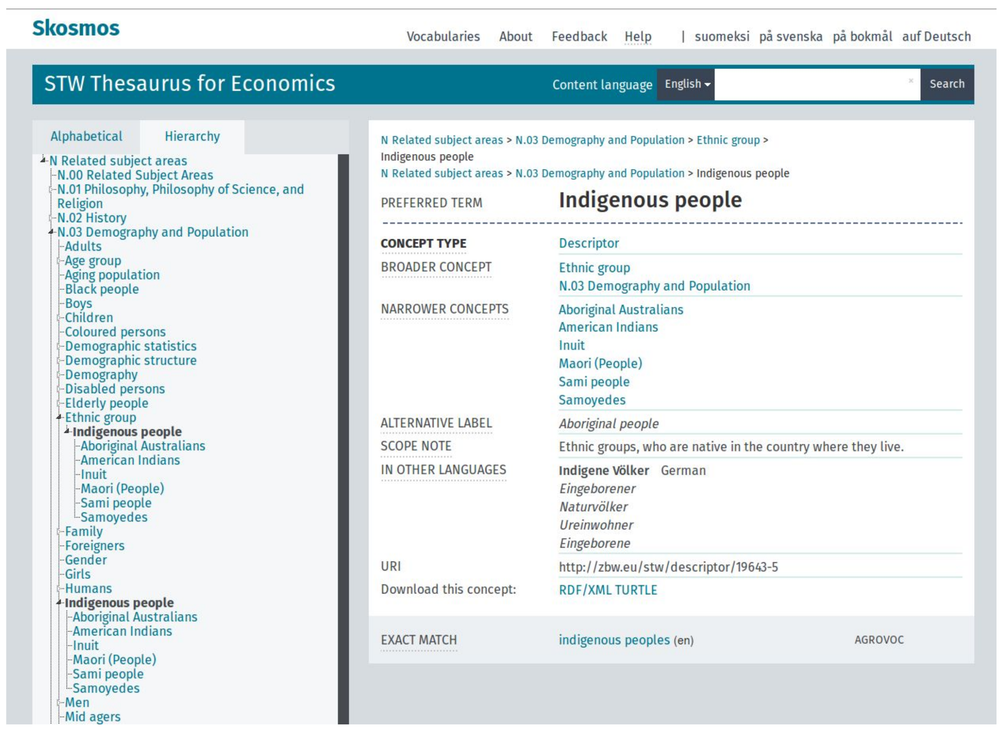
We can improve the FAIR-ness of semantic artefacts in the Digital Humanities using existing software and modelling solutions.

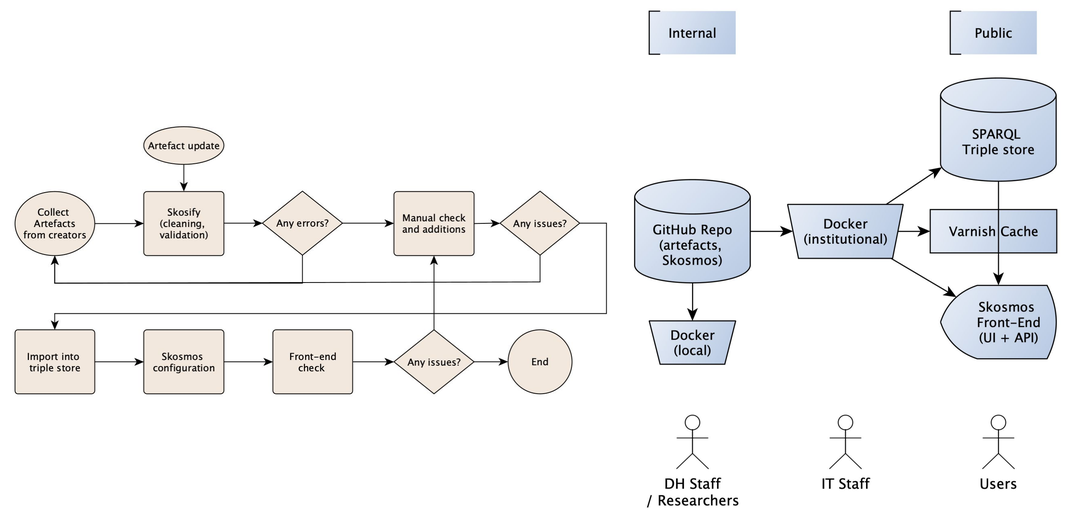
/DH.arc Vocabularies: Making semantic artefacts more visible and accessible using SKOS

Background: The Digital Humanities Advanced Research Center at the University of Bologna needed a way to make its semantic artefacts (controlled vocabularies and ontologies) more accessible and visible without investing into complicated software or implementing new data models.

Step 1: Assess existing repository technology. Choose Skosmos as an easy to implement open-source solution with proven DH uses and API access.



Step 2: Develop production and publishing workflows, using Docker Compose to fit our infrastructural needs and limitations.

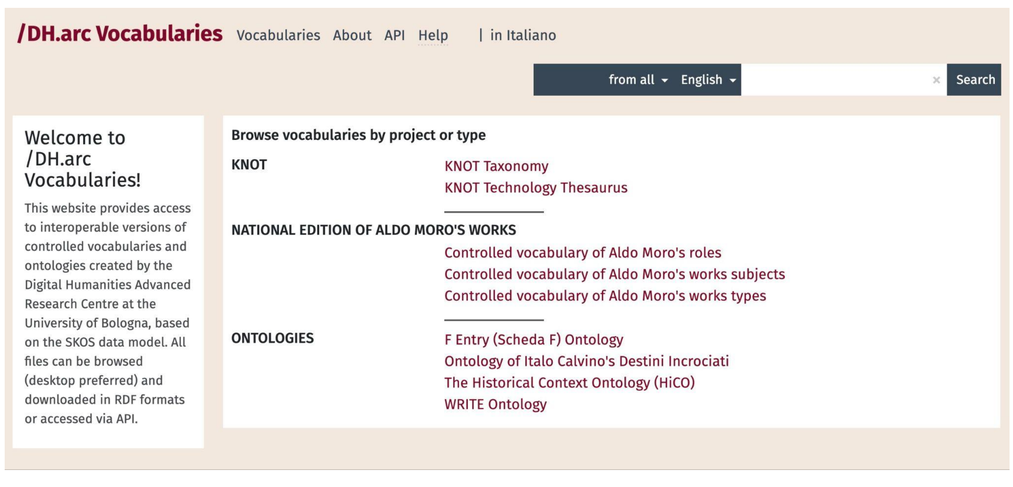


Step 3: Develop a process to create taxonomy- or thesaurus-like representations of OWL ontologies by overlaying OWL and SKOS.

```
fentry: a owl:Ontology, skos:ConceptScheme ;
dc:title "F Entry (Scheda F) Ontology"@en, "Ontologia Scheda F"@it;
skos:prefLabel "F Entry (Scheda F) Ontology"@en, "Ontologia Scheda F"@it;
dc:creator "Marilena Daquino", "Silvio Peroni" ;
owl:imports skos:, fabio:, hico:, cito:, pro:, scoro: ;
dct:language "English"@en, "Italiano"@it ;
dct:created "2016" ;
dct:issued "2016-12-15"^^xsd:date ;
owl:versionInfo "1.0" ;
skos:hasTopConcept fentry:photograph, fentry:FEntry, fentry:shot ;
foaf:homepage <https://essepuntato.it/fentry/current/fentry.html> ;
dcat:downloadURL <https://svn.code.sf.net/p/dwellonit/code/FEO/feo.owl> .

fentry:FEntry  a owl:Class, skos:Concept ;
skos:inScheme fentry: ;
skos:topConceptOf fentry: ;
rdfs:label "F Entry"@en, "Scheda F"@it ;
skos:prefLabel "F Entry"@en, "Scheda F"@it ;
rdfs:comment "It is a document containing metadata about a photograph and
about the concrete object portrayed by the photograph."@en, "È un documento
contenente metadati su una fotografia e sull'oggetto concreto rappresentato
dalla fotografia."@it ;
rdfs:subClassOf fabio:EntityMetadata .
```

Steps 4 & 5: Test overlaying process and production and publishing workflow with existing /DH.arc ontologies and vocabularies. Publish repository.



Limitations: The more intricate formal semantics of OWL cannot be represented in SKOS (e.g. restrictions), though there may be potential in using documentation properties to make these visible to end users. Skosmos does not offer editing capabilities, requiring modelling knowledge from creators to ensure quality.
Future Work: Investigating how to make OWL formal semantics visible in a useful way. Evaluation of Docker for continued production use. Implementation of internal documentation for conversion, publishing, and maintenance of future semantic artefacts including permanent identifiers via W3ID.

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