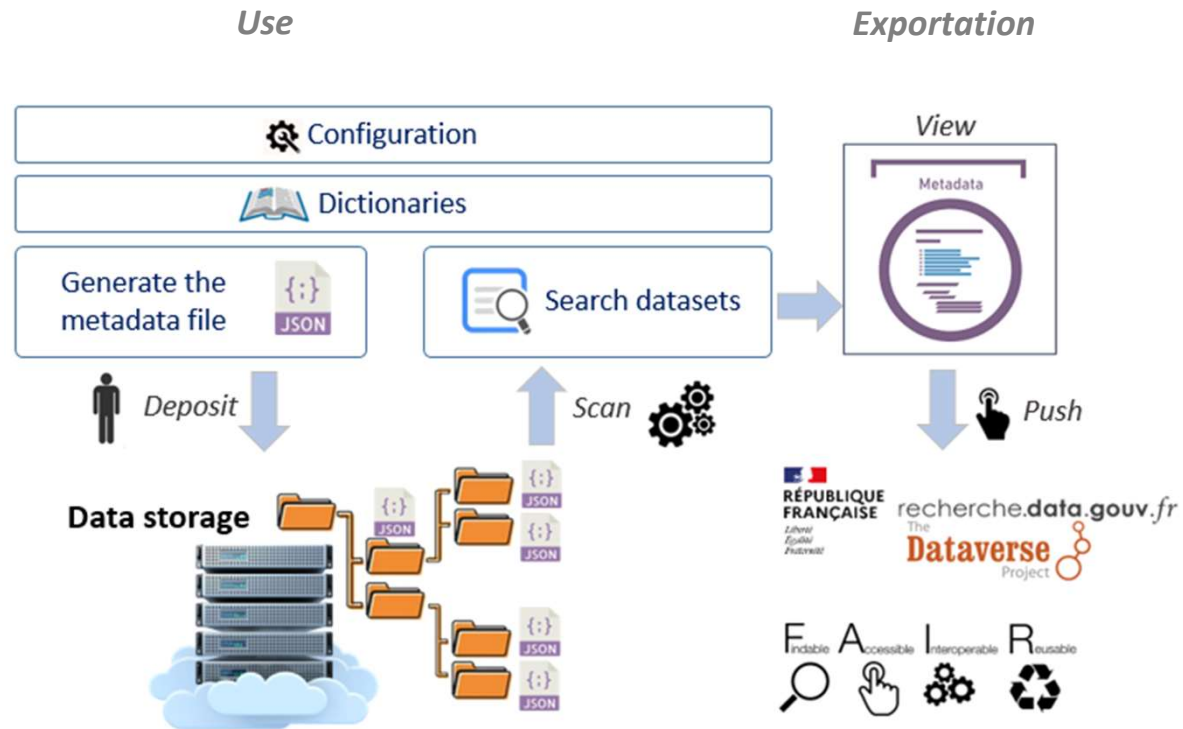# A tool dedicated to metadata

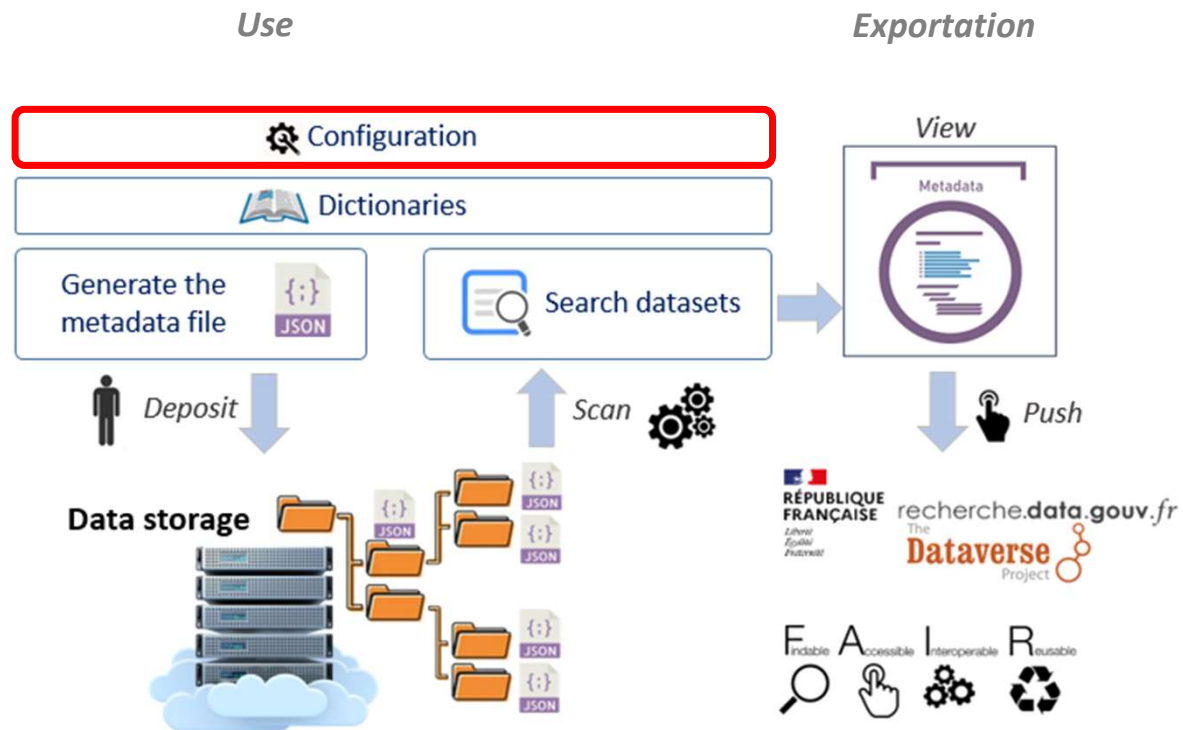

Assistance in entering and managing metadata

Filing Automation avoids re-entering metadata during distribution

A tool dedicated to metadata

Maggot
Metadata aggregation on data storage

Use   *Exportation*

Standards & Terminologies
The 4 **FAIR** pillars

Guidelines   Terminologies   Identifiers   Formats

Configuration

Dictionaries

Generate the metadata file {:} JSON

Search datasets

View
Metadata

Deposit

Scan

Push

Data storage

JSON

RÉPUBLIQUE FRANÇAISE
Liberté Égalité Fraternité

recherche.data.gouv.fr
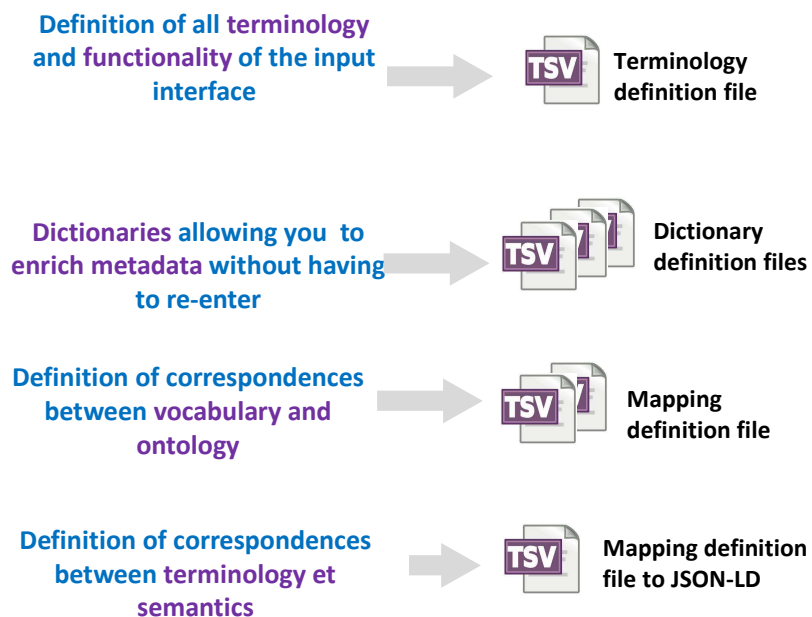The Dataverse Project

Findable Accessible Interoperable Reusable

Assistance in entering and managing metadata

Filing Automation avoids re-entering metadata during distribution

Configuration flexibility

Maggot
Metadata **agg**regation **o**n data **st**orage

Configuration

Definition of all terminology and functionality of the input interface → TSV **Terminology definition file**

Dictionaries allowing you to enrich metadata without having to re-enter → TSV **Dictionary definition files**

Definition of correspondences between vocabulary and ontology → TSV **Mapping definition file**

Definition of correspondences between terminology et semantics → TSV **Mapping definition file to JSON-LD**

Standards & Terminologies
The 4 **FAIR** pillars

https://pmb-bordeaux.fr/maggot/config/view

View all current definition files

▶ Terminology definition file 🔗 conf/config_terms.txt

▶ Documentation definition file 🔗 conf/config_doc.txt

▶ Dataverse definition file 🔗 conf/dataverse.txt

▶ Mapping definition file 🔗 conf/mapping.txt

▶ Schema.org JSON-LD definition file 🔗 conf/schema-jsonld.txt

https://pmb-bordeaux.fr/maggot/dictionary

Dictionaries

Dictionary:

--- Choose a dictionary ---
--- Choose a dictionary ---
Information about grant
Information about people
Information about producer
Information about vocabulary

Roles

The **notion of role** makes it possible **to take into consideration the contribution of each person according to their « job skills ».**

Standards & Terminologies
The 4 FAIR pillars

DDI
Data Document Initiative

OntoPortal
(AgroPortal, BioPortal, …)

Thesaurus SKOSMOS

(VOINRAE, LOTERRE, ONTOSTACK, …)

Roles

Upstream

Fix the frame based on standards and vocabularies recognized by the international community in the field.

Guidelines | Terminologies

« Data steward »
+
« Scientist »

Metadata Capture

« Input Mask »
Allowing metadata to be captured according to a data description standard

Good Practices

Identifiers | Terminologies

« Scientist»

Downstream

Transform data for interoperability
greatly facilitated by the task upstream

JSON-LD

Guidelines | Terminologies | Identifiers | Formats
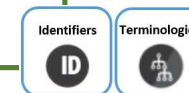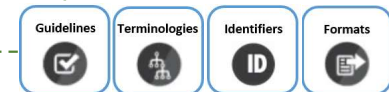
«Data steward »

Role : Kind of action or behavior, in the place one occupies. A person can have several roles; similarly several people can have the same role.

Definition of metadata

Completely done using a single configuration file (TSV format)

Field	Section	Required	Search	ShortView	Type	features	Label	Predefined terms
title	definition	Y	N	1	textbox	width=350px	Short name	
fulltitle	definition	Y	Y	2	textbox		Full title	
subject	definition	Y	Y		checkbox	open=0	Subject	Agricultural Sciences, Arts and Humanities, Astronomy and Astrophysics, Business and Management, Chemistry, Computer and Information Science, Earth and Environmental Sciences, Engineering, Law, Mathematical Sciences, Medicine Health and Life Sciences, Other, Physics, Social Sciences
description	definition	Y	Y		areabox	rows=6, cols=30	Description of the dataset / Organization of directories	
note	definition	N	Y		areabox	rows=4, cols=30	Notes	
status	status	N	Y	3	dropbox	width=350px	Status of the dataset	In progress, Processed, Unprocessed
access_rights	status	N	Y	4	dropbox	width=350px	Access rights to data	Mixte, Private, Public
language	status	N	Y		checkbox	open=0	Language	Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hungarian, Icelandic, Italian, Lithuanian, Norwegian, Romanian, Slovenian, Spanish, Swedish
license	status	N	Y		textbox	autocomplete=license	License	
contacts	management	Y	Y		multiselect	autocomplete=people, min=1	Contacts	
authors	management	Y	Y		multiselect	autocomplete=people, min=1	Authors	
collectors	management	N	Y		multiselect	autocomplete=people, min=1	Data collectors	
curators	management	N	Y		multiselect	autocomplete=people, min=1	Data curators	
members	management	N	Y		multiselect	autocomplete=people, min=1	Project members	
leader	management	N	Y		multiselect	autocomplete=people, min=1	Project leader	
wpleader	management	N	Y		multiselect	autocomplete=people, min=1	WP leader	
depositor	management	N	Y		textbox		Depositor	
producer	management	N	Y		multiselect	autocomplete=producer, min=1	Producer	
grantNumbers	management	N	Y		multiselect	autocomplete=grant, min=1	Grant Information	
kindOfData	descriptors	Y	Y		checkbox	open=0	Kind of Data	Audiovisual, Collection, Dataset, Event, Image, Interactive Resource, Model, Other, Physical Object, Service, Software, Sound, Text, Workflow
keywords	descriptors	N	Y		multiselect	autocomplete=bioportal, onto=EFO: JERM: EDAM: MS: NMR: NCIT: OBI: PO: PTO: AGRO: ECOCORE: IOBC: NCBITAXON	Keywords	

Built the web interface according to the **specifications given upstream**

Definition of metadata

TSV — Terminology definition file

*Built the web interface according to the **specifications given upstream***

Dictionary of people

List of well-chosen and limited CVs according to a reference (e.g. Data Document Initiative)

List of ontologies to choose according to your domain

AgroPortal   BioPortal

Mapping to JSON-LD
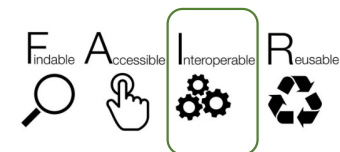
Maggot — Metadata aggregation on data storage

« Data steward »

Mapping definition file to JSON-LD

#datasetField	Field	Type	Level	Array	Multiple	Property	Value type	Value source	Index	Prefix
	@type		0	FALSE	FALSE		schema:Dataset			
	@id		0	FALSE	FALSE					https://pmb-bordeaux.fr/maggot/metadata/
		schema:version	0	FALSE	FALSE		1.0			
	title	schema:identifier	0	FALSE	FALSE		#VALUE			maggot:
	fulltitle	schema:name	0	FALSE	FALSE		#VALUE			
	description	schema:description	0	FALSE	FALSE		#VALUE			
	note	schema:comment	0	FALSE	FALSE	#VALUE				
	license	schema:license	0	FALSE	FALSE		#VALUE			
	contacts	schema:creator	0	TRUE	TRUE					
	contacts	schema:creator	1	FALSE	FALSE	@type	schema:Person			
	contacts	schema:creator	1	FALSE	FALSE	name	#VALUE			
	contacts	schema:creator	1	FALSE	FALSE	identifier	#DICO	cvlist:people	3	https://orcid.org/
	contacts	schema:creator	1	FALSE	FALSE	email	#DICO	cvlist:people	4	
	contacts	schema:creator	1	FALSE	TRUE	affiliation				
	contacts	schema:creator	2	FALSE	FALSE	@type	schema:Organization			
	contacts	schema:creator	2	FALSE	FALSE	name	#DICO	cvlist:people	2	
	authors	schema:author	0	TRUE	TRUE					
	authors	schema:author	1	FALSE	FALSE	@type	schema:Person			
	authors	schema:author	1	FALSE	FALSE	name	#VALUE			
	authors	schema:author	1	FALSE	FALSE	identifier	#DICO	cvlist:people	3	https://orcid.org/
	authors	schema:author	1	FALSE	TRUE	affiliation				
	authors	schema:author	2	FALSE	FALSE	@type	schema:Organization			
	authors	schema:author	2	FALSE	FALSE	name	#DICO	cvlist:people	2	
	collectors	contributor	0	TRUE	TRUE					
	collectors	contributor	1	FALSE	FALSE	@type	schema:Person			
	collectors	contributor	1	FALSE	FALSE	contributorType	DataCollector			http://purl.org/datacite/v4.4/
	collectors	contributor	1	FALSE	FALSE	name	#VALUE			
	collectors	contributor	1	FALSE	FALSE	identifier	#DICO	cvlist:people	3	https://orcid.org/
	collectors	contributor	1	FALSE	TRUE	affiliation				
	collectors	contributor	2	FALSE	FALSE	@type	schema:Organization			
	collectors	contributor	2	FALSE	FALSE	name	#DICO	cvlist:people	2	
	curators	contributor	1	TRUE	TRUE					
	curators	contributor	1	FALSE	FALSE	@type	schema:Person			

Linked Open Data

Maggot — Metadata aggregation on data storage

Metadata schema (standard) (container)
DDI — Data Document Initiative

Vocabulary (content)
- Dictionaries
- Control Vocabulary

OntoPortal (AgroPortal, BioPortal, …)

Thesaurus SKOSMOS

(VOINRAE, LOTERRE, ONTOSTACK, …)
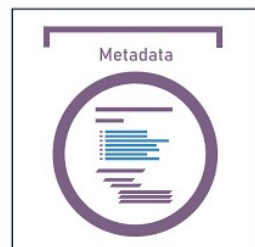
Metadata

External Resources (related data)

eLabFTW   ODAM   EDTMS   doi   HAL INRAE

SOPs   Data   Article   Code   Report   …
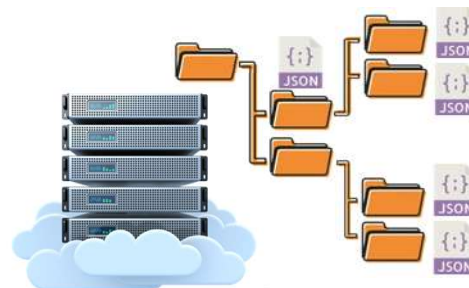
Data storage

Your local (meta)data repository

Mapping definition file to JSON-LD

JSON-LD

Mapping

Findable **A**ccessible **I**nteroperable **R**eusable

Interoperability

Linked Open Data

5 ★ Open Data
https://5stardata.info/fr/

Daniel Jacob - Maggot – INRAE – Septembre 2023
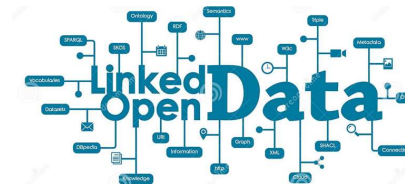
Linked Open Data

Interoperability

https://issemantic.net/rdf-visualizer

Legend:
- ☐ Type/Class
- ☐ Instance/Individual
- ☐ Value/Literal
- —— Object property
- —— Data property
- ...... Quoted triple
- _:b Blank node

Vocabularies/prefixes:
dcite: http://purl.org/spar/datacite/
dcterms: http://purl.org/dc/terms/
disco: http://rdf-vocabulary.ddialliance.org/discovery#
edam: http://edamontology.org/
obo: http://purl.obolibrary.org/obo/
rdf: http://www.w3.org/1999/02/22-rdf-syntax-ns#
schema: http://schema.org/

https://pmb-bordeaux.fr/maggot/metadata/frim1?format=jsonld

Maggot — Metadata aggregation on data storage

A milestone on the way up to Linked Open Data

Metadata Profile

DDI — Data Document Initiative

OntoPortal

SKOSMOS

API

Metadata Capture

TSV — Terminology definition file

TSV — Mapping definition file to JSON-LD

JSON Schema

Good practices

TSV — Mapping definition file

TSV — Dictionary definition files

doi
ORCiD
iD

Data storage

Interoperability

Metadata crosswalk

JSON-LD

RDF

Linked Open Data

Upstream

Downstream

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