

# Enabling Semantic Interoperability within NFDI4Biodiversity

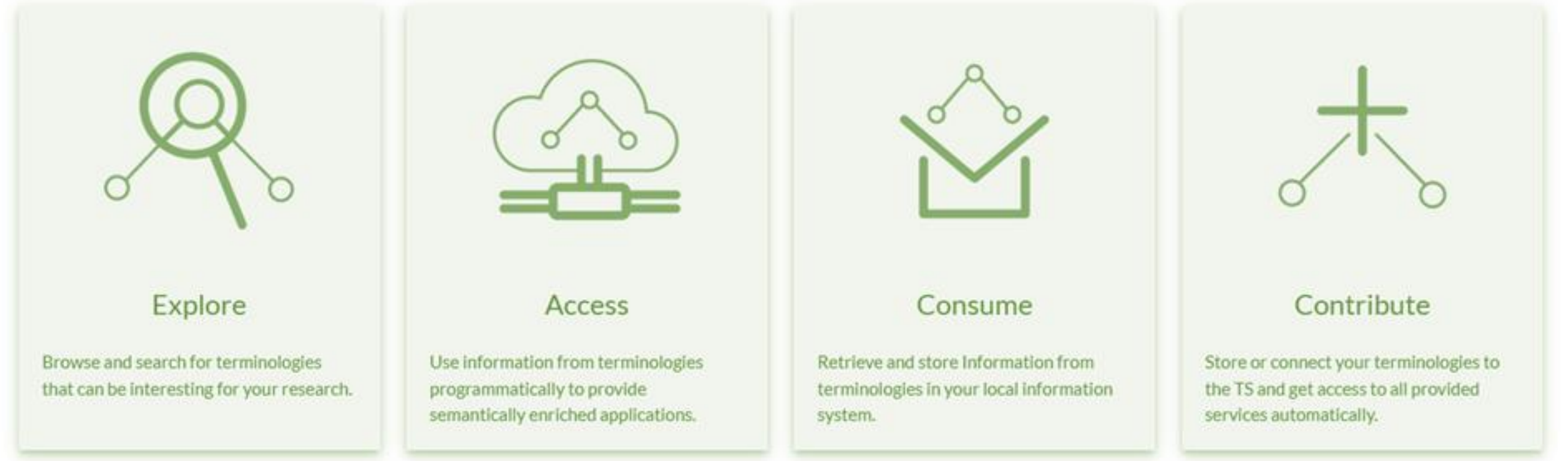
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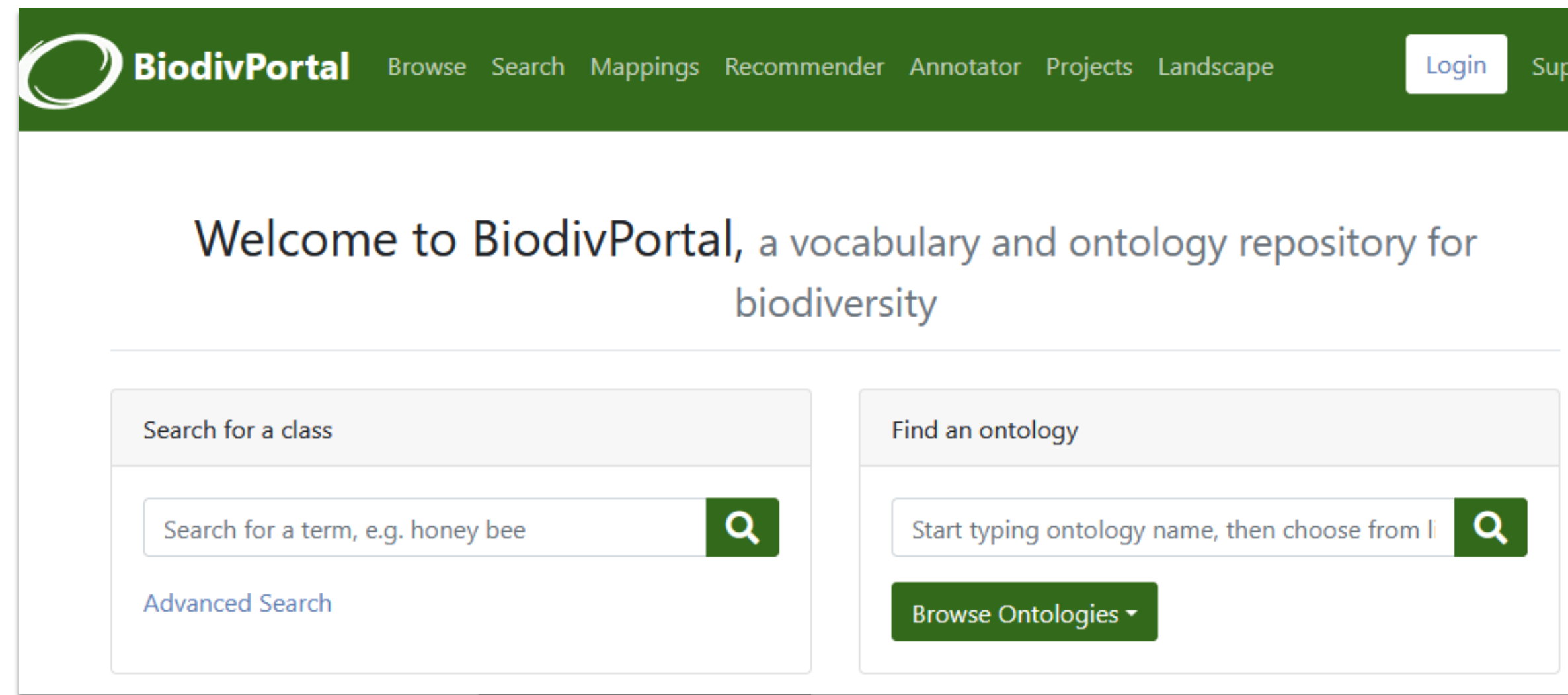
**Goal:** Development of **semantic standards**, **services** and **tools** for the **integration**, **transformation** and **harmonization** of heterogeneous data

Users can explore, contribute or consume terminologies,  
Developers can programmatically access available services

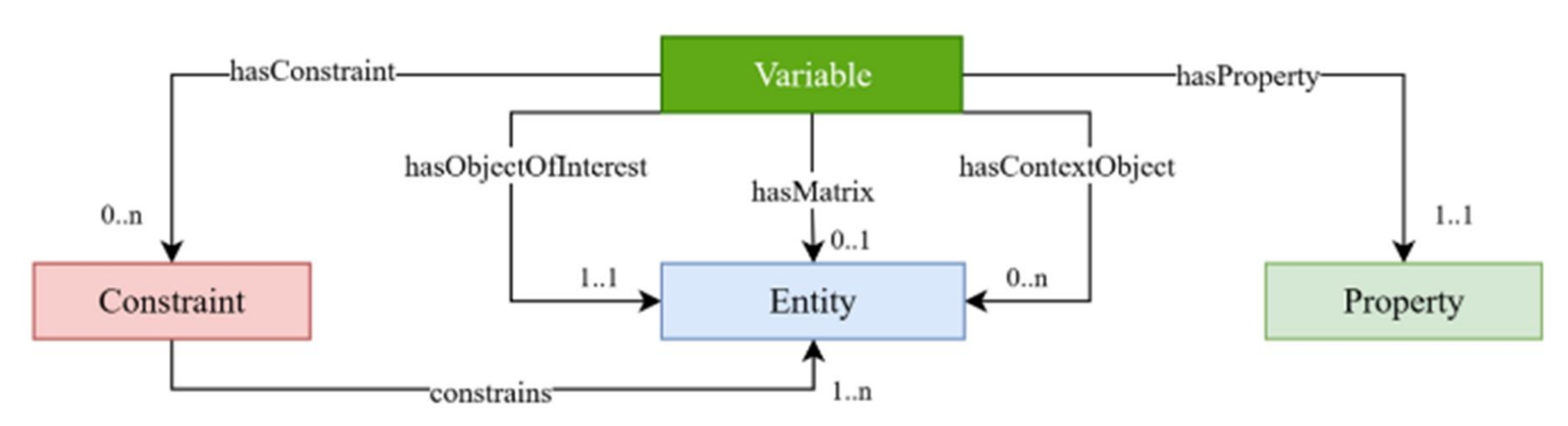
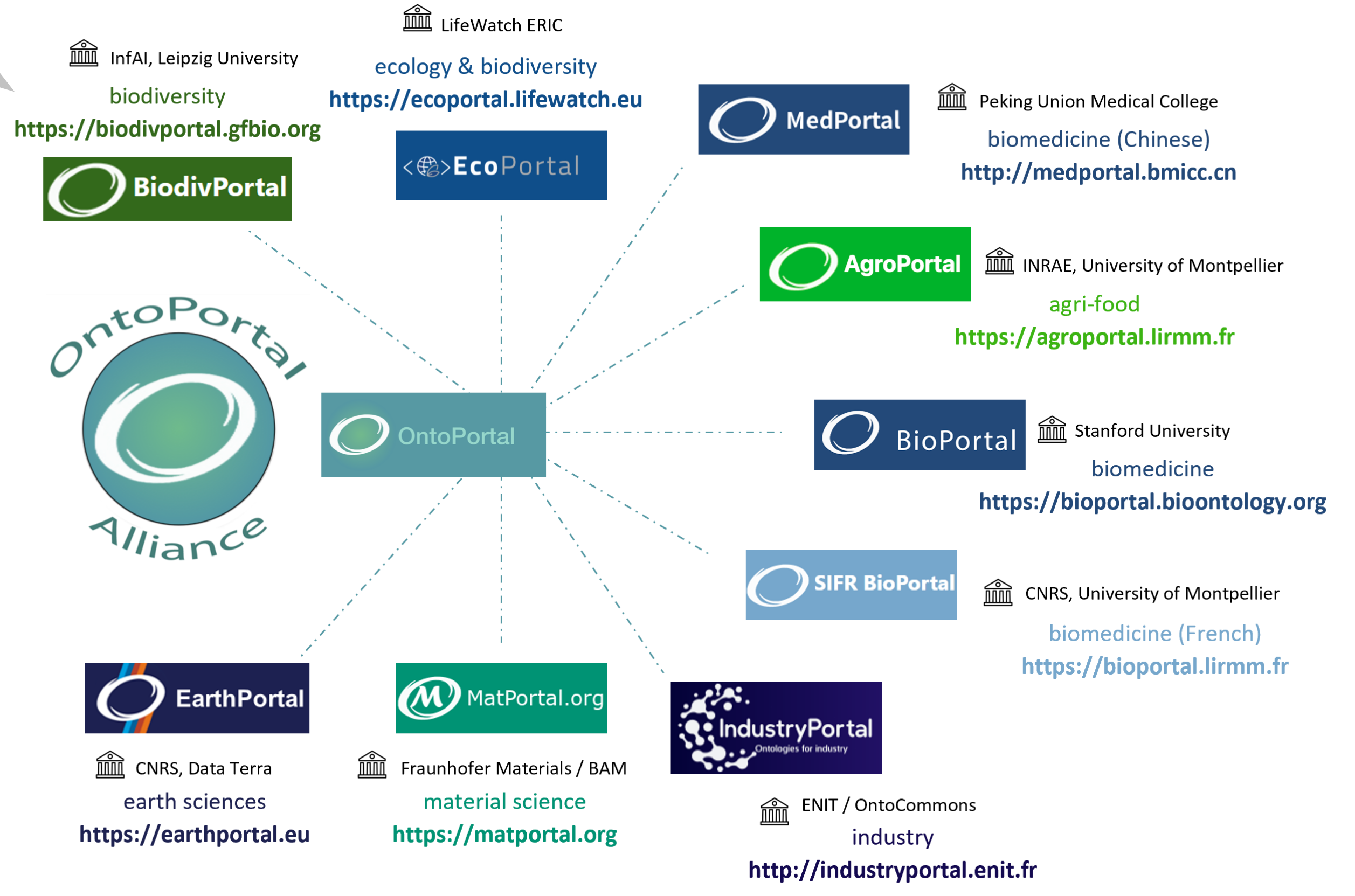


Requirements on a Terminology Service within NFDI4Biodiversity:

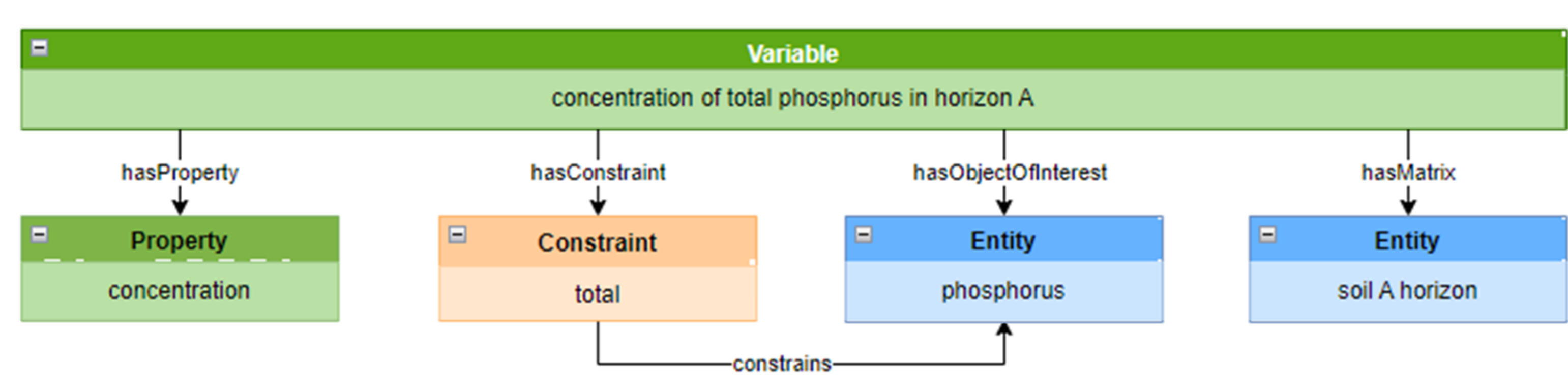
- Repository to store, search, browse and visualize terminologies
- Provide a single access point (API) to terminological resources including taxonomical databases
- Offer an environment for the development, curation and publication of terminologies
- Offer efficient semantic annotation for text and tabular data
- Automatically generate & store mappings between terminologies
- Terminology versioning and evolution mechanisms



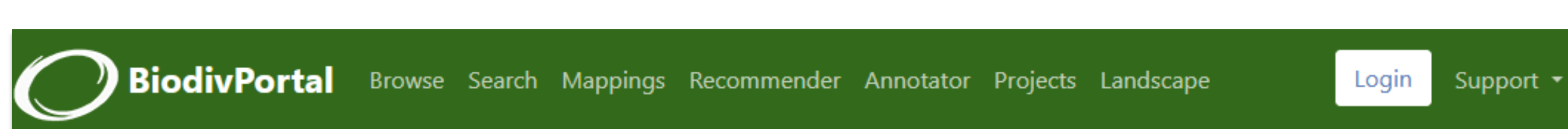
The OntoPortal alliance is a consortium of partners dedicated to the collaborative development and promotion of open ontology repositories and services. Alliance members maintain repositories for different scientific disciplines and participate to the further development of the OntoPortal open-source software, based originally on the BioPortal code. <https://ontoportal.org>



The I-ADOPT framework provides a FAIR representation of variables by providing richer metadata context through the decomposition of its description into atomic parts based on an ontological specification. <https://i-adopt.github.io/>



Extending the BiodivPortal annotation service to enable I-ADOPT annotations, using terminologies, heuristic rules, and grammar.



concentration of total phosphorus in soil A horizon

CLASS	filter	ONTOLOGY	filter	TYPE	filter	UMLS SEM TYPE	CONTEXT	MATCHED CLASS	filter
concentration of		The Environment Ontology		direct			concentration of total phosphorus in ...	concentration of	
concentration of		Flora Phenotype Ontology		direct			concentration of total phosphorus in ...	concentration of	
concentration of		Phenotypic Quality Ontology		direct			concentration of total phosphorus in ...	concentration of	
phosphorus atom		The Environment Ontology		direct			... of total phosphorus in soil A ...	phosphorus atom	
phosphorus atom		Phenotypic Quality Ontology		direct			... of total phosphorus in soil A ...	phosphorus atom	
phosphorus atom		Chemical Entities of Biological Interest Ontology		direct			... of total phosphorus in soil A ...	phosphorus atom	
soil		The Environment Ontology		direct			... phosphorus in soil A horizon	soil	
soil		Semantic Web for Earth and Environment Technology Ontology		direct			... phosphorus in soil A horizon	soil	
a horizon		Semantic Web for Earth and Environment Technology Ontology		direct			... in soil A horizon	a horizon	

