



FAIRCORE4EOSC 
Core Components Supporting a FAIR EOSC

EOSC PID MetaResolver

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FAIRCORE4EOSC in a nutshell

Call title: Deploying EOSC-Core components for FAIR Research and Innovation Action

Budget: 10 million EUR

Duration: June 2022 – May 2025

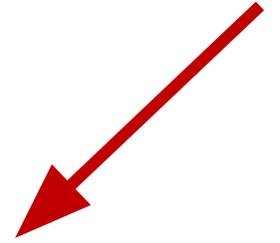
Consortium: 22 partners, coordinated by CSC – IT Center for Science

Website: faircore4eosc.eu

Key results: In response to the gaps identified in the SRIA, the project will develop nine new EOSC-Core components aimed to improve the discoverability and interoperability of an increased amount of research outputs.



Amsterdam, Netherlands – Kick-off meeting, June 2022



The 9 FAIRCORE4EOSC components



EOSC Research Discovery Graph (RDGraph) to deliver advanced discovery tools across EOSC resources and communities.



EOSC PID Graph (PIDGraph) to improve the way of interlinking research entities across domains and data sources on the basis of PIDs.



EOSC Metadata Schema and Crosswalk Registry (MSCR) to support publishing, discovery and access of metadata schemas and provide functions to operationalise metadata conversions by combining crosswalks.



EOSC Data Type Registry (DTR) to provide user friendly APIs for metadata imports and access to different data types and metadata mappings.



EOSC PID Meta Resolver (PIDMR) to offer users a single PID resolving API in which any kind of PID can be resolved through a single, scalable PID resolving infrastructure.



EOSC Compliance Assessment Toolkit (CAT) to support the FAIRCORE4EOSC PID policy compliance and implementation.



EOSC Research Activity Identifier Service (RAiD) to mint PIDs for research projects, allowing to manage and track project related activities.



EOSC Research Software APIs and Connectors (RSAC) to ensure the long-term preservation of research software in different disciplines.



EOSC Software Heritage Mirror (SWHM) to equip EOSC with a mirror of the Software Heritage universal source code archive.



One Place to Resolve all Persistent Identifiers



WHAT?

metadata

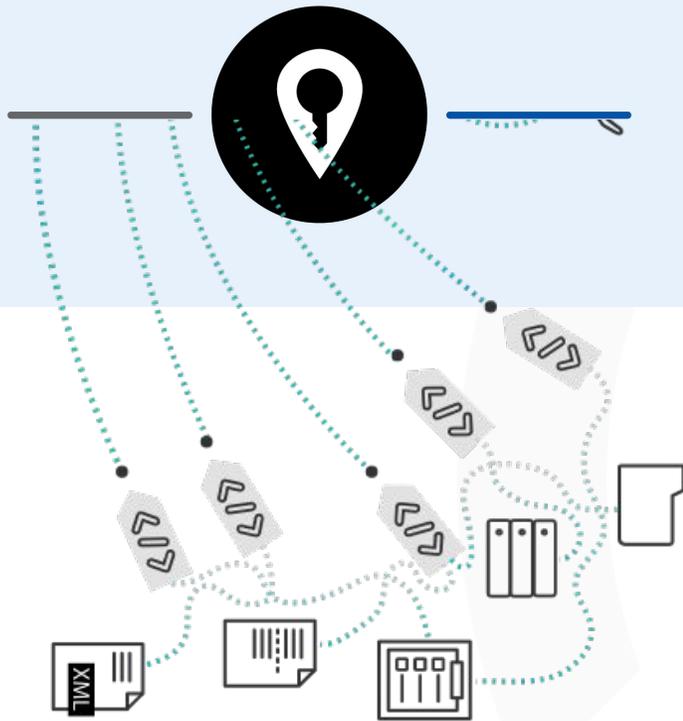
resource

landing page

and more



Persistent Identifier



“A persistent identifier (PID) is a **long-lasting reference to a digital object—a single file or set of files.**”

A PID may also be connected to a set of metadata which describes a digital resource.

A PID provides the information required to reliably identify, verify and locate your research data eliminating many misunderstandings. PIDs can be used to make research data permanently discoverable, retrievable, and citable

Reusable

Accessible

Interoperable

Findable



landing page

Landing pages are directly accessible and referenced in the PID and provide additional information about the referenced object. This is the first instance of resolving a PID and provides a brief summary of the content of PID including some metadata. **The landing page is provided in HTML format and is not machine actionable.**

metadata

Metadata describes the, with a PID, referenced object and provide detailed specification of the object based on the predefined PID schema and is either included within the PID or can be retrieved using the PID itself. Metadata are usually provided in JSON as well as XML format though other formats like in case of content negotiation for instance could be provided including Bibtex, RDF Turtle and so on. **Metadata are machine actionable.**

resource

The resource is the referenced object accessible either directly or via a landing page. The resource of an object is normally given within the metadata. Accessibility of the resources depends on the service provider. Resources are usually provided in different formats including PDF, Document, HTML and other community specific formats. **Machine actionable but not by default.**



Multiple systems used to create and maintain PIDs.



The case

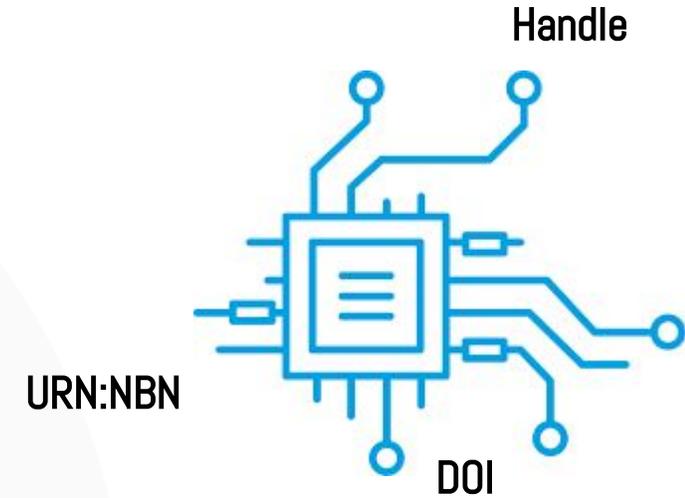
Increasing use of PIDs to reference all types of research results is a major step forward in meeting future requirements for the FAIRness of (research) data.

Challenges arise

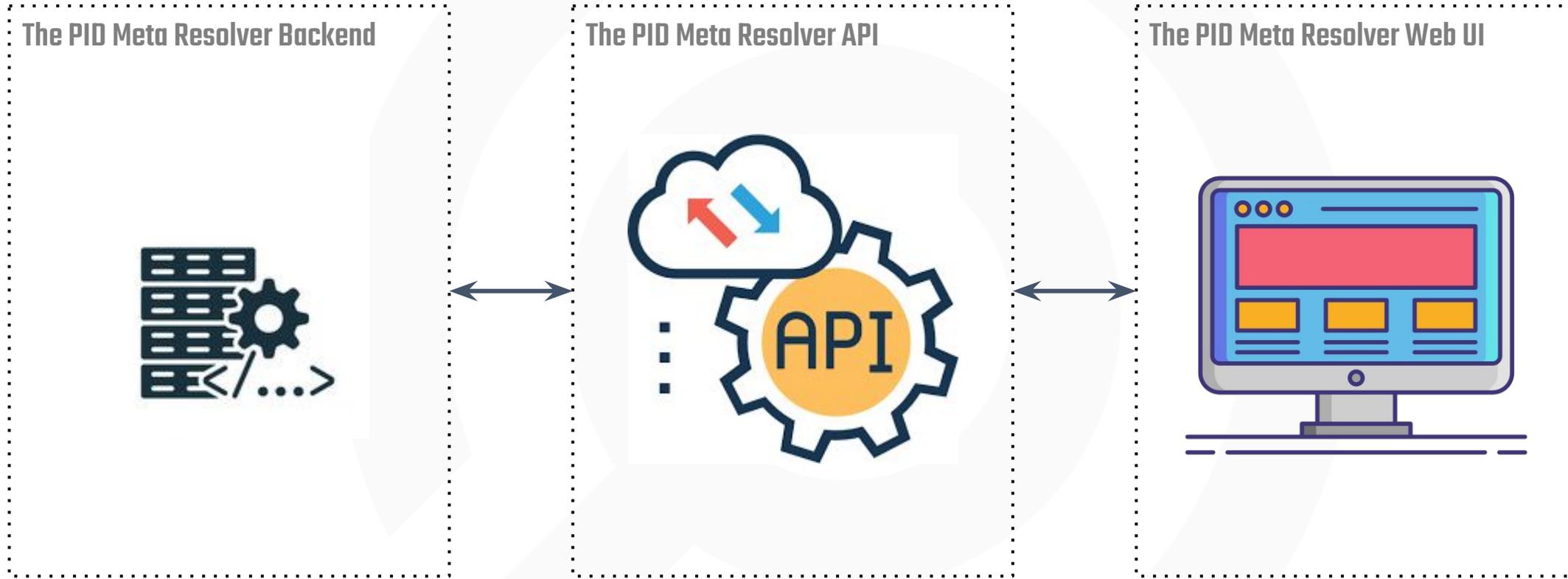
- in processing PIDs
- in integrating PIDs into different research processes



A **"meta resolver"** is a **service** that can understand and translate an incoming URL so as to properly **redirect** to one of potentially several **provider's resolvers.**



The Architecture





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



The FC4EOSC Metaresolver resolves individual handles from various providers

ark:/13030/tf5p30086k

Format: ark - Valid: 

resolve: [🏠 Landing Page](#) [📄 Metadata](#) [📦 Resource](#)



ark:/13030/tf5p30086k

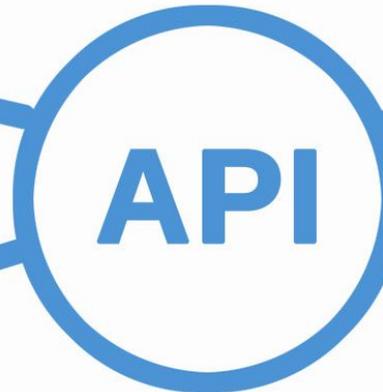


[/v1/providers/identify](#)

Identify the type of Persistent Identifier

[/v1/metaresolvers/resolve](#)

Resolve the PID to the selected PID mode (metadata, resource, landing page).
The 'redirect' parameter redirects you to the resolving page.



[/v1/providers/validate](#)

Validate the type of Persistent Identifier

[/v1/providers](#)

This operation returns the list of Providers that the API supports and the types supported by each provider (metadata, resource, landing page).



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