



FAIR-IMPACT

Expanding FAIR solutions across EOSC

Metadata, Semantics and Interoperability

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Kesäniemi

Work Package 4

WP4 will develop and foster the uptake of a semantic framework for governance, creation, mapping, sharing, reuse, FAIRness assessment and interoperability of semantic artefacts for EOSC

Semantic artefacts* are a key elements to achieving FAIR and these artefacts and their catalogues have to be FAIR too

*ontologies, terminologies, taxonomies, thesauri, vocabularies, metadata schemas and standards...

WP4's tasks



T4.1 (governance)

Nicola Fiore



T4.2 (lifecycle and catalogues)

Daniel Garijo +
Clement Jonquet
+ Alejandra
Gonzalez-Beltran



T4.3 (for research software)

Morane
Gruenpeter



T4.4 (crosswalks and mappings)

Yann Le Franc

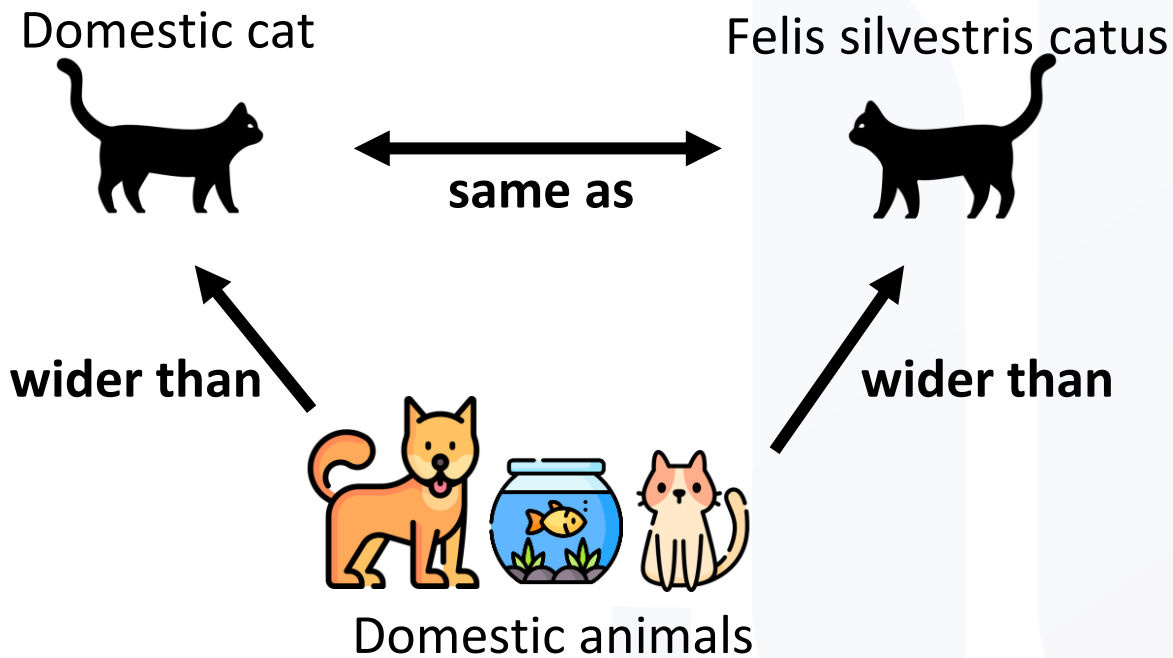


T4.5 (in-use in data repos)

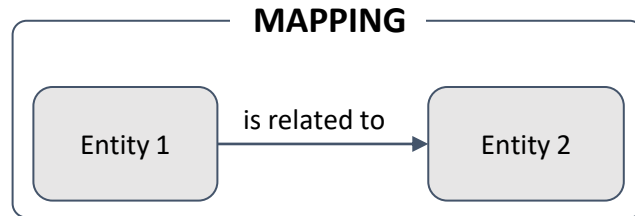
Sophie Aubin



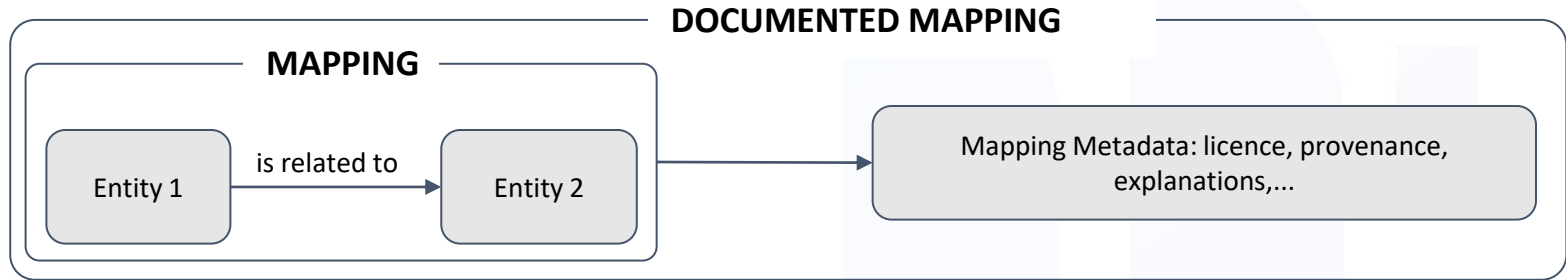
What are mappings and crosswalks?



What do we mean by mappings?

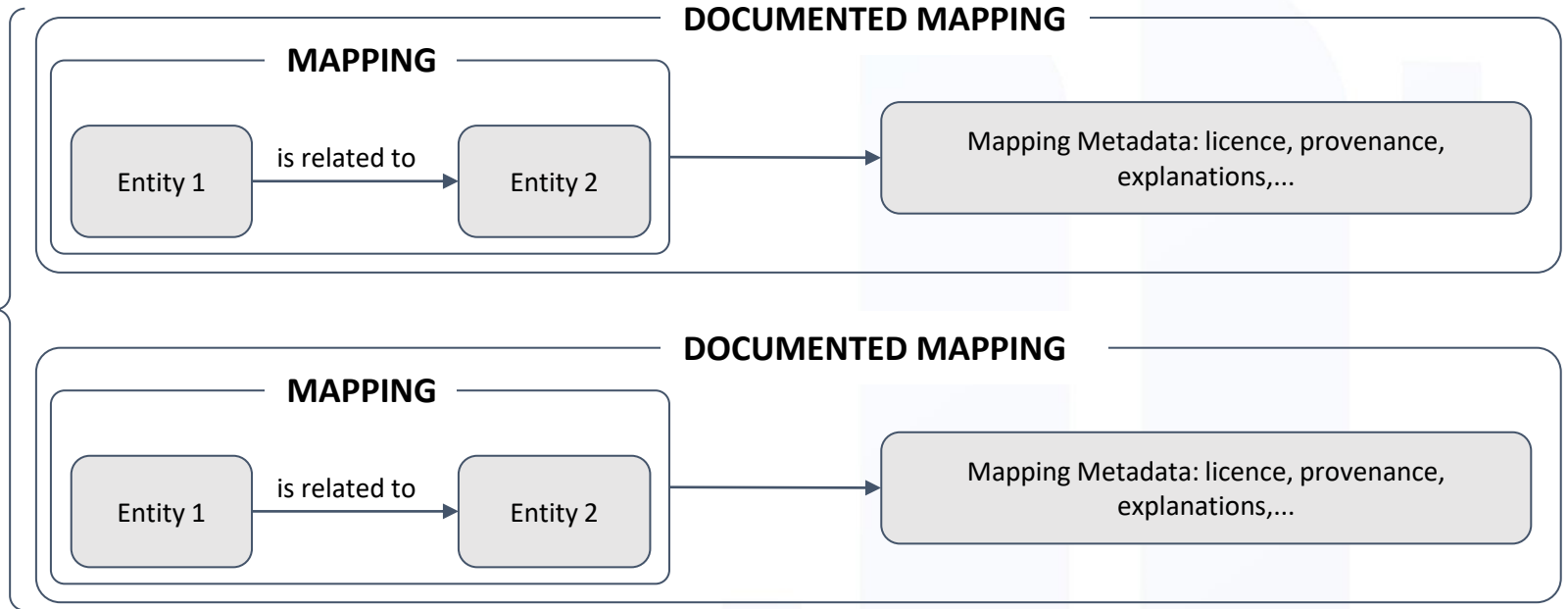


What do we mean by mappings?



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MAPPING SET
or CROSSWALK



Why we want mappings and crosswalks to be FAIR?

Most of the existing mappings are **not reusable**

- Hard to find, or even not published
- No context, or reason for the mapping, no information about the author
- Based on community practices, that might require additional mappings

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FAIR Mappings

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FAIR Mappings

- Support **reusability** instead of duplication even in **other domains**
- Leads to **reduction of the computing power** necessary to use the mappings
- Allow **automation** of **information retrieval**

Mappings in FAIR Impact

Our objectives

- Establish **guidelines** on how to make mappings FAIR
- Propose a **machine-actionable common exchange model** for sharing the diversity of FAIR mappings
- Engage with communities to **co-create, test and adopt** the model for FAIR mappings and to **identify methodologies and practices** around mappings
- Establish a **governance framework** for mapping in collaboration with T4.1

Our ongoing work

Two sides of the same coins:

- Analysis of the requirements and technical recommendations for making mappings FAIR
- Practical aspects of mappings from creation to maintenance: understanding and documenting community practices

How do we work? Workshops and community engagement

Why Mappings Matter and how to make them FAIR?

Funded by the European Union

14.00 - 18.00 CEST
13 April 2023 *Online*

Organised jointly by



Documenting mapping community practices

10.00 - 13.00 CET
24 November 2023 *Online*



FAIR-IMPACT.eu

Developing a mapping process framework

15.00 - 18.00 CEST
30 April 2024 *Online*



FAIR-IMPACT.eu



Contribute to the survey on mappings and practices

https://bit.ly/fairmapping_survey



RESEARCH DATA ALLIANCE

What about the FAIR Recommendations?

Grouped the 15 individual FAIR principles into 4 categories:

- **Model and Format:** Interoperability (I1, I2, I3) and Reusability (R1, R1.1, R1.2, R1.3)
- **Metadata:** Findability (F2, F3) and Reusability (R1, R1.1, R1.2, R1.3)
- **PID :** Findability (F1, F3)
- **Service and API:** Accessibility (A1, A1.1, A1.2, A2) and Findability (F4)

Mappings in FAIRCORE4EOSC

- T4.2 - Metadata Schema and Crosswalk registry
- Will be released in May 2025



Metadata Schema and Crosswalk Registry

- Allows for registration of existing schemas and crosswalks in multiple formats
- Includes a tool for creating crosswalks between registered schemas
- Provides a harmonized view to schemas expressed in different formats
- Facilitates the operationalization of crosswalks
- Handles versioning and assigns handles

MSCR glossary

Schema

Structural definition of data (cf. Ontology and complex data types). Should be owned or maintained by someone or something.

Consists of properties

Vocabulary schema

List of things. Can be hierarchical or flat.

Property

Data typed. Can be simple or complex. Has cardinality.

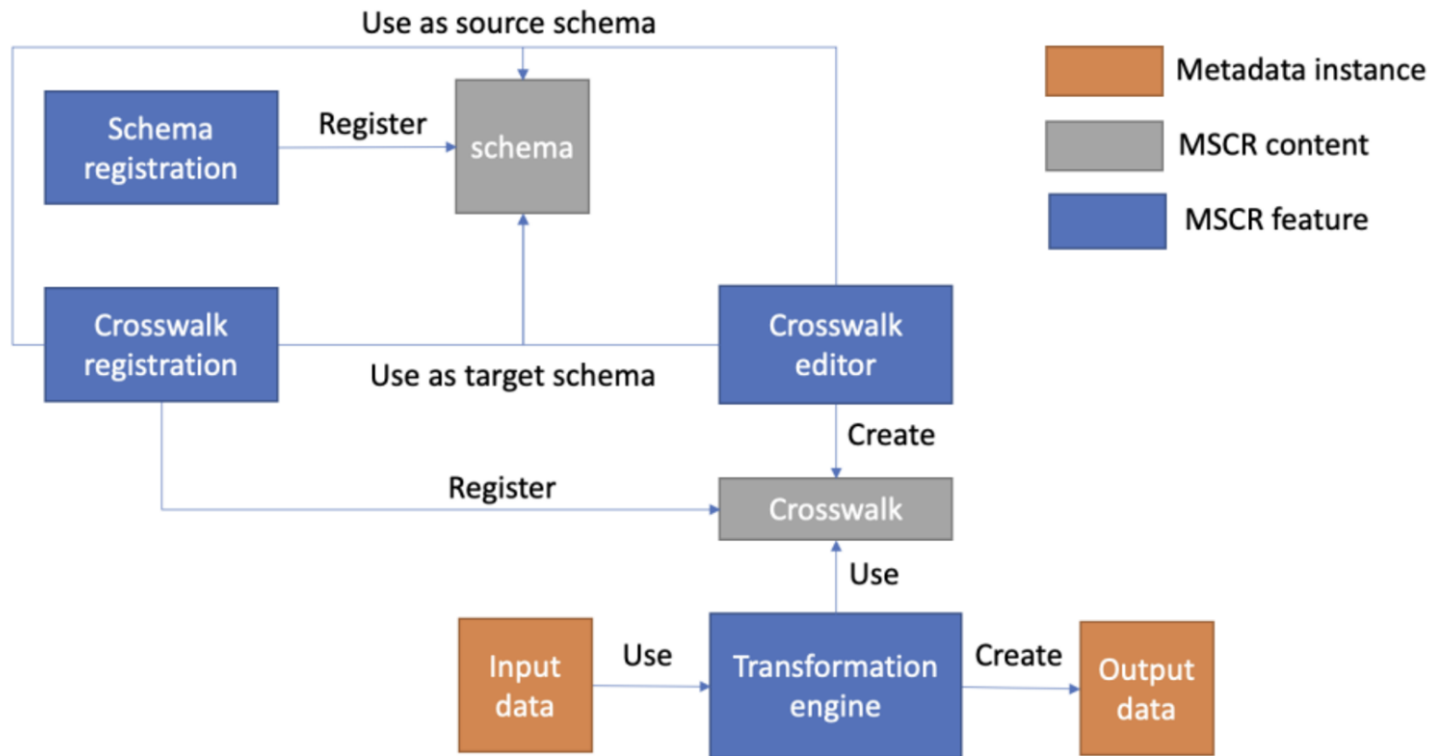
Mapping

Description of a link between two property sets. Mainly manually curated (cf. automated mapping)

Crosswalk

Set of mappings. Binds together two registered schemas

MSCR: Main features



Mapping example - vocabularies

Custom role codes

- supervisor of doctoral candidate
- supervisor of licentiate candidate
- supervisor of master's student



Credit taxonomy

- Supervision

Many-to-one

Mapping example - metadata

```
"temporal": [  
  {  
    "end_date": "2021-12-31T21:59:59.000Z",  
    "start_date": "1996-12-31T22:00:00.000Z"  
  }  
],
```



```
"temporalCoverage": "1996-12-31/2021-12-31",
```

Many-to-one + processing