Persistent identifiers for cultural heritage objects

DataCite
FIND, ACCESS, AND REUSE DATA

OCLC España Round Table, 19 Jan 2022
The next generation of metadata in the field of bibliographic, cultural and artistic heritage
Liz Krznarich, Adoption Manager, DataCite & ROR
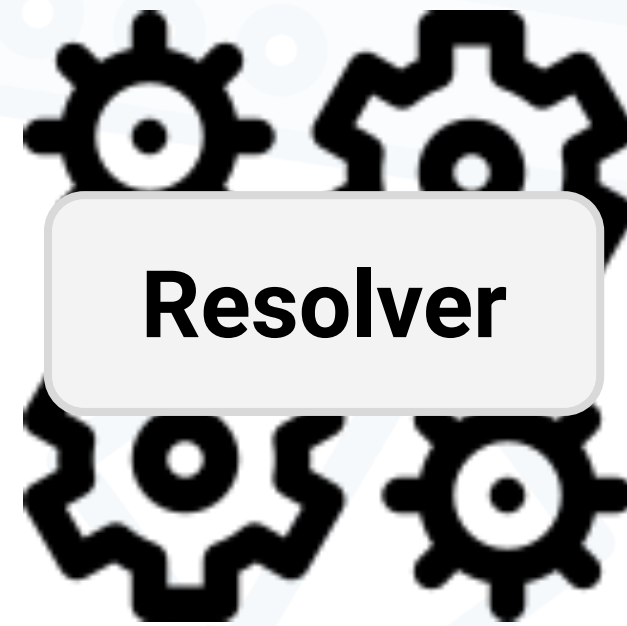iD https://orcid.org/0000-0001-6622-4910

Today's topics

- What are persistent identifiers (PIDs) and what is the value of using PIDs?

- Which PIDs are used for cultural heritage materials, and how do they differ?

- What is the value of using DOIs vs other types of PIDs?

What is a persistent identifier (PID)?

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https://doi.org/10.5061/dryad.708gr

Resolver

https://datadryad.org/stash/dataset/doi:10.5061/dryad.708gr

Special URL that's registered in a known system, like DOI, ORCID or ROR

Always points to the same resource (or a metadata representation)

DOIs for scholarly outputs
https://doi.org/10.5281/zenodo.3630248

ORCID iDs for people
https://orcid.org/0000-0001-6622-4910

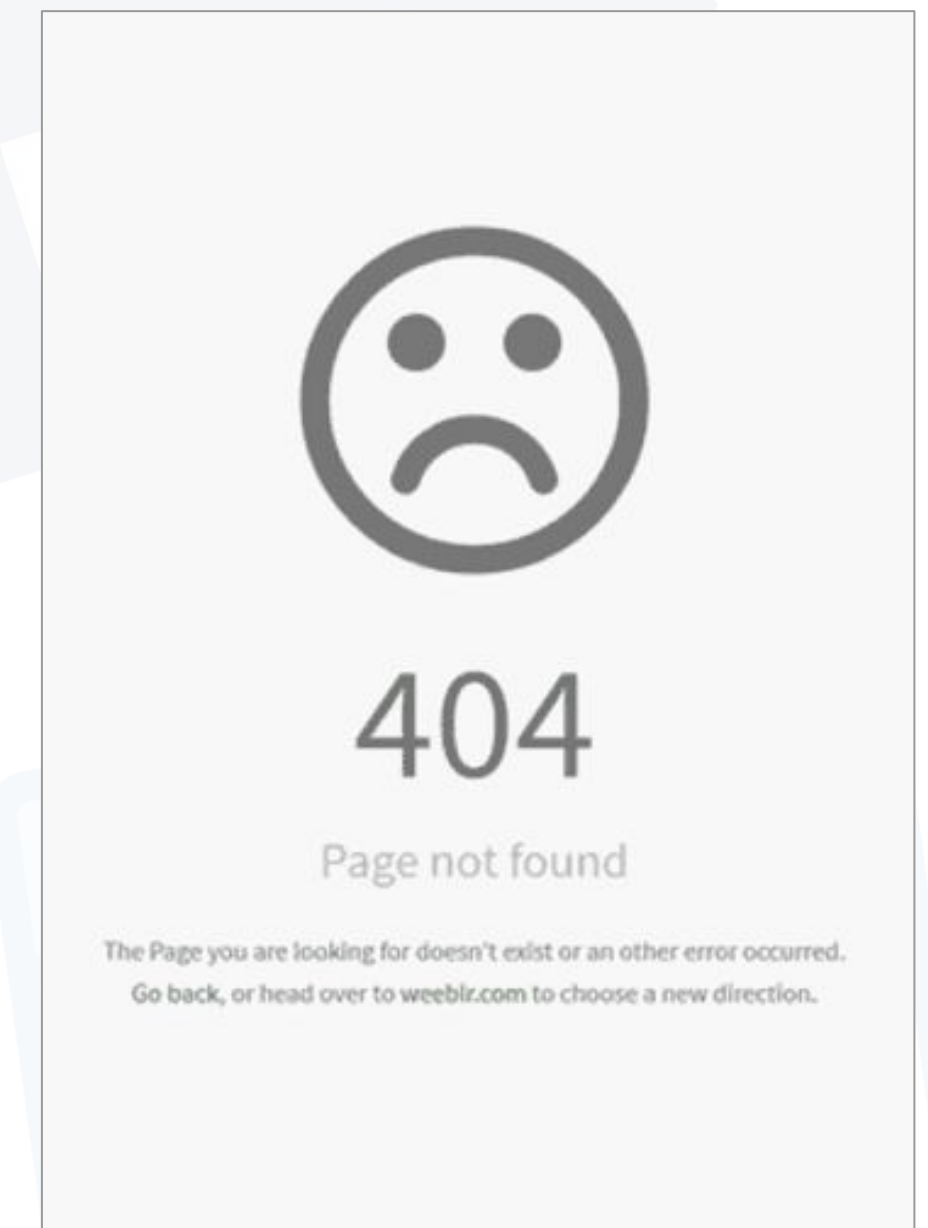**ROR IDs** for research organizations
https://ror.org/01y2jtd41

Why do PIDs exist?

- **Find a resource at the same URL**, regardless of whether its location in the Web changes (avoid 404 errors)

- **Cite a resource** with confidence that its URL won't break over time

  Janeiro, M. J., Coltman, D. W., Festa-Bianchet, M., Pelletier, F., & Morrissey, M. B. (2021). *Data from: Towards robust evolutionary inference with integral projection models* (Version 1) [Data set]. Dryad.
  https://doi.org/10.5061/DRYAD.708GR

- **Enable automated discovery** and retrieval of objects and metadata

Why use PIDs for cultural heritage objects?

- **Ensure that items can be reached at the same URL** even if collections/items are migrated to different platforms

- **Make collections/items more citable** for the long-term

- **Make collections/items more discoverable to users** (via automated indexing tools that consume data from PID APIs/data services)

- **Allow easier tracking of citation/reuse**

Which PIDs are used for cultural heritage objects?

- Many types! (UKRI "Heritage PIDs" has a great list https://tanc-ahrc.github.io/PIDResources/PID%20Functionalities.html)

- Common, general-use types for providing persistent links to *digital objects* include:
  - **Handle**
  - **ARK** (Archival Resource Key)
  - **DOI** (Digital Object Identifier)

Fun fact! Technologically, these are all based on the handle system
The difference between them is in technical implementation details and governance.

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Which PIDs are used for cultural heritage?

Handle

- Locally registered/resolved (ie: you must run your own handle service)
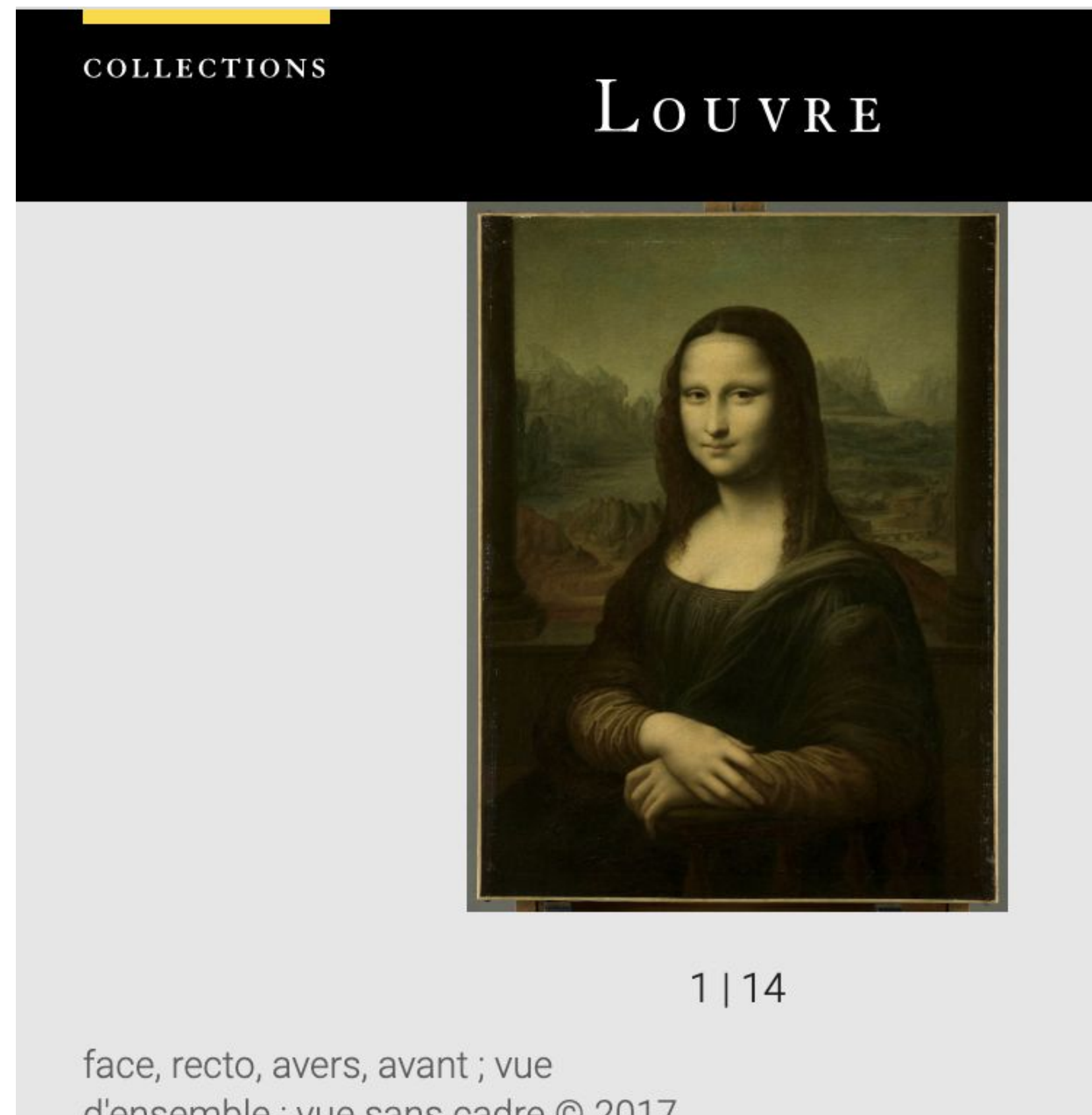- Metadata registration not supported

Example: Rijksmuseum, NL

http://hdl.handle.net/10934/RM0001.COLLECT.5216

Ontdek de verhalen achter Rembrandts meesterwerk ✕

Beleef de Nachtwacht ⧉

i

De Nachtwac

✕

http://www.cuccuccu.n/english/the_night_watch_odyssey.html [2017]

Persistent URL

To refer to this object please use the following persistent URL:
http://hdl.handle.net/10934/RM0001.COLLECT.5216

Which PIDs are used for cultural heritage?

COLLECTIONS

LOUVRE

1 | 14

face, recto, avers, avant ; vue
d'ensemble ; vue sans cadre © 2017

ARK (Archival Resource Key)

- Locally registered/resolved locally (ie: you must run your own ARK service)
- Option to resolve globally via N2T service
- Metadata registration supported, but not required; no standard schema

Example: Louvre FR

https://collections.louvre.fr/ark:/53355/cl010066723

Which PIDs are used for cultural heritage?

Permanent link: https://doi.org/10.7925/drs1.ucdlib_38377

Share:

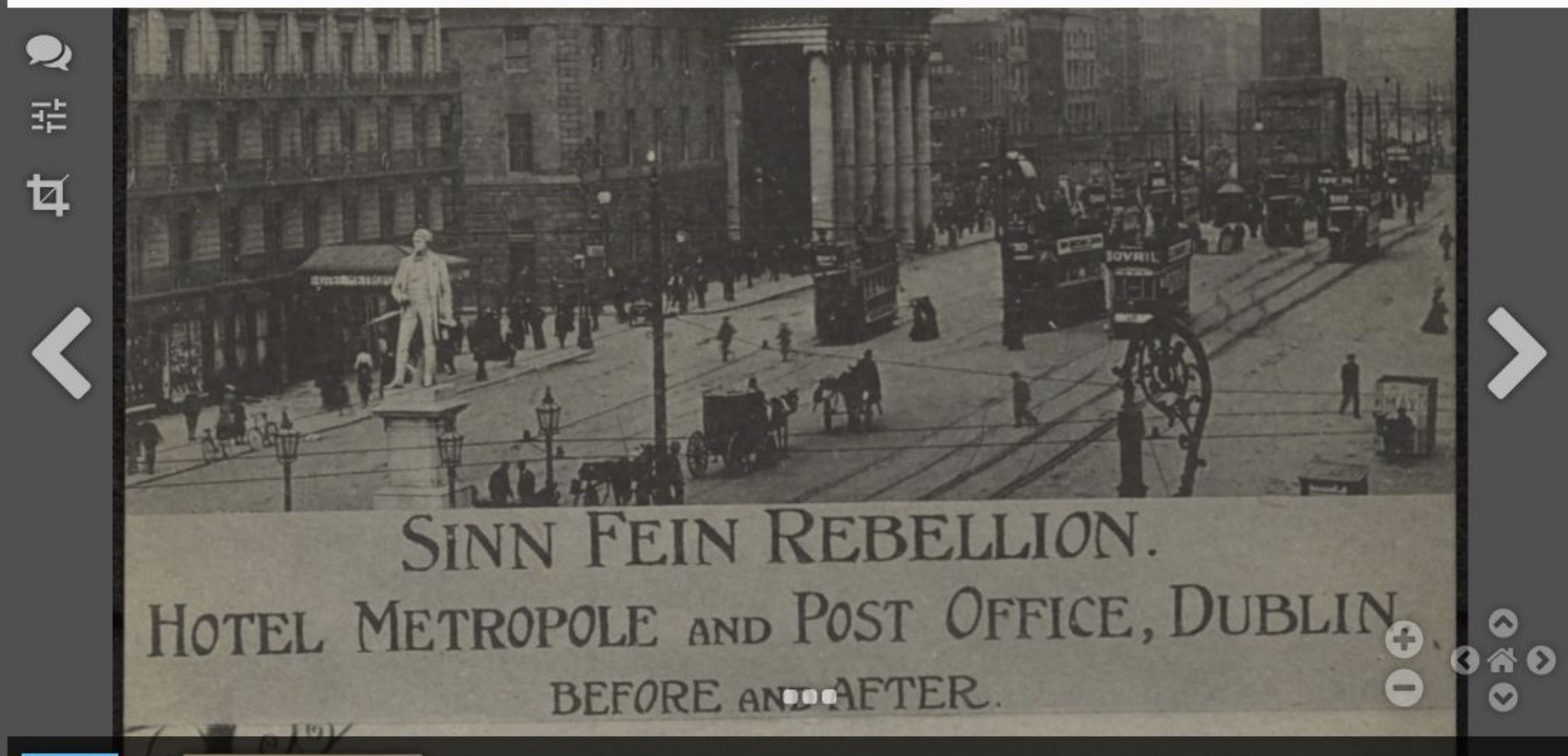## Sinn Fein rebellion : Hotel Metropole and Post Office, Dublin. Before and after

Curran, Constantine Peter [Former owner]

In collection ➡️   1916 Rising Postcards

Click ⬚ in viewer to download images

login   help   changeLayout   settings

Sinn Fein rebellion : Hotel Metropole and Post Office, Dublin. Bef...

DOI (Digital Object Identifier)

- Globally registered/resolved (ie: service is run by Registration Agency/DOI system)
- Metadata registration required, according to standard schema

Example: University College Dublin

https://doi.org/10.7925/drs1.ucdlib_38377

PID comparison

PID type	Where are they registered?	Where are they resolved?	Is metadata also registered?	Cost
Handle	**Locally**, on your own handle server	**Locally**, by your own handle server	**No** Not supported	No per ID cost, but you must maintain your own handle service
ARK	**Locally**, on your own ARK server	**Locally,** by your own ARK server or globally, via N2T service	**Sometimes** Supported by not required. No standard schema.	No per ID cost, but you must maintain your ARK service (or partner with an
DOI	**Globally,** via a Registration Agency	**Globally**, by the DOI resolver system	**Always** Required, using DataCite schema.	Per ID cost and membership fee

What is a DOI Registration Agency?

- Organization authorized by the DOI Foundation to register DOIs in the global DOI system

- Each Registration Agency provides its own technical infrastructure (APIs, etc) and metadata schema for registering DOIs

- RAs are region and/or content type specific https://www.doi.org/RA_Coverage.html

- DataCite is global and focuses on objects other than text publications (datasets, collections, images, audiovisual, and many other resource types)

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airiti DOI
Airiti, Inc.

Crossref
Crossref

CNKi 中国知网 cnki.net
China National Knowledge Infrastructure (CNKI)

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EIDR
EIDR (Entertainment Identifier Registry)

中文DOI
ISTIC & Wanfang Data (The Institute of Scientific and Technical Information of China & Wanfang Data Co., Ltd.)

Japan Link Center
JaLC (Japan Link Center)

KiSTi www.kisti.re.kr
Korea Institute of Science and Technology Information (KISTI)

mEDRA
mEDRA (Multilingual European DOI Registration Agency)

Publications Office
OP (Publications Office of the European Union)

bsi.identify
BSI Identity

What's the value of DOIs vs other PID types?

- **Registration/resolution managed by DOI system and Registration Agencies (like DataCite)** - you don't need to maintain and run your own service

- **DOI/Registration Agency governance** ensures that the system will exist for the long-term

- **Centralized metadata registration, standard schema and APIs** allows search/indexing services to easily harvest DOI info

- **Registration Agencies participates in community initiatives** and builds additional tools/services that leverage DOI metadata

Example DataCite Services/Tools

When to use which PID type?

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Many considerations - no "one-size-fits-all" approach

- How "persistent" and "global" do you want your IDs to be?
- Workflow - which registration mechanisms work best for your organization?
- How many items do you want to assign IDs to? Do all items need PIDs, or just some items/some versions?
- Costs (payment to DOI agency vs staff/technical resources)

Recommend UKRI Heritage PID resources!
https://tanc-ahrc.github.io/PIDResources/index.html

Resources

- Heritage PIDs guide (from UKRI project) https://tanc-ahrc.github.io/PIDResources/index.html

  (final public workshop took place 18 Jan - recording will be available here soon https://tanc-ahrc.github.io/HeritagePIDs/resources.html)

- DataCite knowledgebase https://support.datacite.org

- ARK Alliance https://arks.org

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Get in touch!

Emial us:
info@datacite.org

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support@datacite.org