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Text+ FAIR February Meetup – Let's talk FAIR Digital Editions

Knowledge graphs for interoperable NFDI: Digital editions

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Interoperability



Knowledge Graphs (RDF, SPARQL)

- (Meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation [an example is RDF]
- (Meta)data use vocabularies that follow the FAIR principles [this can be difficult]
- (Meta)data include qualified references to other (meta)data

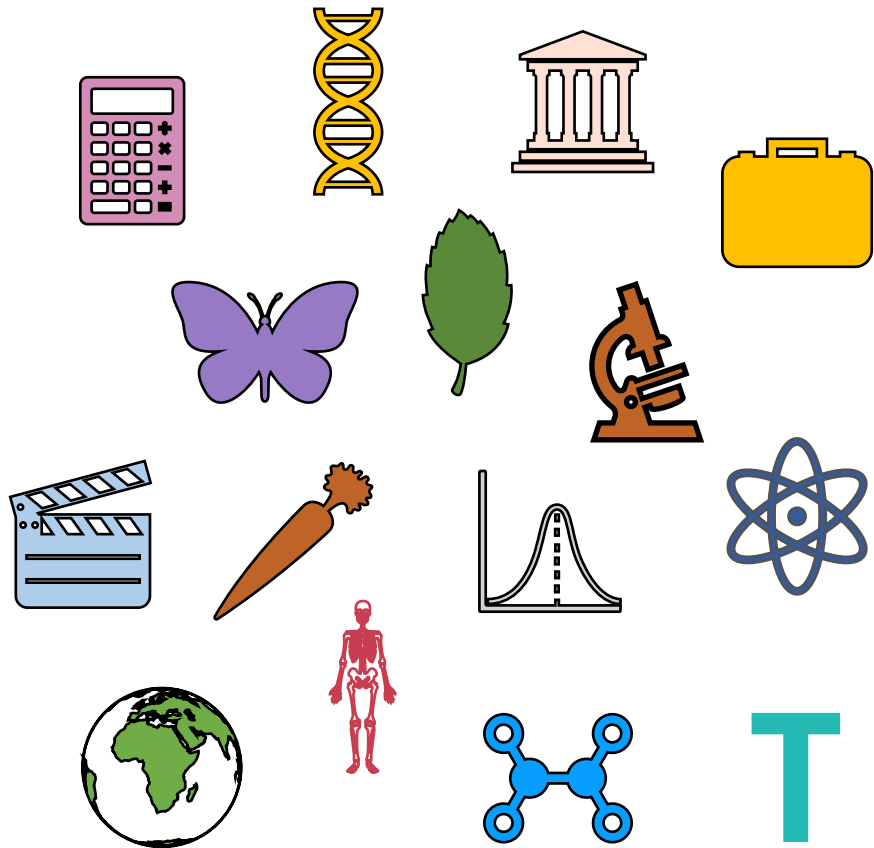


<https://www.go-fair.org>

“Knowledge Graphs are a key technology for implementing the FAIR principles in data infrastructures by ensuring interoperability for both humans and machines.” Charter of the NFDI Working Group “Knowledge Graphs”



26 research data infrastructures with domain-specific (meta)data standards:



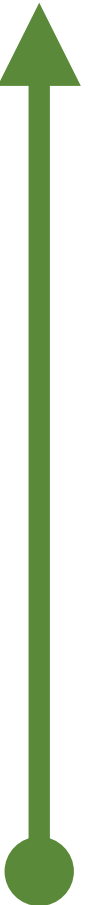
Various data:

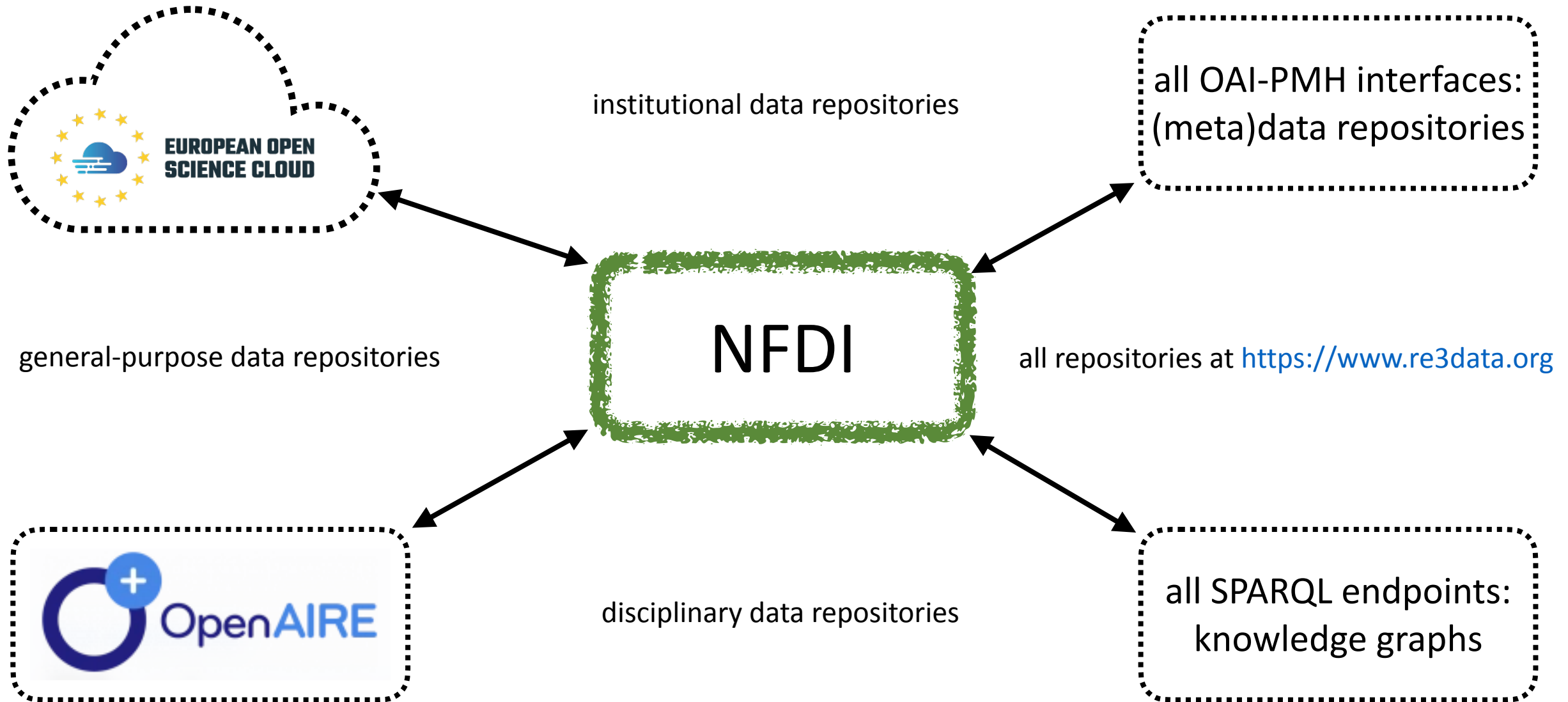
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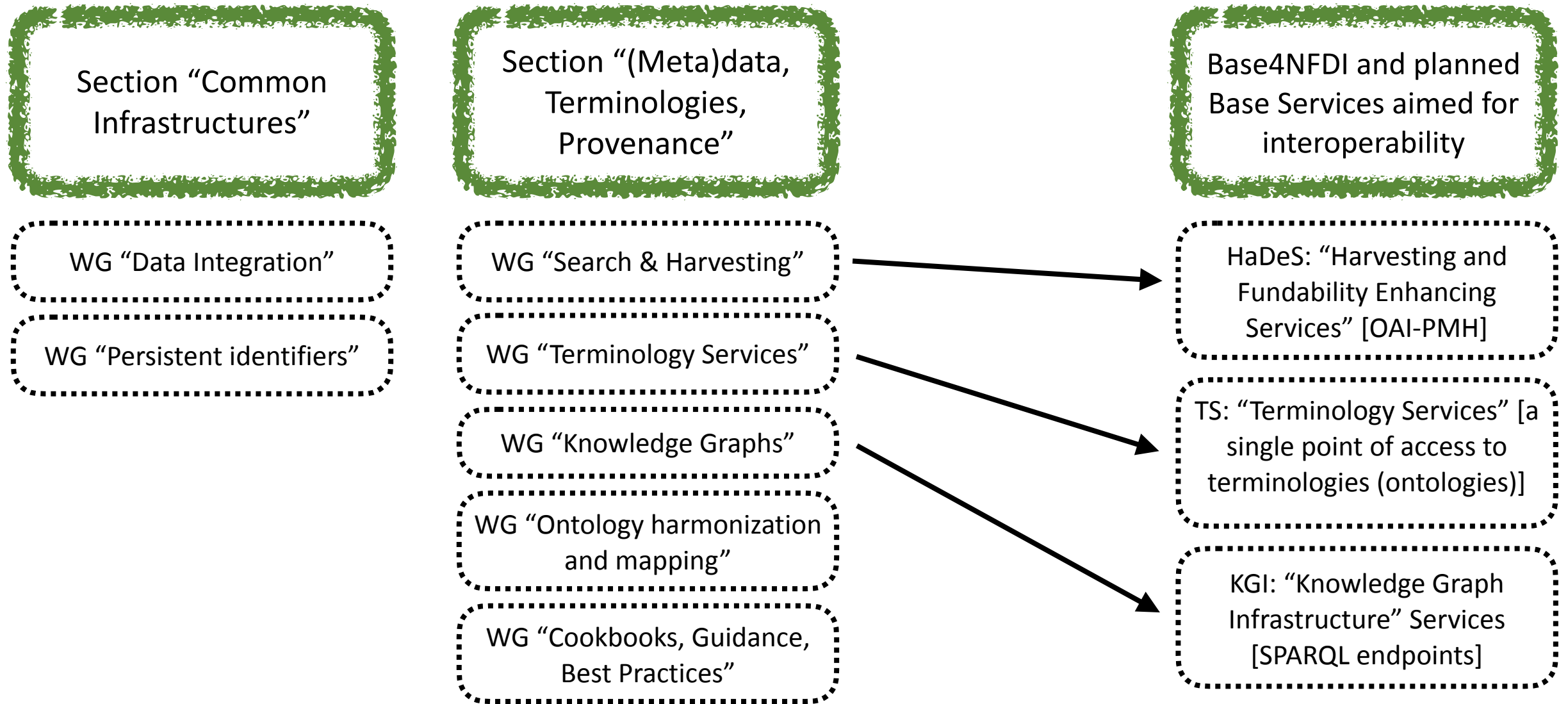
The degree of internal interoperability in NFDI:

HIGH: consortia provide **terminology (ontology) services** & metadata **knowledge graphs** (a domain ontology + entities) for their research data

LOW: consortia don't provide portals for searching over metadata using the vocabularies following the FAIR principles









Title	Text+ Partner
Theodor Fontane: Notizbücher. Digitale genetisch-kritische und kommentierte Edition	SUB
ARCHITRAVE. Kunst und Architektur in Paris und Versailles im Spiegel deutscher Reiseberichte des Barock	SUB
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Heyne Digital (ARCHAE018)	SUB
Wirkungsgeschichte von Goethes Werk „Zur Farbenlehre“ in Berlin 1810–1832	SUB
Die syrischen und arabischen Ahiqar-Texte	SUB
AdW-Digital: Briefportal Leibniz	SUB, AdWG
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<https://www.text-plus.org/forschungsdaten/editions-list>

RIDE – A review journal for digital editions and resources
published by the IDE

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TEI-XML + OAI-PMH

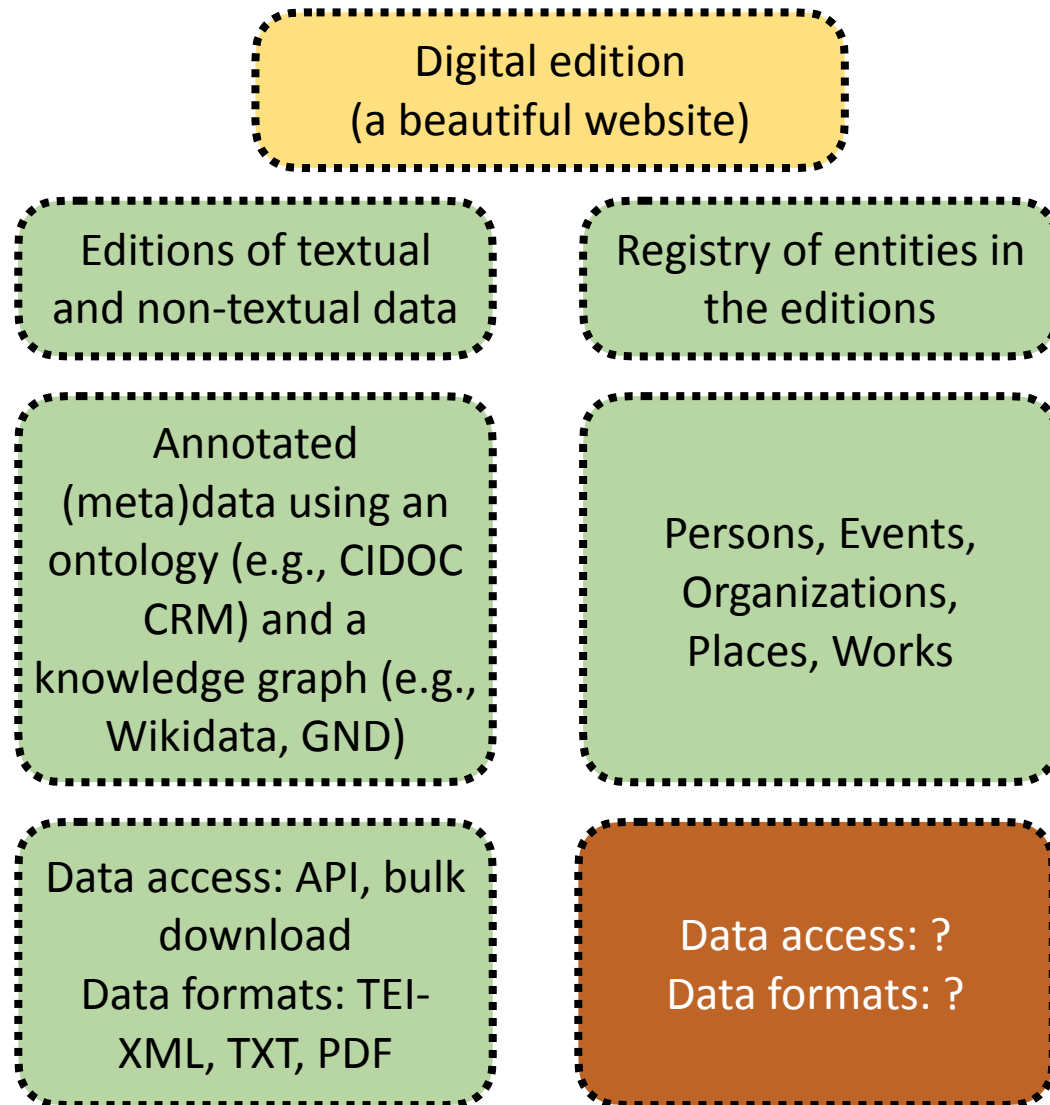
Issues

RIDE is published in irregular intervals. So far, the following issues have been published:

Issue 15: Tools and Environments (December 2022)

- Digital Mappa – Simple and Web-based Annotations
- Mei-friend. A viewer and last-mile editor for MEI score encodings
- Stylo, un éditeur pour les sciences humaines et sociales
- TEI Critical Apparatus Toolbox: Web-based tools for ongoing XML-TEI editions
- TEITOK, a visual solution for XML/TEI encoding: editing, annotating and hosting linguistic corpora

<https://ride.i-d-e.de>

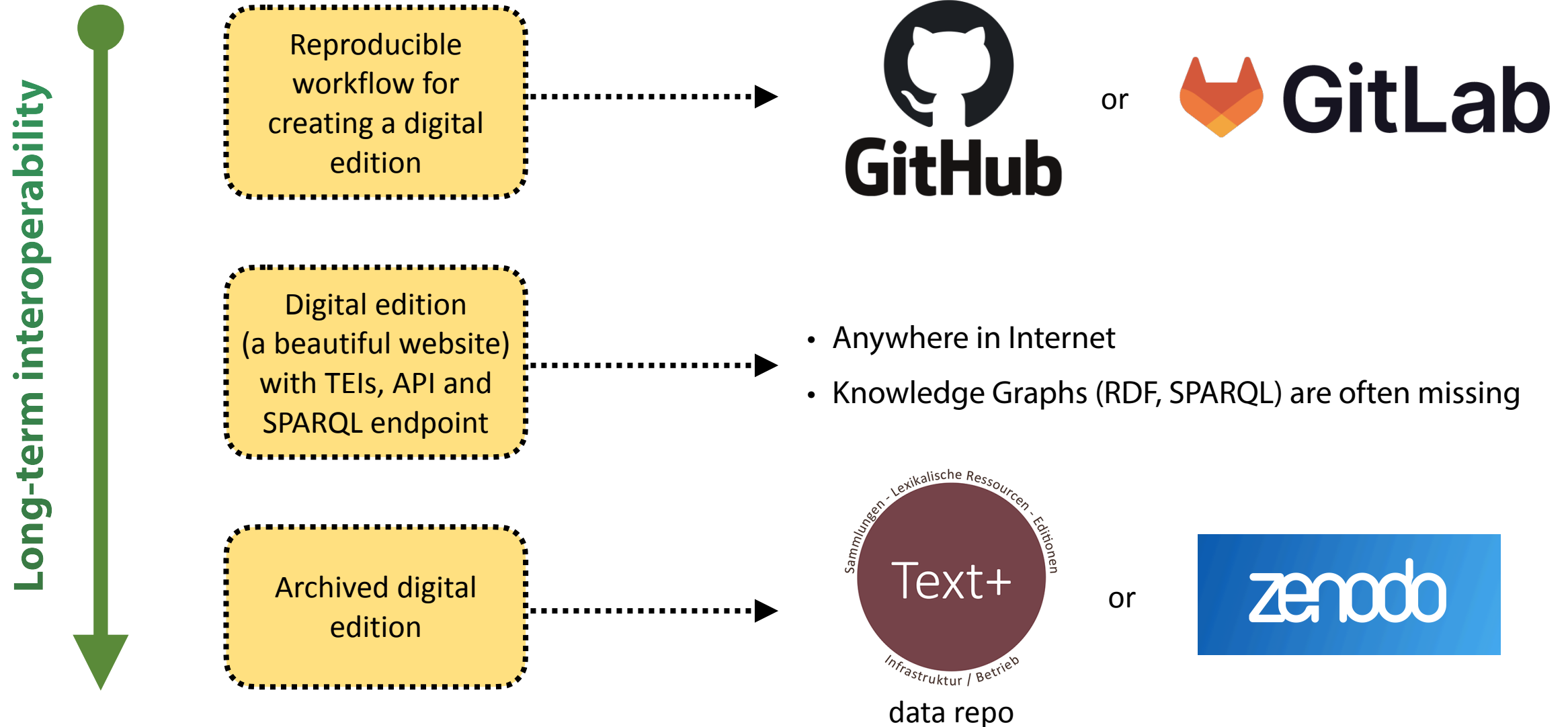


Anything else?

Yes, knowledge graphs, please

Practical tips

- Create a knowledge graph from your (meta)data (including your registry of entities)
- Provide access to your RDF-(meta)data via SPARQL endpoints. This enables reusing (meta)data by both humans and machines
- Provide RDF-(meta)data dumps



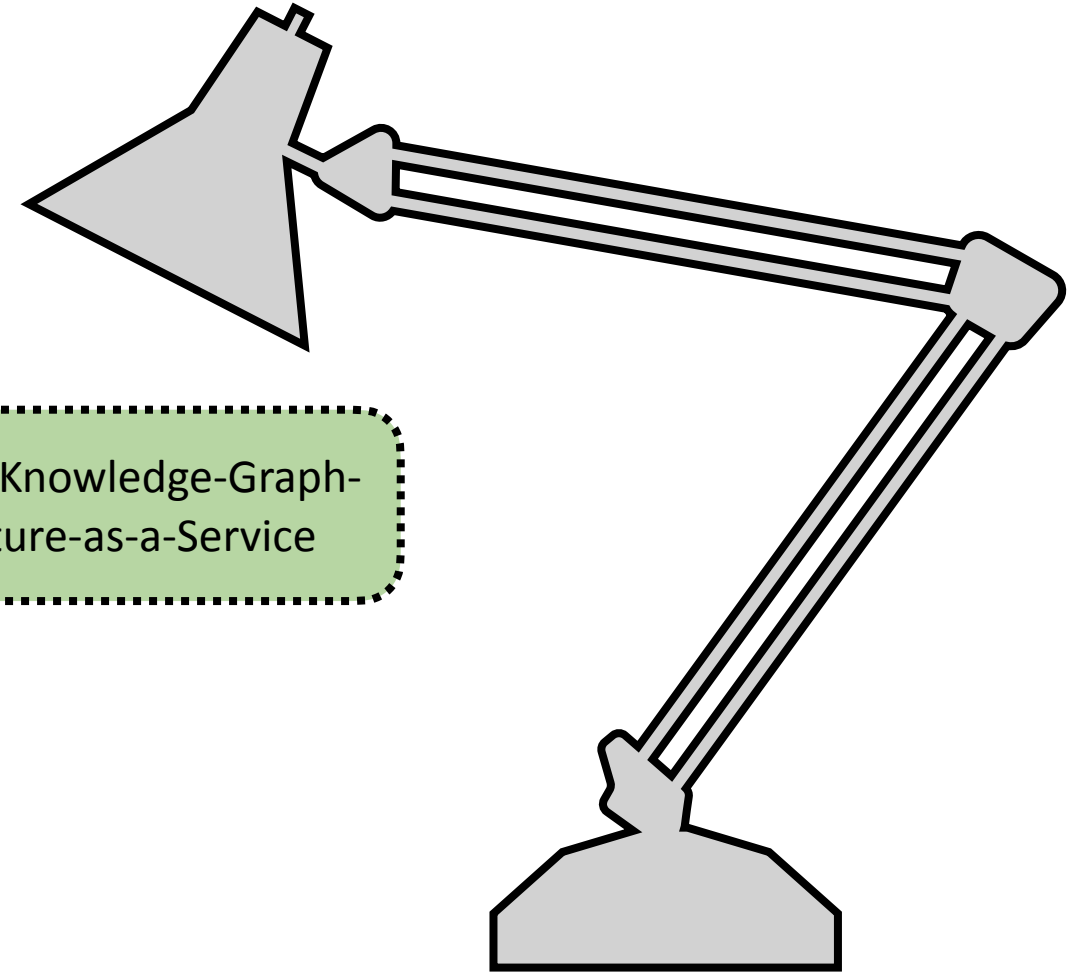


Limited manpower in a research project

Relatively complex technology stack

Inertia

NFDI-driven Knowledge-Graph-Infrastructure-as-a-Service



Knowledge Graph Infrastructure (KGI): Idea

idea:

easily reusable by KGI providers

easily usable by KG creators

consultancy on KG creation

goal:

to satisfy the knowledge graph needs of everyone in the German research data landscape: NFDI consortia, institutions and potentially all researchers

KGI4NFDI

target group:

researchers

data centers

institutions

consortia

Knowledge Graph Infrastructure (KGI): Where to learn more?

KGI Base Service proposal:

<https://docs.google.com/document/d/1kPrj-G3FYeo2QkxJUyokCwd6eI3VN5Uo8UnUZFDR9MU>

NFDI WG “Knowledge Graphs” in Section “(Meta)data, Terminologies, Provenance”

Mailing list of WG KGs:

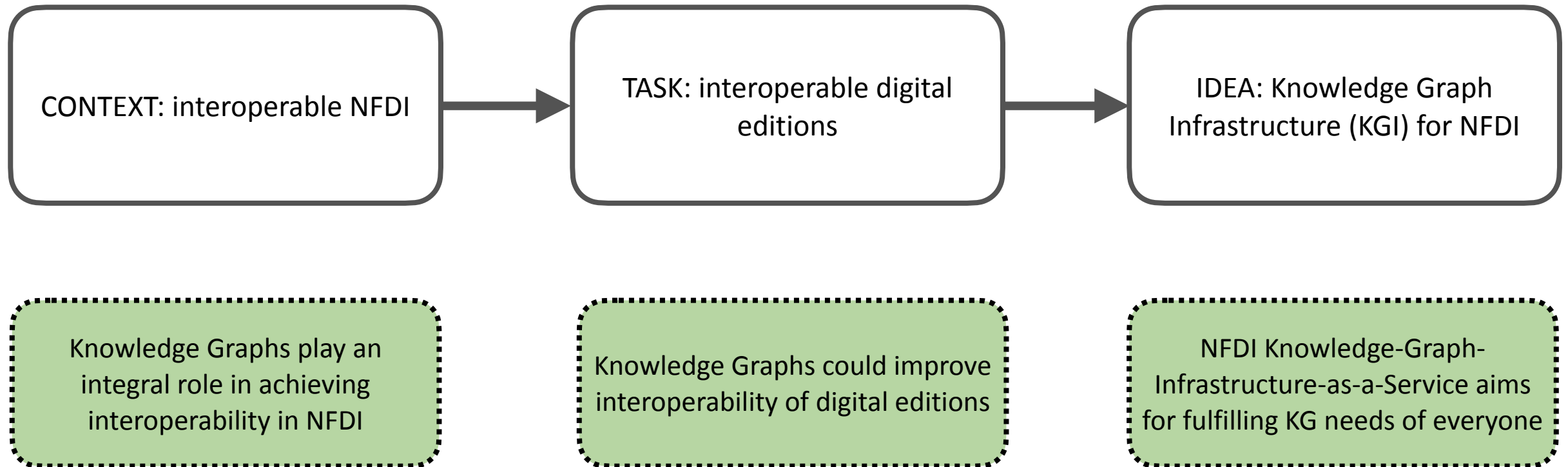
<https://lists.nfdi.de/postorius/lists/section-metadata-wg-kg.lists.nfdi.de>

Charter of WG KGs:

<https://doi.org/10.5281/zenodo.7515324>

Questions?

email to renat.shigapov@uni-mannheim.de



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