

EOSC PID Meta Resolver

A PID Metaresolver to enable accurate citation and attribution of digital objects by providing reliable access to metadata and associated resources

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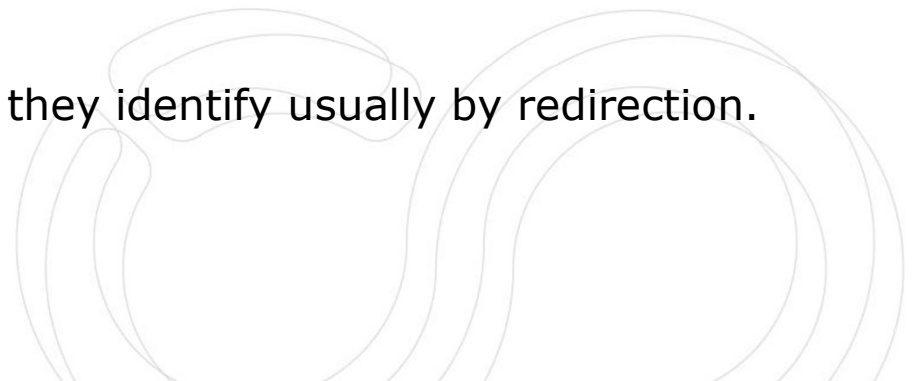
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the European Union**



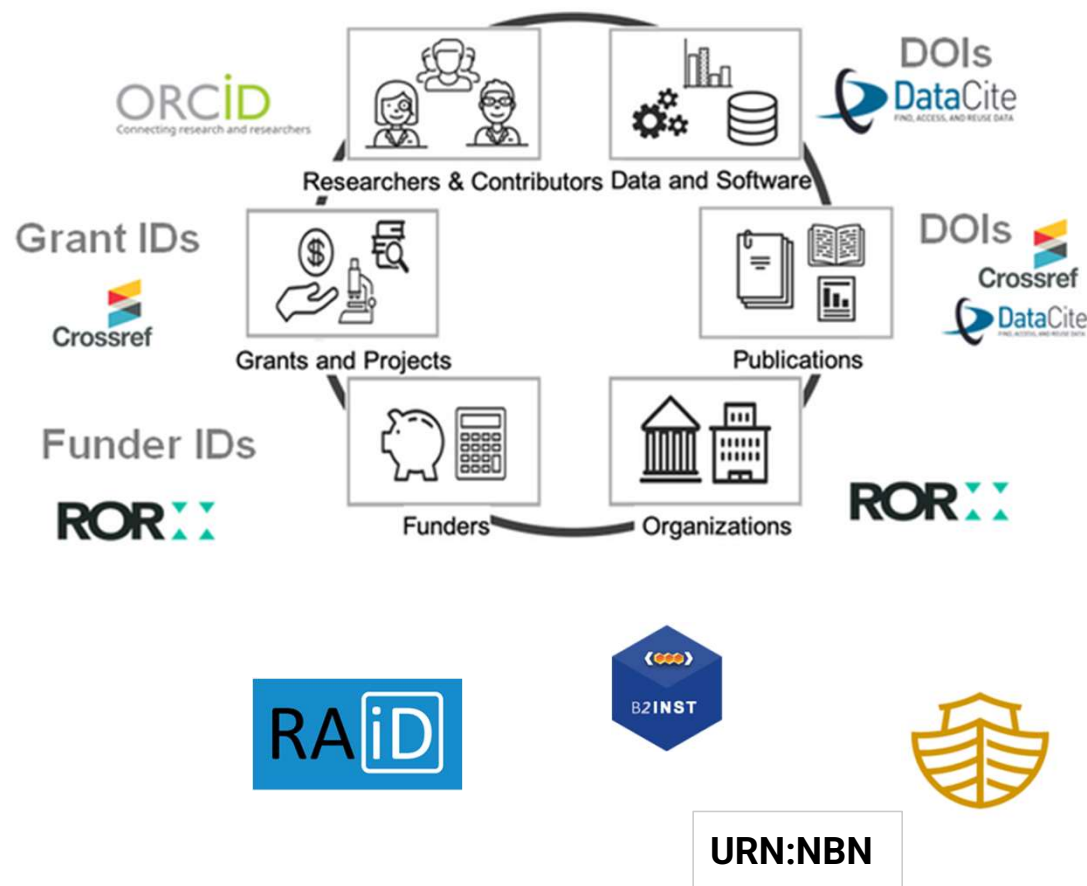
What is a PID

Persistent Identifiers:

- a mechanism for naming and locating
 - documents, data and software
 - in a persistent manner;
-
- are defined as consisting of a unique string and
 - a resolution system that can provide
 - globally unique stable references to the objects they identify usually by redirection.



Why do we need PIDs and why are there so many!



More to come in future !

Multiple systems used to create and maintain PIDs.

PID Metaresolver - The case

Increasing use of PIDs to reference all types of research results is a major step forward in meeting future requirements for the FAIRness of (research) data.

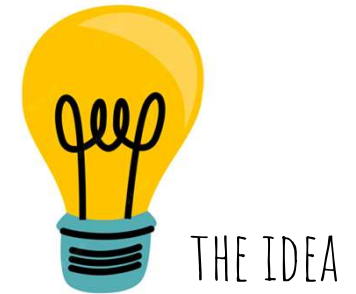
Challenges arise

- in processing PIDs
- in integrating PIDs into different research processes

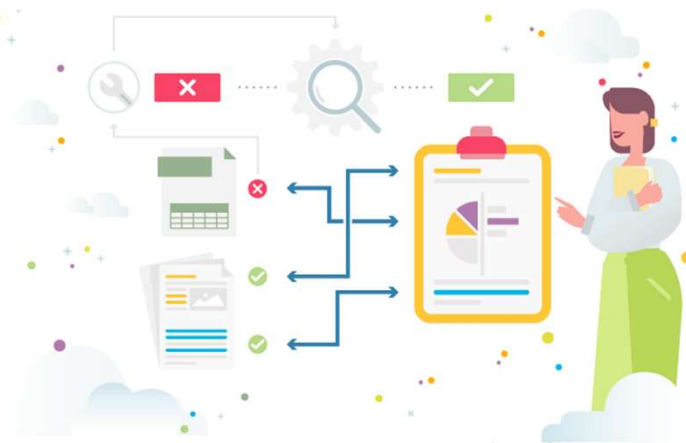


The PID Meta Resolver

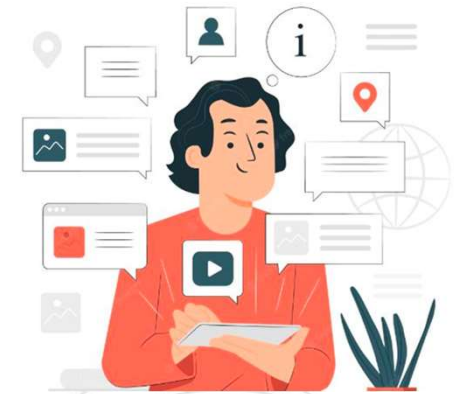
Why we need it ?



One service to resolve PIDs from various providers



Allow retrieval of URLs , Metadata and Resources



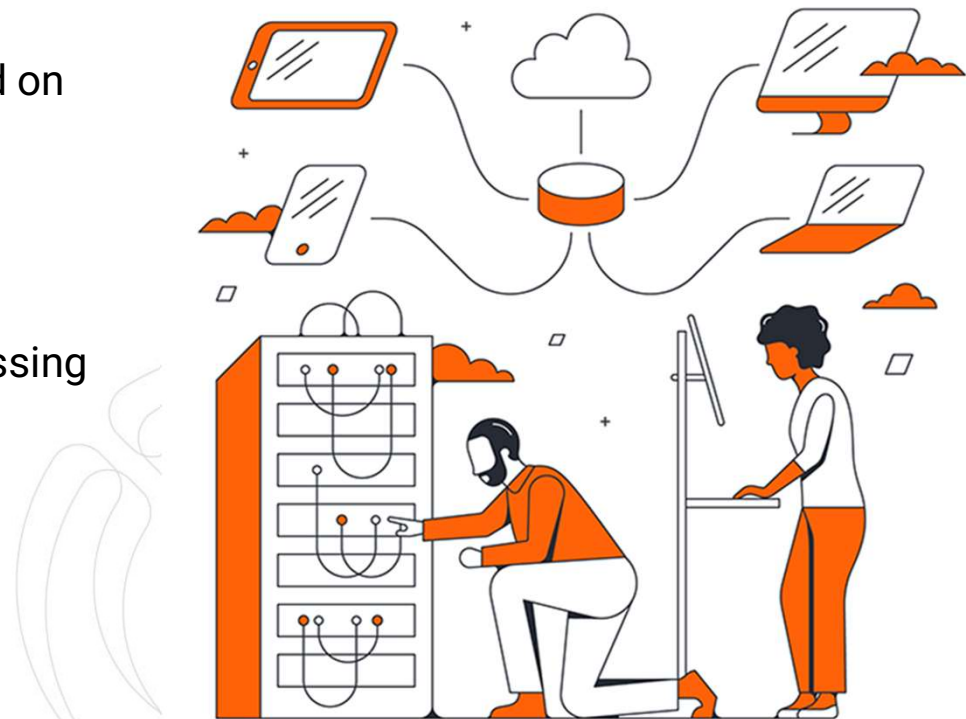
Information about PID provider

PID Metaresolver

- 1 helps the researcher get PID information without in-depth knowledge of the resolution mechanism of different PID systems
- 2 improves machine based data processing
- 3 knows where to route different types of identifiers (eg DOI, URN)

PID Meta Resolver is

- A scalable Metaresolver
- Based on reliable and mature software. Backend based on the Handle System.
- Human and machine interaction
- User friendly UI
- API and backend for high performance machine processing
- Easy to integrate with AI and data science applications
- Simple onboarding process for new providers





Use Case 1

I am a researcher and i don't know anything about persistent identifiers . I am new

Solution

Use the UI wizard to learn more



Use Case 2

I am a researcher and i want to use some PIDs in my simulations, by integrating sources from PIDs.

Solution

Use the API to start using the functionalities of the Meta Resolver

PID Provider



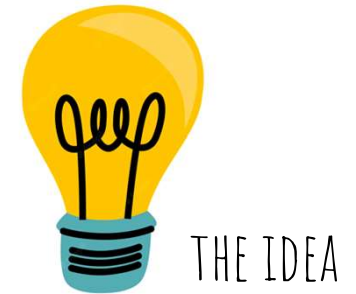
Use Case 3

I am a PID Provider and i want my PIDs to be resolved via the Meta Resolver .

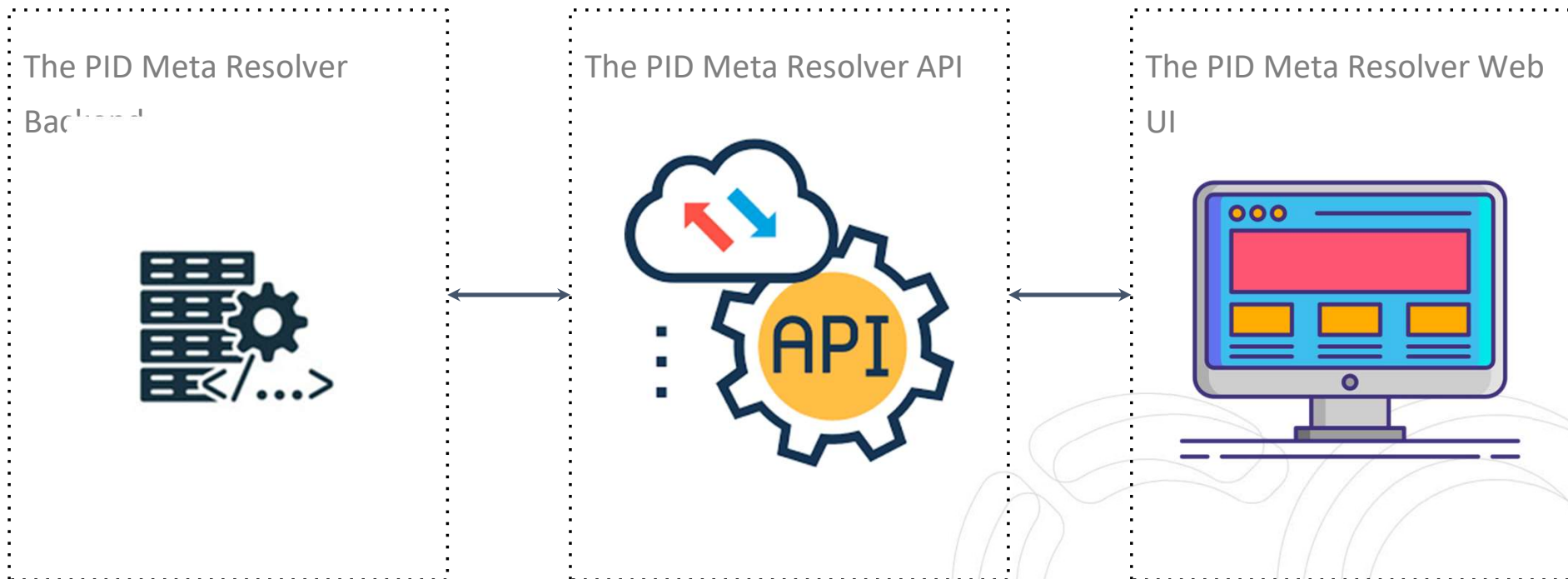
Solution

Use the UI to add your descriptive data.

Behind the scenes



The Architecture



Behind the scenes



Technologies used

The PID Meta Resolver
Backend



The Handle system

RESPONSIBLE

Resolve logic

handle API

retrieve meta
data

process meta
data

Behind the scenes

Technologies used



The PID Meta Resolver API

OPEN API v.3 specification



RESPONSIBLE

Resolve PID

Check the status
of PID

Provide more info

Give access to
providers

Identity the type
of PID

Resolve batch of
PIDs

The API in a glance

<https://api.pidmr.argo.grnet.gr>

Swagger UI | /open-api | Explore | pid-meta-resolver (powered by Quarkus)

PID Meta Resolver - PIDMR-API 1.0.1 OAS3

/open-api

PID Meta Resolver: The PID Meta Resolver is a generalized resolver for mapping items into records. Actually the PID Meta Resolver will know where to route different types of identifier – ex. DOI, URN:NBN. PID Meta Resolver which should improve machine based data processing and allows to get digital object information without in-depth knowledge of the resolution mechanism of different PID systems. That enhances the collection and analysis of data collections originating not only from different sources also referenced by different PID systems. The PID Meta Resolver should return a minimal set of information. This creates the connection with the PID Kernel Information.

Terms of service
Contact GRNET eINFRA Development Team
Apache 2.0

Metaresolver

GET /v1/metaresolvers/resolve/{pid} Resolves

GET /v1/providers/validate/{pid} Validates PIDs.

This operation check the validity of each identifier. Every Provider has a regex based on which the validation is performed.

Provider

GET /v1/providers Returns all the available Providers.

GET /v1/providers/validate/{pid} Validates PIDs

Schemas

Name	Description
pid * required string (path)	The PID to be validated. Example : ark:/13030/tf5p30086k ark:/13030/tf5p30086k
type string (query)	When this parameter is used, the API does not search the list of available Providers but directly retrieves the Provider of this type. Default value : type

Try it out

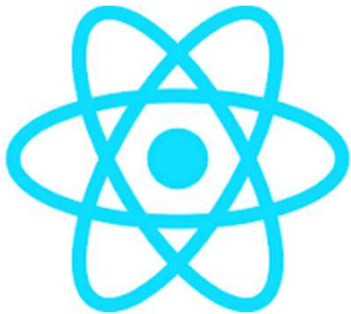
OPEN API v 3

Open to Users

Behind the scenes

Technologies used

The PID Meta Resolver UI



RESPONSIBLE

Library of PID

Resolve PIDs

Provide more info



The UI in a glance

<https://pidmr.argo.grnet.gr>



The FC4EOSC Metaresolver resolves individual handles from various providers

Please enter a valid Pid

supported pids: [ark](#), [arXiv](#), [swh](#), [doi](#), [urn:nbn](#) [and more...](#)

resolve:



Landing Page



Metadata



Resource

Supported Pids:

ark ARK alliance.

Archival Resource Keys (ARKs) serve as persistent identifiers, or stable, trusted references for information objects.

modes: [Metadata](#) [Landing Page](#)

arXiv arXiv.

arXiv is a free distribution service and an open-access archive for 2,226,706 scholarly articles in the fields of physics, mathematics, computer science, quantitative biology, quantitative finance, statistics, electrical engineering and systems science, and economics.

modes: [Resource](#) [Metadata](#) [Landing Page](#)

swh Software heritage persistent identifiers.

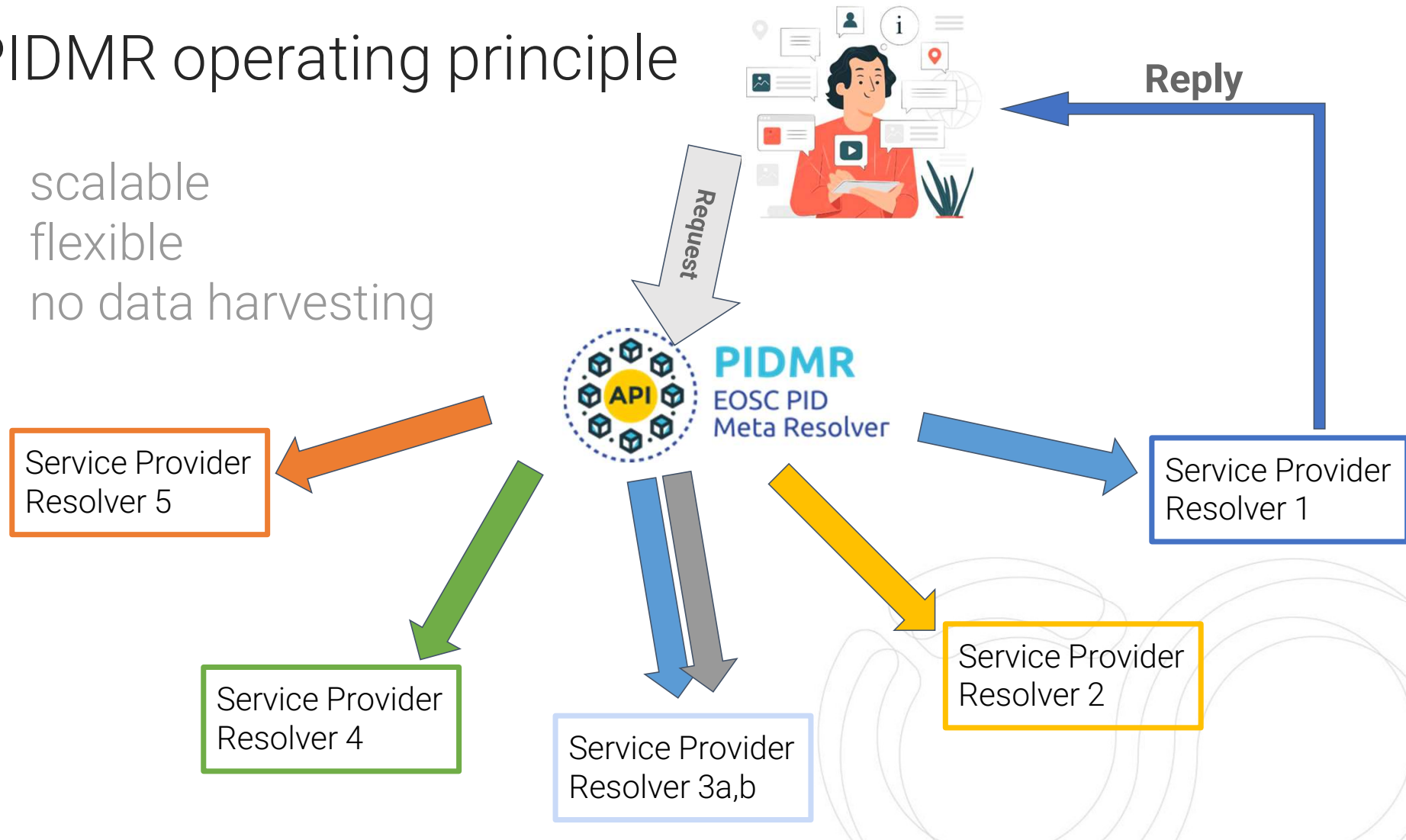
You can point to objects present in the Software Heritage archive by the means of SoftWare Heritage persistent Identifiers, or SWHIDs for short, that are guaranteed to remain stable (persistent) over time.

modes: [Resource](#) [Metadata](#) [Landing Page](#)

responds interactively to the user input and displays information about the current input and suggestions.

PIDMR operating principle

- scalable
- flexible
- no data harvesting



Providers Currently supported



More to come ...

Please select an identifier example for testing:

☐ ARK: [ark:/67531/metapth346793](https://nbn-resolving.org/urn:nbn:de:hbz:5:1-63874-p0001-9)

☐ arXiv: [arXiv:2302.00338](https://arxiv.org/abs/2302.00338)

DOI

☐ DOI ID: [10.15167/tomasi-federico_phd2019-03-14](https://doi.org/10.15167/tomasi-federico_phd2019-03-14)

☐ DOI Canonical: https://doi.org/10.15167/tomasi-federico_phd2019-03-14

☐ Handle: [21.T11148/7317d72eb37156ced029](https://nbn-resolving.org/urn:nbn:de:hbz:6-85659524771)

☐ ISLRN: [261-537-224-628-2](https://nbn-resolving.org/urn:nbn:de:hbz:6-85659524771)

ORCID

☐ ORCID ID: [0000-0001-9547-1582](https://orcid.org/0000-0001-9547-1582)

☐ ORCID Canonical: <https://orcid.org/0000-0001-9547-1582>

☐ ROR: [00cd95c65](https://ror.org/00cd95c65)

☐ SWHID: [swh:1:cnt:94a9ed024d3859793618152ea559a168bbcb5e2](https://nbn-resolving.org/urn:nbn:de:hbz:6-85659524771)

☐ DE-URN: [urn:nbn:de:hbz:6-85659524771](https://nbn-resolving.org/urn:nbn:de:hbz:6-85659524771)

☐ FI-URN: [urn:nbn:fi-fe2021080942632](https://nbn-resolving.org/urn:nbn:de:hbz:6-85659524771)

zbMATH

☐ Author ID: [bingert.sven](https://nbn-resolving.org/urn:nbn:de:hbz:6-85659524771)

☐ swMATH ID: [32212](https://nbn-resolving.org/urn:nbn:de:hbz:6-85659524771)

☐ Publication ID: [7800006](https://nbn-resolving.org/urn:nbn:de:hbz:6-85659524771)

Zenodo

With single-part resource

☐ zenodo PID: [10.5281/zenodo.8056361](https://nbn-resolving.org/urn:nbn:de:hbz:6-85659524771)

With multi-part resource

☐ zenodo PID: [10.5281/zenodo.8246990](https://nbn-resolving.org/urn:nbn:de:hbz:6-85659524771)



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