Webinar | WP4 Webinar #3

Data Semantics, Formats and Quality

DG CNECT
Directorate-General
for Communications
Networks, Content and
Technology

DG GROW
Directorate-General
for Internal Market, Industry,
Entrepreneurship and SMEs

DIGIT
Directorate-General
for Informatics

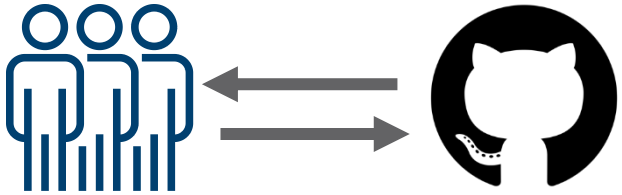
AGENDA

1. Welcome
2. Meeting objectives
3. Further details on the methodology
4. Focus on the current phase
5. Overview of the open issues
6. Focus on the next phase
7. Timeline and milestones
8. Conclusion

1. Welcome

Speaker: Seth van Hooland

Participation and contribution



Contribute to the discussions
Watch GitHub to receive the latest notifications

Countries (MS & EFTA)	
MS representatives 11	BE | CZ | DK | EE | FI | NO | PT | SK | ES | DE | FR
Domain experts	BE | PT | NL 3 countries represented for 3 types of evidence
GitHub issues	34 issues from 7 countries NL | BE | IT | DE | FR | SK | ES

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2. Meeting objectives

Speaker: Seth van Hooland

Meeting objectives

1. Give further details on specific steps of the methodology
2. Get an overview of the open issues
3. Agree on the immediate next steps and the next round of evidence

3. Further details on the methodology

Speaker: Makx Dekkers

Further details on the methodology | *Type of content*

ISA² You click, we link

What will the methodology include?

Process with specific roles: • Working Group • Editors • Moderator	Actionable tasks for each step	Rules and best practices	Examples for the different steps	Which tools to use for developing data models or conformance testing?

Intuitive format

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Further details on the methodology | *Sources*

ISA² You click, we link

Sources for the methodology

- ISA² Process and methodology for developing semantic agreements: https://joinup.ec.europa.eu/collection/semantic-interoperability-community-semic/document/process-and-methodology-developing-semantic-agreements
- W3C World Wide Web Consortium Process Document: https://www.w3.org/2017/Process-20170301/
- Concrete applications

Those methodologies have been applied on concrete cases.

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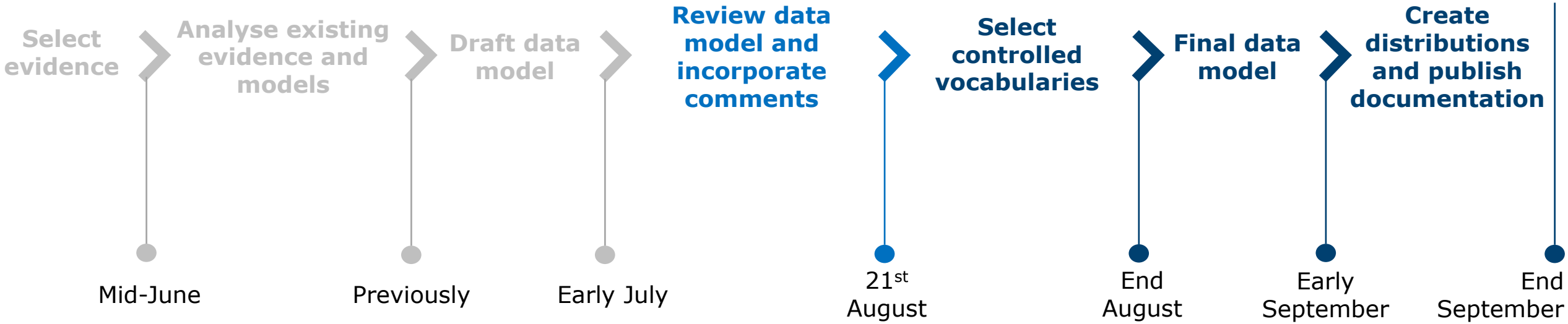
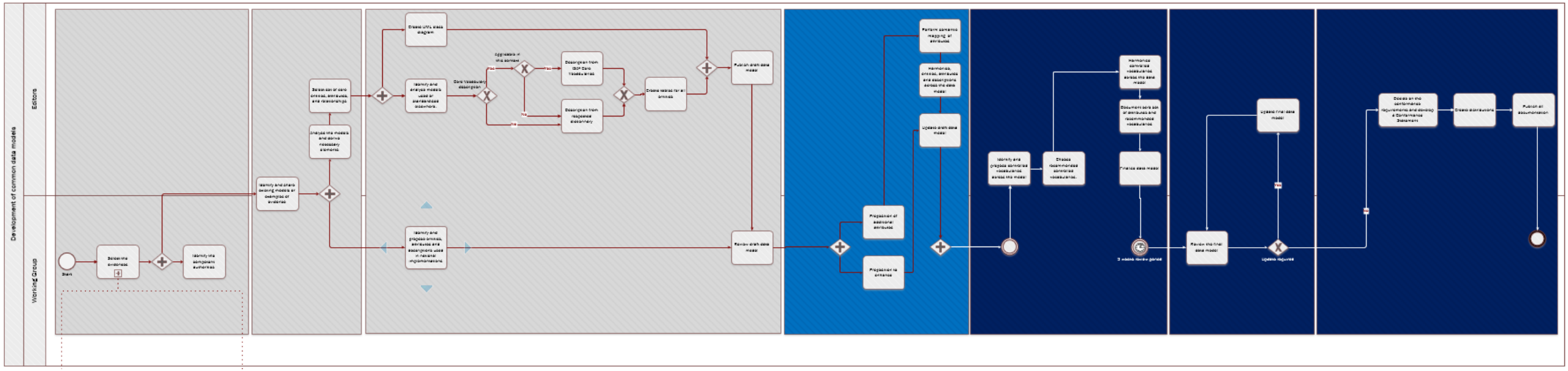
Further details on the methodology | Overview of the process



Further details on the methodology | Detailed process

Select evidence > Analyse existing evidence and models > Draft data model > **Review data model and incorporate comments** > **Select controlled vocabularies** > **Final data model** > **Create distributions and publish documentation**



https://github.com/SEMICeu/SDG-sandbox/tree/master/process_and_method/methodology

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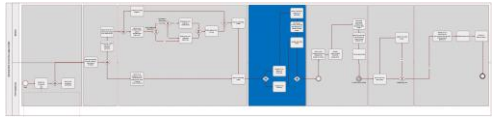
4. Focus on the current phase

Speaker: Makx Dekkers

Focus on the current phase | *Flow*

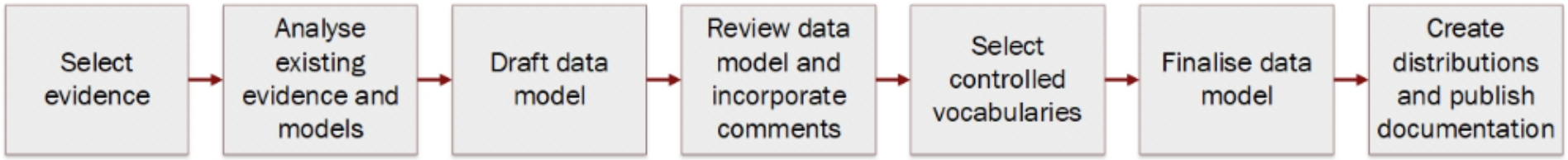


Methodology

This folder contains the various steps that together make up the methodology used to develop the data models of the evidences.

Process

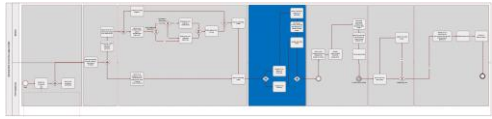
Key phases of the process



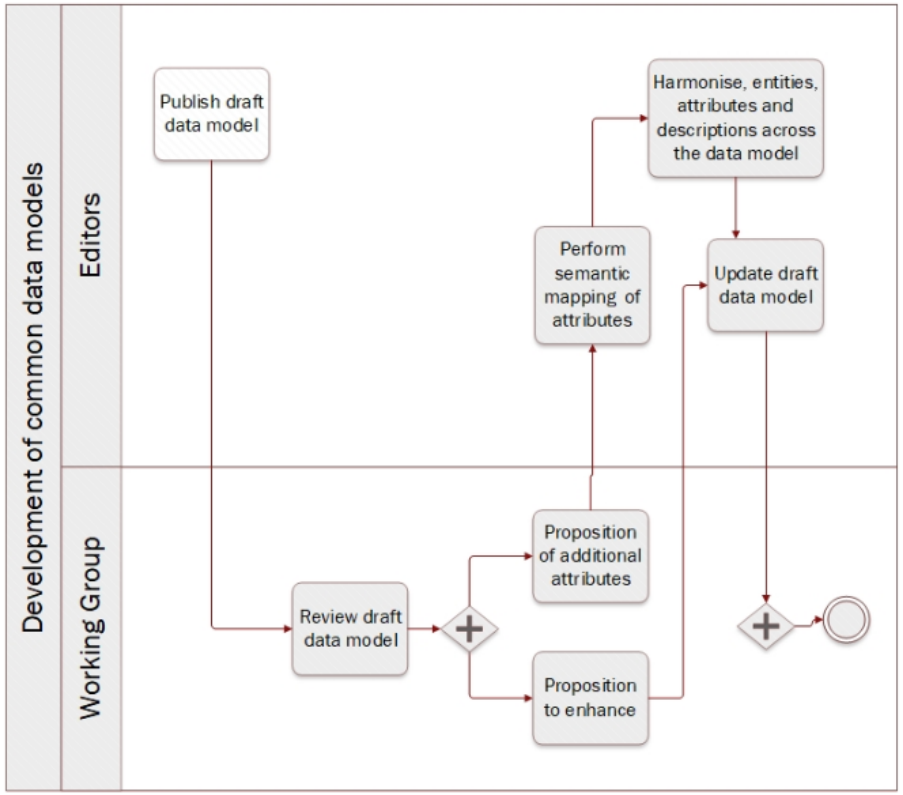
Access each phase

- Phase 1: Select evidence
- Phase 2: Analyse existing evidence and models
- Phase 3: Draft data model
- Phase 4: Review data model and incorporate comments
- Phase 5: Select controlled vocabularies
- Phase 6: Finalise data model
- Phase 7: Create distributions and publish documentation

Focus on the current phase | *Flow*



Phase 4: Review data model and incorporate comments

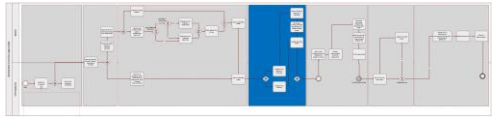


Quick links:

- Step 13. Review draft data model
- Step 14. Proposition enhancements
- Step 15. Propose additional attributes
- Step 16. Perform semantic mapping of attributes
- Step 17. Harmonise, entities, attributes and descriptions across the data model
- Step 18. Update draft data model

Focus on the current phase | *Flow*

ISA² You click, we link



Step 13. Review draft data model

Key activities

```
The Working Group members directly review the proposed model and/or contact domain experts for reviewing it.

The editors process the comments received and propose solutions.
```

Description

Each published draft of the Data Model is reviewed by the Working Group and domain experts when relevant. The Working Group and the editors agree on a tool to collaborate and capture the feedback. The reviewers create issues in the tool. When comments are received outside

Rules and guidelines

- [ ]
- [ ]
- [ ]
- [ ]

Tool

Example

```
TBD
```

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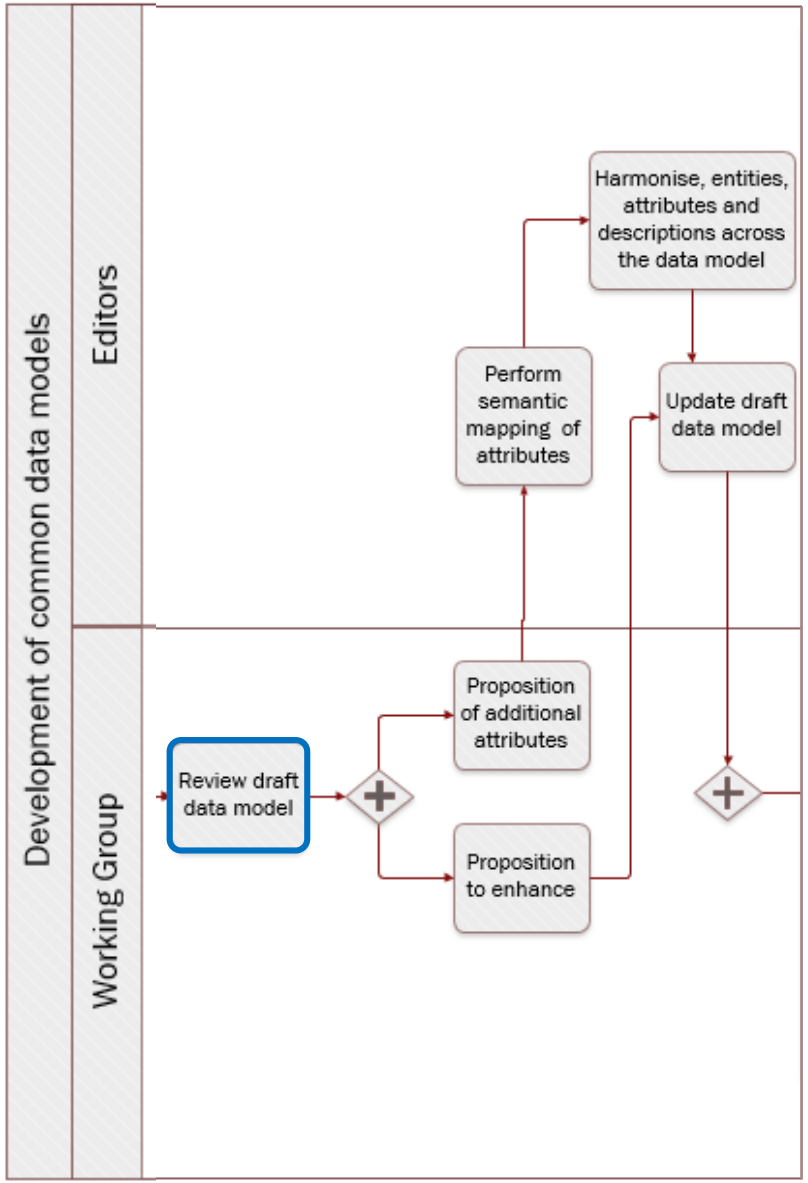
Focus on the current phase | *Review data model*



Methodology

Step 13 – Review draft data model

The Working Group members directly review the proposed model and/or contact domain experts for reviewing it. The reviewers are encouraged to propose a solution to their own issue.

The editors consolidate the proposed solutions and explain the pros and cons of the different solutions to the Working Group. If needed, the editors seek for additional contribution from the reviewers in collaboration with the moderator and rapporteur.

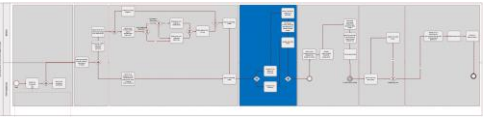
The editors classify the issues and tag major issues which should be commented in priority by the reviewers.

More details about the step, its guidelines and tools on GitHub

5. Overview of the open issues

Speaker: Makx Dekkers

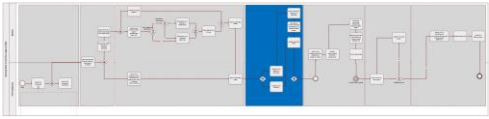
Overview of the open issues | *Summary*



Overview of the issues

- Overview of the issues received by 27/07/2020 per evidence type
- Comments are still open until 21st August

Overview of the open issues | *Vehicle registration certificate*



Vehicle Registration Certificate issues (ES) Major Vehicle registration certificate
#45 opened yesterday by anarosa-es

Vehicle Registration Certificate: helpful resources for data models/controlled vocabularies Vehicle registration certificate enhancement
#43 opened yesterday by OP-EU-Vocabularies

Vehicule registration certificate: Location Vehicle registration certificate enhancement
#34 opened 6 days ago by cecileguasch

Vehicle Registration Certificate : Organisation Vehicle registration certificate enhancement
#33 opened 6 days ago by cecileguasch

Vehicle registration: controlled list of fuel types ? Vehicle registration certificate enhancemen
#27 opened 11 days ago by barthanssens

Vehicle registration: add emission class / CO2 ? Vehicle registration certificate new attribute
#26 opened 11 days ago by barthanssens

Vehicle registration certificate

Vehicle registration: add emission class / CO2 ? Vehicle registration certificate new attribute
#26 opened 11 days ago by barthanssens

Vehicle registration: engine capacity for non-ICE vehicles Vehicle registration certificate enhancement
#25 opened 11 days ago by barthanssens

Vehicle registration: power to weight ratio Vehicle registration certificate enhancement
#24 opened 11 days ago by barthanssens

Data minimisation: Is the address relevant for VehicleRegistration evidence Vehicle registration certificate
#17 opened 12 days ago by roefie64

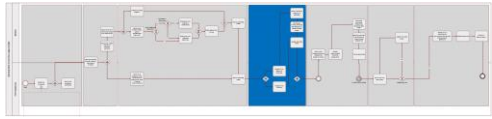
VehicleRegistrationCertificate evidence should contain registration status Vehicle registration certificate new attribute
#16 opened 12 days ago by roefie64

[EXAMPLE] XSD's for Vehicle Owner/Holder data exchanged already in the EU based on COUNCIL REGULATION (EU) 2018/1541 Vehicle registration certificate
#15 opened 12 days ago by roefie64

Vehicle Registration: Cyrillic addresses Vehicle registration certificate enhancement
#6 opened 20 days ago by roefie64

Focus on the current phase | *Other issues*

ISA² You click, we link



Birth Certificate issues (IT) birth certificate
#50 opened 32 minutes ago by giorgialodi

Birth certificate: helpful resources for data models/controlled vocabularies birth certificate enhancement
#46 opened yesterday by OP-EU-Vocabularies

Birth Certificate issues (ES) Major birth certificate
#37 opened 5 days ago by anarosa-es

Birth certificate: Parent Two should be optional birth certificate enhancement
#31 opened 7 days ago by guascce

Birth certificate (and others): gender / controlled vocabulary birth certificate enhancement
#20 opened 11 days ago by barthanssens

Birth certificate

Income tax declaration certificate - helpful resources to data models/controlled vocabularies
Income tax declaration certificate enhancement
#48 opened yesterday by OP-EU-Vocabularies

Tax Declaration issues (ES) Income tax declaration certificate
#39 opened 4 days ago by anarosa-es

Tax declaration: public organization label model Income tax declaration certificate
#36 opened 5 days ago by Bernardstanislas

Tax declaration: clarify that income tax can be negative (= tax return) Income tax declaration certificate enhancement
#21 opened 11 days ago by barthanssens

Income tax declaration

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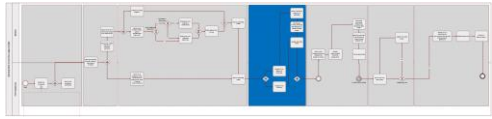
Focus on the current phase | *Other issues*

ISA² You click, we link



Marriage certificate: helpful resources for data models/controlled vocabularies enhancement marriage certificate
#47 opened yesterday by OP-EU-Vocabularies

Marriage Certificate issues (SK) marriage certificate question
#41 opened 4 days ago by michal-o

Marriage Certificate issues (ES) Major marriage certificate
#38 opened 4 days ago by anarosa-es

Marriage certificate: Citizenship enhancement marriage certificate
#35 opened 6 days ago by cecileguasch

Marriage certificate: is marital status required ? enhancement marriage certificate
#23 opened 11 days ago by barthanssens

Marriage certificate: (optional) witnesses ? enhancement marriage certificate
#19 opened 11 days ago by barthanssens

Marriage certificate

Certificate of completion of secondary education: helpful resources for data models/controlled vocabularies
Certificate of completion of secondary education enhancement
#44 opened yesterday by OP-EU-Vocabularies

Completion of secondary education issues (ES) Certificate of completion of secondary education
#42 opened 4 days ago by anarosa-es

Secondary education

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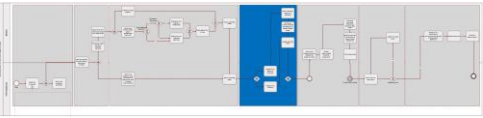
Focus on the current phase | *Specific issues*



General comment #40 We will create separate issues:

- Confirm that Member States have the ability to provide the information from the models proposed
- Approach fulfilling the need-to-know principle
- Verify with domain experts or service providers if proposed models satisfy their needs for evidence, at least within the scope of Annex II.
- Note on identifiers: we will look into eIDAS more in details.

Tax declaration #36

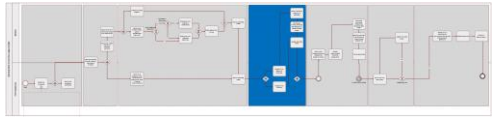
- Only one issuingAuthority for all income tax declaration certificates in France: is it correct in all Member States? This is aligned with the current cardinality of issuingAuthority [1..1].
- Proposition to have a separate entity Public Organization Label with language and label attributes. We will look into it.

Vehicle registration #16

- registrationStatus: what are the needs from the other Member States?

Focus on the current phase | *Specific issues*

ISA² You click, we link

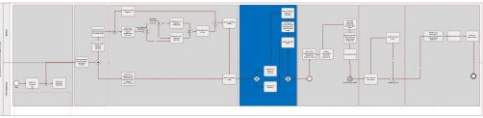


Birth certificate #37 Major

We will create separate issues:

- 1st and 2nd family names: analysis at cross-border level: description of the pros and cons in the coming week on GitHub.
- Need to model the input parameters for requesting a particular evidence: What do you include under the input parameters? We will look into the model proposed and identify the gaps together with WP7.
- Terminology: certificate and evidence. We will create a small terminology to ensure alignment.
- Issuing attributes should be present independently from the evidence: What do we include under issuing attributes? What do other Member States think?
- identifier of a Person: use of ID number (national/foreign) of passport number. Cfr. eIDAS discussion.

Focus on the current phase | *Specific issues*



Optional attributes

- Birth certificate:
  - parentTwo
  - citizenship and gender: make optional or remove?
  - address
- Vehicle registration:
  - engineCapacity
  - powerWeightRatio
  - address
- Marriage certificate
  - maritalStatusBeforeMarriage

Controlled vocabularies and codes

- fuel Type Or Power Source: IIRC in Belgium
- Address or Location: NUTS, ISO
- gender: Human sex code

Use of existing controlled vocabularies:

- Publications Office : EU Vocabularies (#48, #47, #46)
- Eurostat : NUTS
- ISO standards
- UBL data types
- National codelists

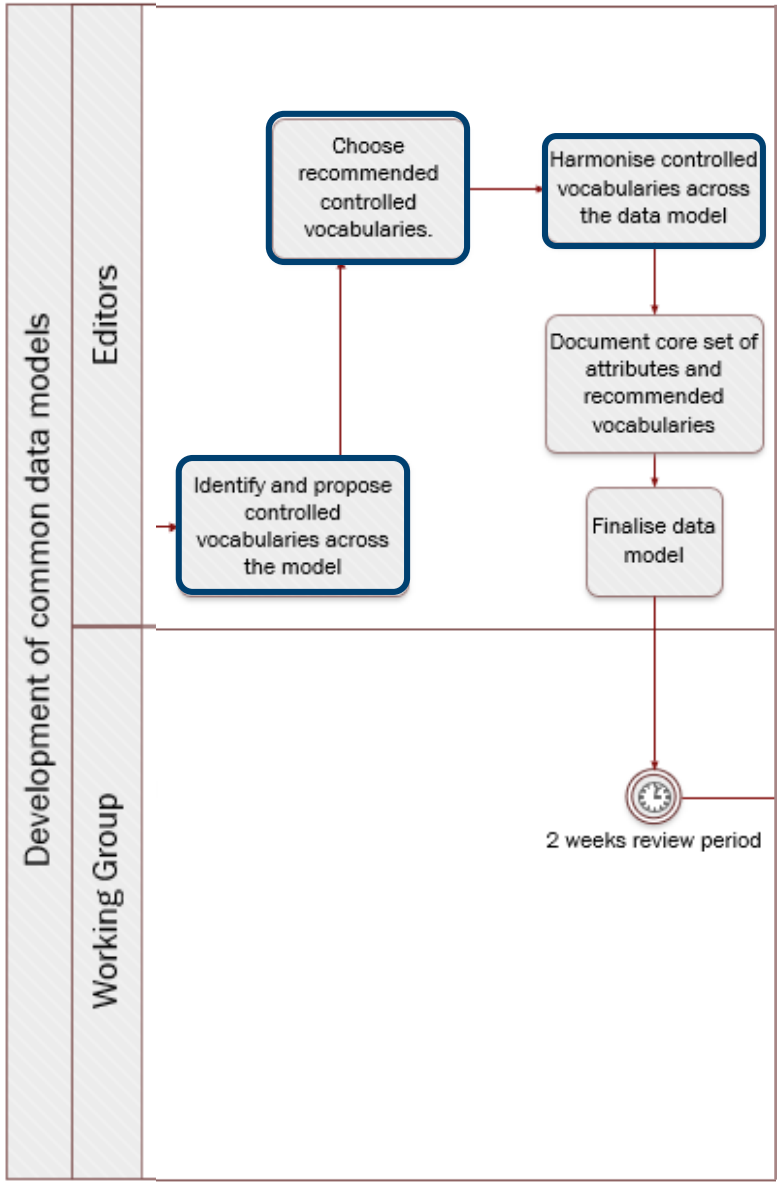
Open issues on the data models

Questions?

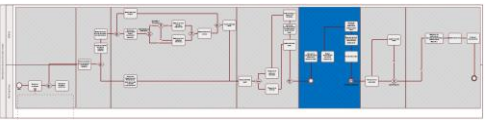
6. Focus on the next phase

Speaker: Makx Dekkers

Focus on the next phase | *Select controlled vocabularies*



Methodology



Step 19 – Identify and propose controlled vocabularies across the model

The Working Group and the domain experts propose controlled vocabularies for the different attributes defined in the previous phases.

The editors synthesise the propositions and complement with additional standard controlled vocabularies where relevant.

Step 20 – Choose recommended controlled vocabularies

The editors put forward the different propositions for each attribute with their pros and cons.

The Working Group and the domain experts discuss through the collaborative tool to select the controlled vocabularies to recommend as part of the data model.

A live discussion may be organised by the editors and the moderators to agree on the most controversial controlled vocabularies.

Step 21 – Harmonise controlled vocabularies across the data models

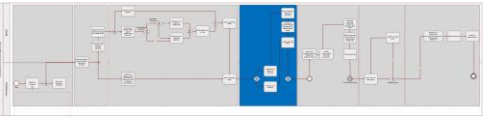
The editors consolidate the recommended controlled vocabularies agreed for each data model to make sure controlled vocabularies are harmonised between the data models.

More details about the step, its guidelines and tools on GitHub

7. Timeline and milestones

Speaker: Makx Dekkers

Timeline and milestones | *Next round of evidence*



Proposed types of evidence

- Extract of criminal records
- Social security registration certificate
- University diploma
- University diploma supplement
- Records of results from previous academic year

Initial timeline and webinars | *Next round of evidence*

ISA² You click, we link

	Owner	September				October				November				
		7th	14th	21st	28th	5th	12th	19th	26th	2nd	9th	16th	23rd	30th
Meetings														
Identify domain experts needed for the evidence selected	**MS**													
Review of the proposition for common metadata models [study] for the selected evidences	**MS**													
Collect and share metadata (at national level) for the selected evidences	**MS**													
Definition of a minimum set of attributes for the evidences selected	**ED**													
Definition of common data models	**ED**													
Testing and improvement of data models	**MS**													
Finalization of common data models	**ED**													

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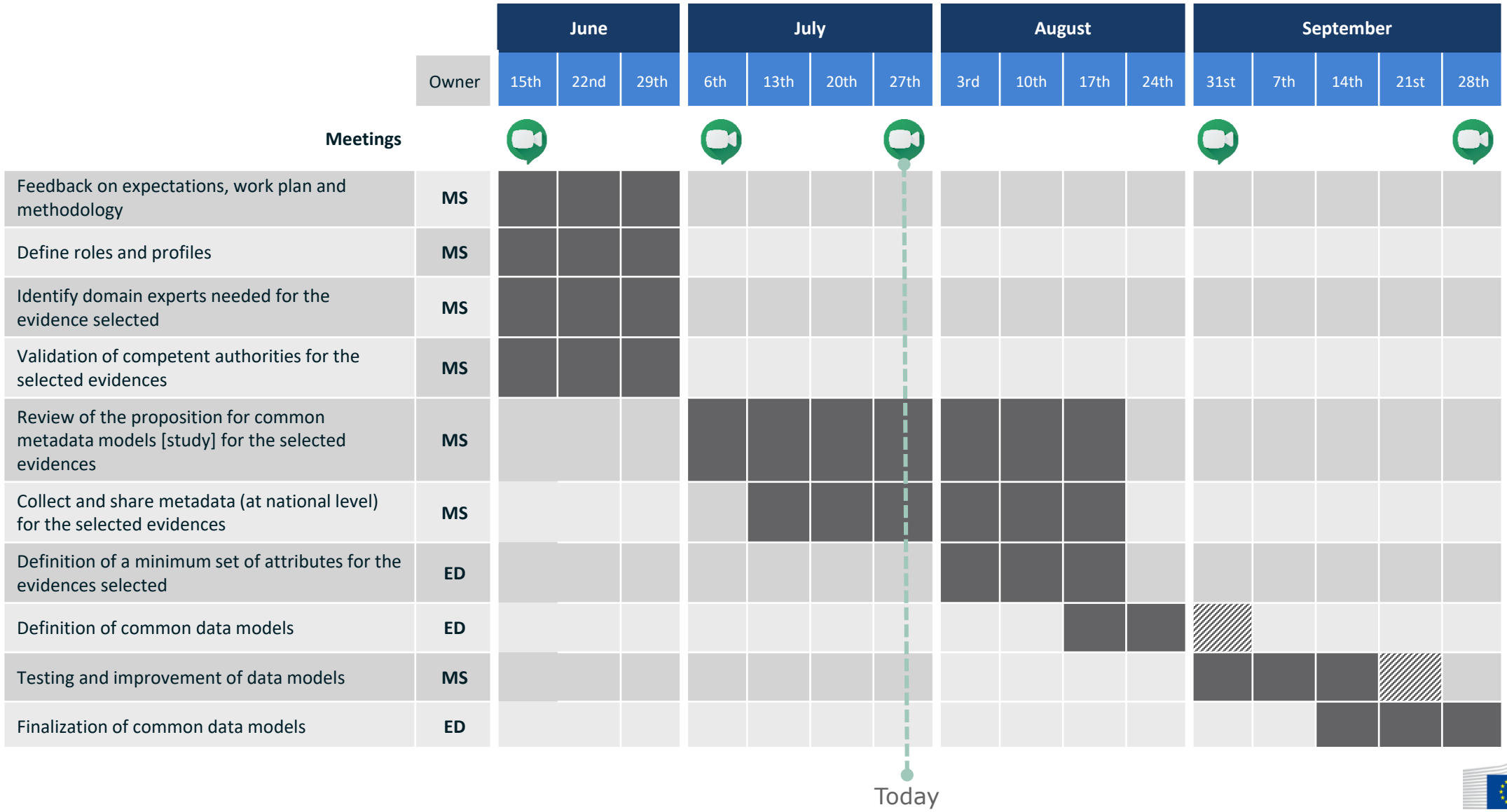
Timeline and milestones | *Current overview*



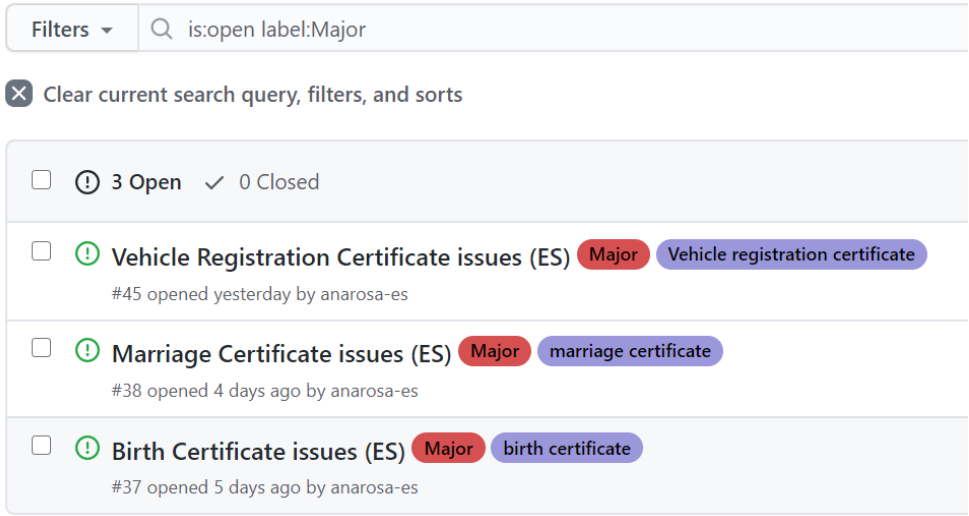
8. Conclusion

Speakers: Miguel Alvarez Rodriguez and Seth van Hooland

Action items and next steps

Action items by the 21st of August

- Review the five data models [GitHub] – guiding questions:
  - Are all elements necessary for this evidence described in the model?
  - Do you agree with the definition of the elements?
  - Is the element mandatory or optional in your country (cardinality)?
  - Do you have specific codes or expected type (e.g. format of date, address etc.) for attributes?
- Comment on the issues – focus on on the major ones



Next webinars

- 2nd September 2020
- 25th September 2020 [*Closing webinar for the first round of evidences*]

Links

Review the five data models

- Birth certificate
- Marriage certificate
- Vehicle registration certificate
- Income tax declaration certificate
- Certificate of completion of secondary education

Methodology

- Overall structure
- Process and table of content
- Detailed steps discussed today:
  - Overview
  - Phase 4 and step 13 "*Review draft data model*"

Any other business?

ISA² programme

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ISA² Programme

DIGIT-ISA2-COMM@ec.europa.eu

Run by the Interoperability Unit at DIGIT (European Commission) with 131€M budget, the ISA² programme provides public administrations, businesses and citizens with specifications and standards, software and services to reduce administrative burdens.