



Questionnaire Generator
Based on the DDI standard

Insee – Guillaume Duffes

Contents

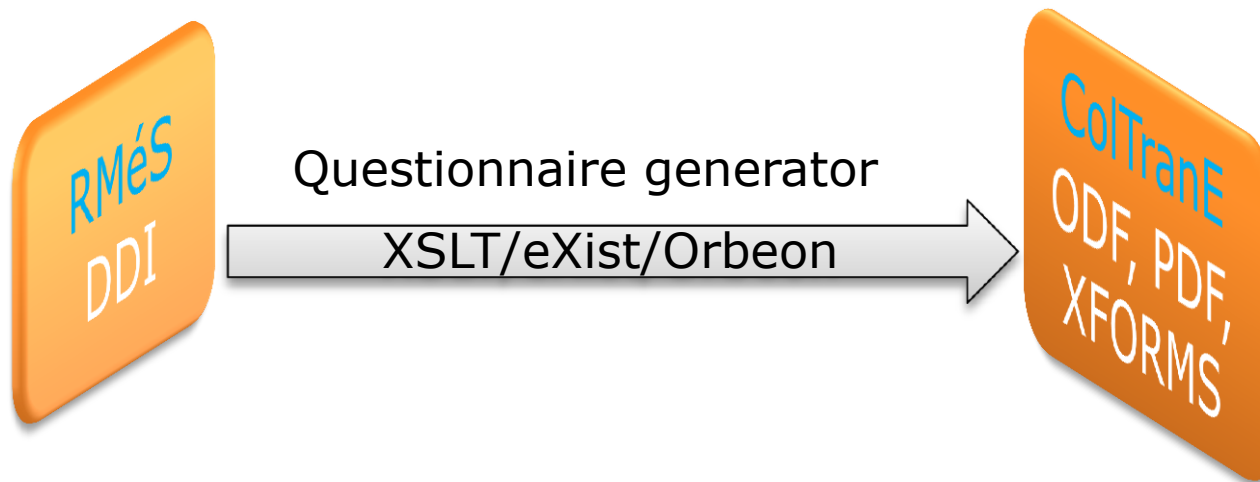


- Brief history of DDI at Insee
- General Architecture
- Principles of development
- Guidelines for users
- Conclusion



Context

- Two major projects involved in the implementation of DDI:
 - ColTranE (transverse data collection for business surveys)
 - RMÉS (Statistical Metadata Repository)





Context

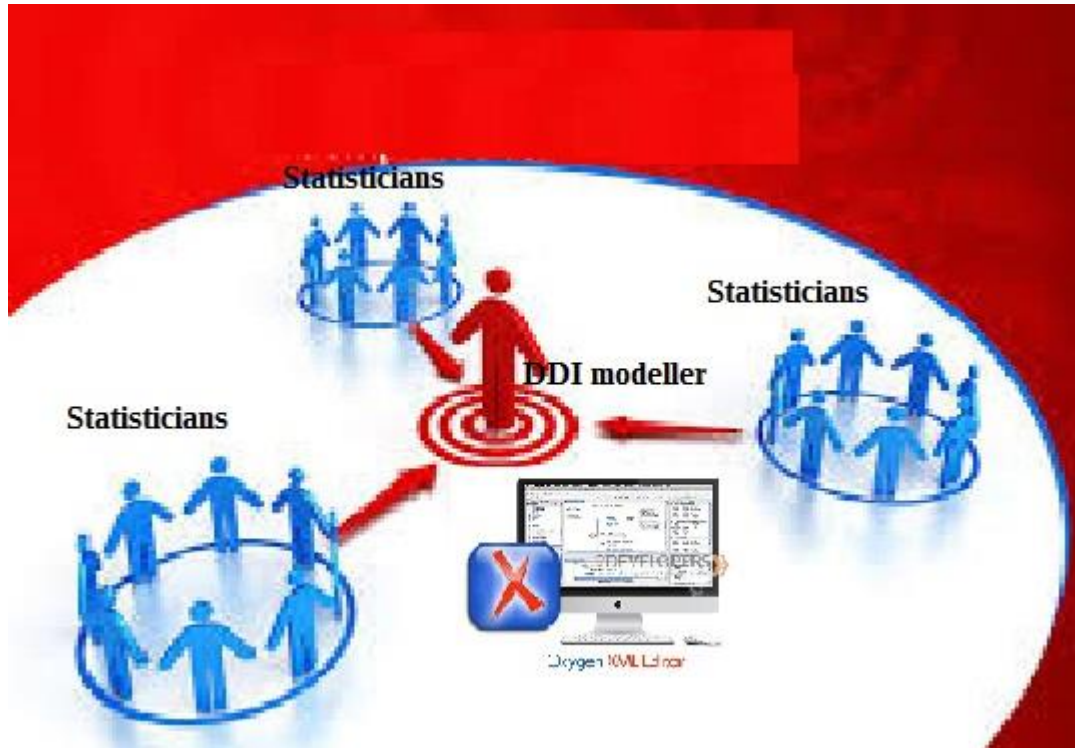
- February 2012: RMÉS was a bit lost, too many metadata scattered all over, too many standards, didn't know where to start.
- ColTranE needed to put online its SBS survey questionnaires
- Both projects jumped in. DDI 3.1 was chosen. PDF fillable forms generated.
- DDI files written manually and through XSLT



Context

- 01/2014: Decision was taken to move to DDI 3.2 to enhance the representation of grids, inter alia.
- XForms was the output format.
- The questionnaire generator is compliant with 3.2.
- Built , tested and run on Business surveys only.
- DDI still written by hand and through XSLT

Centralised manual approach



Mad man

- A lot of exchanges with subject-matter experts
- Deep expertise of DDI and a good knowledge of Eno app
- Time-consuming, high burden
- Tough balance act, prone to error (references, etc.)

Decentralised approach: Pogues



- A GUI (drag-drop) for statisticians
- No IT or DDI background needed
- Automatic consistency checks (references, modelling choices, etc.)
- Integrated with other RMÉS components (next slides)
- Supported by guidelines for questionnaire designers (cf later)



Pogues - Objectives

- PoC of a questionnaire designer user interface for metadata-driven data collection
- Integrated in RMÉS – Coltrane IT ecosystem
 - Using RMÉS metadata
 - Producing questionnaires
- Target: survey designers
- Focus: visualise in one click, fast iteration

Pogues - GUI



Veillez spécifier votre questionnaire

Votre situation personnelle

Quel est votre âge

Vous êtes

Quel est votre diplôme le plus élevé ?

DIPLOME



Conditions

Ajouter une condition

Déclarations

Ajouter une déclaration

Aucune déclaration définie

Contrôles

Ajouter un contrôle

Aucun contrôle défini

Format des réponses

Format des réponses

Réponse à choix unique

Sélectionnez une liste de codes

[U] DIPLOME

Type de saisie

checkbox

Ajout d'une modalité spécifique



Obligatoire



Redirections

Ajouter une redirection

Description



$\$(S1-Q3-R1)=4$ or $\$(S1-Q3-R1)=5$ or $\$(S1-Q3-R1)=6$ or $\$(S1-Q3-R1)=7$ or $\$(S1-Q3-R1)=8$ or $\$(S$

Cible si la condition est vérifiée

COUPLE



Cible si la condition n'est pas vérifiée

Cible



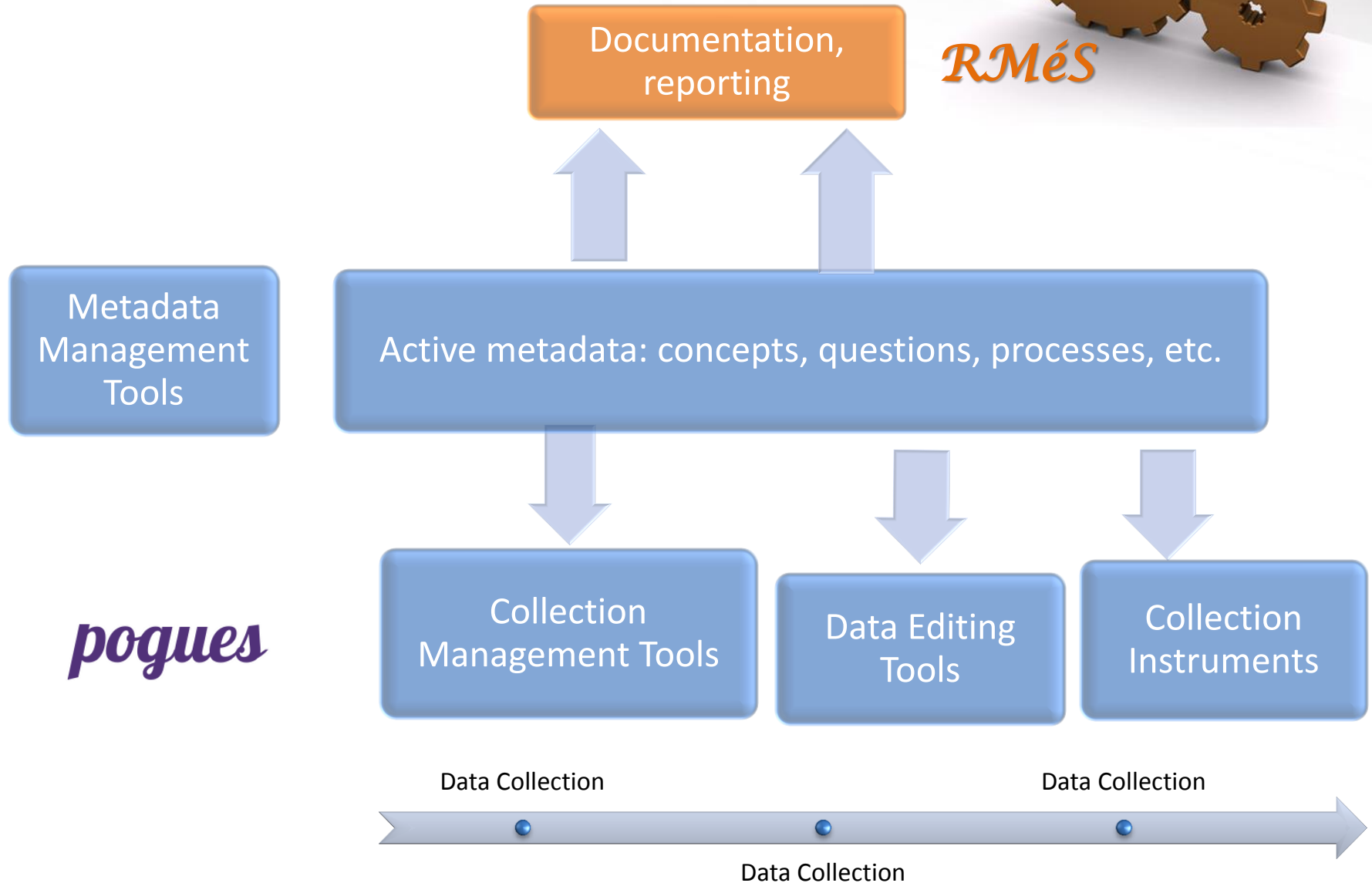
Quel est votre niveau d'étude ?

Vivez-vous actuellement en couple ?

Module1
Module2
MODULE3
MODULE4
MODULE5
MODULE6
MODULE7
MODULE8

Pogues - Environment

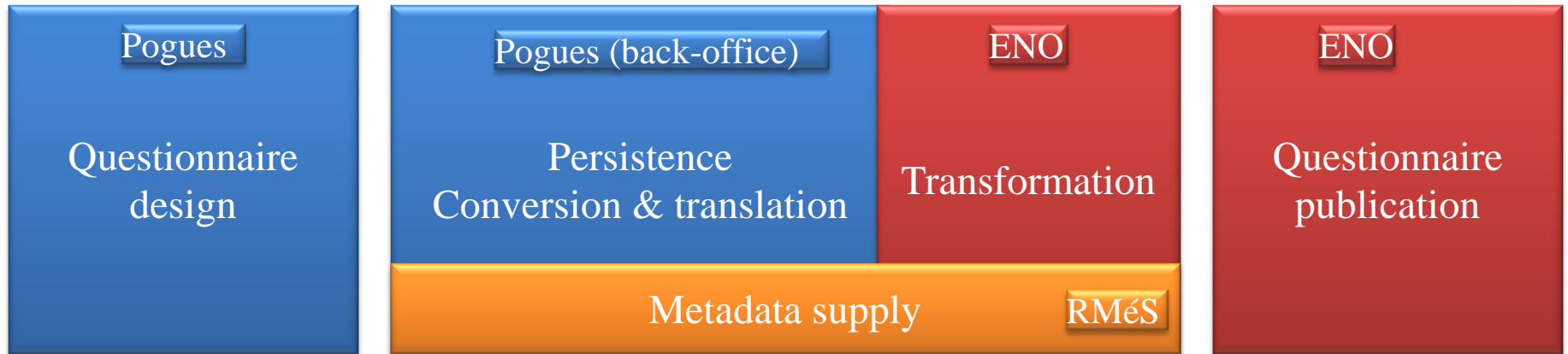
- Metadata-driven collection system



pogues



General Architecture



- Developed with Pogues
- Coltrane development already in production
- Development in progress

Pogues – Development principles



- **Open Source**
 - GitHub
 - MIT Licence
- **International**
 - Codes and comments in English
 - Internationalised interface
 - Data can be in any language

Questionnaire design - Guidelines



- **Not a Pogues** dedicated user guide, but general DDI **best practices**
- Issue: how to model properly business objects?
 - Survey designer oriented for sure
 - But also necessary for ENO developers
- Not all the guidelines implemented in Pogues yet.
- Should be considered in the French Statistical System whichever tool is used to produce DDI instances (Pogues or not)
- Submitted for review to the DDI Alliance and to the MC On Standards

Questionnaire design - Guidelines



```
<d:QuestionItem>
  <r:Agency>fr.insee</r:Agency>
  <r:ID>INSEE-SIMPSONS-QI-102</r:ID>
  <r:Version>0.1.0</r:Version>
  <d:QuestionText>
    <d:LiteralText>
      <d:Text>What are Jay's postal details?</d:Text>
    </d:LiteralText>
  </d:QuestionText>

  <d:StructuredMixedResponseDomain>
    <d:ResponseDomainInMixed>
      <d:TextDomain>
        <r:Label>
          <r:Content xml:lang="en-IE">House number</r:Content>
          </r:Label>
          <r:OutParameter isArray="false">
            <r:Agency>fr.insee</r:Agency>
            <r:ID>INSEE-SIMPSONS-RDOP-102-1</r:ID>
            <r:Version>0.1.0</r:Version>
            <r:ParameterName>
              <r:String>CN1</r:String>
            </r:ParameterName>
            <r:TextRepresentation />
            </r:OutParameter>
          </d:TextDomain>
        </d:ResponseDomainInMixed>
      </d:ResponseDomainInMixed>
      <d:TextDomain>
        <r:Label>
          <r:Content xml:lang="en-IE">Street name</r:Content>
          </r:Label>
          <r:OutParameter isArray="false">
            <r:Agency>fr.insee</r:Agency>
            <r:ID>INSEE-SIMPSONS-RDOP-102-2</r:ID>
            <r:Version>0.1.0</r:Version>
            <r:ParameterName>
              <r:String>CN1</r:String>
            </r:ParameterName>
            <r:TextRepresentation />
            </r:OutParameter>
          </d:TextDomain>
```

Graphical representation

The representation associated with the DDI modelling is as follows:

⇒ What are Jay's postal details?	
House number	<input type="text"/>
Street	<input type="text"/>
City	<input type="text"/>

Future Works



Eno

- New output formats (paper, Blaise)
- Publish as Open Source

Pogues

- Additional features (e.g. more complex flow logic)
- Complex questionnaire controls