

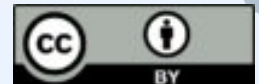
EOSC-Pillar

Coordination and Harmonisation of National & Thematic Initiatives to support EOSC

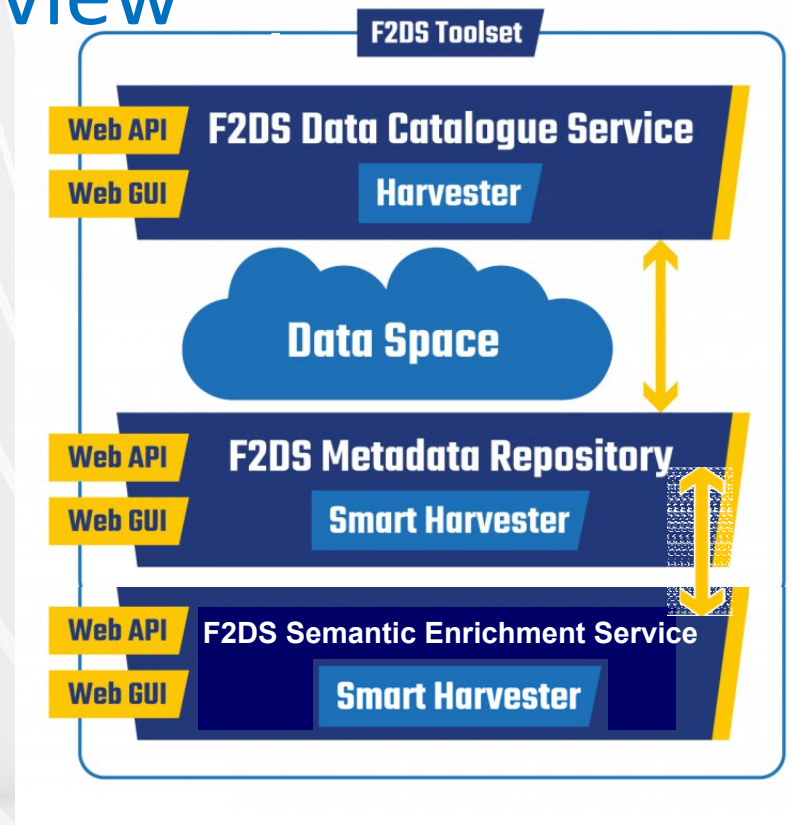
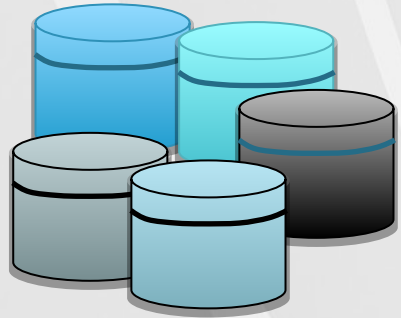
Session S7 Innovative FAIR data spaces



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Session S7 overview



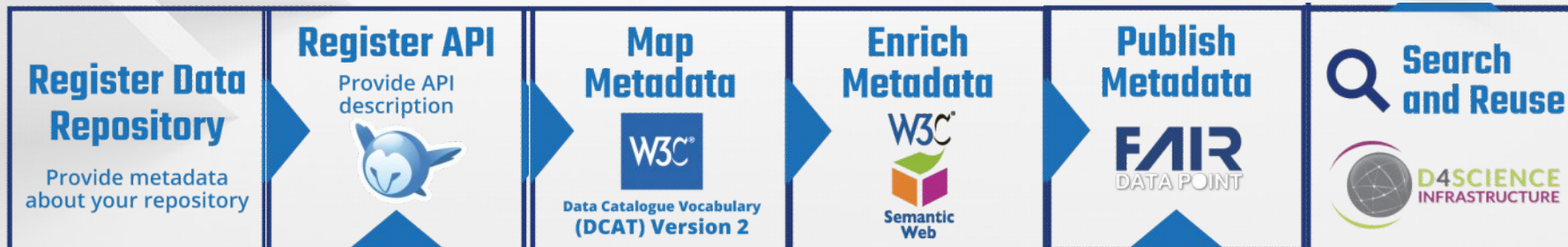
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4





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Coordination and Harmonisation of National & Thematic Initiatives to support EOOSC

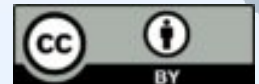
Harvesting and mapping data to an unifying data space

Baptiste Toulemonde

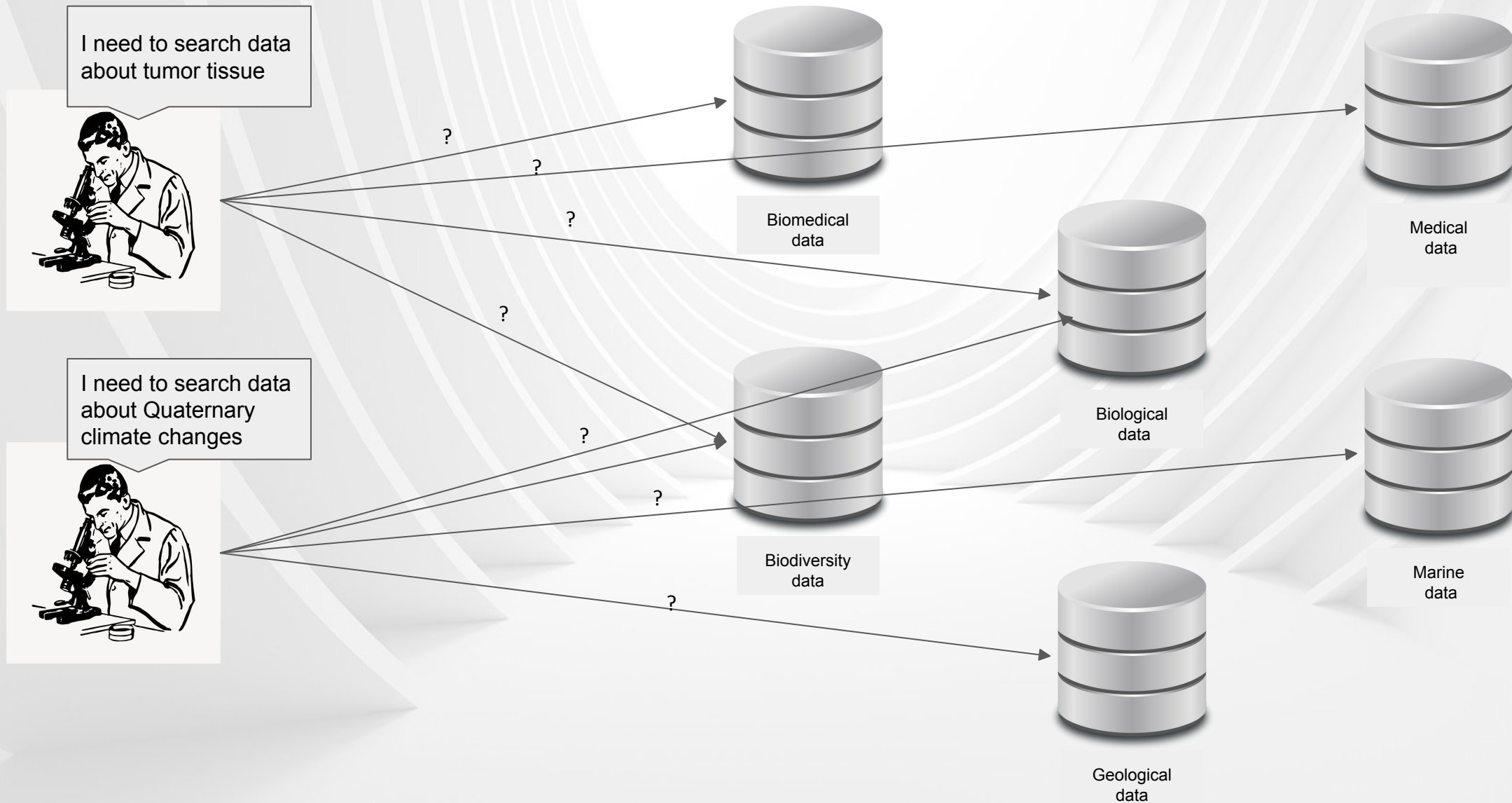


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A cross disciplinary use-case driven project



A cross disciplinary use-case driven project

I need to search data about tumor tissue



?

How can we build a service architecture that would support the aggregation and FAIRification of distributed and heterogeneous data resources?

I need to search data about climate



?

Biodiversity data

?

Geological data

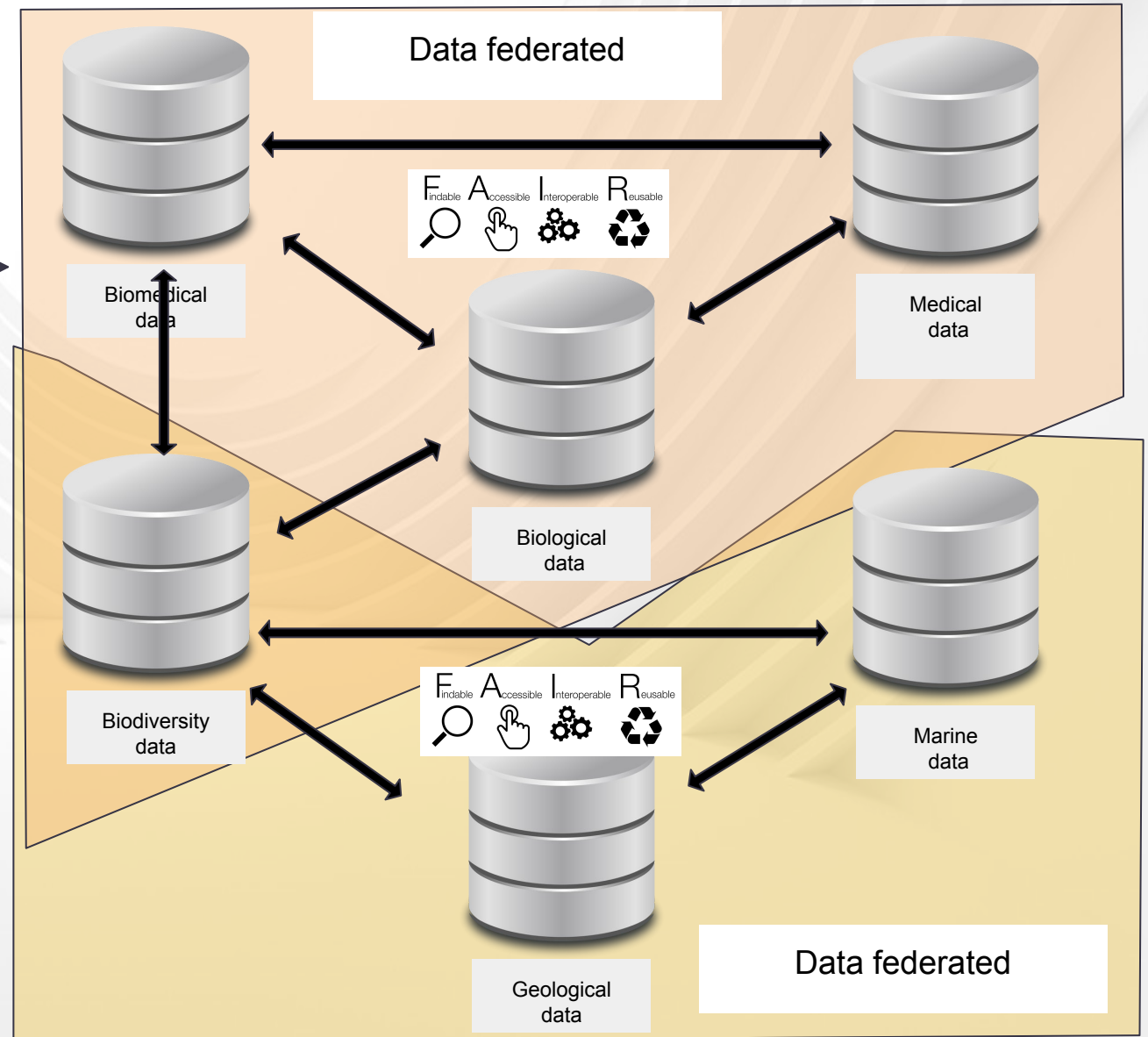
Marine data

A cross disciplinary use-case driven project

I need to search data about tumor tissue



I need to search data about Quaternary climate changes



FAIR Principles: guidelines toward machine actionable information

Technical considerations

- Globally Unique Persistent and Resolvable Identifiers
- Metadata
 - Provenance
 - Common format
 - FAIR Vocabularies/Ontologies
 - Leverage domain specific metadata standards
 - Persistent
- Free, Open and Universal Access protocol
- Licences (human and machine readable)

Existing tooling

Publish FAIR data



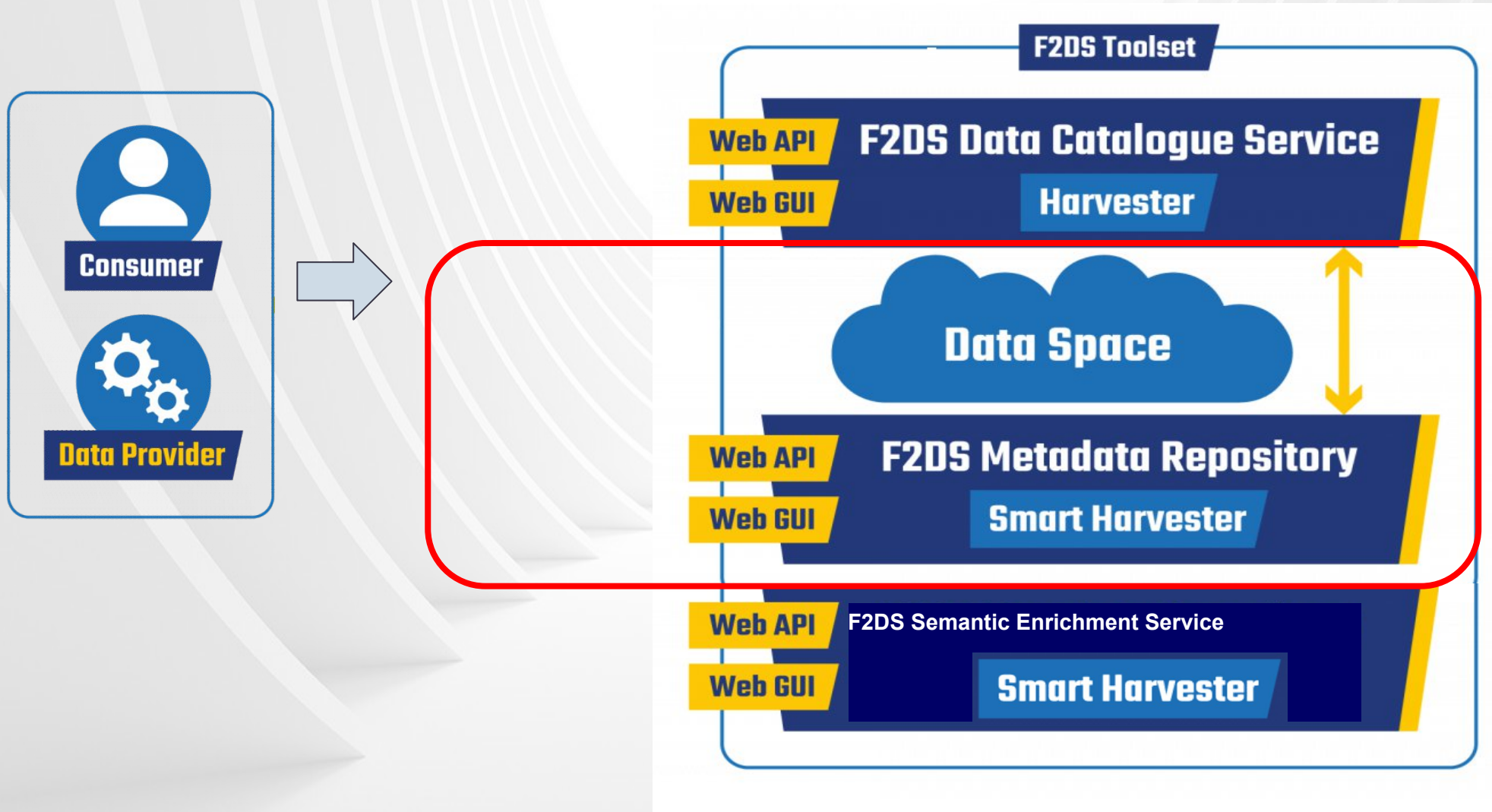
Enrich (meta)data
with semantics



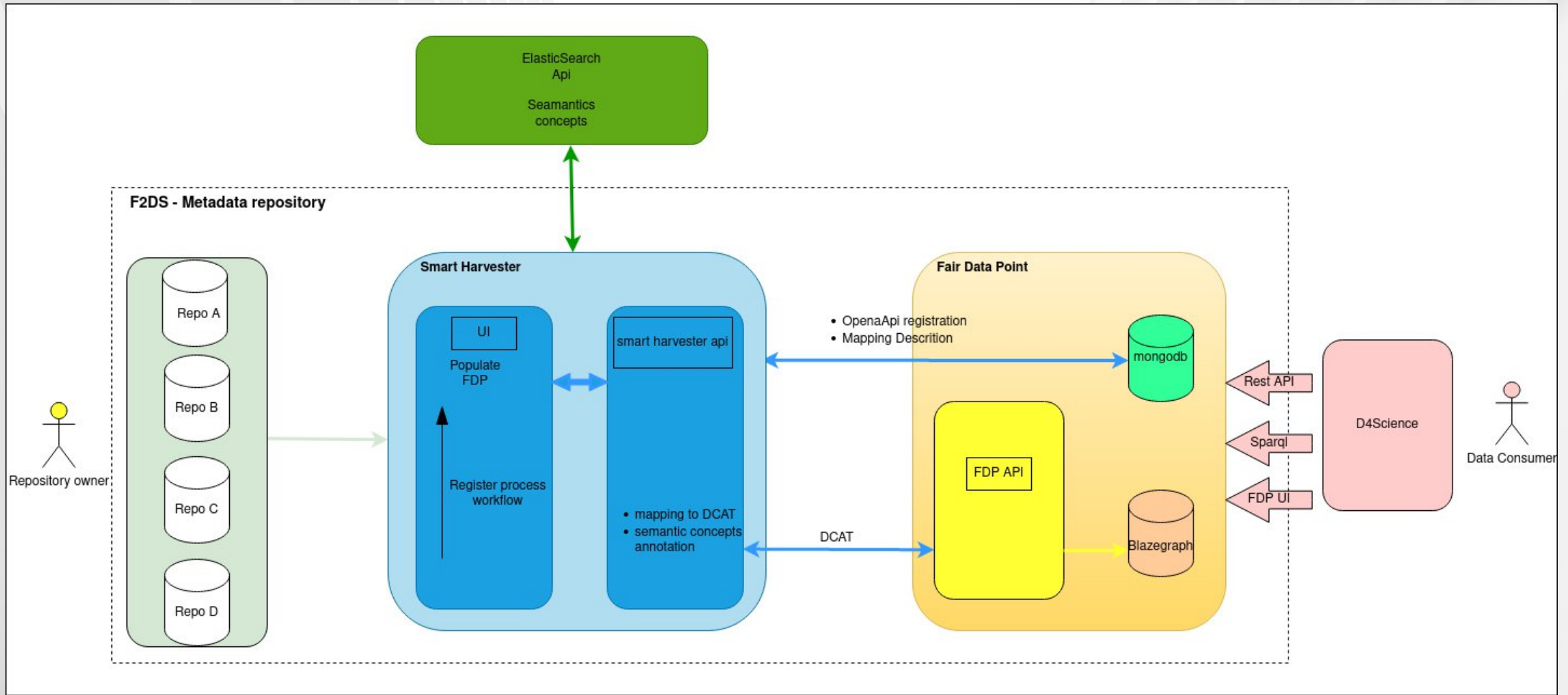
Evaluate FAIRness



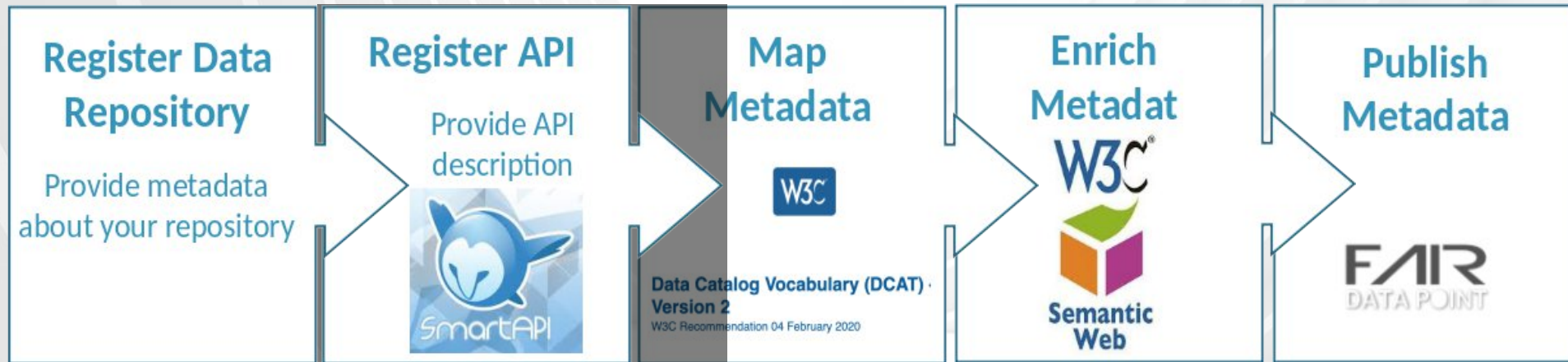
A simple service architecture



A simple service architecture



User-centric workflow for repository owners



User-centric workflow for repository owners

The screenshot shows the EDSC-Pillar web interface. The top navigation bar includes the logo, a user profile for 'Baptiste troulemonde', and a 'LOGOUT' button. A left sidebar contains navigation links: Home, Integrate your repository, SDT information, Technical information, Describe access to datasets, and Search. The main content area is titled 'Upload and fill form with repository description file:'. It features a file upload field with 'Browse...' and 'repository_ird.yaml' next to it. Below this, it says 'Or describe your repository and save a new file for publishing in the FDP database:'. The form fields are: Repository Type* (Dataverse), Repository Name* (IRD), Description (ird test), url* (https://dataverse.ird.fr), Version (1), License, Language (en), and buttons for 'SAVE REPOSITORY DESCRIPTION FILE' and 'PUBLISH CATALOG DESCRIPTION IN FDP'.

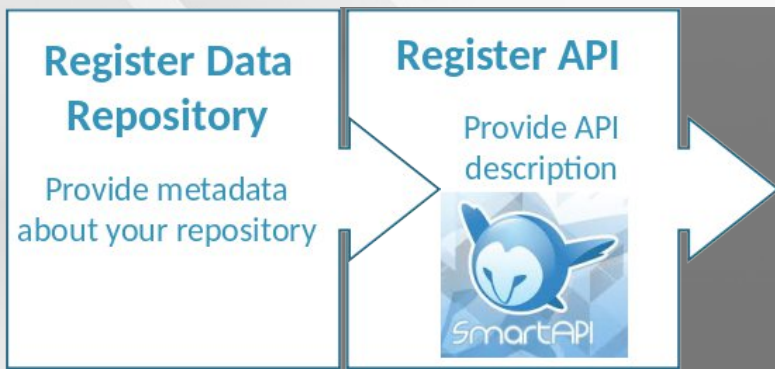
Register Data Repository

Provide metadata about your repository

User-centric workflow for repository owners

The screenshot shows the 'Describe API' interface in the EDC Pillar system. The user is logged in as 'Baptiste toulemonde'. The interface displays the API path `/api/search` and a table of parameters for a GET request.

Name	Location	Type	Default value	Description
per_page	query	integer	10	
type	query	string	dataset	
start	query	string	0	
show_entity_ids	query	boolean	false	
show_my_data	query	boolean	false	
q	query	string	*	



User-centric workflow for repository owners

EDS: Pillar

Home

Integrate your repository

SDT Information

Technical Information

Describe access to datasets

Search

Map DCAT Schema

Map your metadata schema with DCAT schema

Dcat

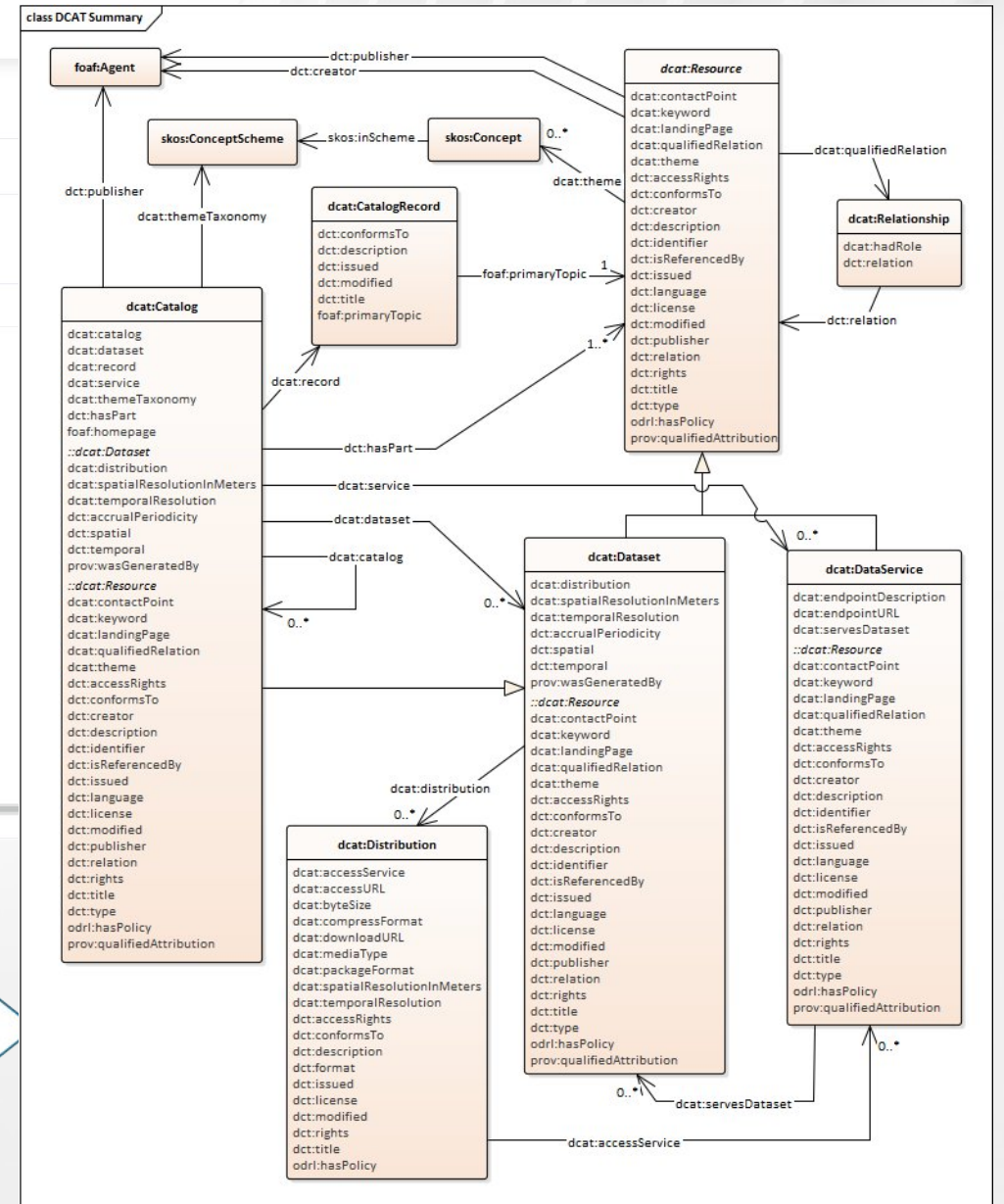
Upload Or fill out the form with the path corresponding to the dcat property and save a new file for next mappings:

Use jsonpath to describe the mapping (more information about jsonpath [here](#))

IMPORT FILE

Dataset

dct:title *	\$.datasetVersion.metadataBlocks.citation.fields[?(@.typeName == 'title')].value
dct:description *	\$.datasetVersion.metadataBlocks.citation.fields[?(@.typeName == 'dsDescription')].value[*].dsDescriptionValue.val
adms:identifier	
adms:sample	
adms:versionNotes	
dcat:contactPoint	\$.datasetVersion.metadataBlocks.citation.fields[?(@.typeName == 'datasetContact')].value[*].datasetContactEmail.v
dcat:keyword	\$.datasetVersion.metadataBlocks.citation.fields[?(@.typeName == 'keyword')].value[*].keywordValue.value
dcat:landingPage	\$.persistentUrl
dcat:qualifiedRelation	
dcat:spatialResolutionInMeters	

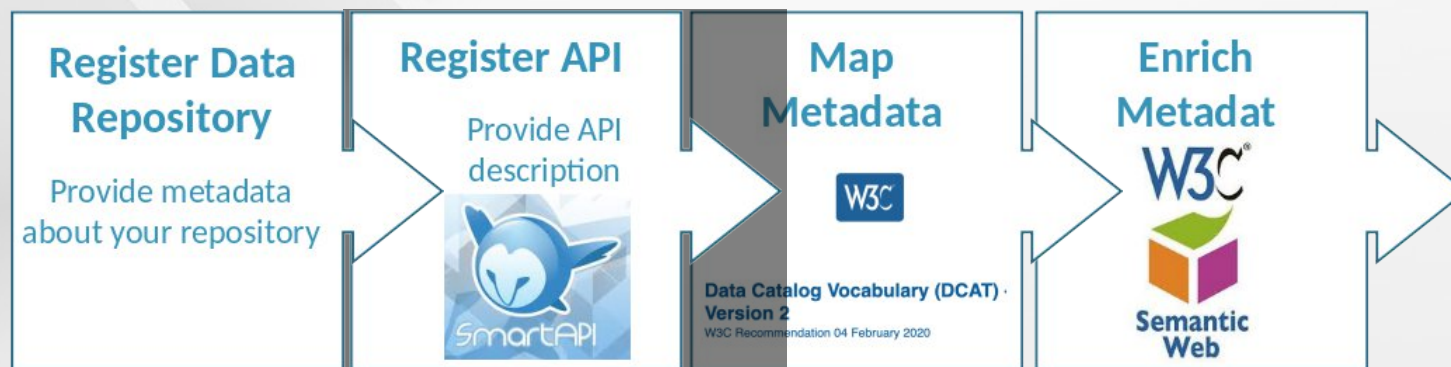


User-centric workflow for repository owners

The screenshot shows the EDSC Pillar web interface. The top navigation bar includes the EDSC Pillar logo, a user profile for Baptiste toulemonde, and a LOGOUT button. The left sidebar contains navigation options: Home, Integrate your repository, SDT Information, Technical information, Describe access to datasets, and Search. The main content area displays search results for the query "Examination and description of soil profiles collected in Nakivale refugee area in southern Uganda in 2001". A "Keyword(s) found" section lists "soil properties", "soils", and "exchangeable complex". Below this is a search input field with the placeholder "enter a value with at least 4 characters". A tabbed interface shows the "NITROGEN (N)" tab selected, displaying a table of search results.

label	definition	synonyms	score
<input checked="" type="checkbox"/> nitrogen (N)			158.54
<input type="checkbox"/> TOTAL NITROGEN (N) CONTENT	Quantity (i.e. number of moles) of total nitrogen (i.e. nitrogen in all chemical forms) per unit volume of the water column.	NTOT	133.97
<input type="checkbox"/> nitrogen	use this term only for the element N or the gas N2; for other nitrogen compounds see NITROGEN COMPOUND.	N element	126.03
<input type="checkbox"/> nitrogen	The chemical element nitrogen.	Azote Kjeldahl,N	121.37
<input type="checkbox"/> nitrogen	<p>Keep in liquid nitrogen</p>		120.94
<input type="checkbox"/> nitrogen	An element with the atomic symbol N, atomic number 7, and atomic weight 14. Nitrogen exists as a diatomic gas and makes up about 78% of the earth's atmosphere by volume. It is a constituent of proteins and nucleic acids and found in all living cells. [MeSH]	N	120.18
<input type="checkbox"/> Nitroren	An element with the atomic symbol N, atomic number 7, and atomic weight [14.00643; 14.00728]. Nitrogen exists as a diatomic gas and makes up about 78% of the earth's atmosphere by	N? Nitroren	120.00

Below the table, there are links to "Instantiation example of the user centric metadata model - REPHY network", "Examination and description of soil profiles collected in Nakivale refugee area in southern Uganda in 2001", and "Enquête sociodémographique et foncière sur le terroir de Brakaguhé en 2016".



User-centric workflow for repository owners

EOSC Pillar FAIR Data Point / ird test seamntic

ird test seamntic

ird test seamntic

Datasets

A note on PAD/LAD estimators implemented in AMAPVox 1.7

This note briefly describes the implementation of various estimators of PAD/LAD provided in AMAPVox v1.7

Issued 30-09-2022 Modified 30-09-2022

Analysis of earthworm casts and soils collected over Dong Cao catchment in Northern Vietnam in 2016

Earthworm casts and their surrounding topsoil were taken in collaboration with the Soils and Fertilizers Research Institute (Sfri) under different vegetation cover at the long term...

C1088 C71096 LP14044-9 C-10501 C-10701 200906047399586391

CO028158

Issued 30-09-2022 Modified 05-10-2022

Analysis of earthworm casts and soils collected over Dong Cao catchment in Northern Vietnam in 2017

Earthworm casts and their surrounding topsoil were taken in collaboration with the Soils and Fertilizers Research Institute (Sfri) under different vegetation cover at the long term...

C1088 C71096 LP14044-9 C-10501 C-10701 200906047399586391

CO028158

Issued 30-09-2022 Modified 30-09-2022

Analysis of soil samples collected over Huay Ma Nai catchment in Northern Thailand in 2001

Owner Edit Settings Delete

Metadata Issued 30-09-2022 Metadata Modified 07-10-2022

Conforms to

- Catalog Profile

Language

License

cc-by-nc-nd3.0

Issued

30-09-2022

Modified

30-09-2022

Theme taxonomy

- tropics

- D061306

- CO031213

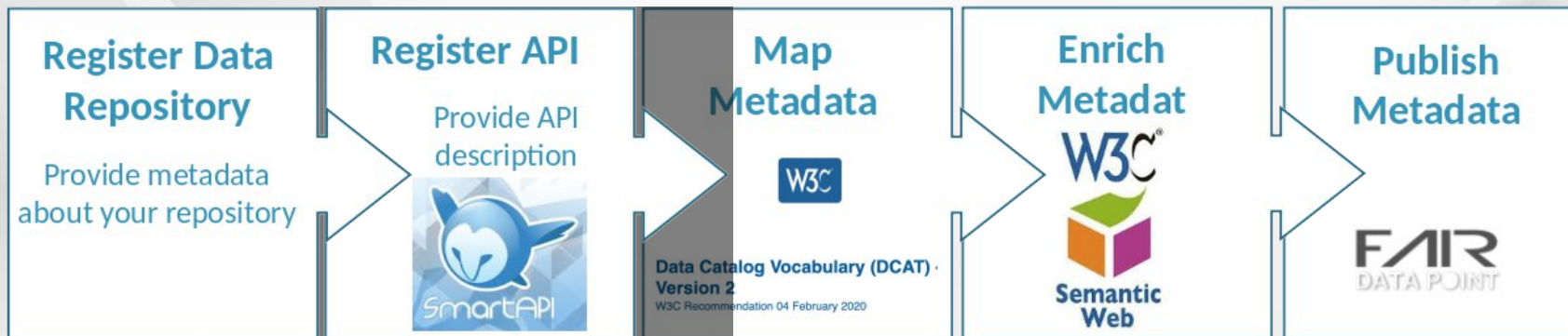
Show more

Download RDF

ttl rdf+xml json-ld

```
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@prefix dcat: <http://www.w3.org/ns/dcat#> .
@prefix foaf: <http://xmlns.com/foaf/0.1/> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
@prefix ldp: <http://www.w3.org/ns/ldp#> .

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<http://vocab.nerc.ac.uk/collection/A04/current/Soils/>, <http://purl.jp/bio/4/id/200906040050429715>.
```



Benefits

- Create in no-time data spaces across internal resources, institutions, and domains
- No changes required for repositories
- Make repository content more FAIR
- Multiple APIs for accessing and processing F2DS content (SparQL, REST API, and web UI)
- Connect easily any processing services

EOSC-Pillar

Coordination and Harmonisation of National & Thematic Initiatives to support EOSC

Thank you!

Get in touch with us!



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