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## **ENVRI-FAIR provenance: AnaEE use case**

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# ENVRI-FAIR provenance



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**INRAE**

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# AnaEE sites = 'platforms' for experimentation on ecosystems

- In vitro**



- Analytical**



Managing data/metada for:

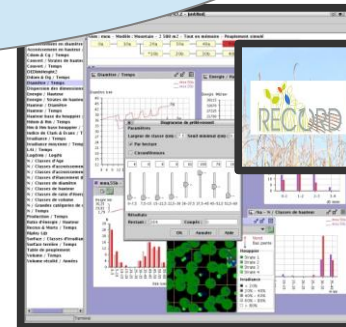
- discovery
- access to resources : platforms, datasets...

**Including PROVENANCE!**



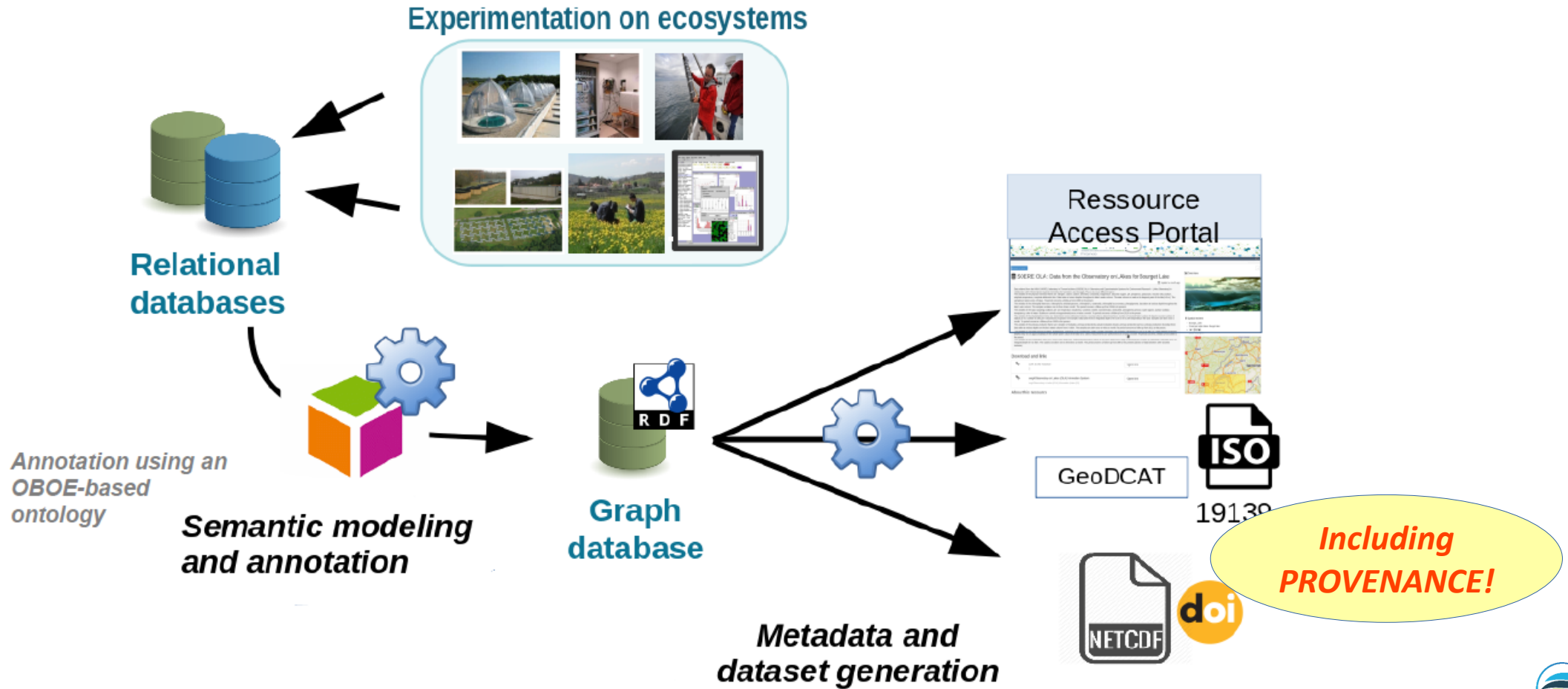
- Data & modelling**

AnaEE provenance use case





# AnaEE workflows





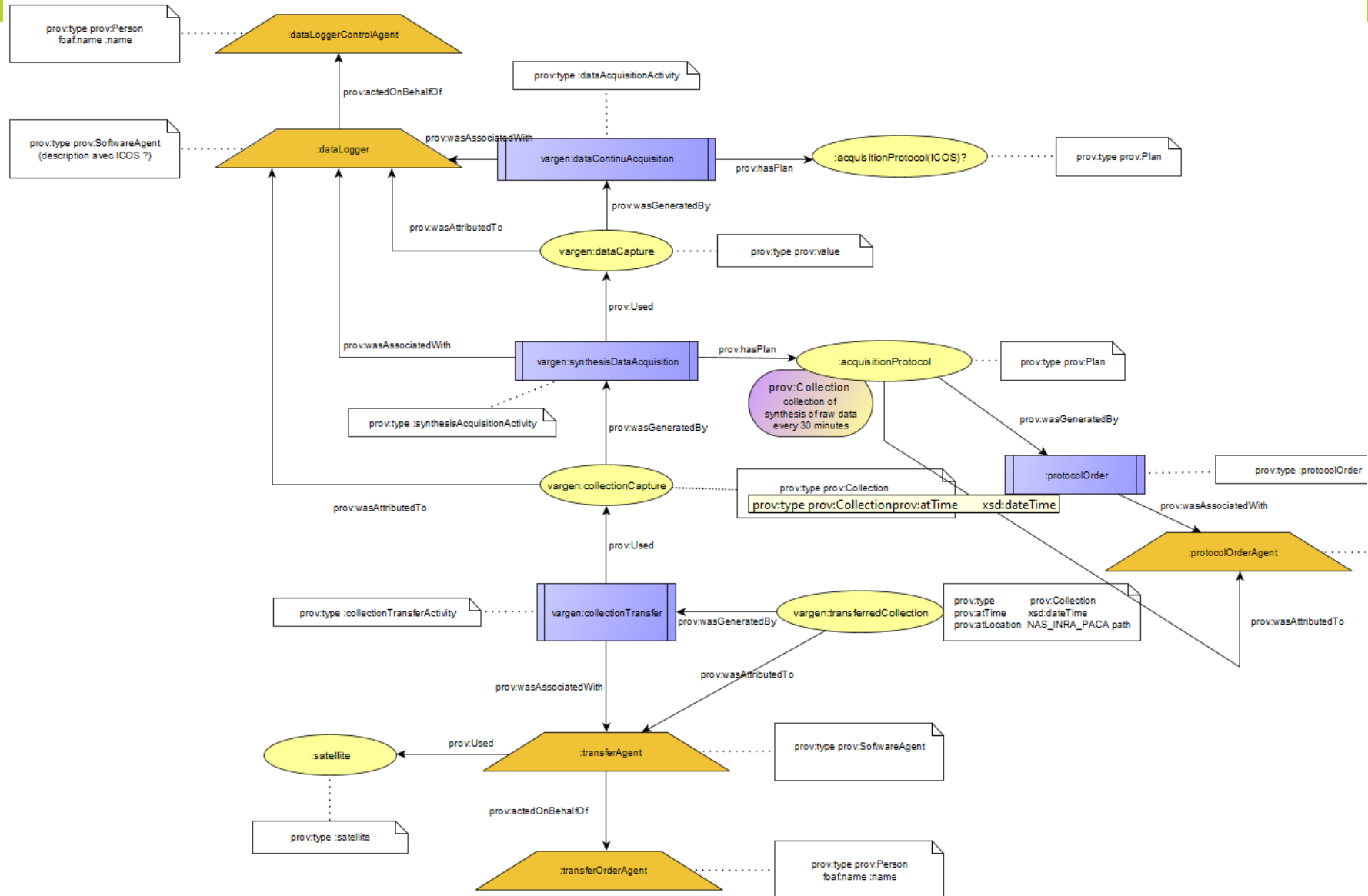


# Objective and methodology

- Our objective :
  - Provide provenance informations for datas and metadatas users
  - Generate automatically this provenance informations as metadata for datasets
- Methodology :
  - Provenance element identification and flow modeling
  - Test provenance demonstrator with Jupyter Notebook
  - Provenance implementation test with AnaEE semantic pipelines and generation of rdf triples

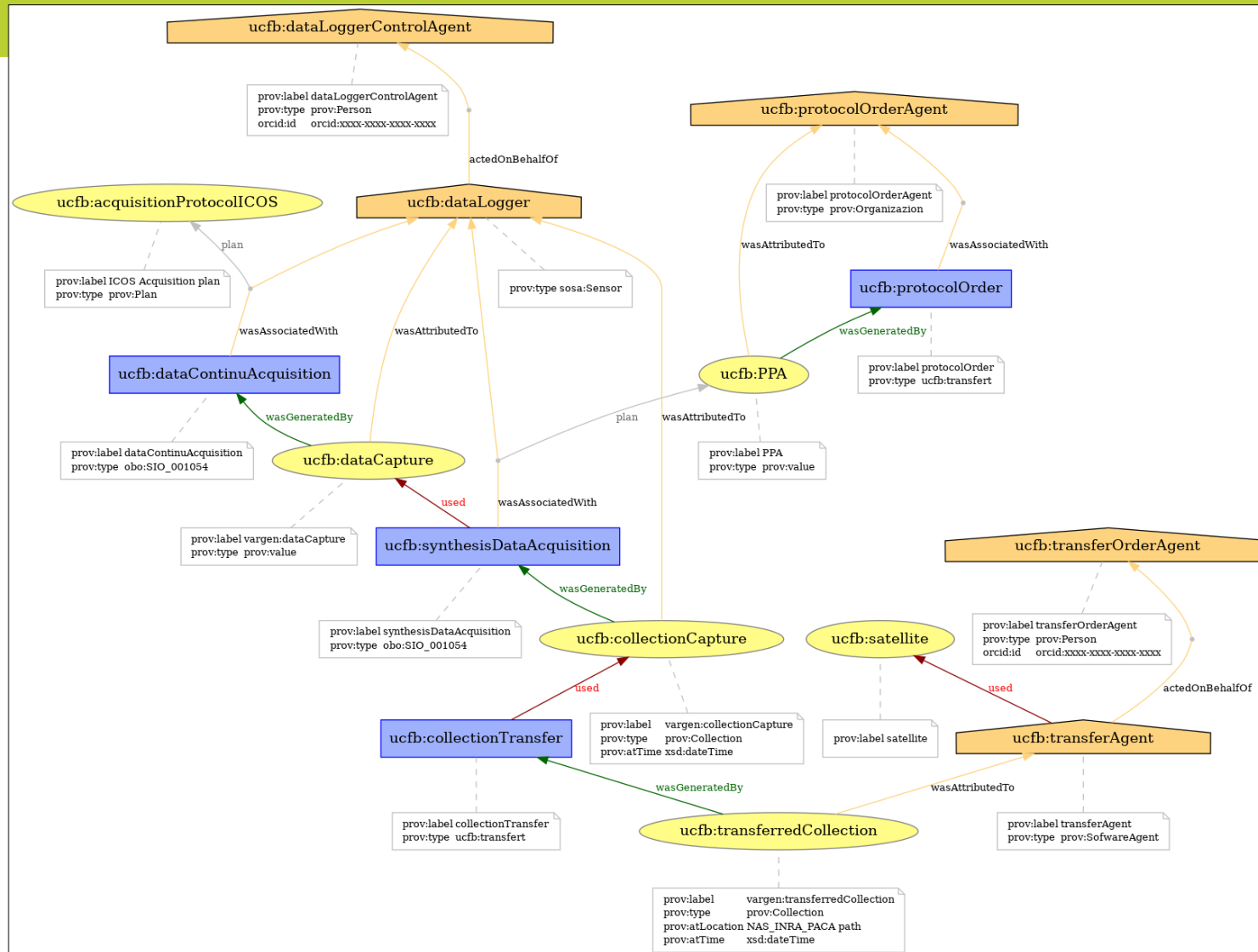


# Flux modelisation «Font-Blanche» use case





# Provenance demonstrator with Jupyter Notebook

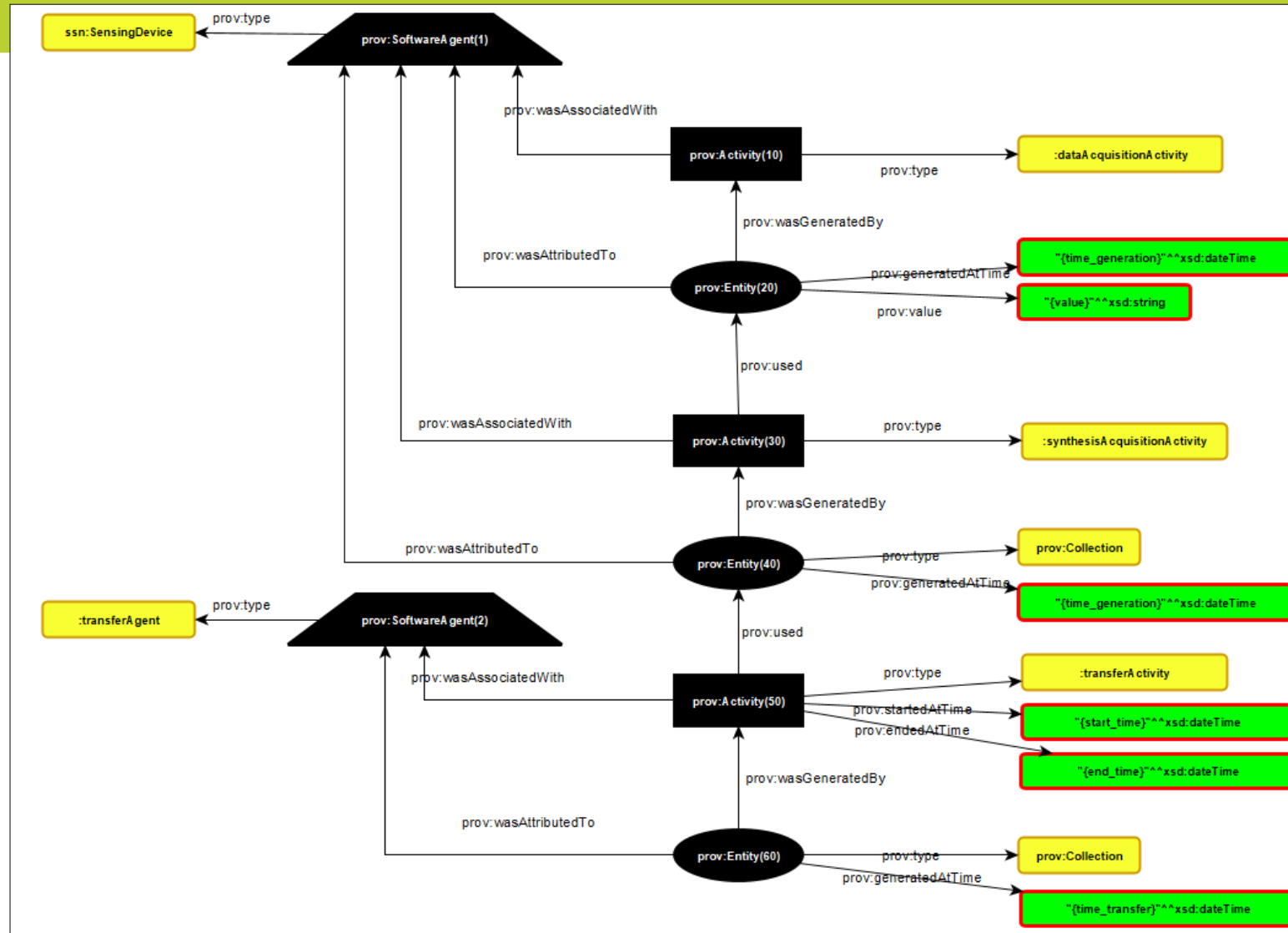


AnaEE provenance use case



# Provenance implementation with AnaEE semantic pipelines

Graph syntax compliant with existing pipelines



AnaEE provenance use case



# Generation of triples for Provenance

```
<http://semanticscience.org/resource/SIO_001054> <http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <http://www.w3.org/ns/prov#Activity> .
<http://semanticscience.org/resource/SIO_001054> <http://www.w3.org/ns/prov#wasAssociatedWith> <http://prov_agent/FontBlancheDataLogger1/1> .
<http://semanticscience.org/resource/SIO_001054> <http://www.w3.org/ns/prov#type> <http://www.anaee-france.fr/ontology/anaee-france_ontology#dataAcquisitionActivity> .
<http://semanticscience.org/resource/SIO_001054> <http://www.w3.org/ns/prov#wasAssociatedWith> <http://prov_agent/FontBlancheDataLogger1/3> .
<http://prov_agent/FontBlancheDataLogger1/1> <http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <http://www.w3.org/ns/prov#SoftwareAgent> .
<http://prov_agent/FontBlancheDataLogger1/1> <http://www.w3.org/ns/prov#type> <http://purl.oclc.org/NET/ssnx/ssn#SensingDevice> .
<http://prov_agent/FontBlancheDataLogger1/3> <http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <http://www.w3.org/ns/prov#SoftwareAgent> .
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```



# State of advancement and issues

- Identification of really useful provenance elements for dataset users
- Evaluation of current provenance elements availability or the possibility of making them available in AnaEE platforms
- Provenance instantiation (=>rdf triples)



# Identification of really useful provenance elements for dataset users (correspondance with D8.6 specifications)

## Acquisition

- **Measuring instrument (AnaEE-R5)**
  - Name
  - Type
  - Brand
  - Model
  - Installation date
  - Installation protocole
  - Production date
  - Calibration informations
  - [PIDINST / B2INST ...](#)
- **Acquisition method**
  - Text description
- **Acquisition context (AnaEE-R4)**
  - Date
  - Position
- **Technical responsible (AnaEE-R6)**
  - Name
  - Contact
  - [Orchid ID](#)
- **Scientific responsible (AnaEE-R6)**
  - Name
  - Contact
  - [Orchid ID](#)
- **Project description**
  - Text description

## Curation

- **Curation agent (AnaEE-R7)**
  - Name
  - Type
  - Author -> name, contact, [Orchid ID](#)
  - [\(Repository link\)](#)
- **Responsible for data curation (AnaEE-R6)**
  - Name
  - Contact
  - [Orchid ID](#)

## Annotation / Production

- **Annotation / Production agent (AnaEE-R8-10)**
  - Name
  - Type
  - Author -> name, contact, [Orchid ID](#)
  - [\(Repository link\)](#)
- **Responsible for annotation / production (AnaEE-R6)**
  - Name
  - Contact
  - [Orchid ID](#)

## Publication

- **Publication agent (AnaEE-R10)**
  - Name
  - Type
  - Author -> name, contact, [Orchid ID](#)
  - [\(Repository link\)](#)
- **Responsible for data Publication (AnaEE-R6)**
  - Name
  - Contact
  - [Orchid ID](#)