonimo</u>
Reason for attribution	n.r.

AUTHOR	
Author	<u>Peruzzi Baldassarre</u> (ULAN) (DBPEDIA)
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Precise location	18 maggio 1994, n. 206



the photograph is taken by an
anonymous photographer

machine-readable data linked by meaningful relations

ANONYMOUS, *PERUZZI BALDASSARRE*

- SEC. XVI - TRE GRAZIE

THE SEMANTIC WEB

OBJECT	
Object	positivo
Number of elements	1
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BW/C - Material and technique	BN - <u>gelatina ai sali d'argento/ carta baritata</u>
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PHOTOGRAPHER	
Author	<u>Anonimo</u>
Reason for attribution	n.r.

AUTHOR	
Author	<u>Peruzzi Baldassarre</u> (ULAN) (DBPEDIA)
Personal data	1481/ 1536
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Century	sec. XVI
Dates (from – to)	1500 - 1535
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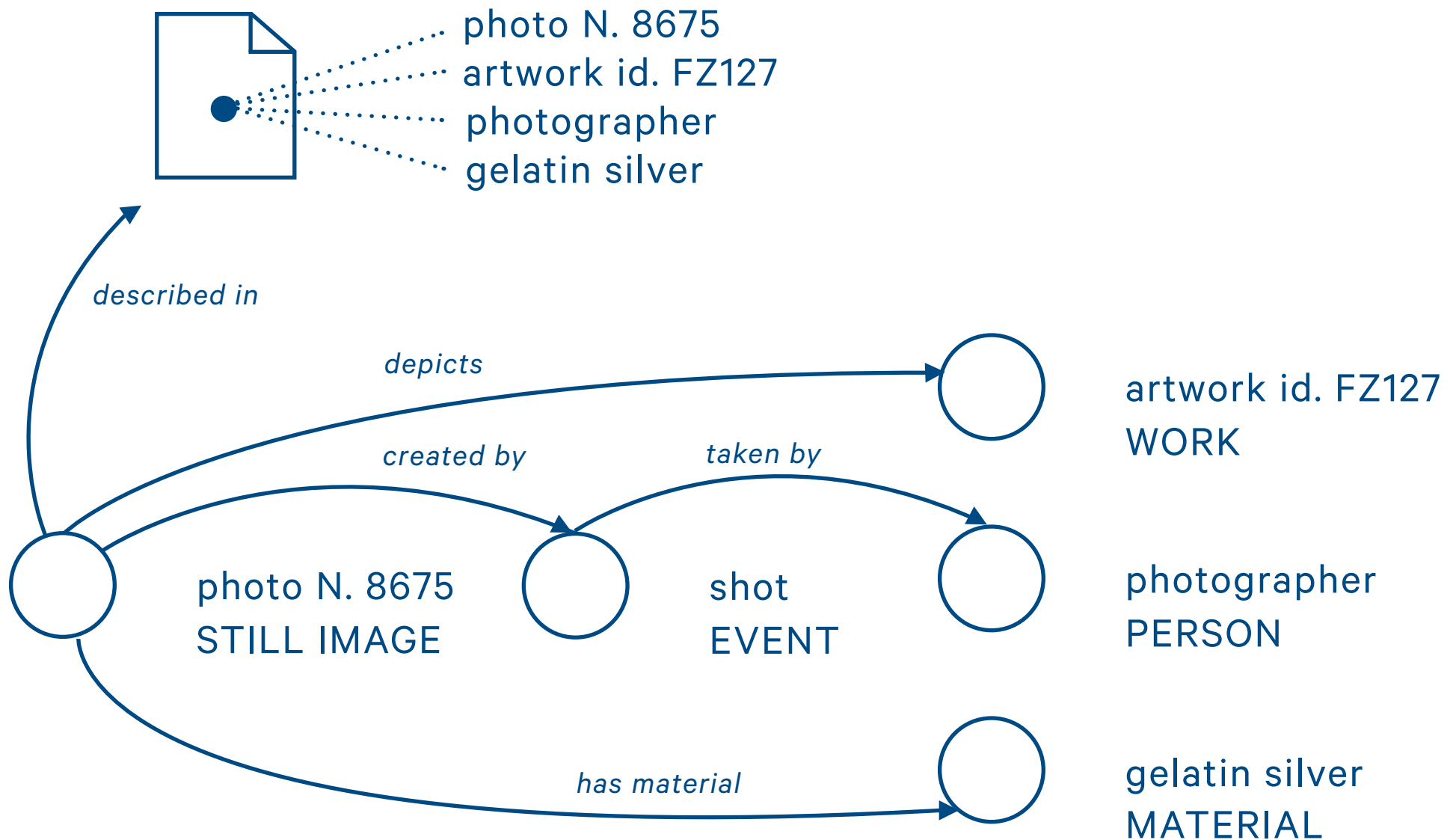


the photograph is a gelatine
silver print

machine-readable data linked by meaningful relations

THE RDF MODEL

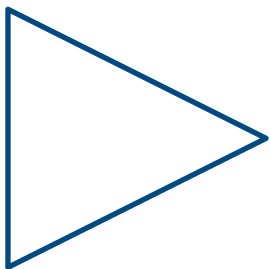
from a flat/ tree data structure
to a graph representation



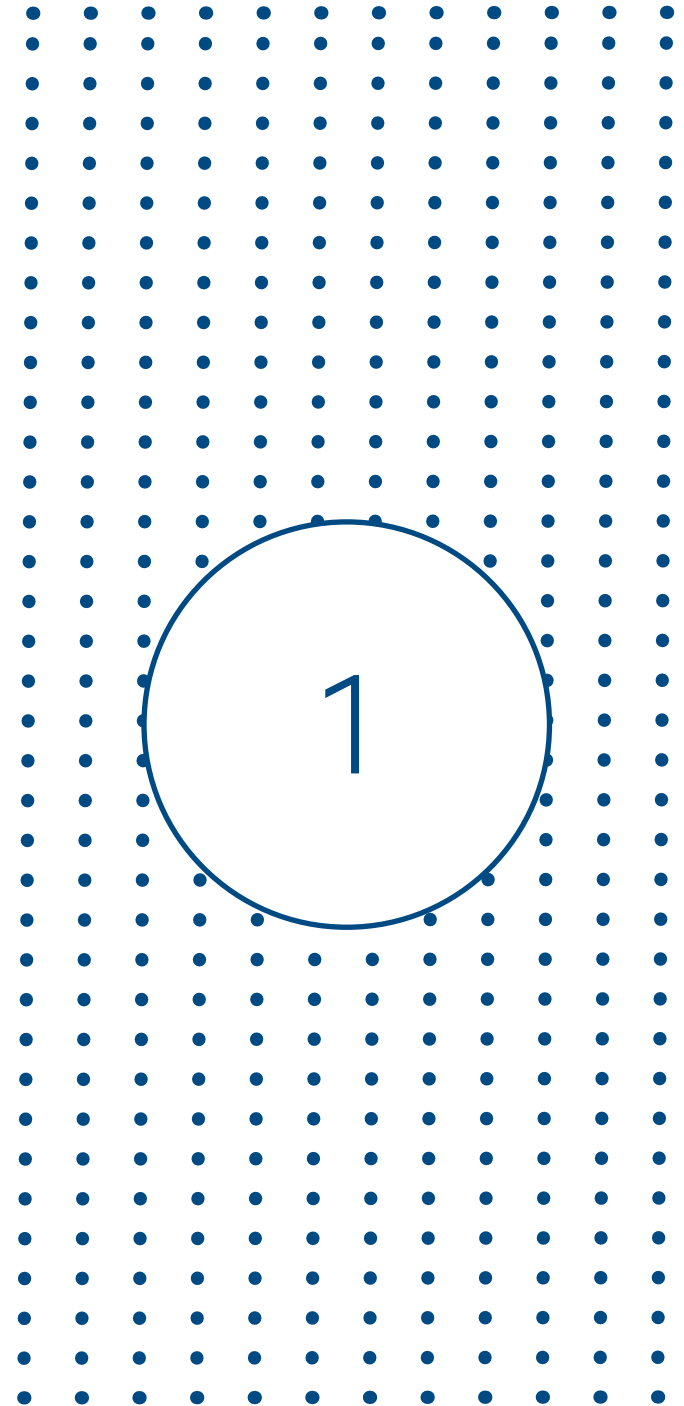
IDENTIFY

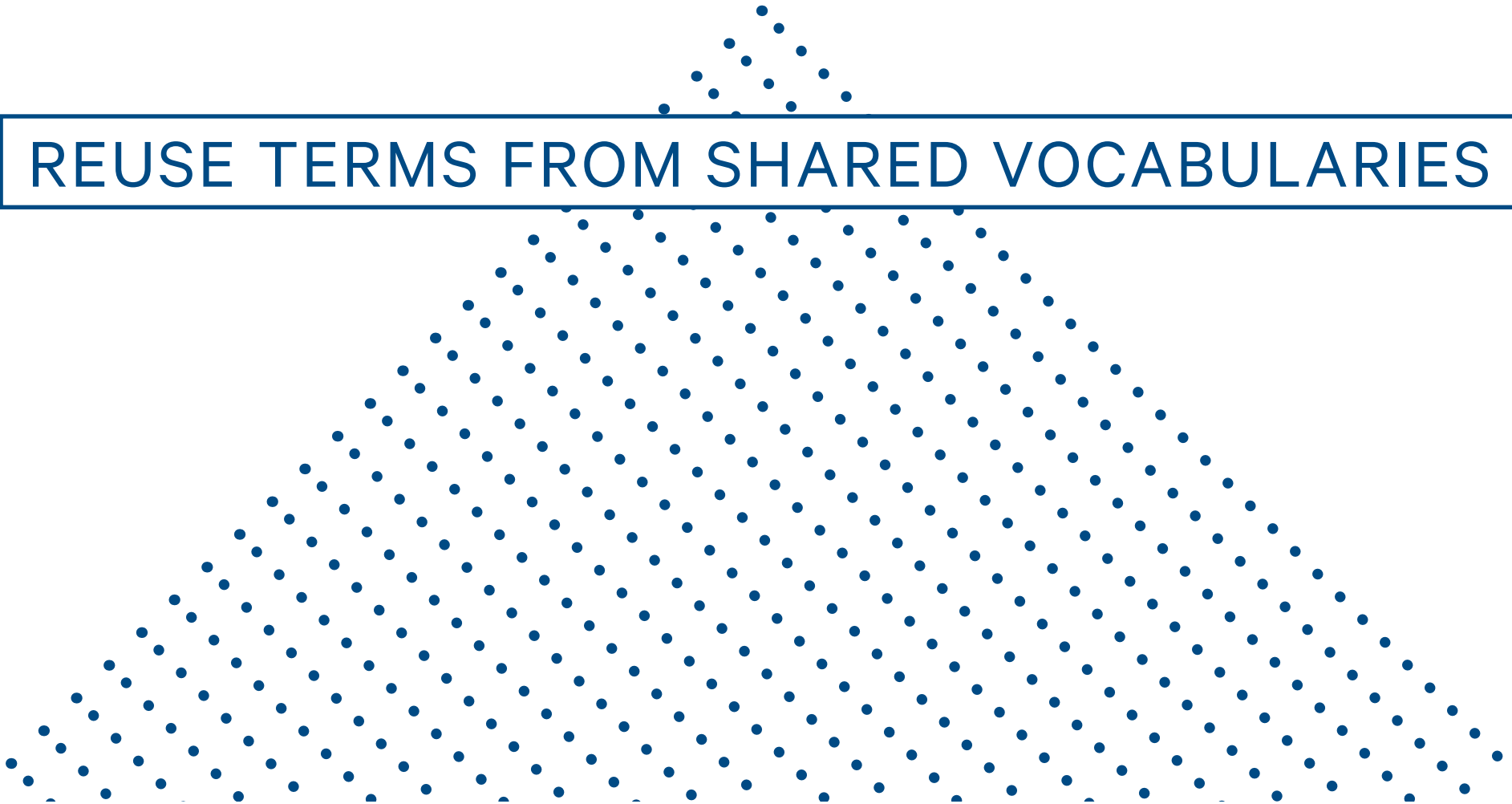
persistent URIs for identifying
concepts rather than documents

e.g. people, objects, materials, titles, subjects



CONSISTENCY ACROSS
INSTITUTIONS



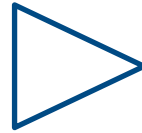


REUSE TERMS FROM SHARED VOCABULARIES

THESAURI

ICONCLASS, AAT

identify subjects, materials, techniques



MULTILINGUISM

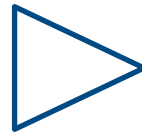
e.g. gelatin silver print

<http://vocab.getty.edu/aat/300128695>

AUTHORITIES

ULAN, VIAF, TGN, geoNames

people, places, subjects again



DISAMBIGUATION



e.g. Oxford (1 out of 17)

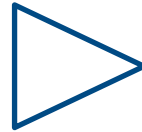
<http://www.geonames.org/2640729>

ALIGN RECORDS BETWEEN DATA SOURCES

DATASETS

- *open data now!*

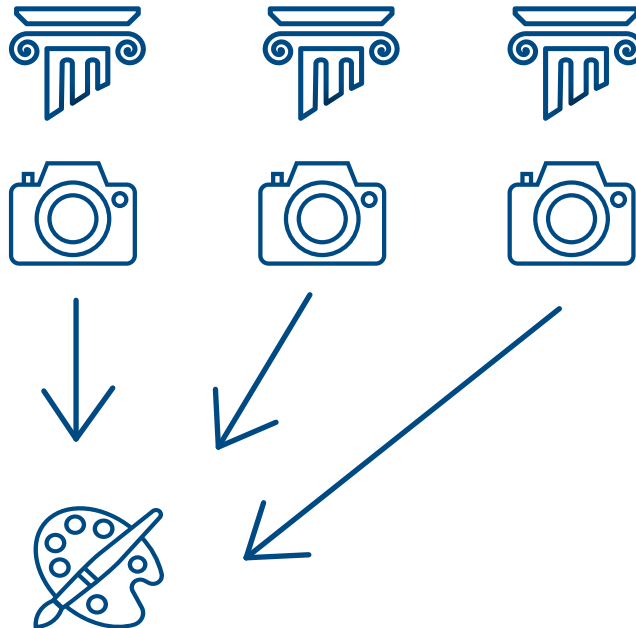
WIKIDATA, DBPEDIA, others
link same objects in different places



RECONCILIATION

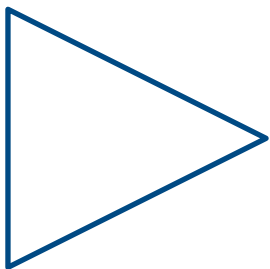
e.g. “Peruzzi Baldassarre, Three Graces”

in Zeri photo archive, Berenson Library, Frick
Art Reference Library



INTEGRATE

semantic and technical
interoperability allows
to aggregate data sources



INFORMATION QUALITY

ISSUES

VISIBILITY

2

ENRICHMENT

gather data from other sources
and save time

@Zeri



@DBpedia



artist's
biography



Baldassarre Peruzzi

http://dbpedia.org/resource/Baldassare_Peruzzi

Baldassare Tommaso Peruzzi (7 March 1481 – 6 January 1536) was an Italian architect and painter, born in a small town near Siena (in Ancaiano, frazione of Sovicille) and died in Rome. He worked for many years with Bramante, Raphael, and later Sangallo during the erection of the new St. Peter's. He returned to his native Siena after the Sack of Rome (1527) where he was employed as architect to the Republic. For the Siennese he built new fortifications for the city and designed (though did not build) a remarkable dam on the Bruna River near Giuncarico. He seems to have moved back to Rome permanently by 1535.

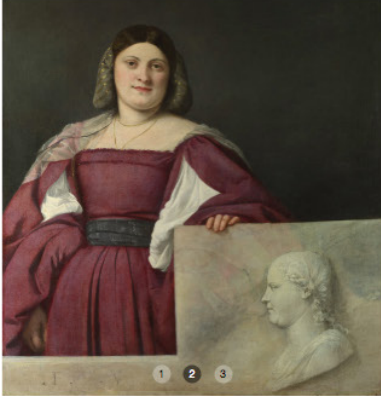
@en

CURATION

compare data sources to update data
and speed-up the cataloguing process

mAuth

ABOUT SEARCH



1 2 3

Vecellio Tiziano 14.0

Zeri Foundation (University of Bologna) accepted attribution
3 ♥

artwork title: *Vecellio Tiziano, Ritratto di gentildonna*
date(s) of attribution: none;
criteria: artist's signature;
source of attribution: none;
[see more](#)

Titian 4.0

Wikidata accepted attribution
3 ♥

artwork title: *La Schiavona by Titian*
date(s) of attribution: 2018;
criteria: none;
source of attribution: none;
[see more](#)

Titian 3.0

DBpedia accepted attribution
3 ♥

Tiziano Vecellio 3.0

Italian DBpedia accepted attribution
3 ♥

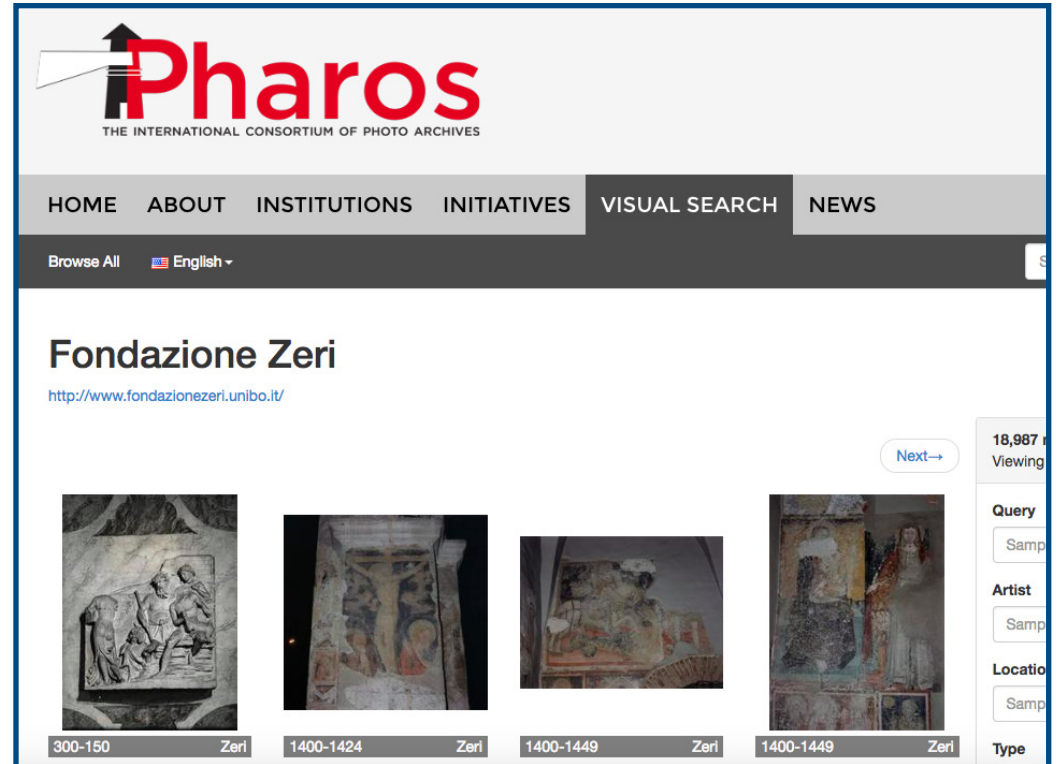
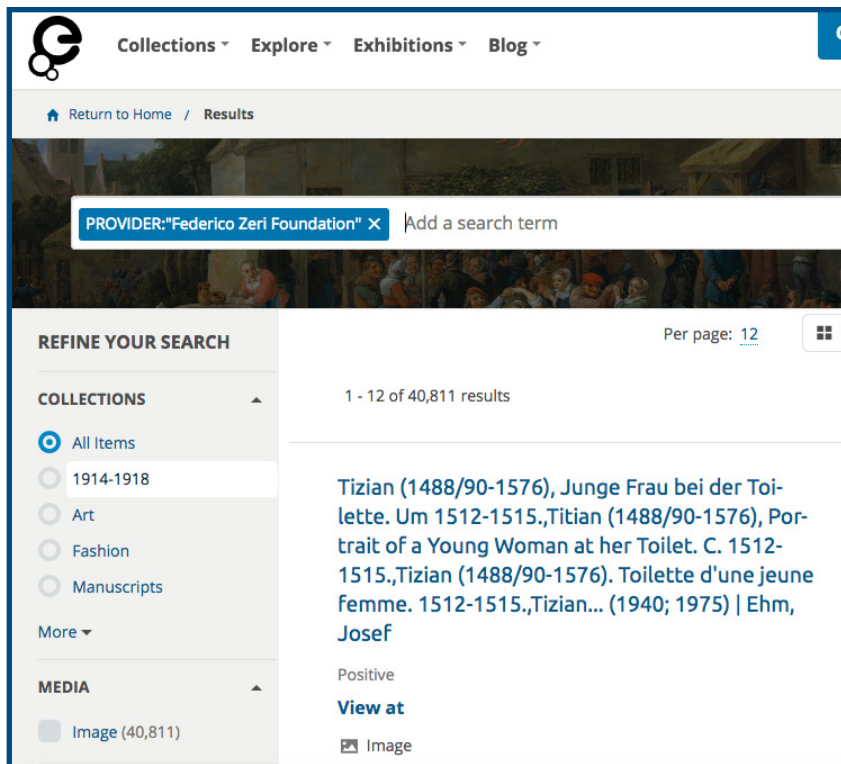
Mining
Authoritativeness
in Art History

A CRAWLER OF AUTHORSHIP ATTRIBUTIONS

harvester of authorship attributions from photo archives

AGGREGATION

create several access points to your data and increase discoverability of collections

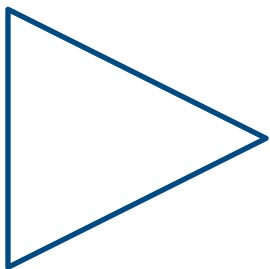


Europeana includes
Zeri's LOD

PHAROS includes Zeri's images and
will include Zeri's LOD

CREATE

develop expressive services
and discover latent knowledge



ANSWER SOPHISTICATED
QUESTIONS

3

REUSE

mix data from different sources
to create new applications

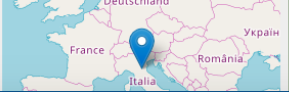
 dati.beniculturali.it

Pinacoteca nazionale di Bologna

<http://dati.beniculturali.it/mibact/luoghi/resource/CulturalInstituteOrSite/20150>

rdfs:comment **EN** **IT**

La Pinacoteca nazionale ha sede nell'ex noviziato gesuita di Sant'Ignazio. Il museo, oggi completamente rinnovato (1997) nelle sue strutture secondo i più moderni criteri conservativi e museografici, offre ai visitatori un affascinante percorso attraverso la pittura emiliana dal XIII al XVIII secolo. Entrata a far parte delle più importanti raccolte d'arte europee, la pinacoteca nacque nel 1808 come quadreria dell'Accademia di Belle Arti e divenne museo autonomo nel 1882. Per il Trecento si segnalano opere di Vitale, dello Pseudo Jacopino, di Simone dei Crocefissi e di Jacopo di Paolo, di Giotto e di Lorenzo Veneziano, oltre ad una delle più vaste raccolte nazionali di affreschi trecenteschi staccati (come ad esempio quelli provenienti dalla Chiesa di Mezzaratta). Nella sezione rinascimentale dipinti dei Vivarini, del Cossa e del Costa, di Perugino e di Raffaello a precedere i capolavori del Parmigianino e di Tiziano. La ricchissima sezione secentesca propone le sale dedicate ai tre Carracci ed a Guido Reni, Guercino, Domenichino e Tiarini. Il percorso si conclude con opere del Settecento emiliano (Crespi, Creti, Gandolfi). Al piano superiore è il Gabinetto dei Disegni e delle Stampe, ricco di migliaia di pezzi, consultabili a richiesta.

Italian Ministry
of Cultural Heritage
reuses Zeri's data

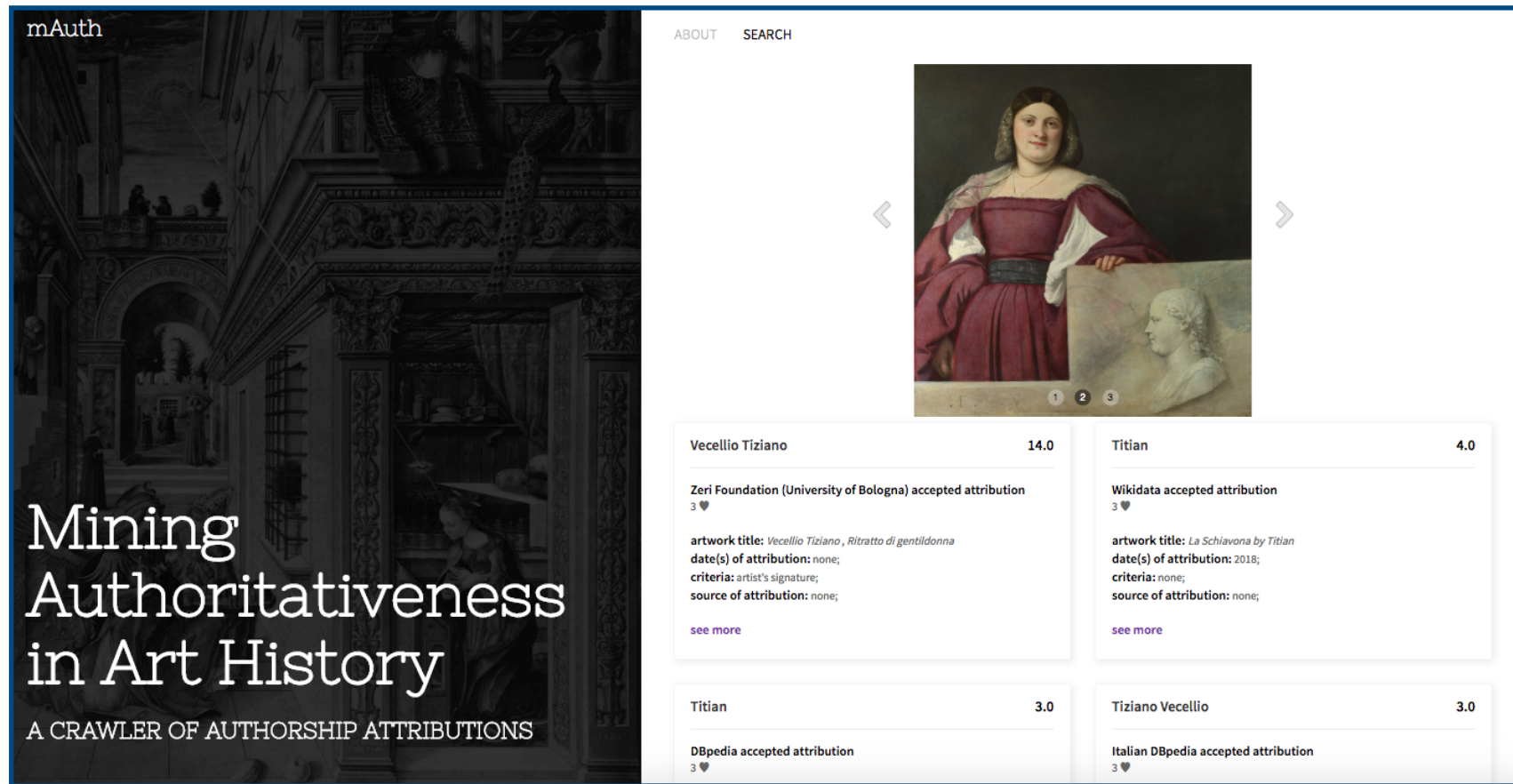
owl:sameAs

- `<http://it.dbpedia.org/resource/Pinacoteca_nazionale_(Bologna)>`
- `<http://dati.culturaitalia.it/resource/actor/pinacoteca-nazionale-di-bologna>`
- `<https://w3id.org/zericatalog/pinacoteca-nazionale-bologna>`
- `<http://dati.emilia-romagna.it/id/ibc/IT-ER-BO090>`

psss! we can reuse their data
as well!

MASHUP

mix data from different sources
to create new applications



The screenshot displays the mAuth application interface. On the left is a dark, artistic background image of a museum gallery with the text "Mining Authoritativeness in Art History" and "A CRAWLER OF AUTHORSHIP ATTRIBUTIONS". The main area features a central artwork of a woman in a red dress holding a portrait, with navigation arrows and a small thumbnail strip below it. To the right, four attribution cards are shown, each with an author name, a score, and a list of accepted attributions.

Author	Score	Accepted Attributions
Vecellio Tiziano	14.0	Zeri Foundation (University of Bologna) accepted attribution 3 ♥ artwork title: Vecellio Tiziano, Ritratto di gentildonna date(s) of attribution: none; criteria: artist's signature; source of attribution: none; see more
Titian	4.0	Wikidata accepted attribution 3 ♥ artwork title: La Schiavona by Titian date(s) of attribution: 2018; criteria: none; source of attribution: none; see more
Titian	3.0	DBpedia accepted attribution 3 ♥
Tiziano Vecellio	3.0	Italian DBpedia accepted attribution 3 ♥

provide tools for supporting the decision-making process
of users

INFERENCE

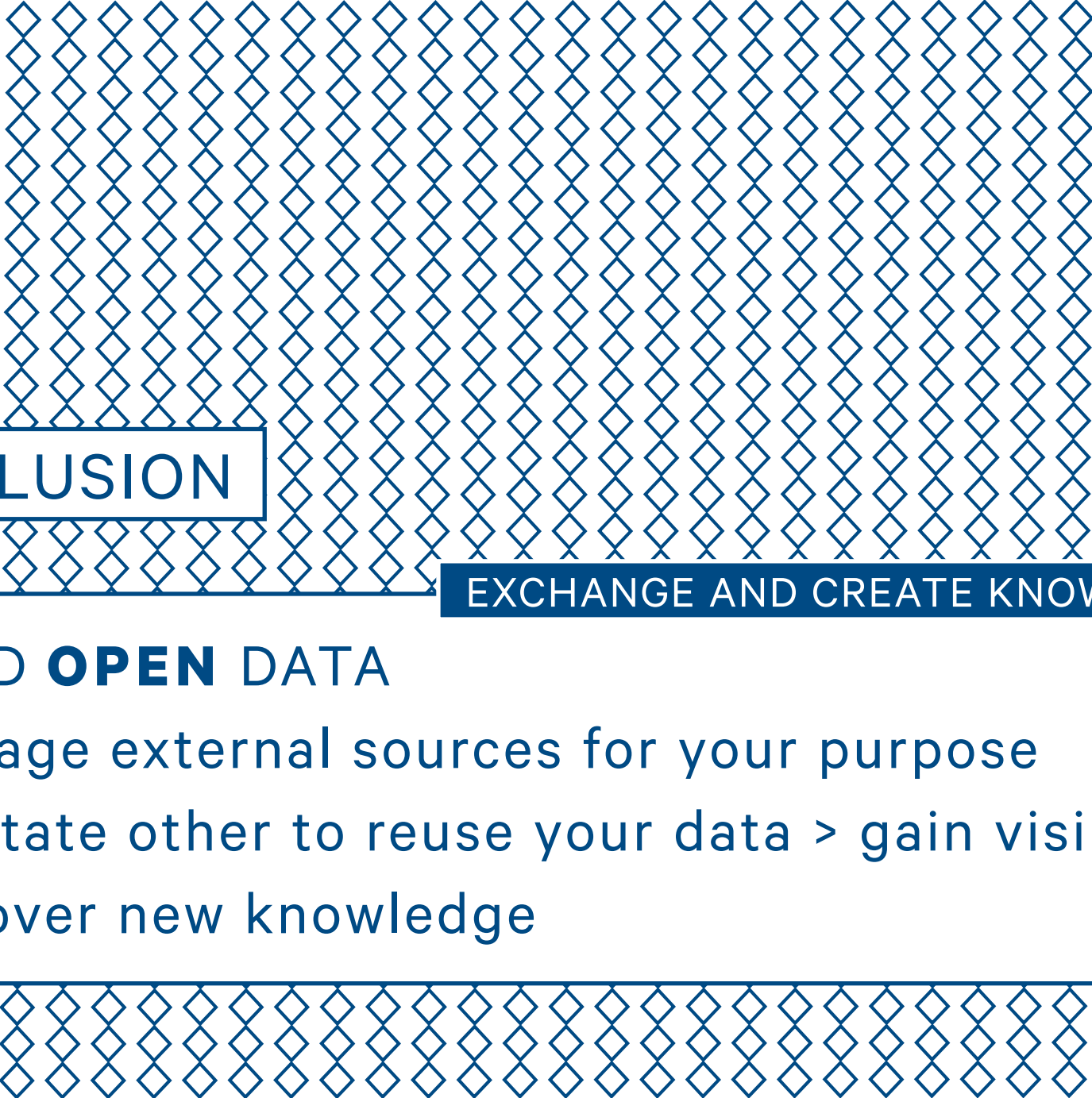
reuse internal (or external)*
information for making new
hypotheses



identify photographers' names in time
in the Zeri's authority file

<https://w3id.org/zericatalog/name/anderson-roma/1853-1960>
<https://w3id.org/zericatalog/name/james-anderson/1853-1877>
<https://w3id.org/zericatalog/name/stab-d-anderson/1877-1938>
<https://w3id.org/zericatalog/name/d-anderson/1877-1938>
<https://w3id.org/zericatalog/name/guglielmo-anderson/1938-1960>
<https://w3id.org/zericatalog/name/alessandro-anderson/1938-1960>
<https://w3id.org/zericatalog/name/giorgio-anderson/1938-1960>

define rules for automatically
attributing the date of a **new*** photo
recording one of those forms of name



CONCLUSION

EXCHANGE AND CREATE KNOWLEDGE

LINKED **OPEN** DATA

- 1 leverage external sources for your purpose
- 2 facilitate other to reuse your data > gain visibility
- 3 discover new knowledge

THANKS

MEMORIAV

LE PATRIMOINE

PHOTOGRAPHIQUE

A L'ERE NUMERIQUE

15-16 novembre 2018

Lausanne / IDHEAP - Unil

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