

ICEG Public Organization & Service: Working Group

Welcome!

9th of December

Virtual working group – Google meet



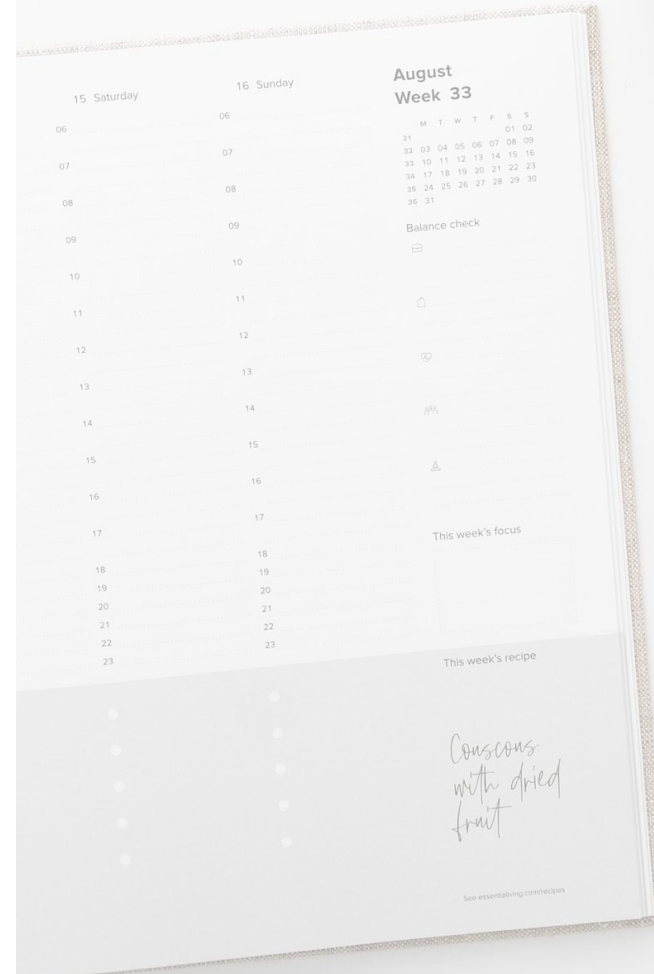
Introduction & meeting objectives 5'



Agenda

1. Welcome and objectives
2. Process, input and timeline
3. Use cases
4. Presentation of the final models
5. Presentation of the deliverables
6. Closing

We have foreseen a 1-hour webinar



House rules

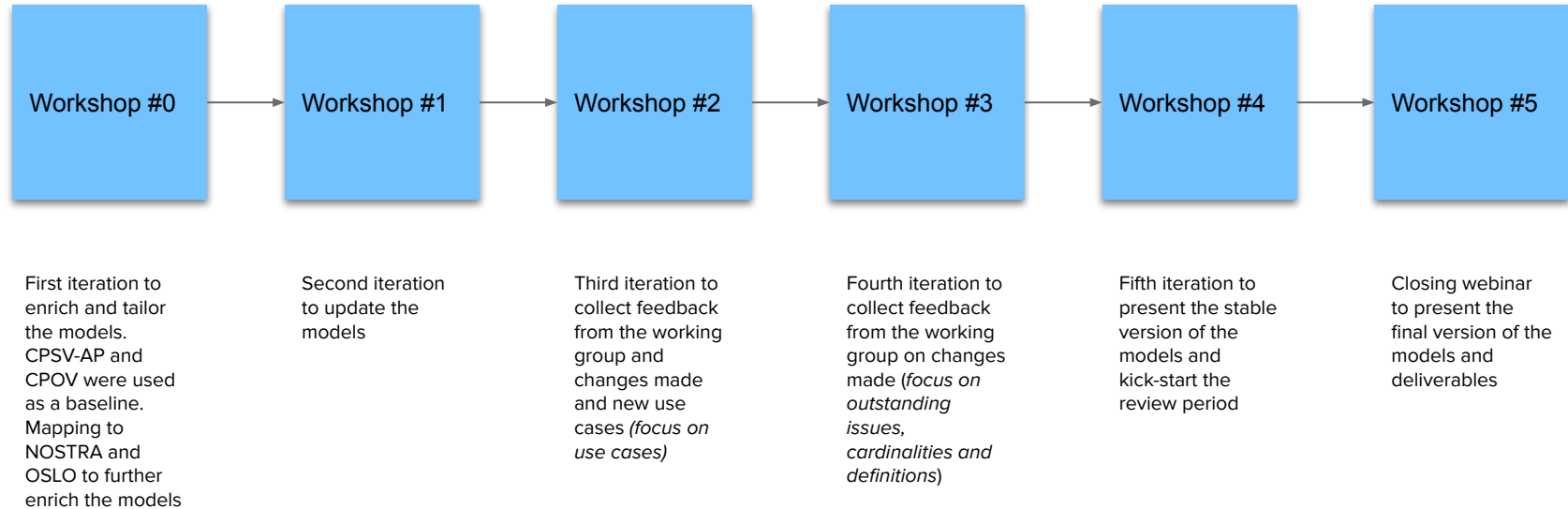
1. **Mute your microphone** when you don't speak
2. Virtually **raise your hand** to speak
3. Don't hesitate to **raise questions** and contribute via the chat (+1, -1)

The webinar is recorded and can be made available afterwards

Meeting objectives

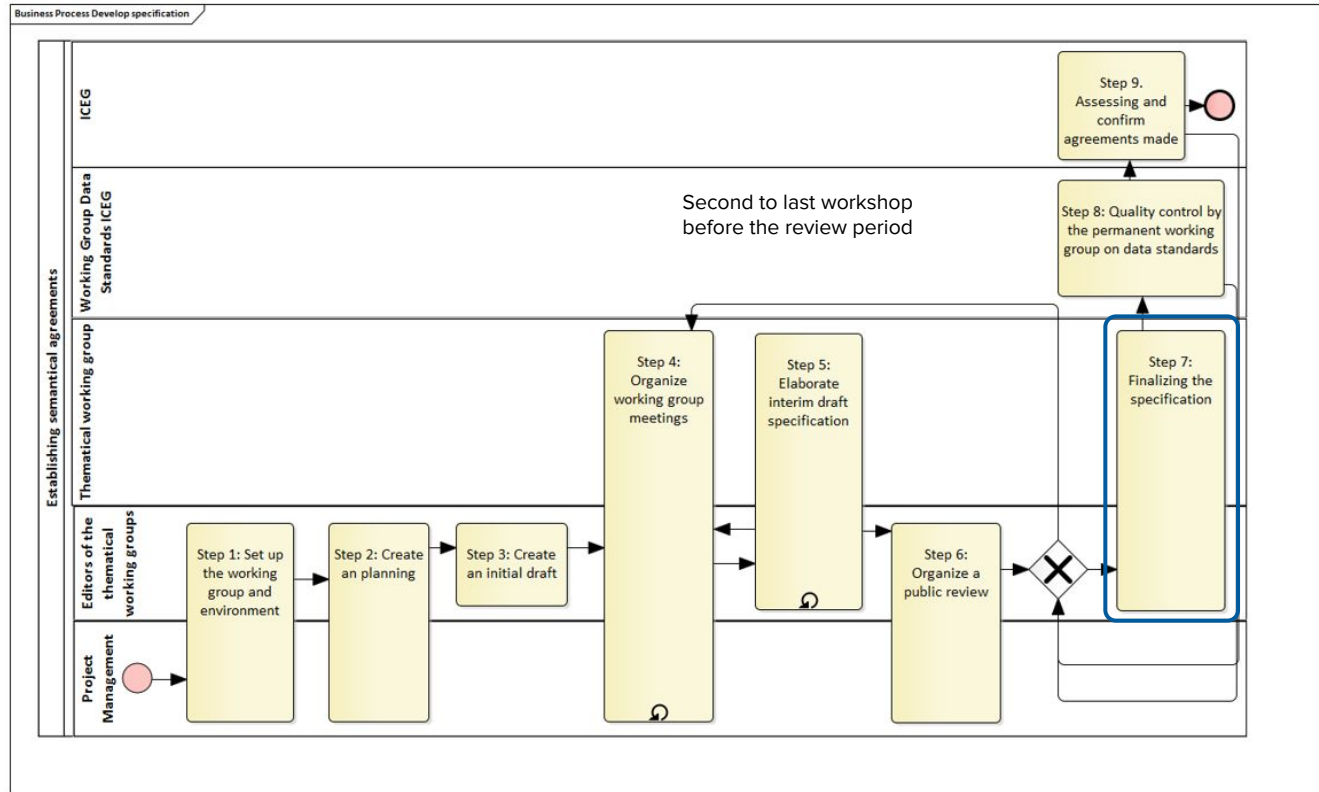
1. Introduce the **final version** of the PO & PS **application profiles**
2. **Wrap-up** the work for ICEG PO & PS trajectory

Process



How do we achieve this

Process and methodology defined by ICEG



INFORMATIE
VLAANDEREN



BO
SO
100 Digital Transformation
100 Based on Underpinning
100 Transformation Digital
100 Strategic of Appeal

PROCESS AND METHOD FOR THE DEVELOPMENT OF DATA STANDARDS

Version /// 1.0
Publication date /// 24 may 2019

<https://github.com/belgif/review/blob/master/Process/201906-ICEG%20-%20Process%20and%20method.docx>



Testing of PO & PS 20'



Testing with mapping tables

README

The 'mapping [model]' sheet contains the latest version of the Public Service and Public Organization diagrams in a tabular structure

1) Public Organization https://belpif.github.io/thematic/models/public%20organisation/index_en.html

2) Public Service https://belpif.github.io/thematic/models/public%20services/index_en.html

The purpose of this sheet is to map the Public Service and Public Organization data model against instance data.

When populating fields, the tester should think about reporting on issues, making recommendations (e.g. usage nodes), suggesting changes in the models

DATA MODEL

The columns indicated with a grey header are already filled in

Attribute	Expected type	Definition	Cardinality	Code list
Entities and attributes. Entities are in italic and underlined.	Specifies the datatype of the attribute or the relation(s) of the entity	The statement that explains the meaning of an entity or attribute	The cardinality is the number of times an attribute needs to be provided at a minimum and maximum	A controlled vocabulary, or more commonly referred to as code list, is an authoritative list of terms to be used in indexing. Controlled vocabularies do not necessarily have any structure or relationship between terms within the list

DATA PROVIDER PERSPECTIVE

The columns indicated with yellow header need to be filled in (mapping with instance data)

Instance data	Mapping relation	Mapping Comment
Actual data to be provided. For instance, the given name for Johann Sebastian Bach is "Johann Sebastian"	<u>Please use the following mapping relations:</u> - <u>Exact Match</u> - <u>No Match</u> - <u>Near Match</u> - <u>Partial Match</u> - <u>Related Match</u> (For further information on the definitions of these mappings, please see: https://www.iso.org/obp/ui/#iso:code:reference/5/5mappings)	Comments in case there is a remark, suggestion, issue with the mapping & processing. (1) For the mandatory attributes: how can specific requirements for the format of the data? (2) For the optional attributes, what are the challenges for processing of the data if the attribute is missing?

Attribute	Expected type	Definition	Cardinality	Code list	Instance data	Mapping relation	Mapping Comment
Organization		Represents a collection of people organized together into a community or other social, commercial or political structure. The					
alternative label	Text	In line with ORG anc	[0..1]	N/A			
authorizations	Code	Approvals, authoriza	[0..1]	N/A			
changed by	Change Event	The changed by org	[0..1]	N/A			
company number	String	Unique combination	[0..1]	N/A			
contact point	Contact Point	The contact point pe	[0..1]	N/A			
deregistration	Code	Ex officio deregista	[0..1]	N/A			
description	Text	Statement or accou	[0..1]	N/A			
has member	Organization	One Organization m	[0..1]	N/A			
has post	Post	Indicates the post if	[0..1]	N/A			
has site	Site		[1..1]	N/A			
has sub organization	Organization	Public Organizations	[0..1]	N/A			
homepage	Document	A property to link an	[0..1]	N/A			
identifier	Identifier		[0..1]	N/A			
link to database	Text	Links to databases i	[0..1]	N/A			
logo	Image Object	A property to link an	[0..1]	N/A			
member of	Organization	One Organization m	[0..1]	N/A			
next	Organization	In some cases, it is	[0..1]	N/A			
prev	Organization	In some cases, it is	[0..1]	N/A			
resulted from	Change Event	This property link an	[0..1]	N/A			
start date of this data	DateTime	The date on which th	[0..1]	N/A			
status	Code	entity status, e.g. a	[0..1]	N/A			
sub organization of	Organization	Public Organizations	[0..1]	N/A			
preferred label	Text	As defined in the Of	1	N/A			

Testing with mapping tables



▼ @context:	"https://raw.githubusercontent.com/belgif/thematic/master/models/public22organisation/context/iceg-public-organisation_en.jsonld"
▼ 0:	
▼ 1:	
adms:	"http://www.w3.org/ns/adms"
cv:	"http://data.europa.eu/ebg/"
dc:	"http://purl.org/dc/terms/"
ex:	"http://www.example.com/"
euodp:	"http://data.europa.eu/EBU/dataset/"
foaf:	"http://xmlns.com/foaf/0.1/"
iceg:	"http://www.iceg.be/"
locn:	"http://www.w3.org/ns/locn"
org:	"http://www.w3.org/ns/org"
▼ na_1_atu:	"http://publications.europa.eu/resource/authority/atu/"
▼ na_1_country:	"http://publications.europa.eu/resource/authority/country/"
person:	"http://www.w3.org/ns/person"
rdfs:	"http://www.w3.org/2000/01/rdf-schema"
schema:	"https://schema.org/"
skos:	"http://www.w3.org/2004/02/skos/core"
graph:	"@graph"
id:	"@id"
type:	"@type"
▼ graph:	
▼ 0:	
▼ id:	"ex:organization_ParticipatiemeetschappijVlaanderen"
type:	"Organization"
organization.alternativeLabel:	"P.M.V."
organization.contactPoint:	"ex:contactPoint_123"

input from the testing of Public Organization #69



bahimc opened this issue on 3 Nov · 1 comment



bahimc commented on 3 Nov · edited ▼

Collaborator ☺ ...

dears,

following the testing of the model we received the comments below – could you please share your opinion?

- as the document entity seems odd and unclear, it was suggested to remove it
- `startDateOfThisData` is unclear. We defined it as "The date on which the Organization-related information was provided." Could you please suggest improvements, if any?
- as multiple titles can apply to a Person, it was suggested to make the `Person.title` unbounded
- it was suggested to add website as part of the contact point entity
- all address attributes, with the exception of full address, should be made optional
- administrative territorial units are still unclear. Could you please suggest ideas for a better definition? Also, as a public organization may govern multiple ATUs, the cardinality should be unbounded
- values that legal form can take should be enumerated in the usage notes

please note that unless an objection is formulated, we will proceed with the changes.

de vormgeeft. Zij financiert beloftevolle ondernemingen van bij de p
Vlaanderen."

Feedback from the testers (PO)

Context

Public Organization was tested using the following public organization: [Participatiemaatschappij Vlaanderen \(P.M.V.\)](#)

- an independent investment company
- created by the Flemish Government
- registered in CBE (BCE/KBO)
- More information: <https://www.pmv.eu/nl>

The test was executed by the product owner of the Flemish organisation registry (P.M.V. is also registered in the organisation registry J). The test was based on an Excel file with a mapping table; [a dummy JSON-LD was generated out of this test.](#)

Outcome

- Overall: a good match between the model and the data about the organisation
- “Major” challenges:
 - Providing detailed information about geometry (coordinates, etc.)
 - Correct mapping of the different “substructures” of the organisation: member, sub-organisation, unit and site

Feedback from the testers (PO)

Context

Public Organization was tested using the following public organization: [Participatiemaatschappij Vlaanderen \(P.M.V.\)](#)

- an independent investment company
- created by the Flemish Government
- registered in CBE (BCE/KBO)
- More information: <https://www.pmv.eu/nl>

The test was executed by the product owner of the Flemish organisation registry (P.M.V. is also registered in the organisation registry J). The test was based on an Excel file with a mapping table; [a dummy JSON-LD was generated out of this test.](#)

Outcome

- Overall: a good match between the model and the data about the organisation
- “Major” challenges:
 - Providing detailed information about geometry (coordinates, etc.)
 - Correct mapping of the different “substructures” of the organisation: member, sub-organisation, unit and site

Feedback from the testers (PS)

Definitions (or usage notes)

- “has member” and “has sub organisation” are rather similar?
- “has site” contains both geographical as well organisational perspectives? It also seems related to the “locator name” which is now assigned to the Address class...

Properties

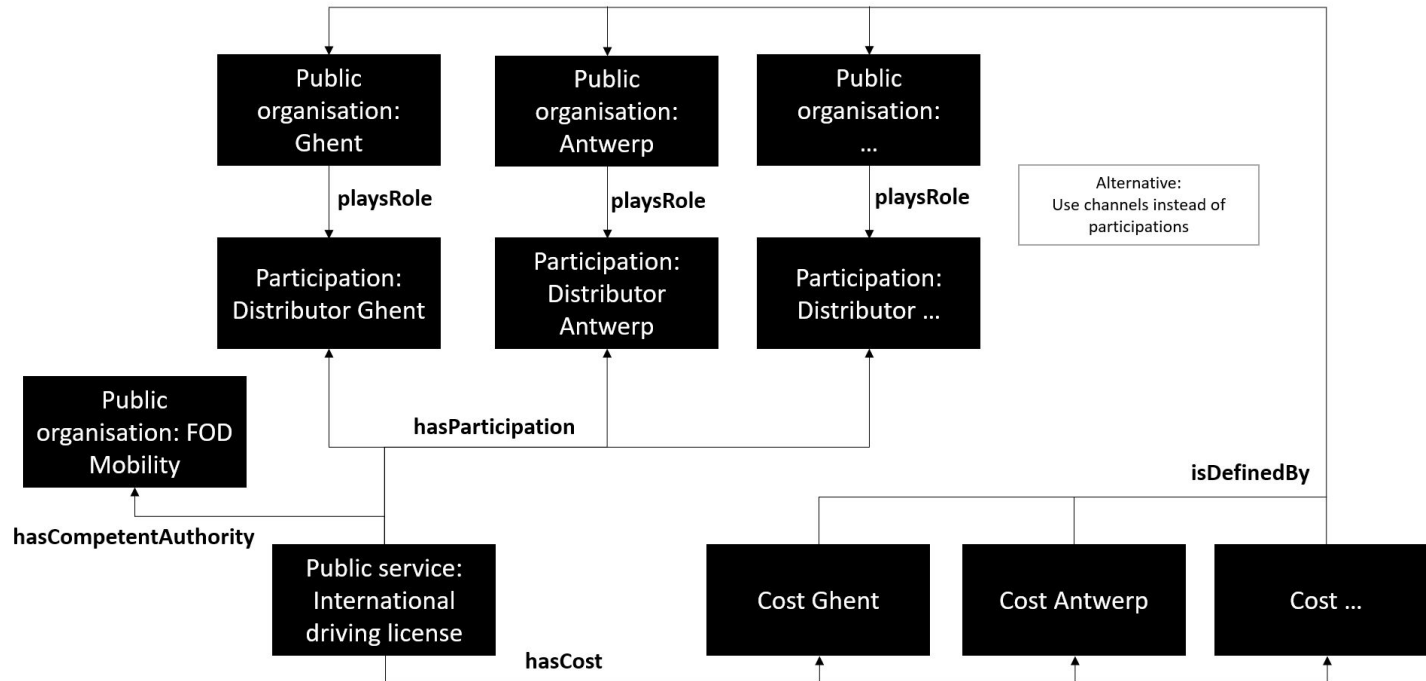
- Organisation: CompanyRegistrationNumber is captured by the Identifier Class and its properties?
- Organisation: StartDateOfThisData; who/what is supposed to provide this information?
- Contact point: Add homepage here? (as opposed to Organisation)

Relations

- An organisational unit may have a site (or address) as well? Cf discussion with respect to the definitions above

Feedback from the testers (PS)

International driving license



Feedback from the testers (PS)

Limitation of modelling pattern

- Cost can only be defined by a public organisation (which is sufficient in this case)
- Sometimes a cost can be defined by a non public organisation (distributor is a non public organisation) e.g., Sodexo, private parking companies, ...

Proposal

- **Link Cost.isDefinedBy to an Agent instead of a Public Organisation**
- **Link Channel.isOwnedBy to an Agent instead of a Public Organisation**

Additional remarks

Additional attributes for public services (IPDC – product and service catalogue used in Flanders)


- Procedure, i.e., description on how to apply for a public service
- Target Audience, i.e., code to describe the target audience (citizens, companies, ...)

Proposal:

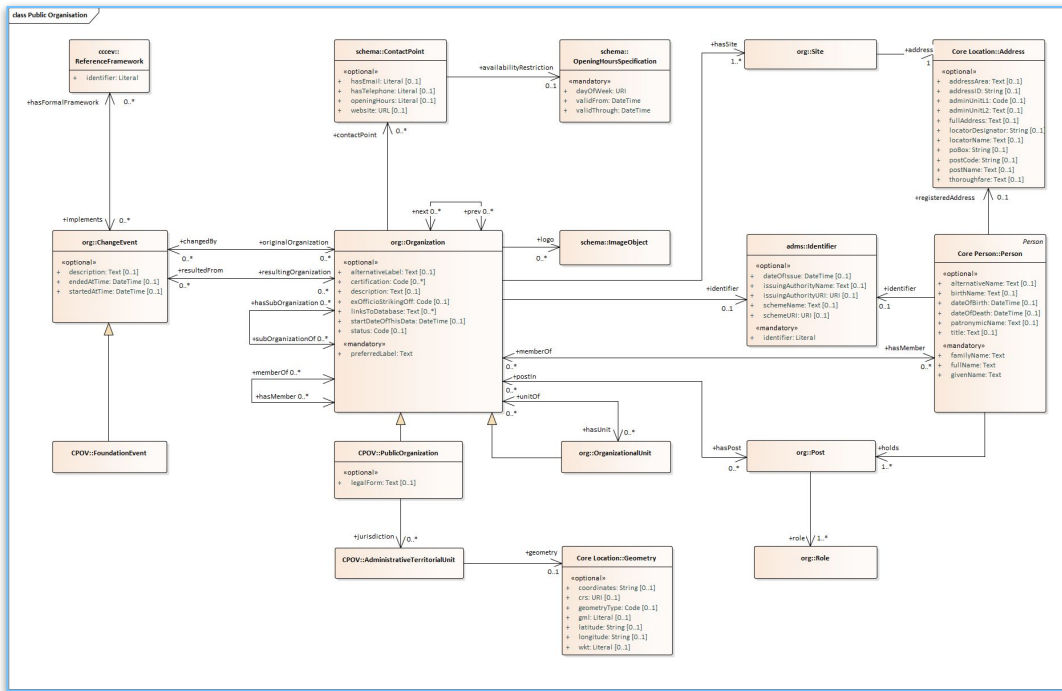
- **Add optional attributes 'Procedure' and 'Target audience'**



Final PO application profile 10'




PO application profile




Changes made

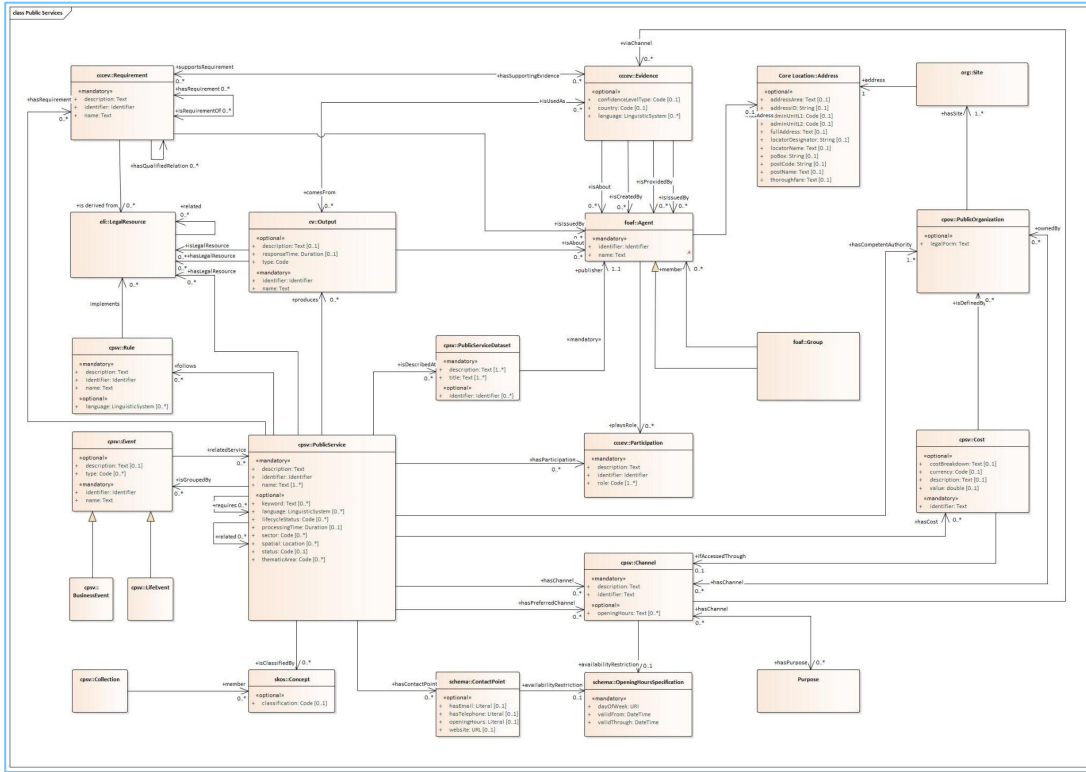
- Removed the **companyRegistrationNumber** attribute as the identifier already caters for it
- Removed the **Document** class
- **title** is now unbounded
- **website** was added as an attribute to the Contact Point class
- All classes and attributes are redirected to the main entity Organization, e.g., **ImageObject** is linked to Organization instead of PublicOrganization
- All **Address** attributes have been made optional except for **fullAddress**
- Layout improved



Final PS application profile 10'



PS application profile



Changes made (1/2)

Attributes, classes and relationships changed:

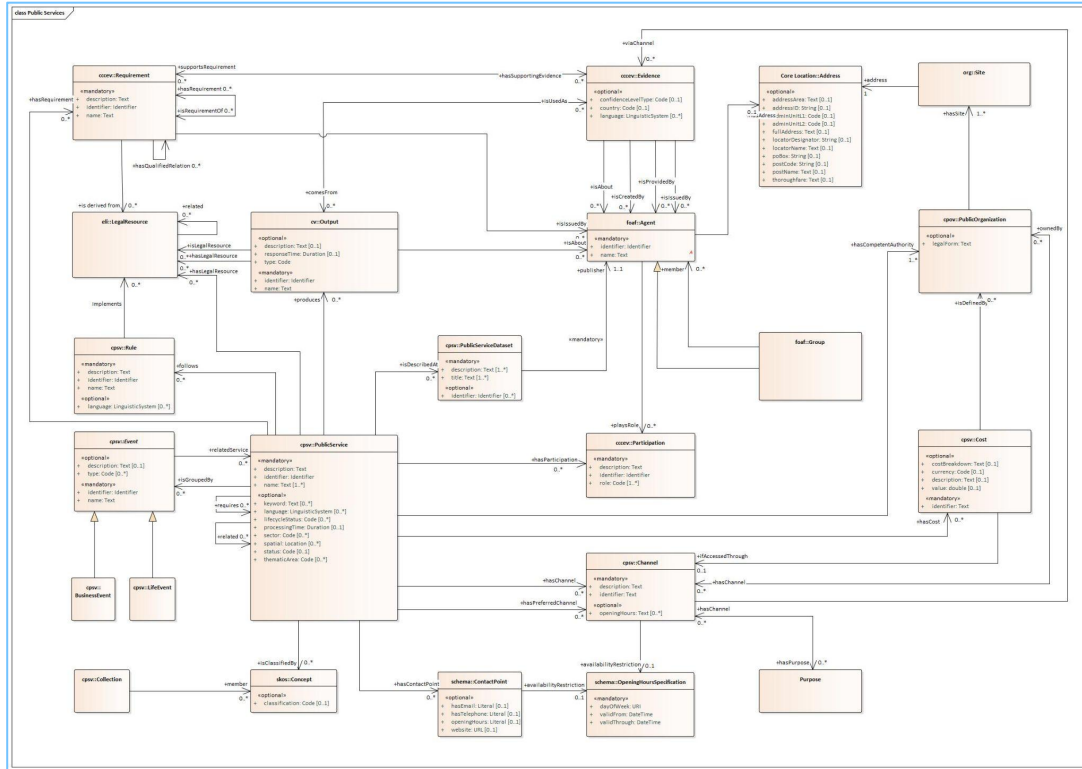
- PS & PO have been aligned
 - Relationship to Address is via Site
 - All attributes of Address have been added
 - The attributes of the class Public Organization have been modified
 - The attributes of the Contact Point class have been added
 - The attributes of the Opening Hour Specification class have been added
- Removed the channel preference class to the Preferred Channel relationship
- Renamed of the relationships between Output and Evidence
- Removed the type attribute in the Requirement, Evidence, Channel, Purpose and Output classes
- Added a relationship between Public Organization and Channel with has Channel
- Changed the Dataset class to the Public Service Dataset class
- Added the classification attribute in the Concept class
- Changed the name of the relationship between Channel and Evidence with viaChannel

PS application profile

Changes made (2/2)

Definitions changed:

- Addition of usage notes to **publicService.related**
- Alignment for classes and attributes nomenclature (lowercase and uppercase characters)
- Improved definition for entity **Rule**
- Removed the notion of criterion requirement in the definition and usage notes





Distributions 10'



HTML documentation for the vocabulary

With terms and definitions

PURL.EU \ OPEN STANDARDS FOR LINKED ORGANISATIONS

Application profiles

START WITH OUR APPLICATION PROFILES

Vocabularies

DISCOVER OUR VOCABULARY



With Open Standards for Linked Organisations on PURL.EU, we want to commit to an explicit standard for the information. All identifiers of information resources that are available via this domain in the form of a URI are semantically unambiguous. In other words, users of the URIs with the domain purl.eu can assume that these exist and that, over time, these identifiers will always refer to one and the same object.

5. Properties

This section provides a formal definition for every property.

Property metadata


Type	Property
URI	https://purl.eu/ns/air-and-water/core#ObservationCollection.metadata
Domain	http://www.v3.org/ns/osa/ObservationCollection
Range	http://def.isotc211.org/iso19115/2006/MetadataEntitySetInformationEMD_Metadata
Definition	Link to the metadata of the observationCollection.

Property parameter

Type	Property
URI	https://purl.eu/ns/air-and-water/core#ObservationCollection.parameter
Domain	http://www.v3.org/ns/osa/ObservationCollection
Range	http://def.isotc211.org/iso19106/2011/Observation#NamedValue
Definition	The parameter describes an arbitrary event-specific parameter. This might be an environmental parameter, an instrument setting or input, or an event-specific sampling parameter that is not tightly bound to either the feature of interest or to the observation procedure.

Domain name

Both specifications will be pushed on <https://vocab.belgif.be/> with a specific template



Vocab Belgif
Linked Open Data Thesauri

nl fr de en

Work in progress

Please contact opendata@belgium.be for more information.

Lists

Taxonomies and thesauri (SKOS)

Models

Ontologies (RDFS/OWL) and XSD schemas

Validation

Validation rules (SHACL)

Contexts

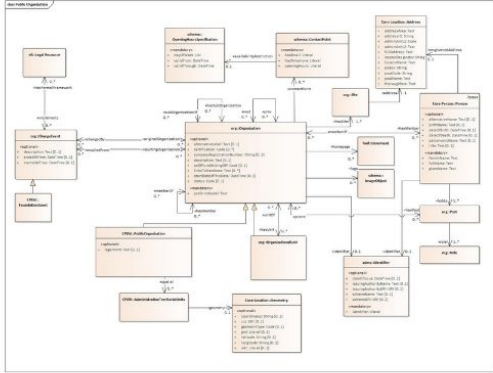
JSON-LD contexts

2017 - 2020 FPS.BOSA | [Github](#)

Overview

This document describes the usage of the following entities for a correct usage of the data model:

[Address](#) | [Administrative Territorial Units](#) | [Change Event](#) | [Contact Point](#) | [Document](#) | [Foundation Event](#) | [Geometry](#) | [Identifier](#) | [Image Object](#) | [Legal resource](#) | [Opening Hours Specification](#) | [Organization](#) | [Organizational Unit](#) | [Person](#) | [Post](#) | [Public Organization](#) | [Role](#) | [Site](#) |



SHACL validation rules & JSON-LD

```
shacl:class schemas:ContactPoint;  
shacl:definition ""The contact point property links to a Contact Point that provides contact  
information, in particular a phone number and e-mail address.""@en;  
shacl:name "contact point"@en;  
shacl:path schemas:contactPoint  
], [  
  shacl:class rdf:langString;  
  shacl:definition "As defined in the ORG Ontology, a preferred label is used to provide the primary, legally recognised  
name of the organization"@en;  
  shacl:maxCount 1;  
  shacl:minCount 1;  
  shacl:name "preferred label"@en;  
  shacl:path skos:prefLabel  
], [  
  shacl:class schemas:ImageObject;  
  shacl:definition "A property to link an Organization to its logo."@en;  
  shacl:name "logo"@en;  
  shacl:path schemas:logo
```

SHACL
validation
rules

JSON-LD

What is SHACL (Shapes Constraint Language)?

- When implementing the specification, there is a possibility to validate the input against the specification constraints, i.e., set of conditions, thanks to the SHACL file.
- SHACL file comes in TTL and JSON
- SHACL can also integrate codelists
- ISA testbed can be used for validation

Further documentation on SHACL validation rules can be found here : <https://www.w3.org/TR/shacl/>

What is JSON-LD?

- It is a lightweight Linked Data format
- It is based on the JSON format and provides a way to help JSON data interoperate at Web-scale
- It is an ideal data format for programming environments, REST Web services

How to read?

- @context specifies the vocabulary(ies) referenced
- @type specify the item(s) being marked up
- Can be populated with attribute-value pairs, e.g, "familyName": "Smith"

```
{  
  "Person": "http://www.w3.org/ns/person#Person",  
  "Person.alternativeName": {  
    "@id": "http://purl.org/dc/terms/alternative",  
    "@type": "@id"  
  },  
  "Person.birthName": {  
    "@id": "http://www.w3.org/ns/person#birthName",  
    "@type": "@id"  
  },  
  "Person.dateOfBirth": {  
    "@id": "http://schema.org/birthDate",  
    "@type": "http://www.w3.org/2001/XMLSchema#dateTime"  
  },  
  "Person.dateOfDeath": {  
    "@id": "http://schema.org/deathDate",  
    "@type": "http://www.w3.org/2001/XMLSchema#dateTime"  
  },  
  "Person.familyName (surname)": {  
    "@id": "http://xmlns.com/foaf/0.1/familyName",  
    "@type": "@id"  
  },  
}
```




Conclusion 5'



Reminder of the key use cases

- Harvest information on public organisations from the source
- Link organisations into coherent structures identifying the different units, their relations and making these structures machine-readable.
- Keep track of the evolution of public organisations and their structures.
- Facilitate the sharing of basic data about public organisations

Wrap-up session & closing

1. Core working group members will perform a quality review (step 8-9)
2. Project team members will publish the RDF Vocabulary and the HTML specification on Purl.eu and GitHub.
3. Any questions/suggestions?

Feedback & collaboration



Feedback & questions can be addressed to

- barthelemy.florian@pwc.com
- christophe.bahim@pwc.com
- louis.matha@pwc.com



Application profiles can be accessed using the following links:

- [Public Organization](#)
- [Public Service](#)

Issues and comments can be posted on the Thematic GitHub repository

- [GitHub Repository](#)



Different links will be added here and communicated next week

- RDF vocabulary
- HTML documentation for the vocabulary with terms and definitions
- UML diagram
- HTML documentation for the UML diagram
- SHACL validation rules
- JSON-LD context file



Thanks!

