

## **FAIR-IMPACT contribution to Semantic interoperability & ontologies in research**

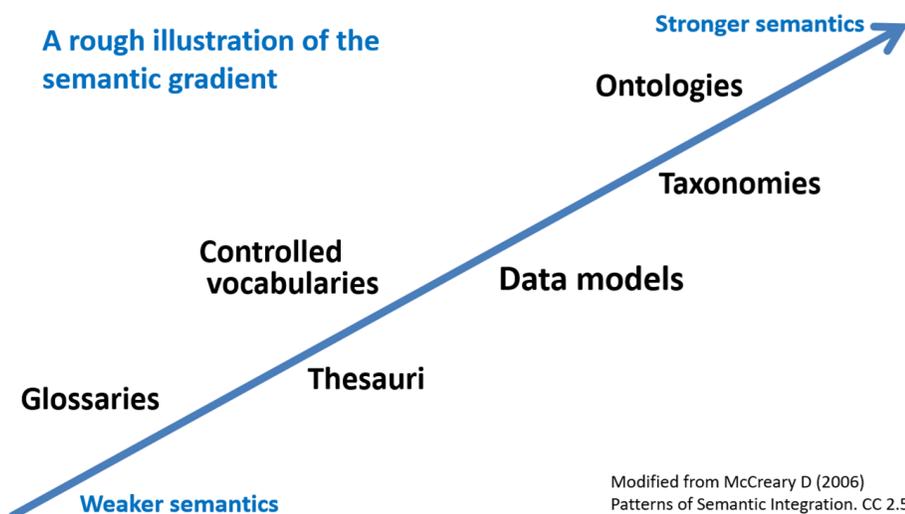
**Sophie Aubin, INRAE**

# Broader and more harmonised use of semantic artefacts in EOSC

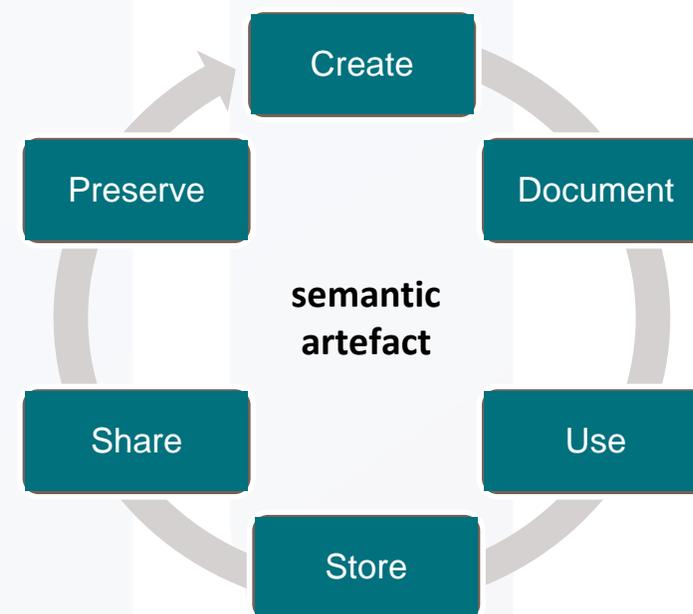
**Semantic interoperability** ensures that the precise format and meaning of exchanged data and information is preserved and understood throughout exchanges between parties, in other words 'what is sent is what is understood'.

Source : [Revised European Interoperability Framework](#)

*Semantic artefacts, what are we talking about ?*



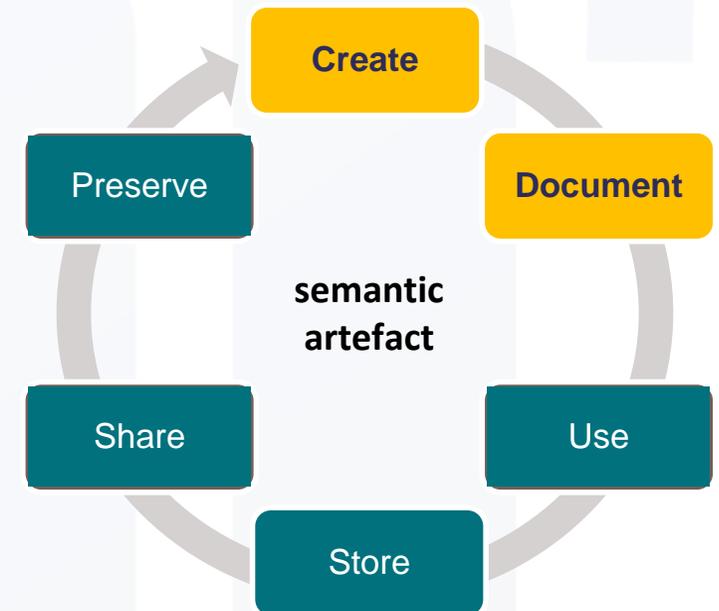
*Let's make semantic artefacts FAIR(er)!*



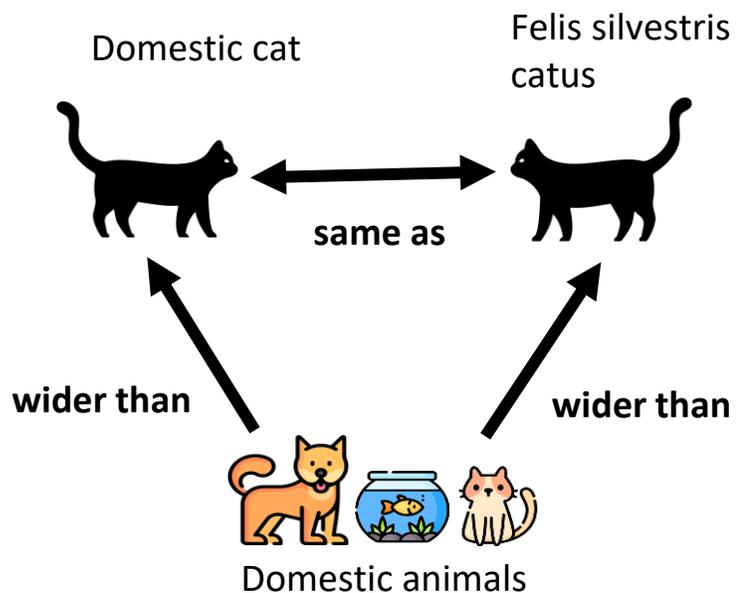
# Broader and more harmonised use of semantic artefacts in EOSC

- ★ Guidelines for engineering semantic artefacts
- ★ [FAIR implementation framework](#) : find methodologies and tools for the semantic artefact developer
- ★ Guidelines to create mappings with other semantic artefacts

*Let's make semantic artefacts FAIR(er)!*



# A framework for metadata crosswalks and mappings between semantic artefacts

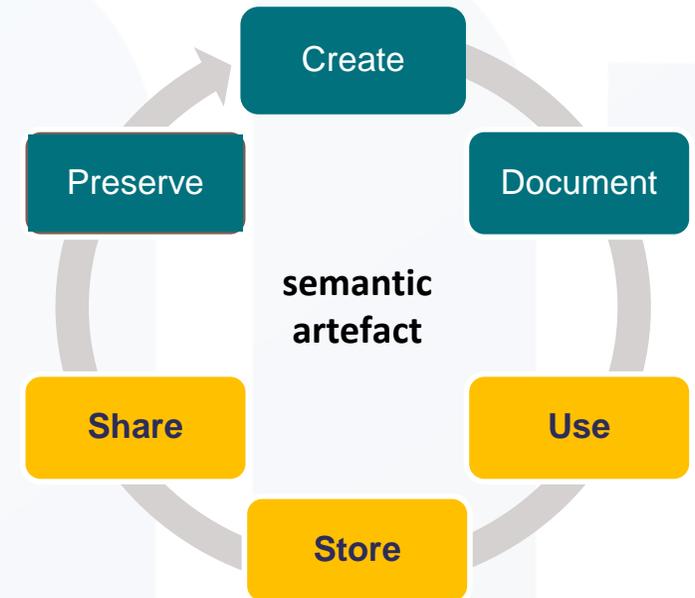


- ★ **Specifications/Requirements** for FAIR Mappings
- ★ **Common exchange model** based on SSSOM (Matentzoglou et al., 2022), that would enable sharing simple and complex mappings
- ★ **Cookbook** with practical guidelines showing the various ways of doing mapping supported by concrete examples

# Broader and more harmonised use of semantic artefacts in EOSC

- ★ **MOD: a DCAT-based standard for describing semantic artefacts and their catalogs**
- ★ **A common API for EOSC semantic artefact catalogs - towards a federated system to find and share SA**
- ★ **Use cases to evaluate the impact of connecting semantic artefact catalogs to data repositories to address indexation needs**

*Let's make semantic artefacts FAIR(er)!*



# Broader and more harmonised use of semantic artefacts in EOSC

*Let's make semantic artefacts FAIR(er)!*

★ Report on governance of semantic artefacts for inclusion within EOSC

*Where should I publish my ontology?*

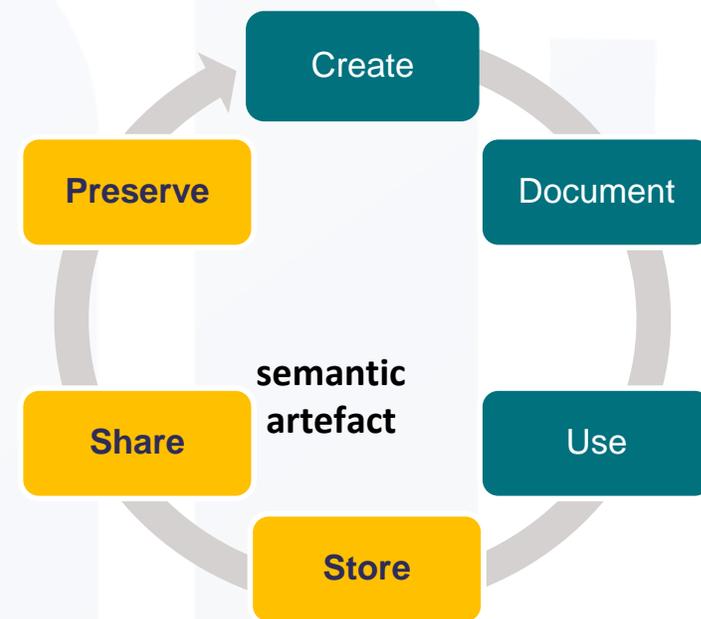
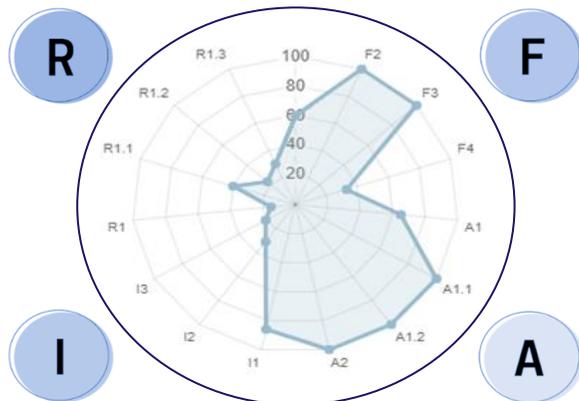
*Which license?*

*Can users ask for content modifications?*

*Who guarantees the access?*

★ FAIRness assessment of semantic artefact (WP5)

*How FAIR is my ontology?*

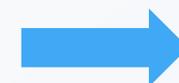


# Research Software MetaData Guidelines (RSMD) & checklist

## Guidelines for recommended metadata standard for research software within EOSC

A standardized community based requirements and recommendations to end users related to :

- ★ General metadata requirements
- ★ Accessibility and preservation (Archive)
- ★ Reference and identification (Reference)
- ★ Description and classification (Describe)
- ★ Credit and attribution (Cite)
- ★ Reuse, licensing and legal aspects
- ★ Re-executability: dependencies and execution environment



The CodeMeta Project

<https://github.com/codemeta/codemeta>



Coming event: Metadata session during the Software Source Code Interest Group at [RDA P21 on October 23rd](#) (full [programme](#))

# Design and promote interoperability mechanisms across domains and institutions

- ★ **FAIR Guidelines for the usage of components for technical and semantic interoperability**
- ★ **Getting hold of the issue of legal interoperability**
- ★ **Connection to the EU Data spaces**
  - Bringing the FAIR Principles to the Data Spaces to support data sharing and re-use
- ★ **Exploring potential synergies with the WorldFAIR project**
  - On FIPs - FAIR Implementations Profiles - and more

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Expanding FAIR solutions across EOSC



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