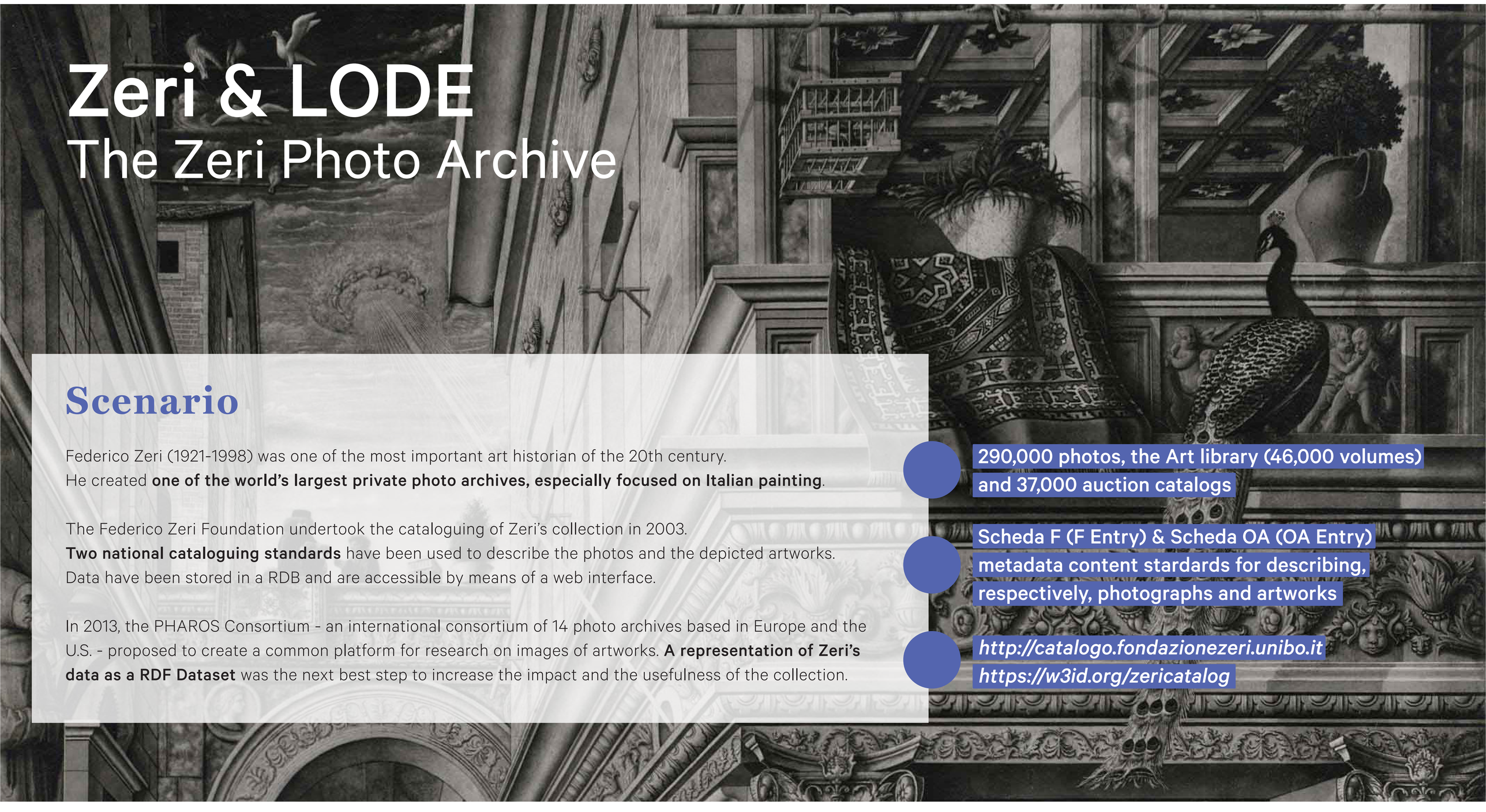
Zeri & LODE
The Zeri Photo Archive



Scenario

Federico Zeri (1921-1998) was one of the most important art historian of the 20th century.
He created **one of the world's largest private photo archives, especially focused on Italian painting**.

The Federico Zeri Foundation undertook the cataloguing of Zeri's collection in 2003.
Two national cataloguing standards have been used to describe the photos and the depicted artworks.
Data have been stored in a RDB and are accessible by means of a web interface.

In 2013, the PHAROS Consortium - an international consortium of 14 photo archives based in Europe and the U.S. - proposed to create a common platform for research on images of artworks. **A representation of Zeri's data as a RDF Dataset** was the next best step to increase the impact and the usefulness of the collection.

- **290,000 photos, the Art library (46,000 volumes) and 37,000 auction catalogs**
- **Scheda F (F Entry) & Scheda OA (OA Entry) metadata content stardards for describing, respectively, photographs and artworks**
- ***http://catalogo.fondazionezeri.unibo.it***
  https://w3id.org/zericatalog

issues

to publish Zeri's RDF data according to CIDOC-CRM

a standard de facto in the cultural heritage domain
and the chosen model for sharing PHAROS members' data

how to overcome its limits and shortcomings?
(e.g. FRBR, provenance of information, people's roles, relations between works)

to represent all the heterogeneous information provided by the SCHEDA F and SCHEDA OA

118 fields out of more than 300 provided by the F entry for describing photos and 97 fields out of 280 provided by the OA entry for describing depicted artworks have been really used by cataloguers of Zeri Foundation

- **cataloguing process**
  cataloguing institutions, cataloguers, updates of the entries, archival hierarchy
- **photographs & artworks**
  creation, subjects, techniques, assessments of conditions, physical description, archival collocation, copyright movings and changes of custody, exhibitions
- **attributions**
  authors, titles, dates, roles and events
- **bibliography**
  monographies, conference proceedings, catalogs, journals, guides, dictionaries, etc.
- **archival sources**
  manuscripts, letters, reports, booklets, etc.

can a single model serve all such needs?
should it do that?

to realize comprehensive models for describing photography and arts domains

to go beyond italian content standards, to ensure the model reuse and to integrate cultural heritage domains

what about the other domains?
rather than reinventing the wheel...

development

methodology

SAMOD
Simplified Agile Methodology for Ontology Development

a data-centric approach

1. creation of modelets
2. test on real use-case data
3. refactoring of terms
reusing existent models

reuse

DOMAIN ONTOLOGIES

1. CIDOC-CRM
cultural heritage objects
2. SPAR ontologies
publishing domain

TASK ONTOLOGIES
3. HiCo
provenance of attributions

F Entry & OA Entry ontologies

include all the reused ontologies but CIDOC-CRM

define
1. F/OA metadata documents
2. photograph FRBR levels
3. relations between artworks
4. roles

SPAR ontologies

FRBR
the OWL 2DL version
FaBiO
extends FRBR with new properties
CiTO
typed citations and sources
PRO
roles in time-indexed situations

HiCo ontology

extends PROV Ontology

two meta-levels of provenance:
1. who said that? and where?
2. who created the RDF statement?

motivations, criteria, sources

mapping F/OA to RDF

mapping fields of Scheda F and Scheda OA to CIDOC-CRM and the other models

detailed documentation
and 2 exemplars of usage (rdf/ttl)

SAMOD http://dx.doi.org/10.6084/m9.figshare.3189769
CIDOC-CRM http://www.cidoc-crm.org/
SPAR Ontologies http://sparontologies.net
HiCo Ontology http://purl.org/emmedi/hico
F Entry Ontology http://www.essepuntato.it/2014/03/fentry
OA Entry Ontology http://purl.org/emmedi/oaentry
MAPPING FtoRDF https://dx.doi.org/10.6084/m9.figshare.3175273.v1
MAPPING OAtoRDF https://dx.doi.org/10.6084/m9.figshare.3175057.v1
RDF example - F entry http://dx.doi.org/10.6084/m9.figshare.3175252.v1
RDF example - OA entry https://dx.doi.org/10.6084/m9.figshare.3175048.v1

data | partial results

data
stored in a proprietary relational database (Microsoft Access)

XML dump
XML files not conforming any official scheme, including:
*- a **subset** of the catalog entries (30.000 F entries and 19.000 OA entries)*
- the bibliography (4500 bibliographic records)
- the archival hierarchy (i.e. the organization in foldings, containers and series)
- the artists' and photographers' authority files (6000 and 2000 records)

the subset includes entries describing artworks of XV-XVI centuries and related photographs

XSL transformation
due to the nature of data, they have been converted into RDF/XML files by means of a XSL transformation

RDF dataset
- about 11.400.000 RDF statements relating 1.600.000 unique typed entities
- IRIs in English, labels both in Italian and English
(IRI design pattern: http://w3id.org/zericatalog/ section «Data»)

access and browse data
stored in an Apache Fuseki2 triplestore

User-friendly query interface
http://data.fondazionezeri.unibo.it/query/
REST requests
http://data.fondazionezeri.unibo.it/sparql/

dereferenced URIs (https://w3id.org/zericatalog/collection/zeri-photo-archive)
RDF data browsing through the LODview interface

homepage
http://w3id.org/zericatalog/

license for the reuse of data (images are not included)
CC-BY-NC, http://creativecommons.org/licenses/by-nc/4.0/

links to other datasets
- 2200 VIAF records
- 1200 Getty ULAN records
- 1500 geoNames resources
- 2260 Dbpedia and Wikidata resources and as many Wikipedia pages

*the provision of the final counting, when all the catalog entries will be published, is estimated to be about **1 billion RDF triples***

Future works

1. to complete the mapping F/OA to RDF, by considering all the remaining fields

2. to convert all the catalog entries to RDF according to the mappings.

3. to consider different content and cataloguing standards for describing photos and artworks

4. to consider different models for enhancing the RDF representation

5. to integrate data with stakeholders' ones

6. to test benefits when comparing contradictory attributions on the same object

University of Bologna
Marilena Daquino | marilena.daquino2@unibo.it
Francesca Mambelli | francesca.mambelli@unibo.it
Silvio Peroni | silvio.peroni@unibo.it
Francesca Tomasi | francesca.tomasi@unibo.it
Fabio Vitali | fabio.vitali@unibo.it