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Documenting the European Social Survey questionnaire design process online using the Data Documentation Initiative (DDI)

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SERISS Task 4.1

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This project has received funding from the *European Union's Horizon 2020 research and innovation programme* under grant agreement No 654221.

Table of Contents:

- The questionnaire design process of the European Social Survey
- The Questionnaire Design Documentation Tool (QDDT)
- The metadata standard DDI as basis for the tool
- Examples from the QDDT tool

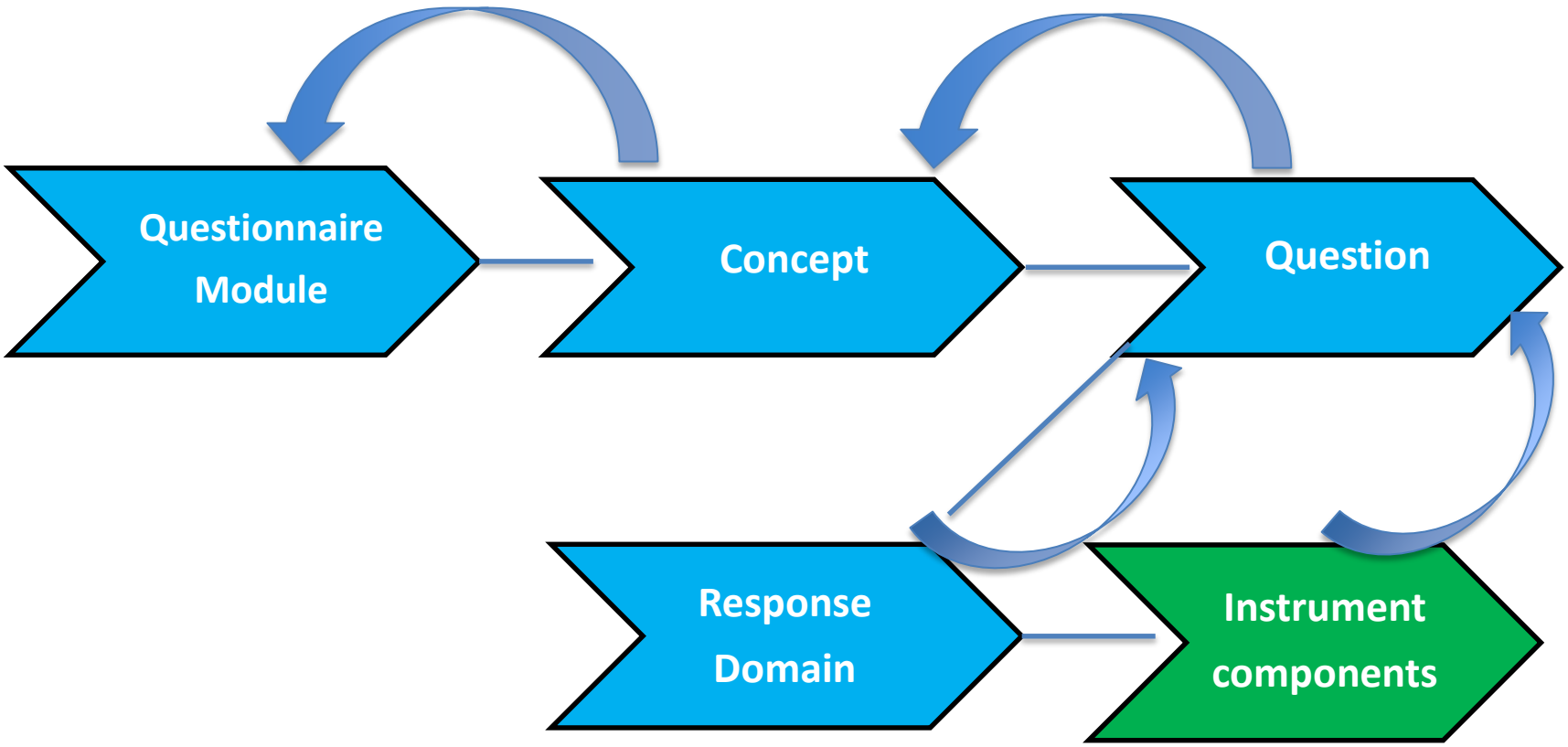
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European Social Survey (ESS) questionnaire module design process:

- Two topical questionnaire modules and related design teams elected for each ESS round
- Iterative process over two years including discussions, testing and piloting
- Multiple actors involved: Questionnaire designers, National Coordinators, Translation team, methodology experts etc.
- ESS Head Quater is responsible

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ESS questionnaire design steps



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The Questionnaire Design and Documentation Tool:



- A web-based open source tool,
- designed to assist research teams in developing items (questions and concepts) for topical modules of conceptual questionaires.
- Captures and displays the development history of items.
- Usecase is the ESS.

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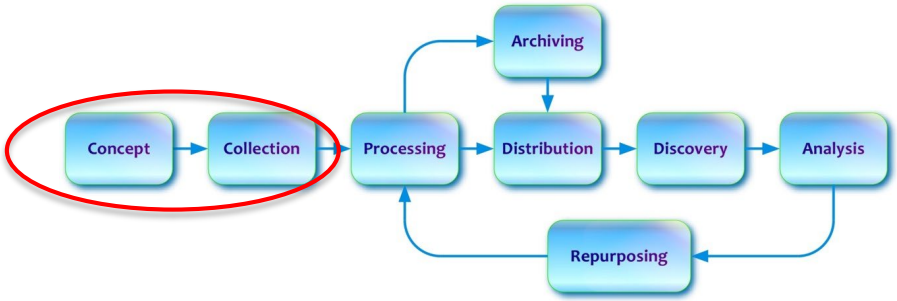
Data Document Initiatve (DDI):



- A metadata standard originating in the social and behavioural sciences moving into new fields
- Driven by a self-sustaning membership organisation, the DDI Alliance
- Rich content
- Current branches: 2.* Codebook, 3.* Lifecycle,
- Upcoming: 4 Model based, datum based

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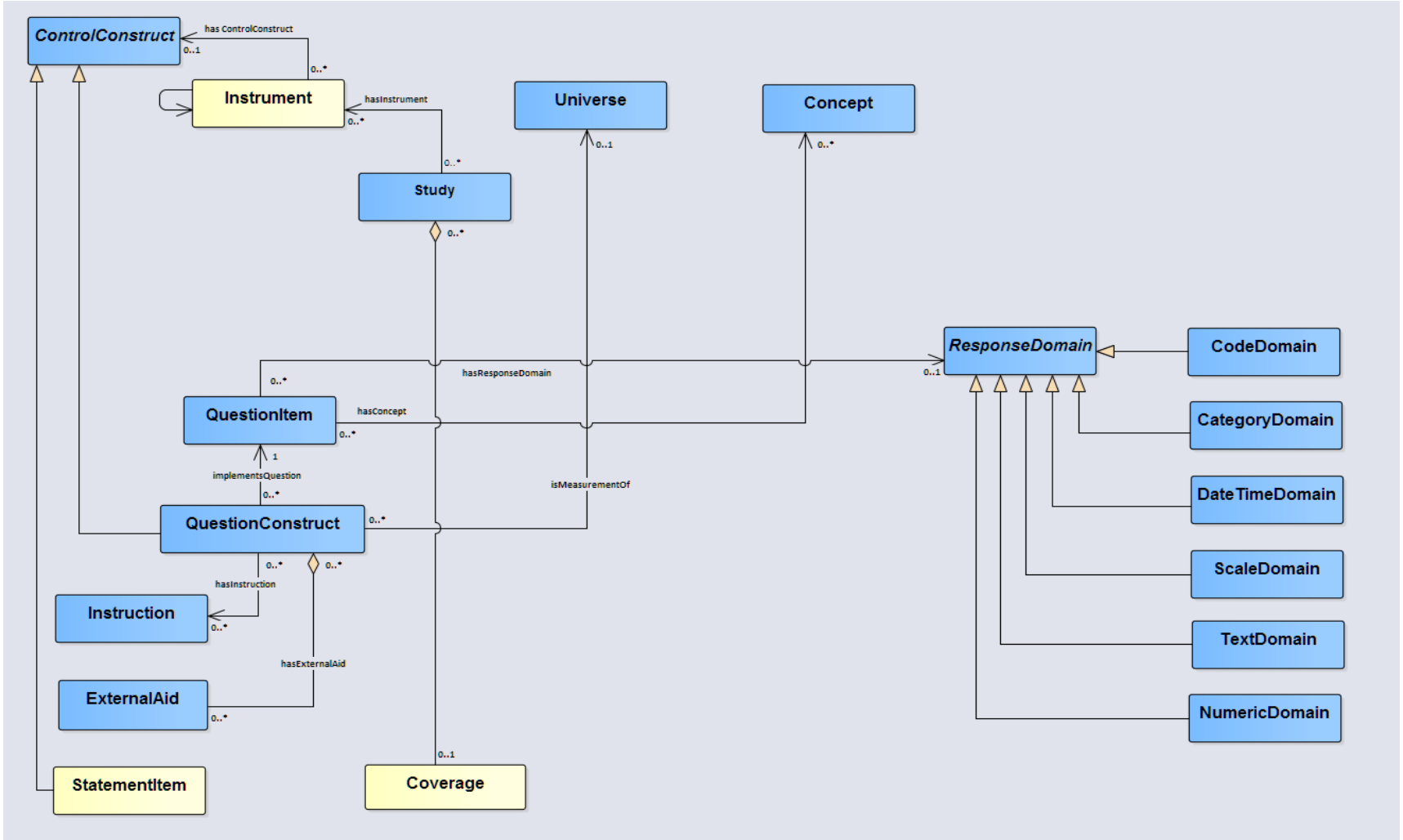
Data Document Initiatve (DDI) usage in the QDDT:



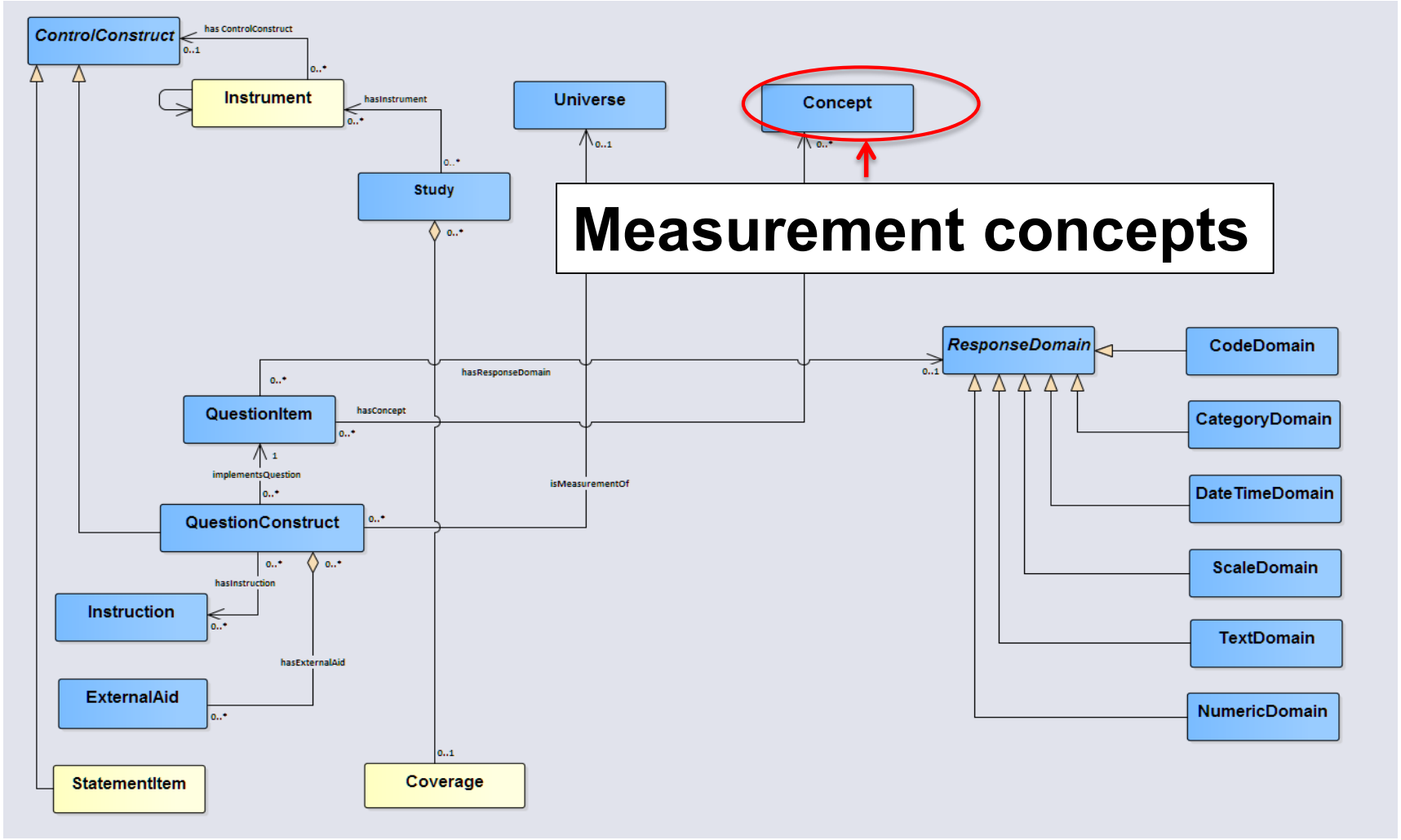
- Conceptual model based on the metadata standard DDI-Lifecycle
- This facilitates reuse of items (e.g. questions and responses) over time,
- helps keeping track of the development history of items,
- and facilitates interoperability with other tools

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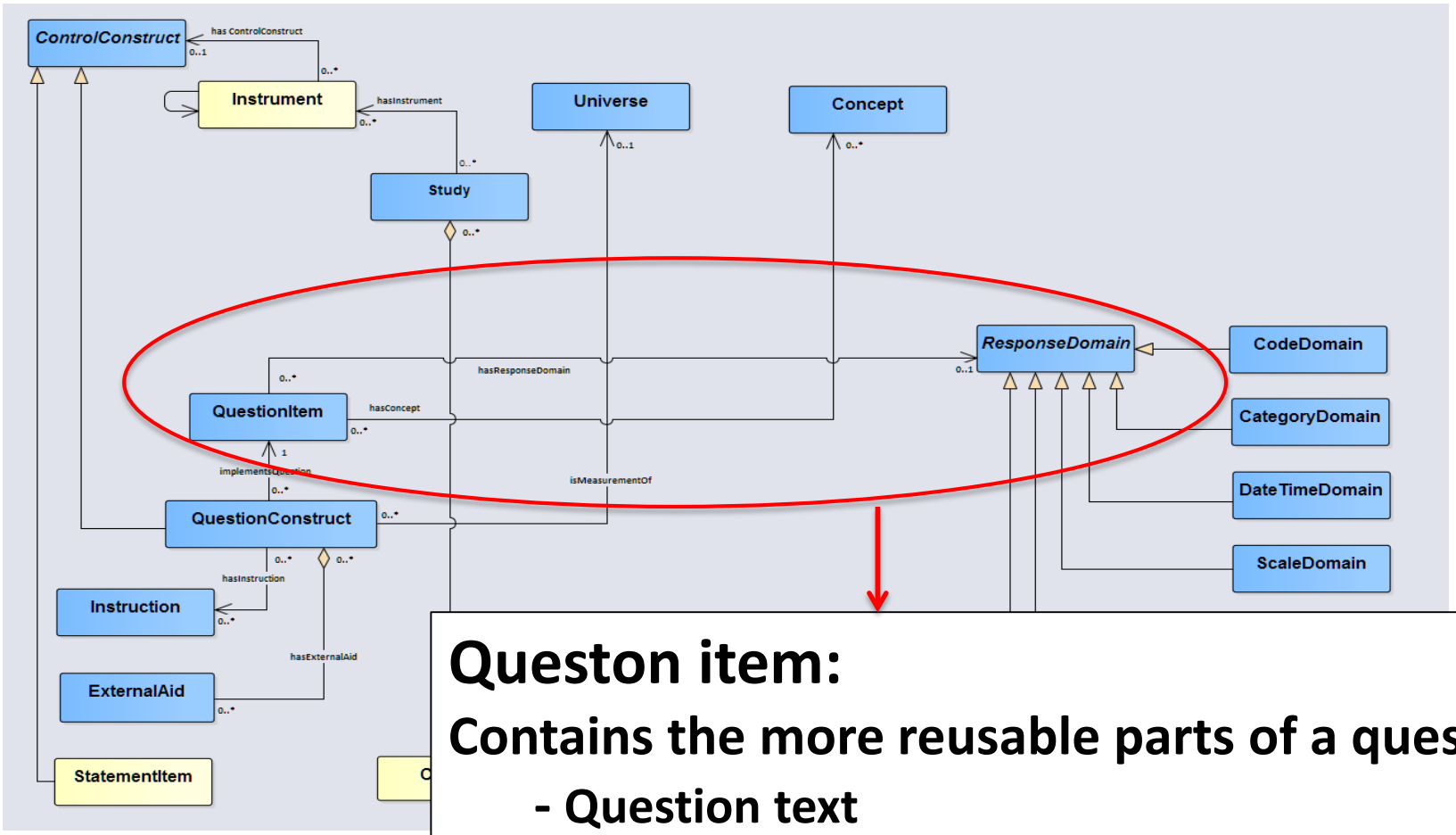
QDDT Conceptual Model – DDI-Lfecycle (3.2) based



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Queston item:

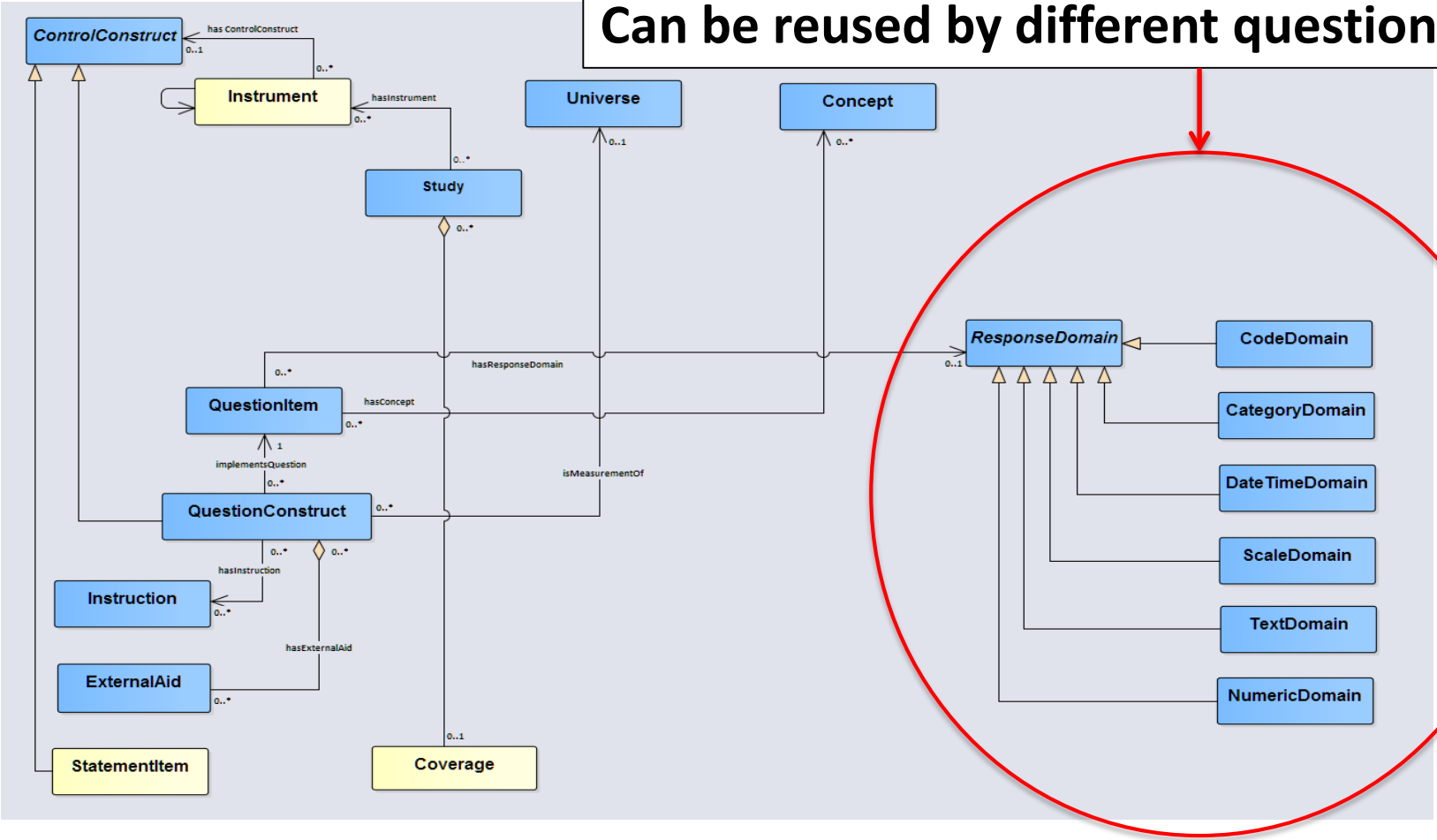
Contains the more reusable parts of a question

- Question text
- Response domains

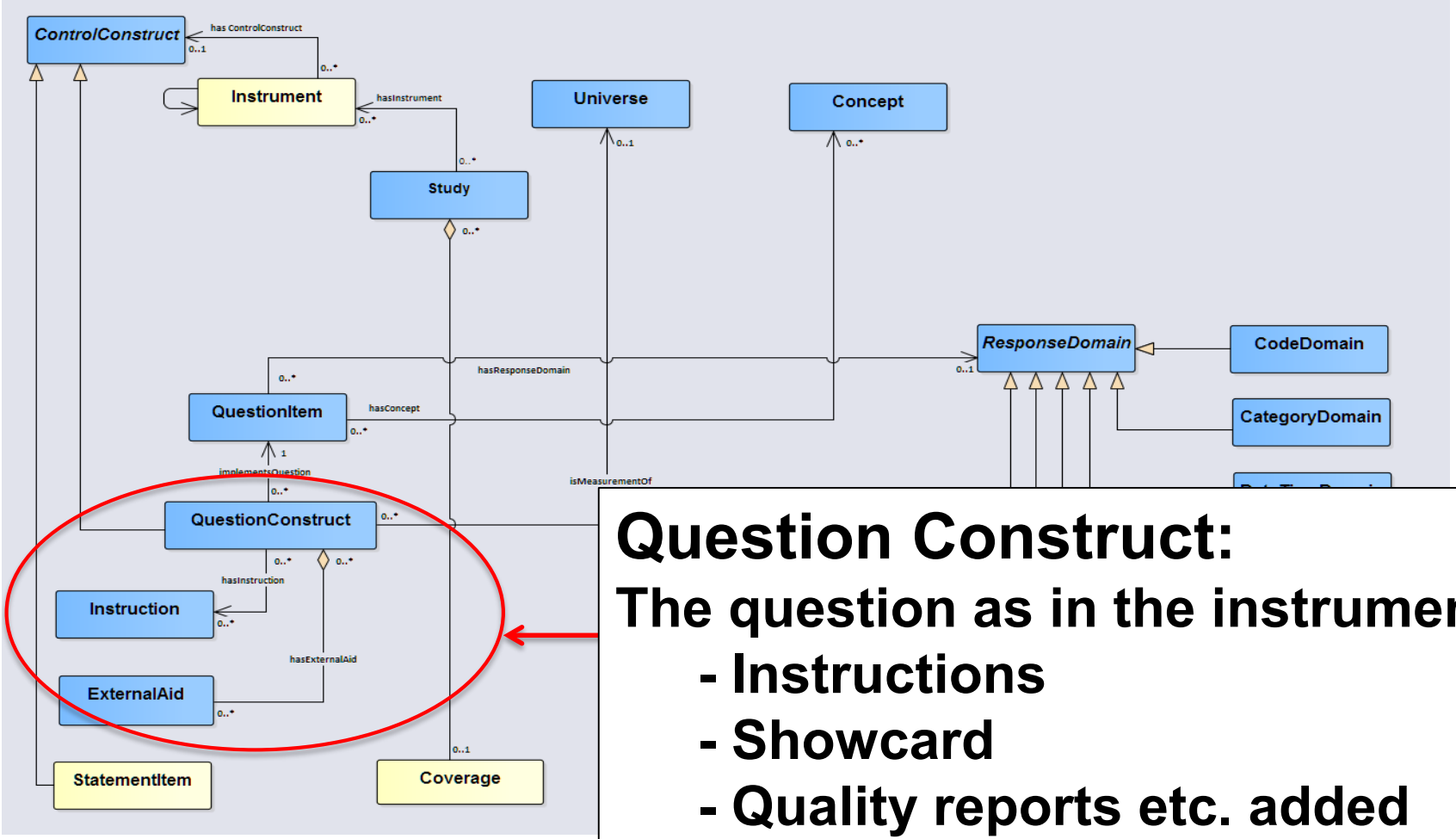
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Response domains:

Can be reused by different questions



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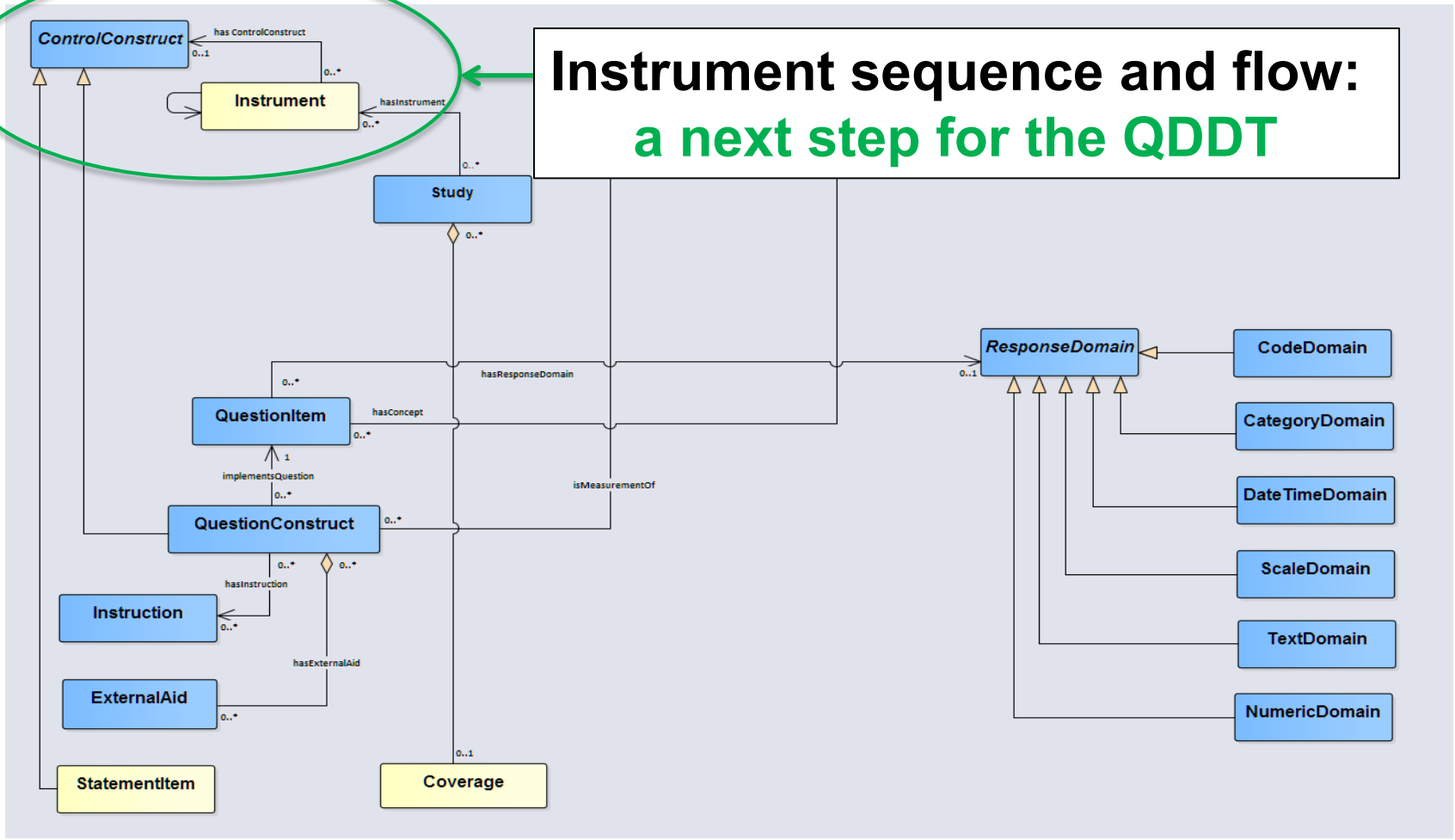
Question Construct:

The question as in the instrument

- Instructions
- Showcard
- Quality reports etc. added

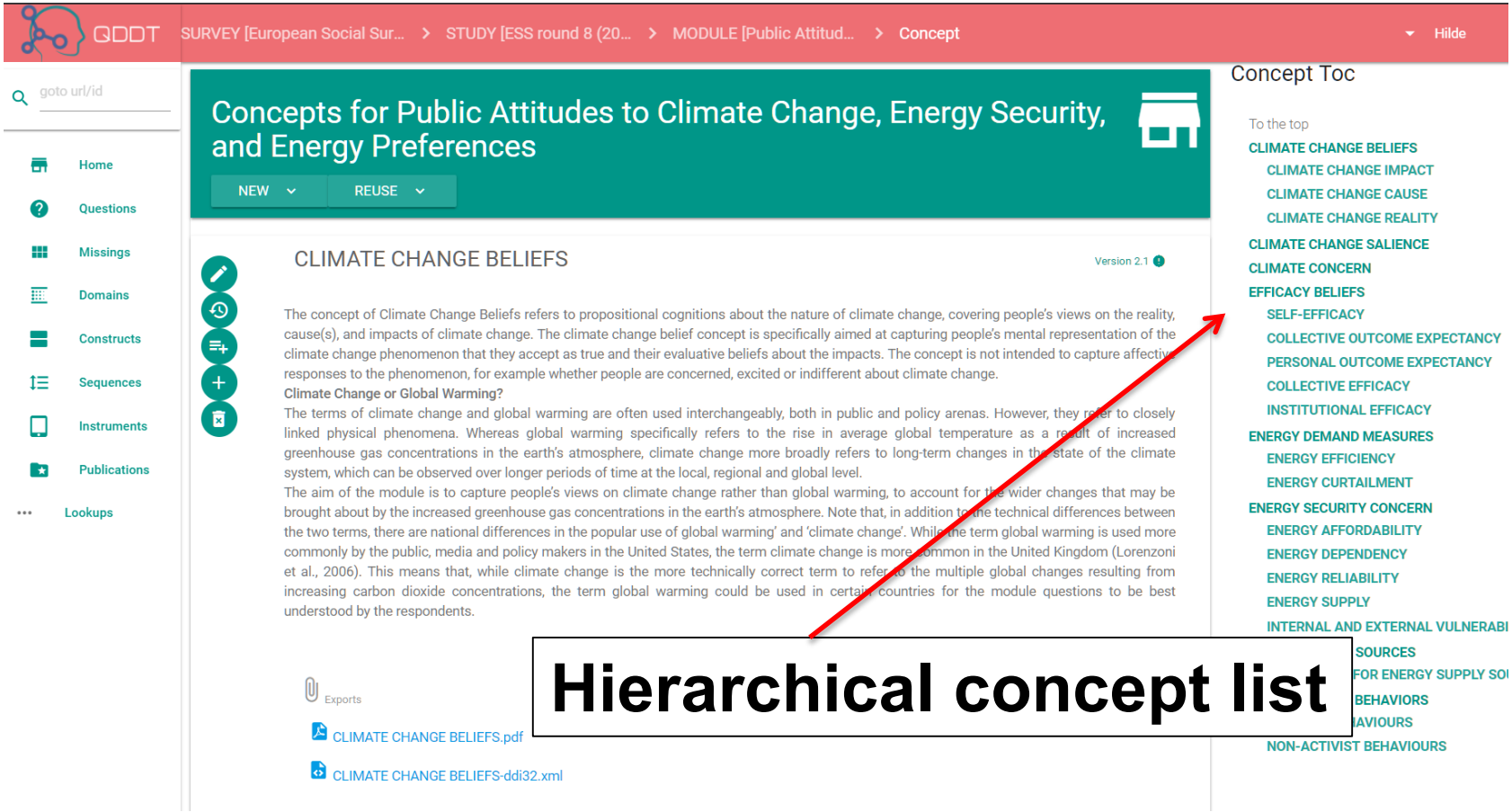
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Instrument sequence and flow:
a next step for the QDDT



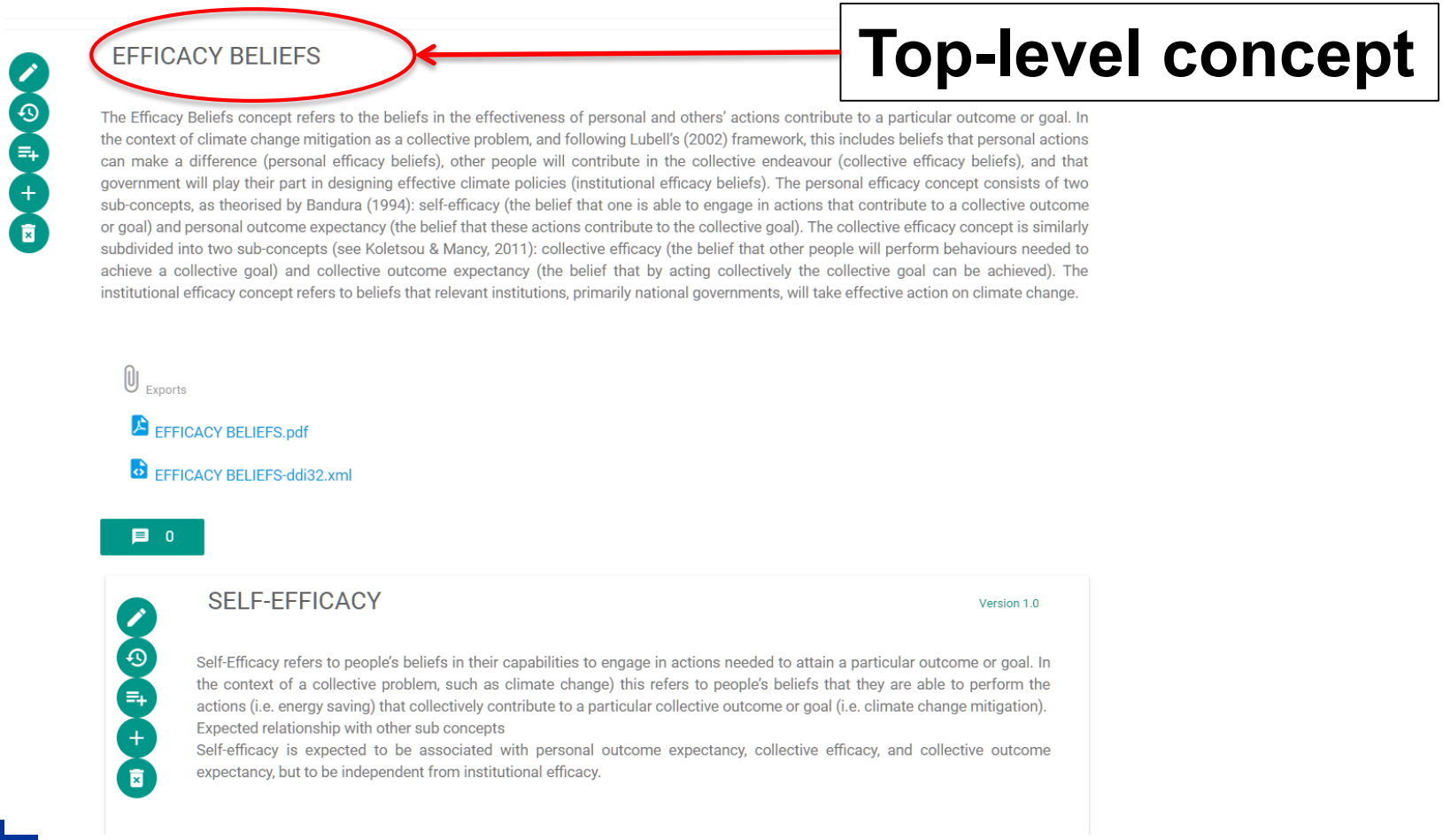
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QDDT – Concepts:



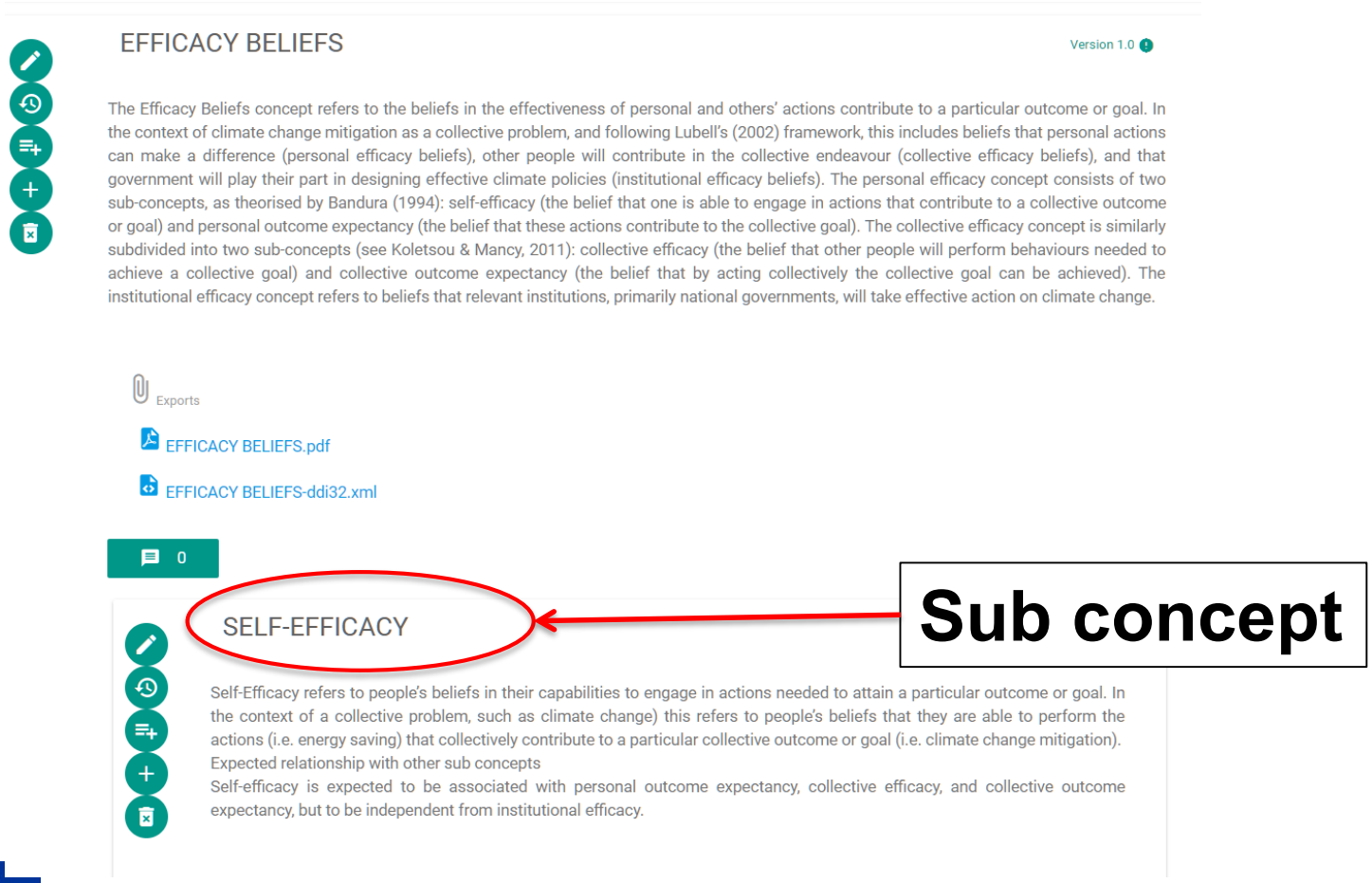
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Concepts:



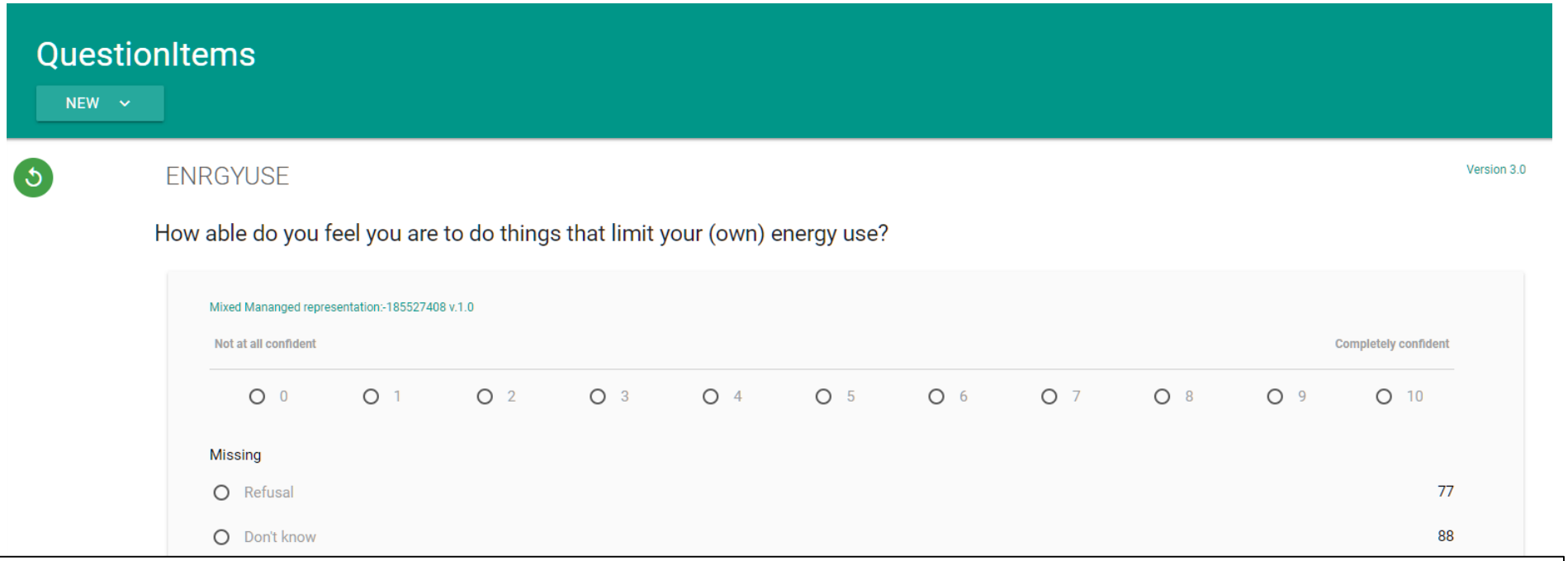
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Concepts:



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Structuring questions for reuse in the QDDT:



- **Only core content is added at the question item level**
- **Responses are maintained separately and linked to the question by reference**
- **Valid responses are maintained and reused separately from the missings**

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QuestionItems

NEW

Question text

ENRGYUSE

Version 3.0

How able do you feel you are to do things that limit your (own) energy use?

Mixed Mananged representation:-185527408 v.1.0

Not at all confident — Completely confident

0 1 2 3 4 5 6 7 8 9 10

Missing

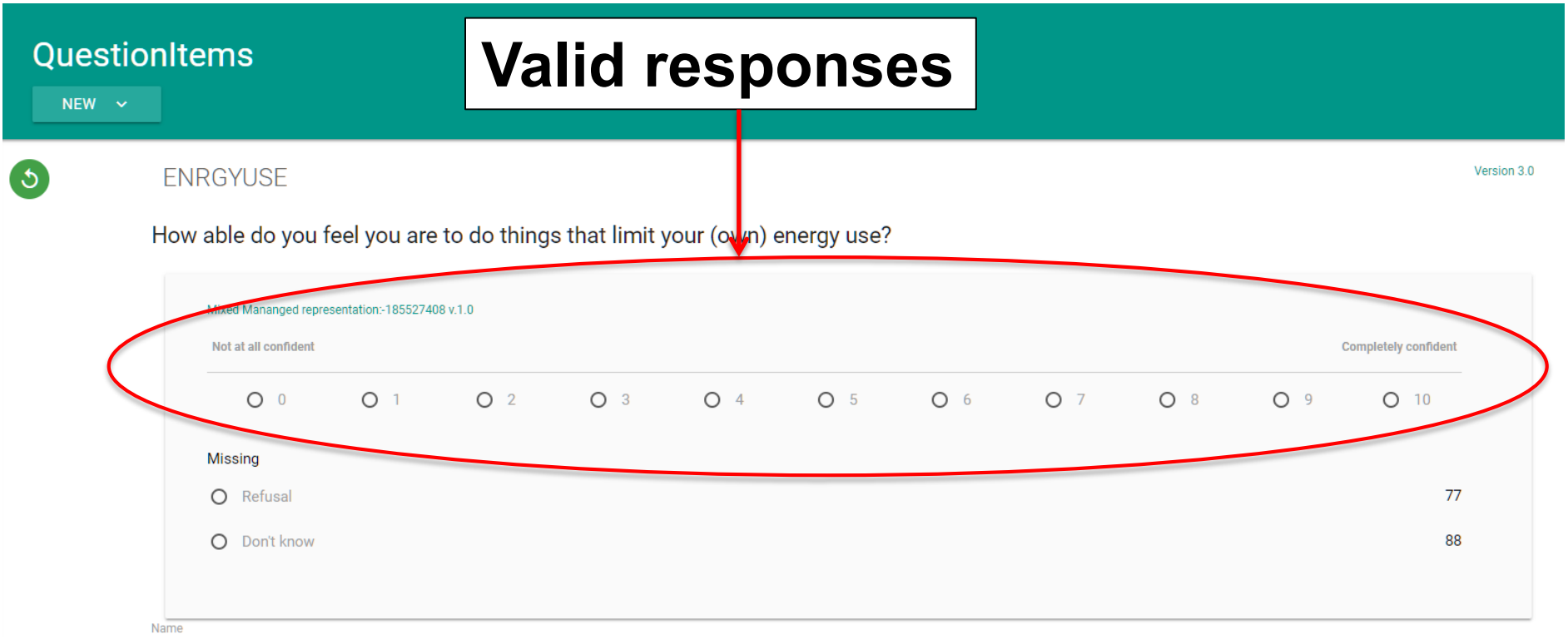
Refusal 77

Don't know 88

Name

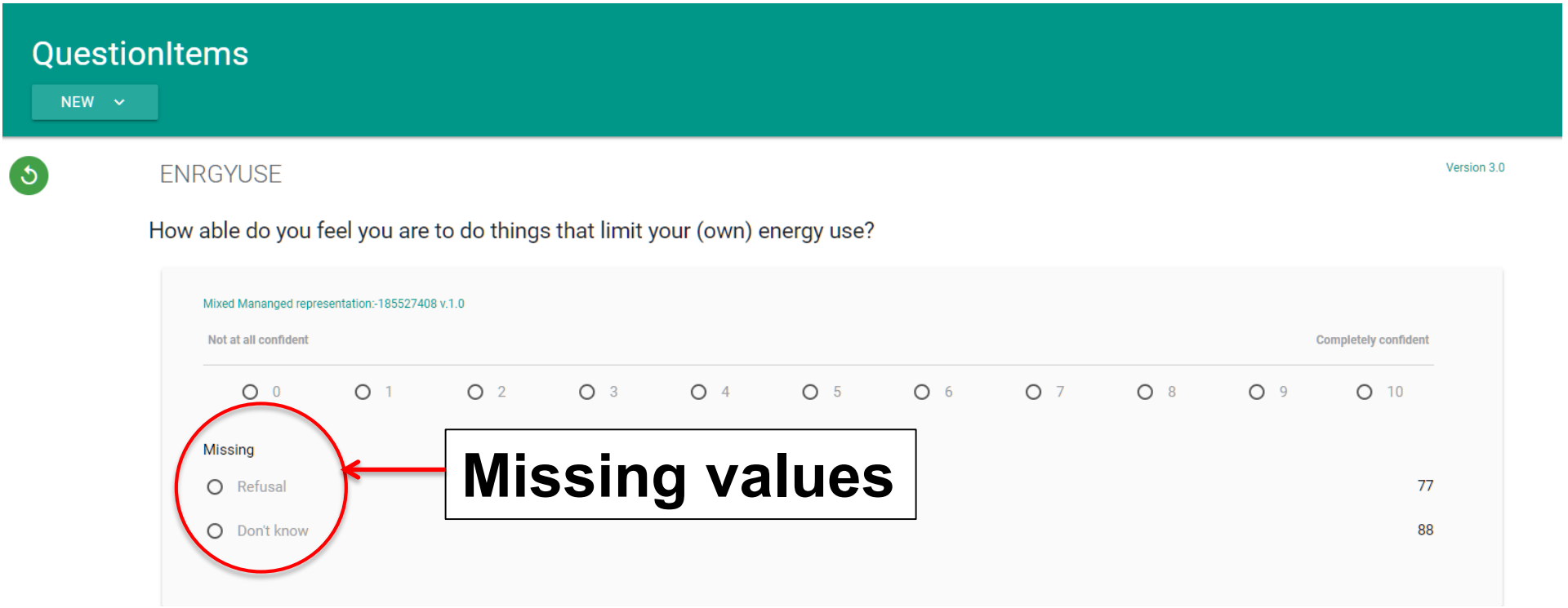
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Valid responses



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Questions:

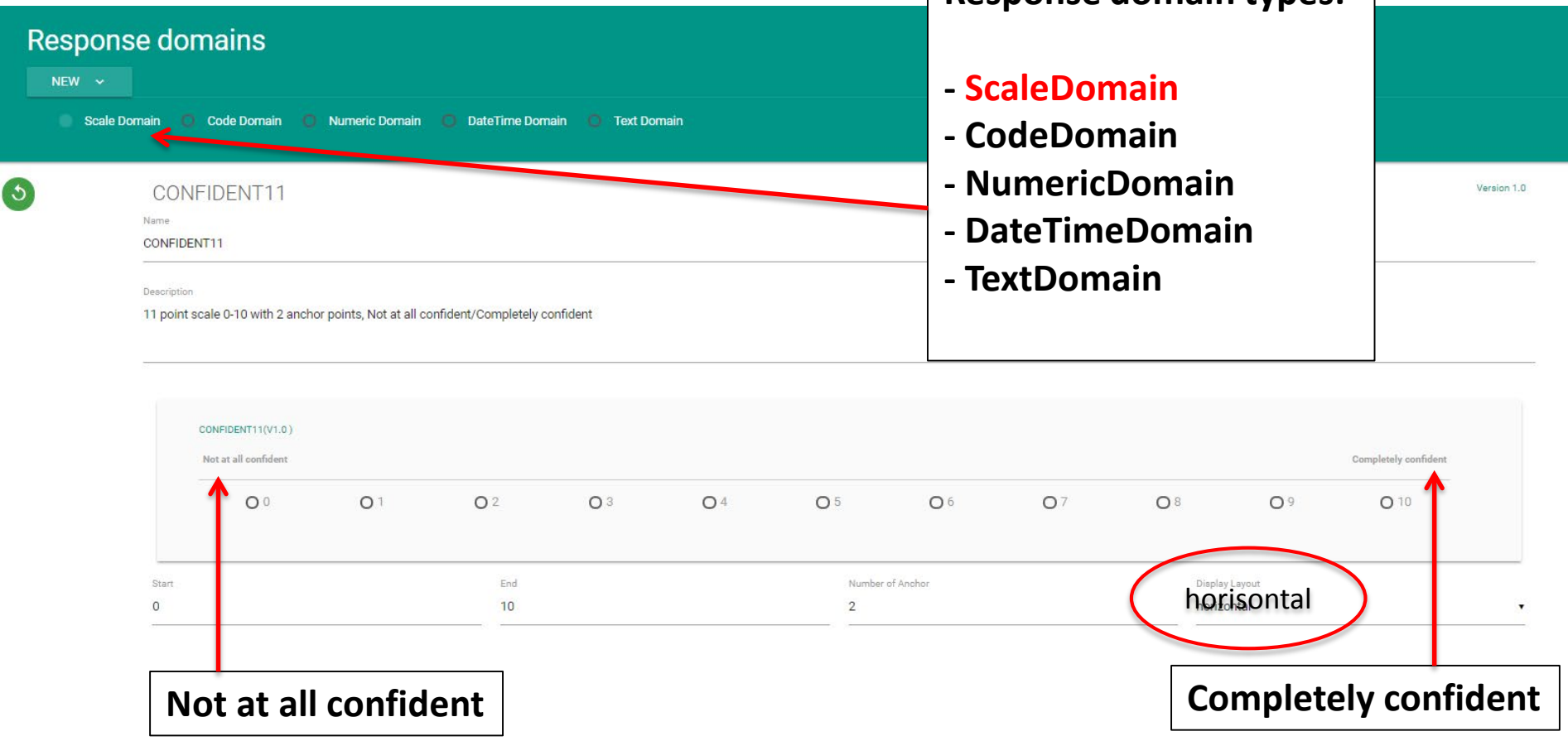


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Response domains:

Response domain types:

- ScaleDomain
- CodeDomain
- NumericDomain
- DateTimeDomain
- TextDomain

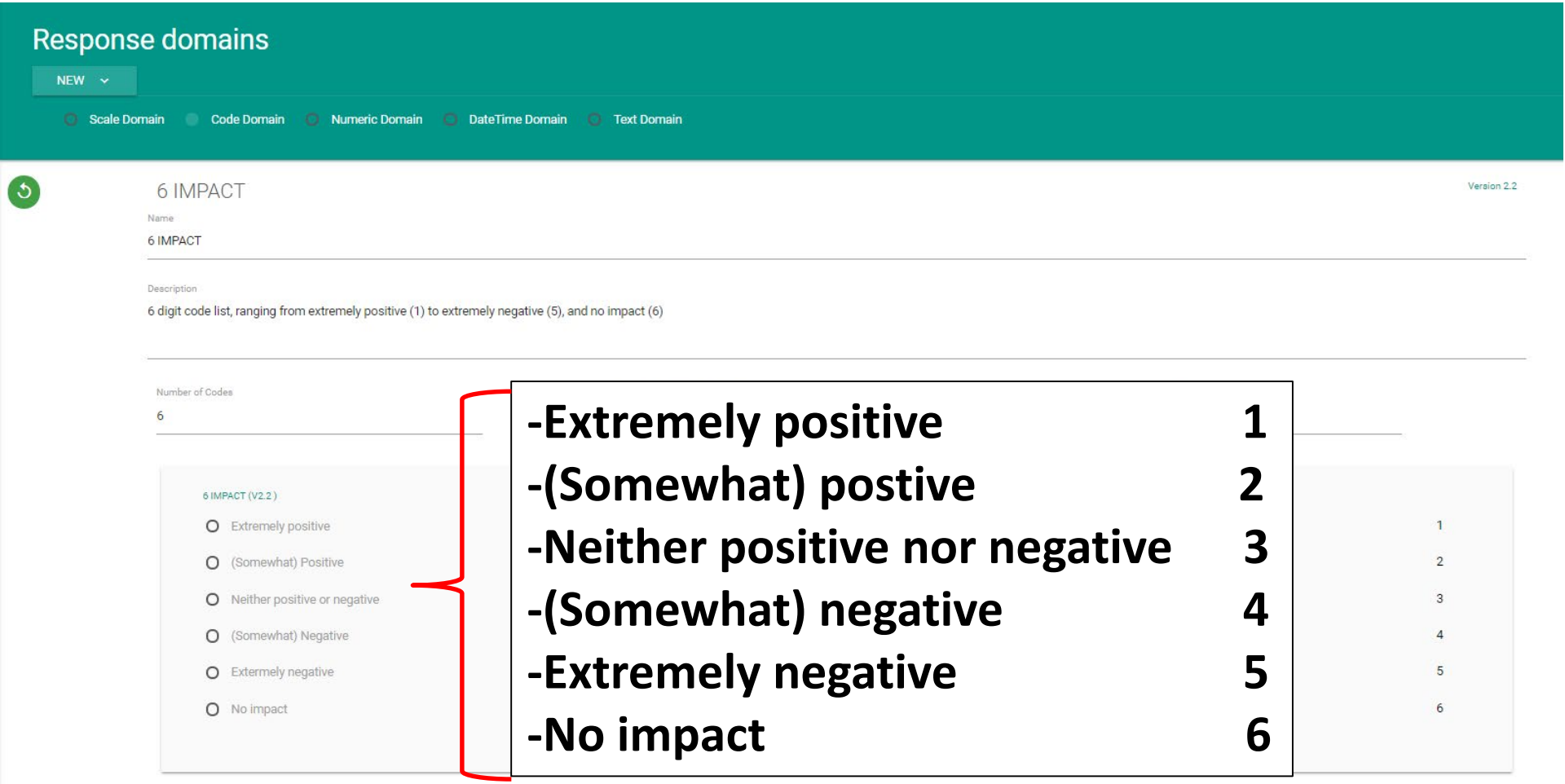


Not at all confident

Completely confident

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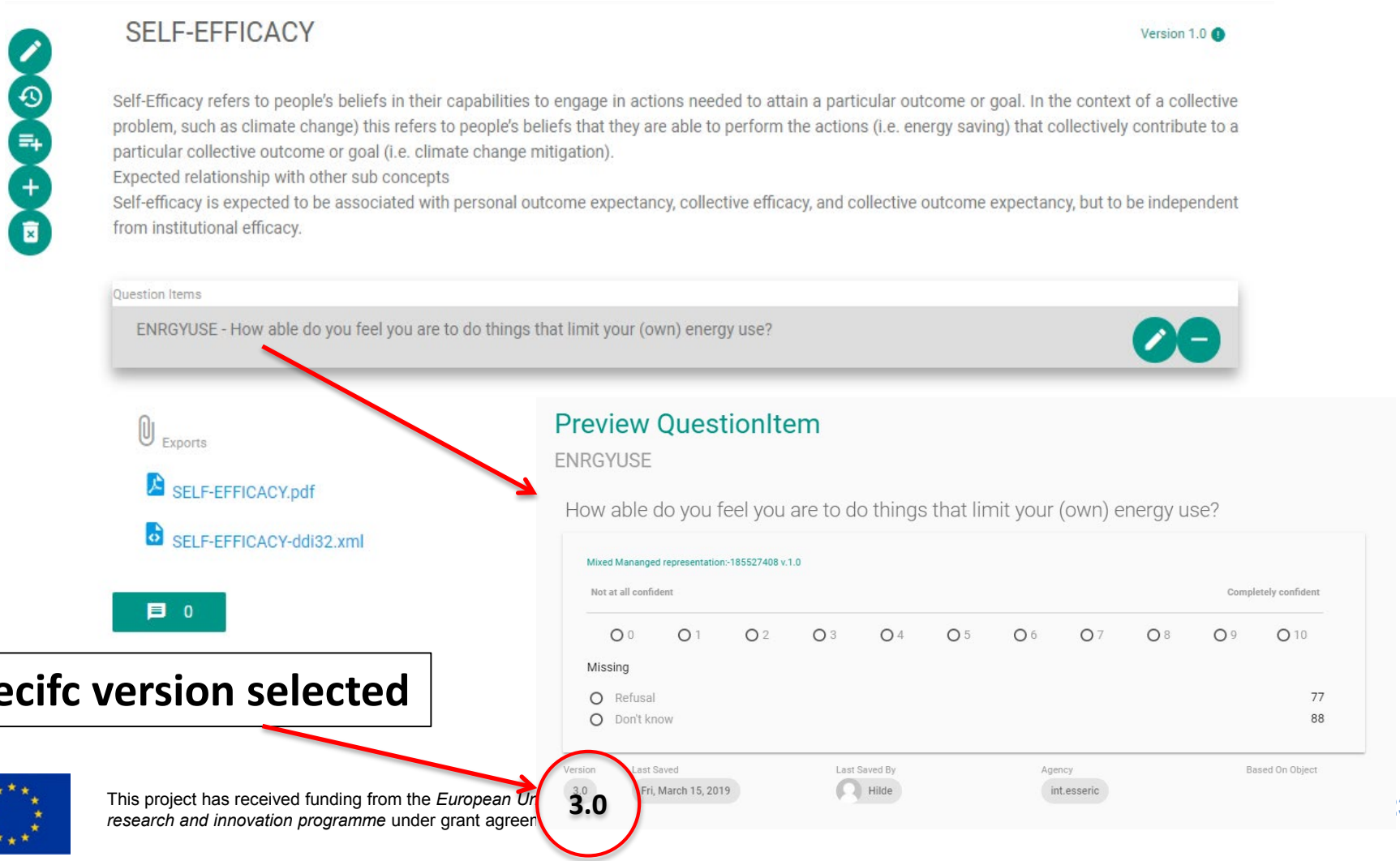
Response domains – Code list:



-Extremely positive 1
-(Somewhat) postive 2
-Neither positive nor negative 3
-(Somewhat) negative 4
-Extremely negative 5
-No impact 6

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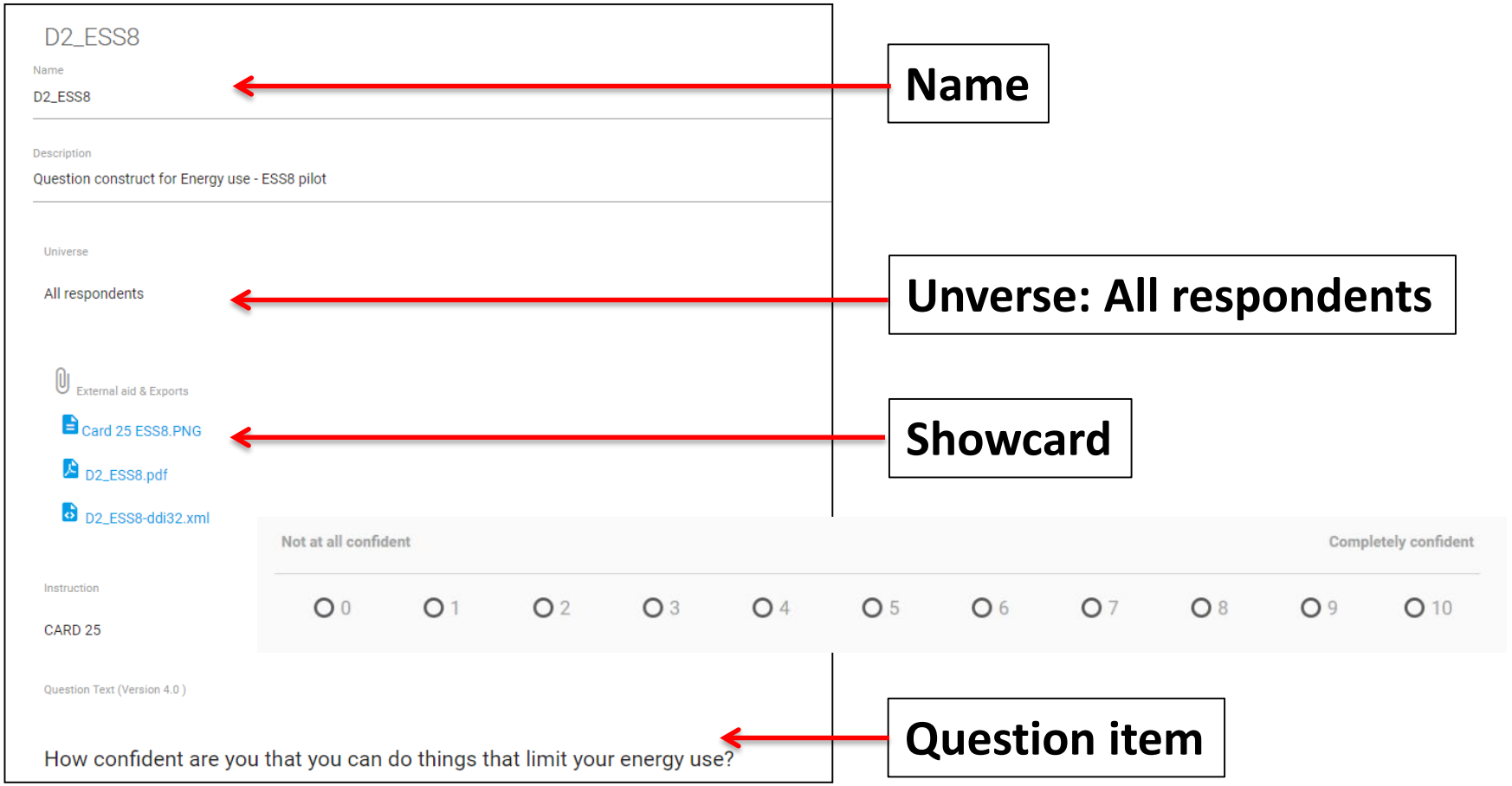
Linking questions to concepts:



Specifc version selected

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research and innovation programme under grant agreen

Question constructs – the question as in the questionnaire:



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Comments:

ENRGYUSE

How able do you feel you are to do things that limit your (own) energy use?

1

March 17, 2019 at 7:36:00 AM GMT+1

QDT/CST: It has been dificult to formulate wording for the efficacy items. We tried 'how able' but confidence seems the easiest solution

0

We tried 'how able'
But confidence seems the easiest solution

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Compare current change to latest version:

Current change

```
question    How confidentare you that you can do things that limit your energy use?
  Intent
RD-Name     Mixed [ScaleDomain:-43817374 + Ref/DK]
RD-Ver      V1.0
```

How confident…..

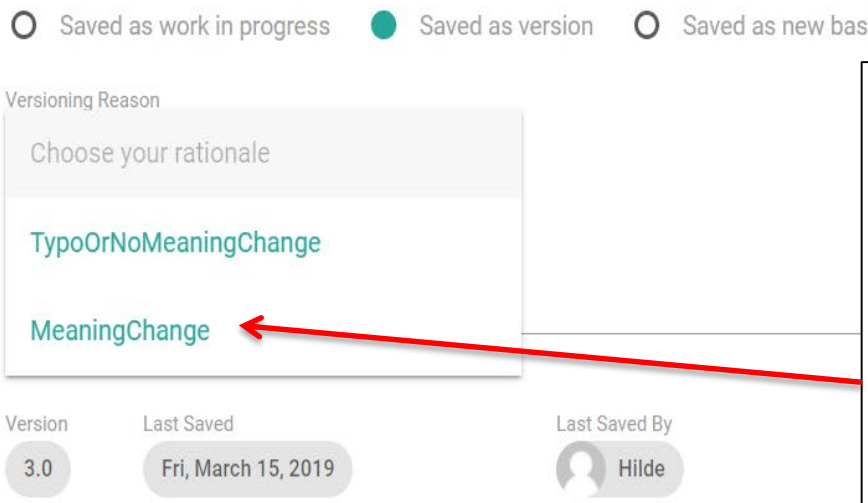
V 3.0

```
     Ver    V3.0
question    How able doyou feel you are to do things that limit your(own) energy use?
  Intent
RD-Name     Mixed [ScaleDomain:-43817374 + Ref/DK]
RD-Ver      V1.0
```

How able…….

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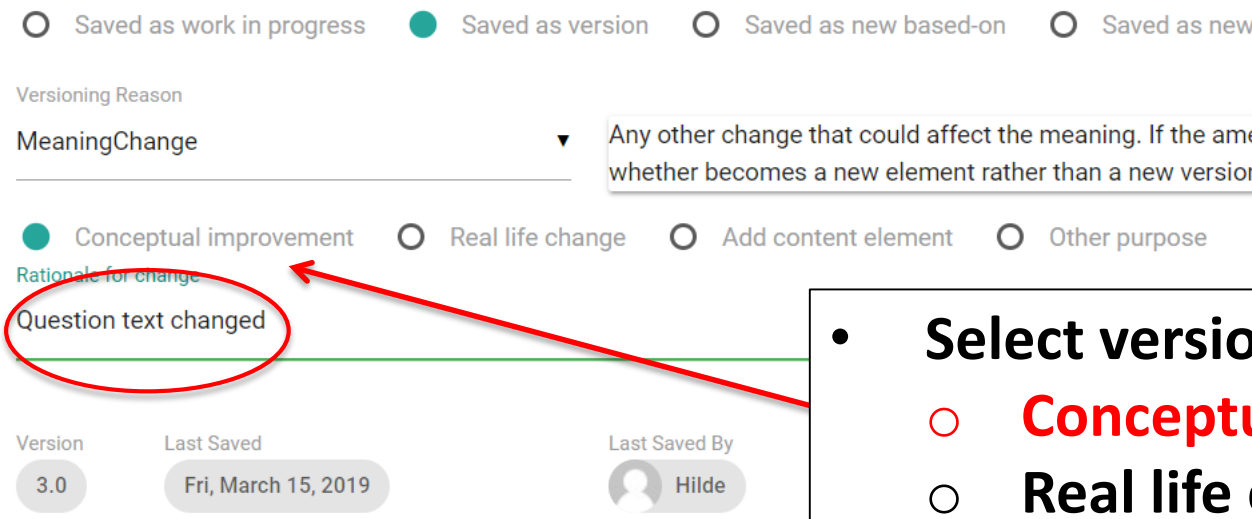
Versioning:



- **Select change type:**
  - **Saved as work in progress**
  - **Save as a version**
    - **Meaning change**
    - **Typo**
  - **Saved as new based on**
  - **Save as new**

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Versioning:



- **Select version rationale code:**
  - **Conceptual improvement**
  - **Real life change**
  - **Add content element**
  - **Other change**
- **Add description**
- **And save**

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QuestionItems

The version number changes automatcally based on the choice of the user

ENRGYUSE

How confident.....

v3.0 → **v4.0**

How confident are you that you can do things that limit your energy use?

Mixed Mananged representation:-185527408 v.1.0

Not at all confident — Completely confident

0 1 2 3 4 5 6 7 8 9 10

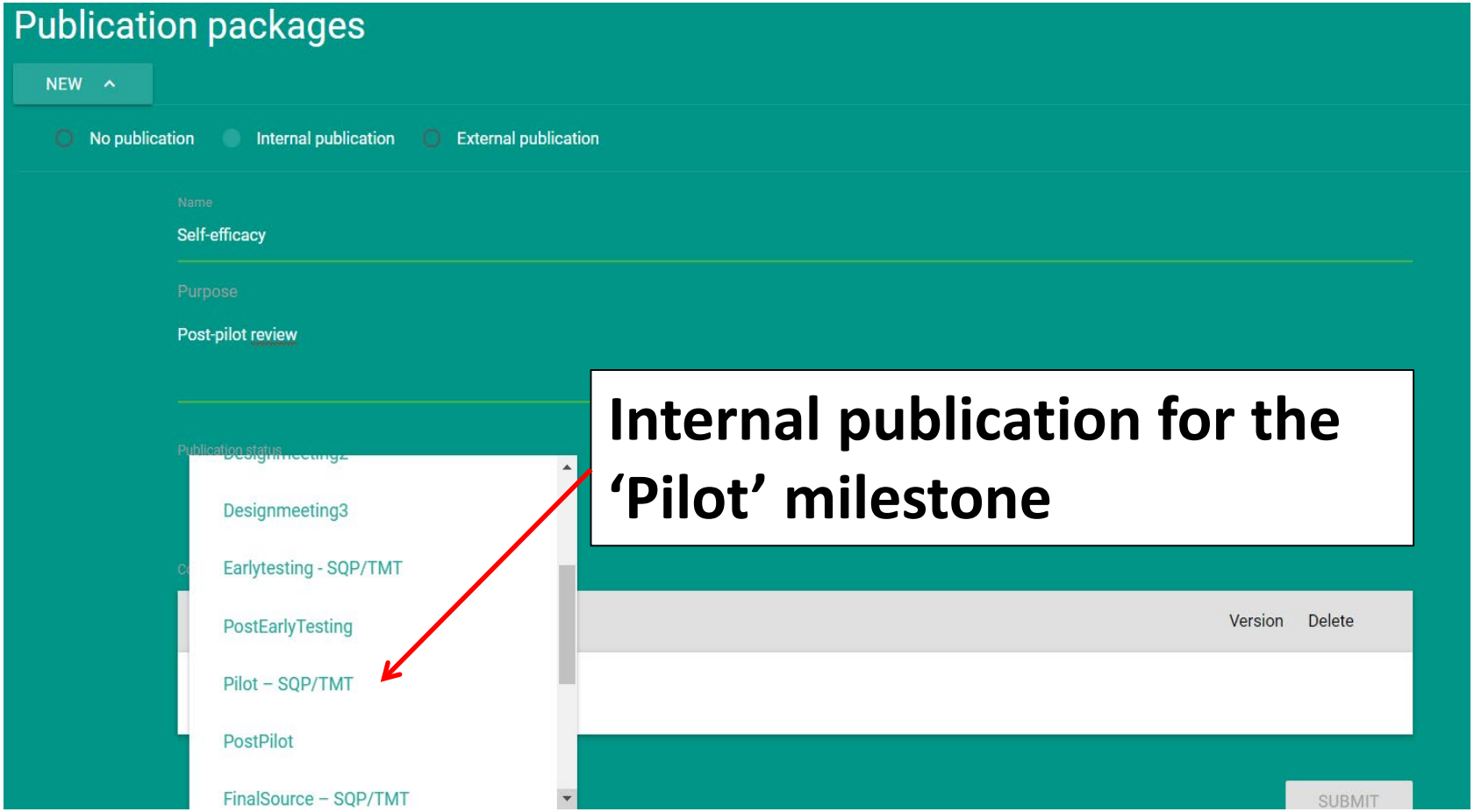
Missing

Refusal 77

Don't know 88

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Publications:



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Ideas for further development:

- Instrument sequences and flow
- Import to the tool
- Publication packages
- Depending on funding

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Special thanks to

Sarah Butt, Yvette Prestage, Virginia Roos, Sally Widdop
ESS HQ, City University, London

Benjamin Beuster, Knut Kalgraff Skjåk,
Dag Ø. Heradstveit, Håvard V. Bakkmoen
NSD - Norwegian Centre for Research Data - NSD

Joachim Wackerow
Consultant

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Thank you for your attention



QDDT project site:

https://github.com/DASISH/qddt-client/wiki

Please contact us at: surveytools@nsd.no

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QDDT Architecture

Angular 6 + Typescript

- No Javascript in dev tools, only in browser
- Typescript can transpile to ES3
- Supports «evergreen» browsers (Chrome, FireFox, Opera, Safari, and IE10/11)

Spring MVC API

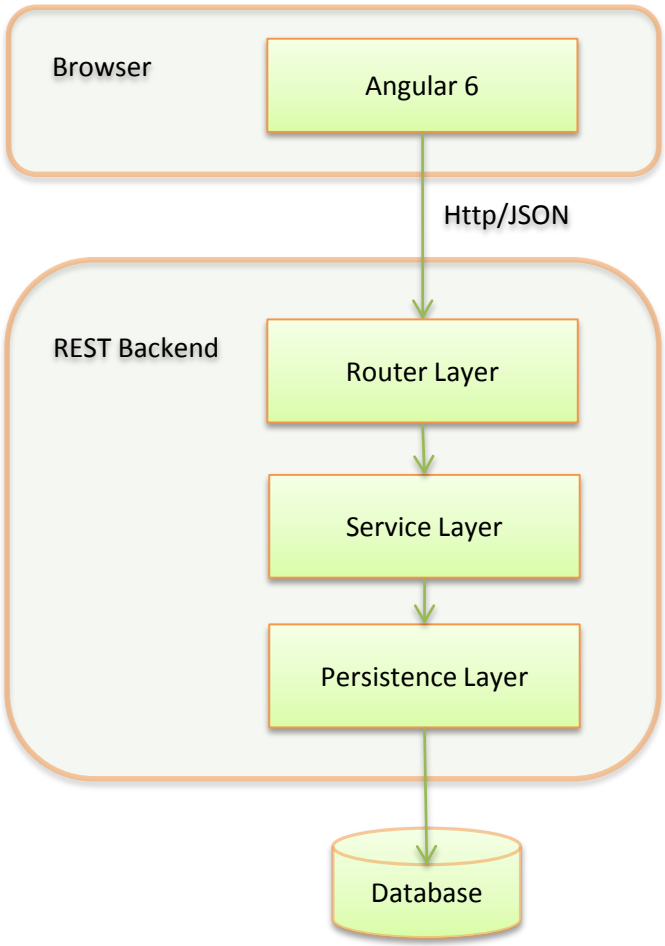
- RESTful API
- JSON for free
- no need for a SOAP service stack

Spring security (OAuth2)

- Tokenbased
- No state for requests

Persistence Layer implemented with Hibernate + Envers

- Revisions
- Database agnostic
- Since qddt is open source, we chose Postgres



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