

# Semantic Repository (SR) - OOTS

## Overview

The Semantic Repository is a central service, providing commonly agreed semantic specifications for the exchange of evidences.

The service should provide the following functionalities:

- Ability to externally reference these models from other components;
- Ability to define and extract subsets of models;
- Provision of documentation.

In order to implement these functionalities, the following components will be included:

- Evidences: for both the generic data model ("manifest") and each evidence type, a repository is created which contains the following elements per data model:
  - 1) A visual class diagram in the format of a .png file;
  - 2) A textual description of all the entities of the data model, consisting of a definition and the list of the attributes of the entity. For each attribute, the expected type (Boolean, Identifier, Date, etc), a definition, the cardinality and the optional usage of a code list is indicated. The repository of each evidence will also offer version control and keep track of a change log in between different versions.
  - 3) Distributions in .XSD, complemented by other widely used serialisation formats if there are operational reasons to do so.
- Code lists: to ensure the automated processing of evidences, certain properties of data models will be populated based on code lists. The code lists will be made available in XML.
- Methodology: to formalise the process of developing new common data models for evidence types exchanged in cross-border administrative procedures, a methodology has been designed. This methodology also comprises examples and learning materials.

## High-level structure of the semantic repository

The structure below gives an outline of how users will be able to navigate across the various resources and specifications published through the semantic repository. All specifications will allow version control and to embed comments and change requests from the user community.

- Common data models
  - Generic metadata model
    - Data model
    - Distributions
    - Documentation
      - Instantiated dummy examples
      - Sources
  - Specific Evidence type
    - Data model
    - Distributions
    - Documentation
      - Instantiated dummy examples
      - Sources
- Code lists
- Methodology