ASIP Santé's Interoperability Framework

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ASIP Santé – French government agency for eHealth

- **Agency created in 2009 through the merger of two government agencies: GIP-DMP (agency for the development of a national EHR/PHR) and GIP-CPS (agency for the production of healthcare professional smartcards)**

- **Three main missions:**

  - ➢ **Regulation for improving eHealth** (ex. through publication of security or interoperability specifications…)

  - ➢ **Implementation of shared national services** (ex. DMP – national EHR/PHR, Secure mail for healthcare professionals, healthcare professionals directory, health resources directory…)

  - ➢ **Promotion and speeding up of use and innovation in eHealth** (ex. Provision of expertise for digital health regional projects, for digitalization of healthcare and social care provision for seniors in the process of loosing their independence…)

- **Around 130 employees of which around 7 plus 2 contractors are working on interoperability**

- **http://esante.gouv.fr/**

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Health Information Systems Interoperability Framework (HIS-IF)

- **Interoperability part of mission 1 - regulation for improving eHealth**

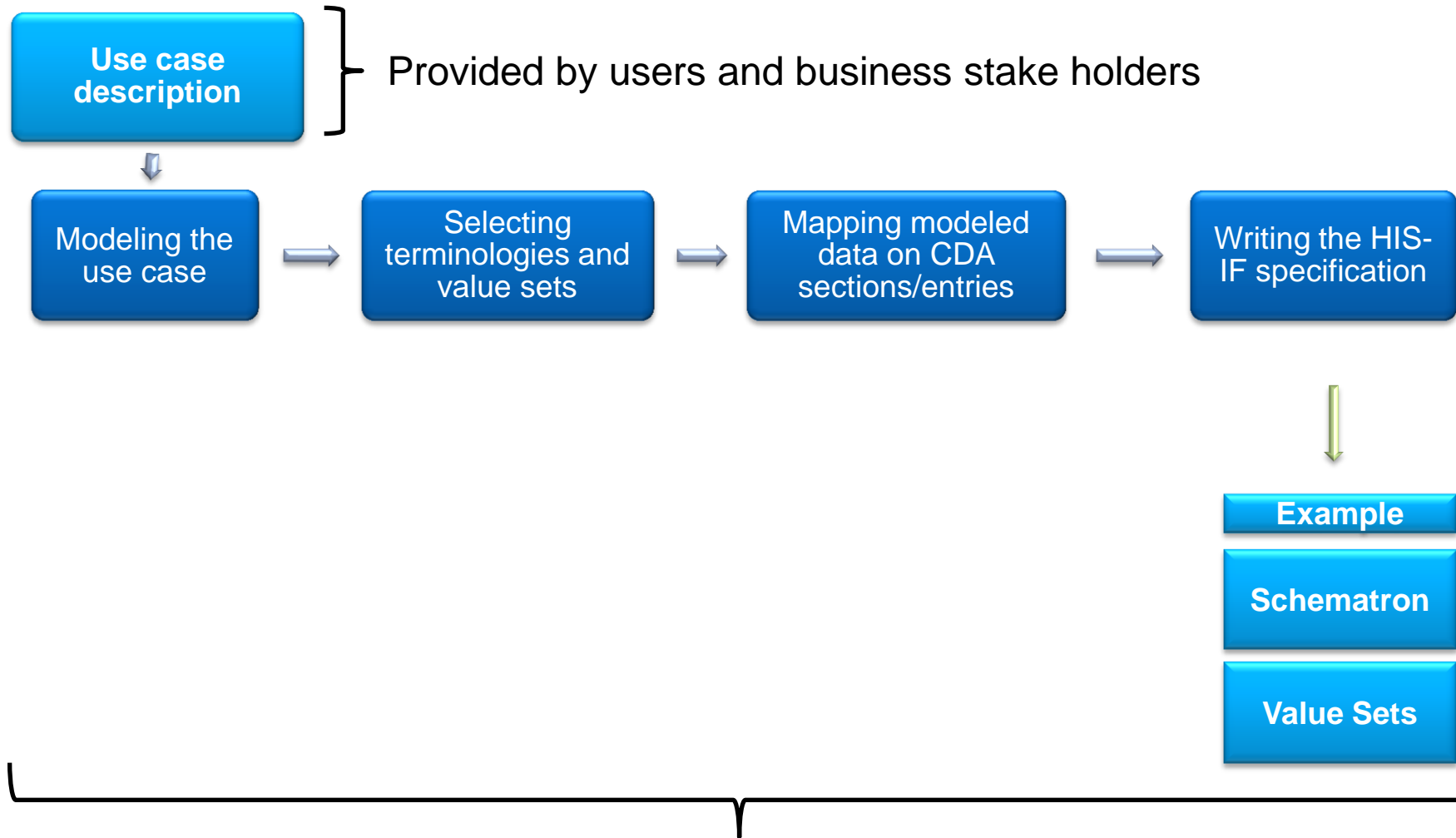- **Interoperability specification in French taking into account the specificities of French use cases**

- **Organized in 3 layers:**

  - **Transport layer** (ex. network, authentication, user assertion…)

  - **Service layer** (ex. sharing of medical documents, exchange of medical documents, health record management…)

  - **Content layer** (medical document templates – ex. lab report, referral, medical summary, antepartum summary, immunization summary…)
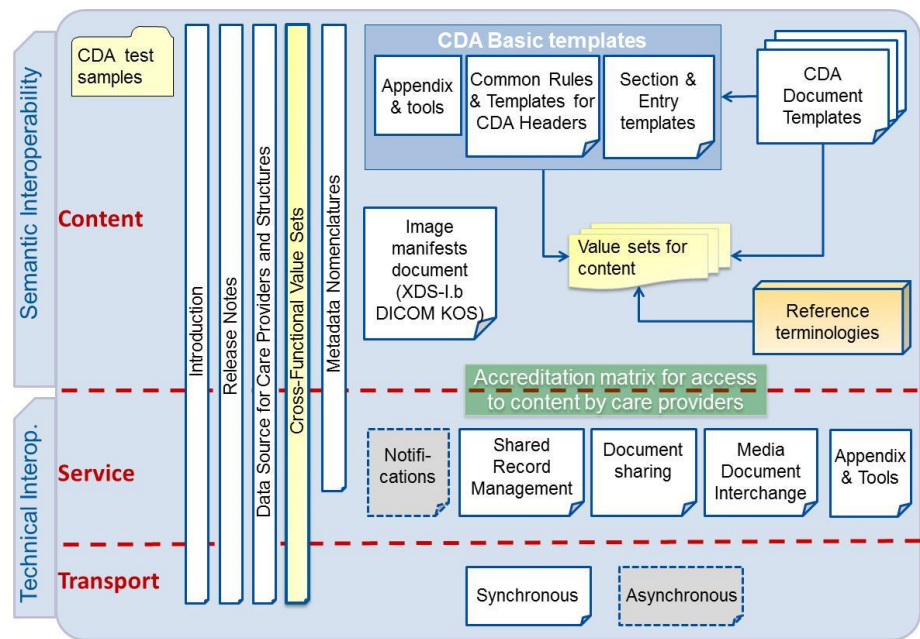
- **Based on IHE profiles or following IHE logics whenever possible** (ex. XUA for user assertion, XDS for sharing of documents, PCC profiles for medical documents or ASIP Santé's produced CDA templates using PCC CDA content modules…)

Process of production of HIS-IF content specification

Use case description — Provided by users and business stake holders

Modeling the use case → Selecting terminologies and value sets → Mapping modeled data on CDA sections/entries → Writing the HIS-IF specification

Example

Schematron

Value Sets

Produced by ASIP Santé

IHE profiles leveraged in the HIS-IF

- **IHE profiles leveraged:**

  - **PCC profiles**
    - Medical Summary Document Content (MS)
    - Immunization Content (IC)
    - Antepartum profiles
    - Labor and delivery profiles

  - **PALM profiles**
    - Sharing Laboratory Reports (XD-LAB)
    - Anatomic Pathology Structured Reports (APSR)

  - **QRPH profiles**
    - Mother and Child Health (MCH)

- **Specification leveraging PCC content modules**
  - Breast cancer screening
  - Patient with a high level of cardiac risk (anticoagulant drugs, …)

Issues faced 1/2

- **A lot of steps are needed to insure adequacy of the content specification**

- **Some of those steps can be optimized through tooling already used in the agency but some gaps remain**

Tooling: Modelio

Tooling: in test

Tooling:
- Word
- PDF creator

Tooling: Oxygen
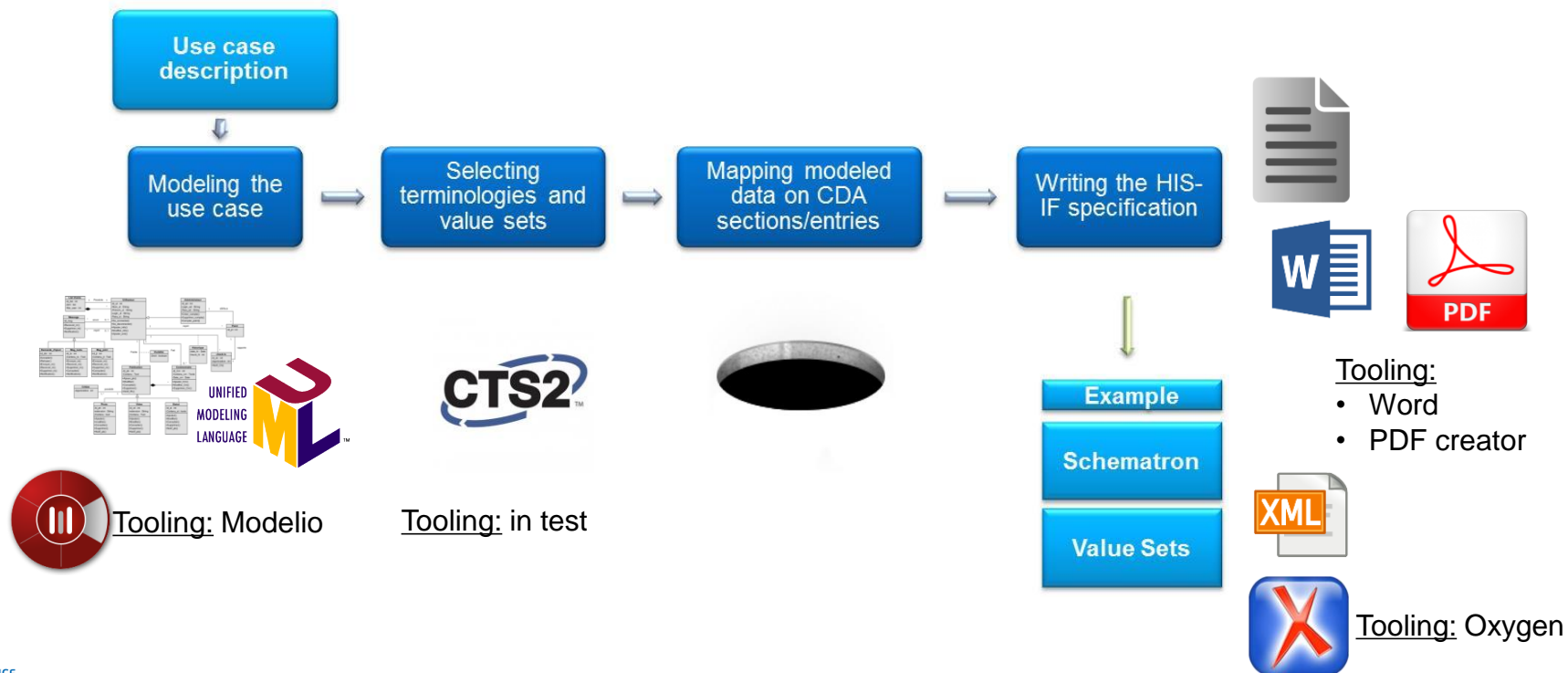
Issues faced 2/2

- **If the use case isn't addressed in a specific profile, sections and entries have to be found for data in the model**

  ➢ Search PCC technical framework for sections that might match groups of elements in the model (e.g. classes)
    - Search in the section for entries that match elements in the model (e.g. attributes)

  ➢ If no section seem to match a group of elements, search PCC technical framework for entries that might match element in the group
    - Check the adequacy of the sections in which the entries are documented

  ➢ Otherwise, creation of a specific section

  A lot of Ctrl + F !

- **When a section is coming from PCC technical framework, copy/paste tables from PCC framework into the HIS-IF document**

  A lot of Ctrl + C / Ctrl + V !

Solution found: development of a mapping tool
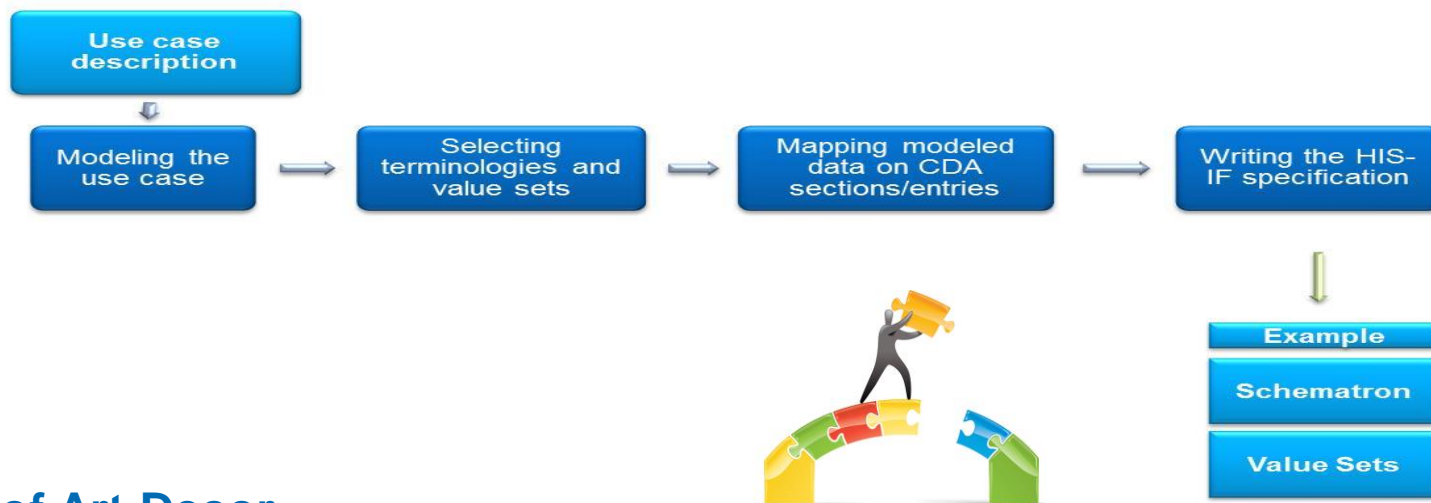
- **Test of Art Decor**

  ➤ Adequate for selecting terminologies and value sets and to generate examples, schematrons and value sets

  ➤ PCC content modules not included in Art Decor

  ➤ Structure of the documentation produced not in line with HIS-IF documents

  Decision not to use Art Decor yet (and reevaluate it in two years)

- **Development of a mapping tool**

  ➤ Automation of HIS-IF document production

  ➤ Need to parse PCC content modules (in progress)

Solution found: Mapping tool screen shots – documentation

Section

Entry

Solution found: Mapping tool screen shots – selection of entries

Perspectives for IHE-PCC and ASIP Santé

- **Parsing of PCC content modules documentation**

  - ➢ Initial parsing in progress
    - Parsing first and translation afterword
    - Can be provided to PCC domain for publication and/or feeding into Art Decor
  - ➢ Joint work on a format of documentation that might facilitate parsing of technical framework update

- **Report to PCC of HIS-IF updates for possible reference for future PCC profiles**

- **Other perspectives?**

ASIP Santé Web site
« CI-SIS »

http://esante.gouv.fr/services/referentiels/referentiels-d-interoperabilite/cadre-d-interoperabilite-des-systemes-d

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