



ICEG Building: Thematic Workshop #1

Welcome!

Tuesday May 24 2022

Virtual working group – Microsoft Teams



Practicalities

Audience sound is muted by default.



Use the hand in Google Meet if you want to say something.

Questions, comments and suggestions can be communicated via the chat function. Interaction is encouraged!



A yes/no question can be answered simply and quickly via the chat:

Agree = +1

Do not agree = - 1

Indifferent = 0



Agenda

#1	Welcome	09:00 to 09:15
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#2	Process, input and timeline	09:15 to 09:30
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#3	Presentation of identified use cases and requirements	09:30 to 10:00
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#4	Identification and presentation of parts of the model	10:00 to 11:20
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#5	Next steps	11:20 to 11:30
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Goal for today

Discussion on the selected use cases and the storylines for the model as a first step towards the next workshop and the first version of the ICEG building model.



Summary of the business workshop



What are the requirements of the identified use cases?



Presenting parts of the model using storylines

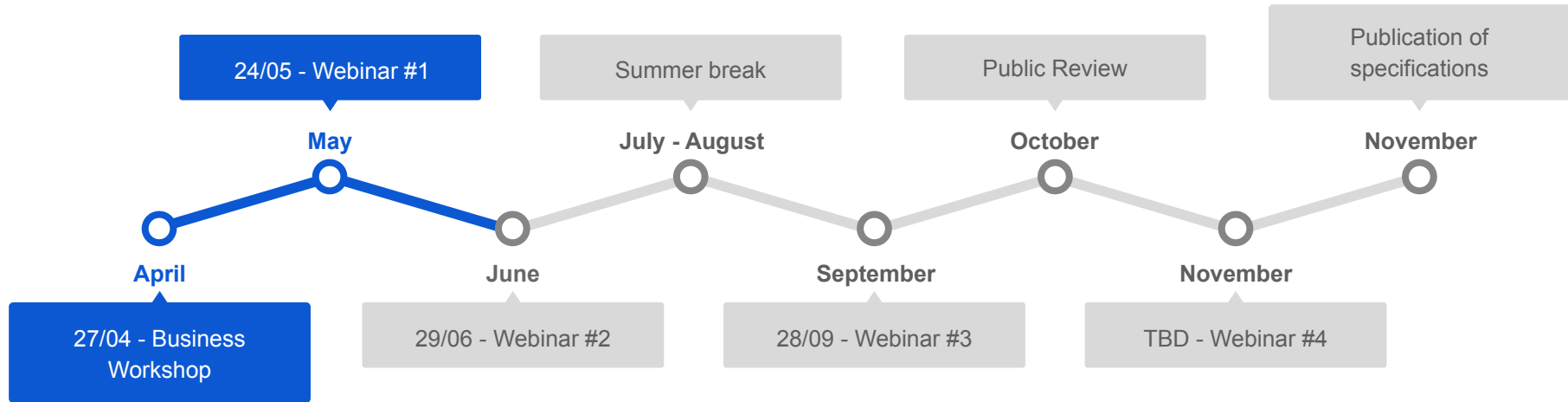


Welcome

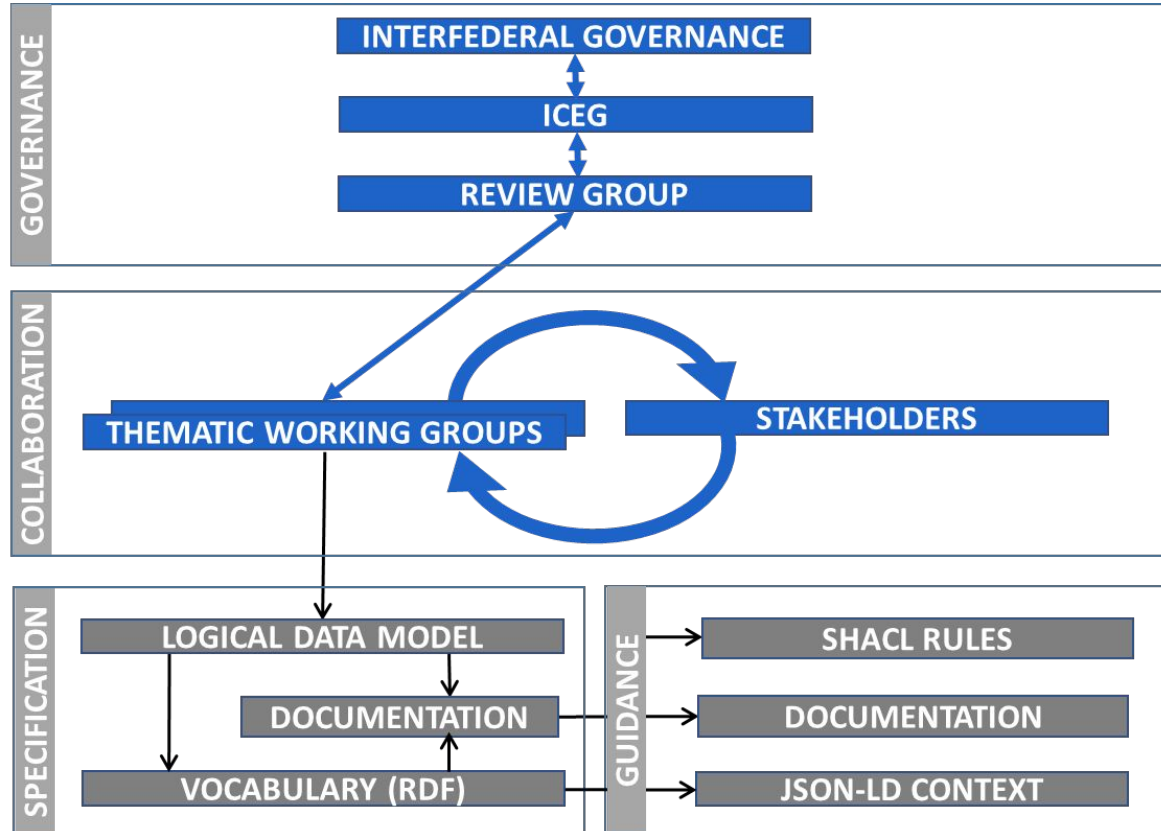


Timeline

Today: Thematic webinar #1

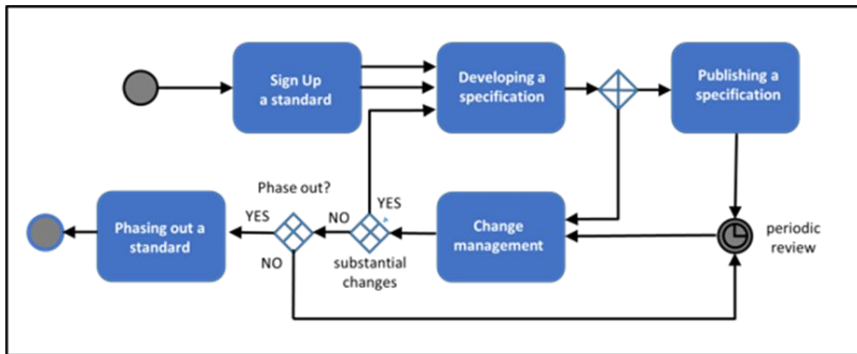


Governance



Governance: ICEG process and method

Scalable process for registering, developing, changing and phasing out data standards.



Abstract: French, Dutch

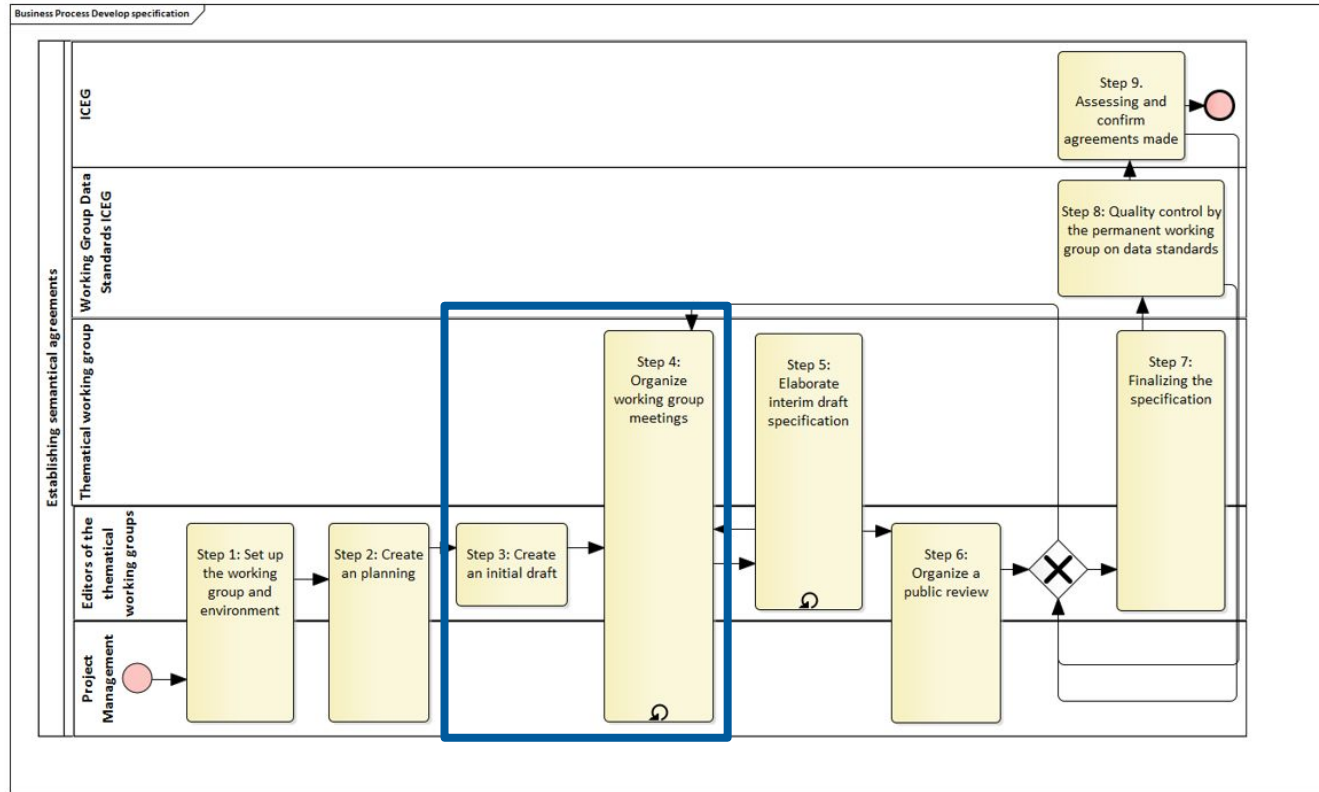
Full paper: English

W3C, IEEE, IETF, IAB en ISA, Open Stand, OSLO



How do we achieve this

Process and methodology defined by ICEG



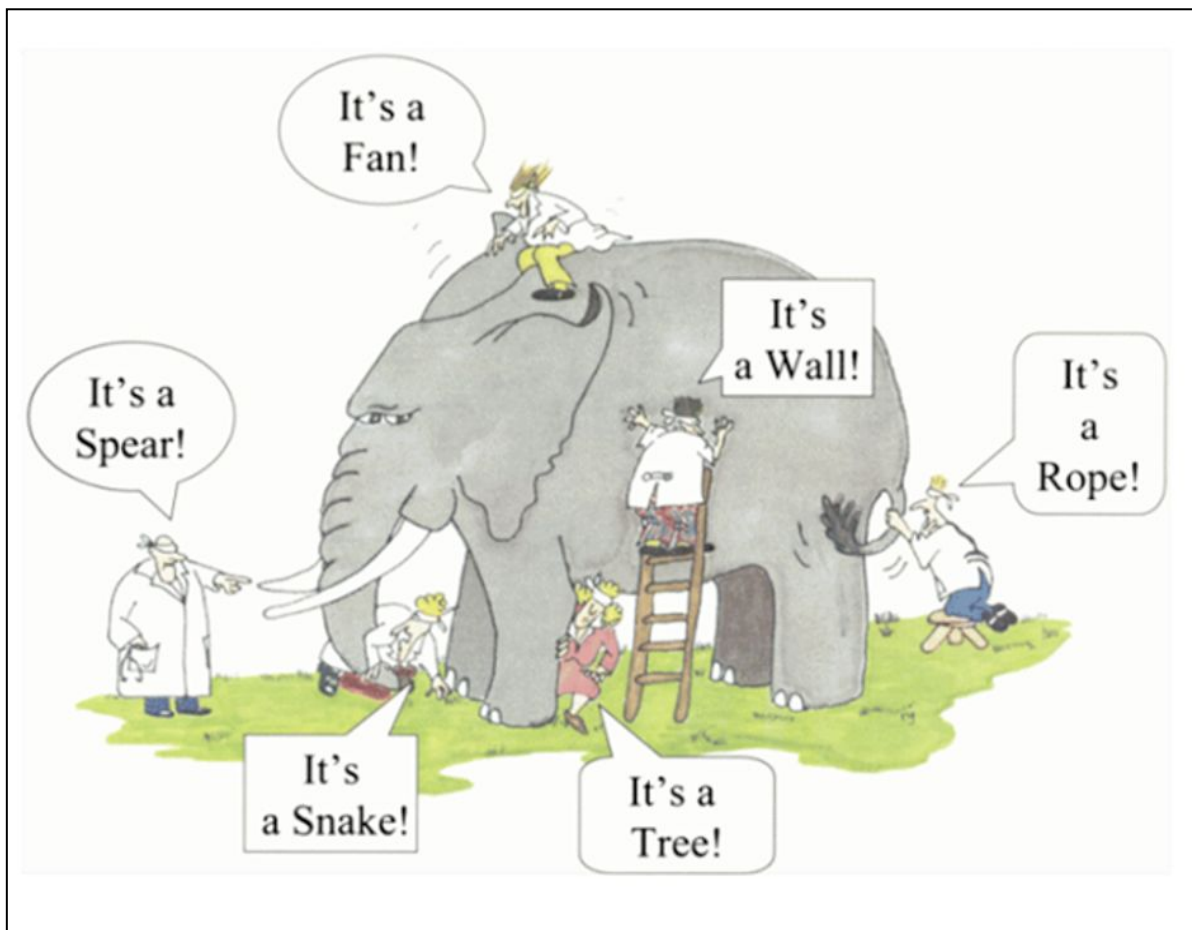
INFORMATIE
VLAANDEREN




BO
SO
IG: Digitale Transformatie
IG: Based on Onderzoek
IG: Transformatie Agents
IG: Strategie en Appoi

PROCESS AND METHOD FOR THE DEVELOPMENT OF DATA STANDARDS

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





Presentation of identified use cases and requirements



What did we do in the previous workshop?



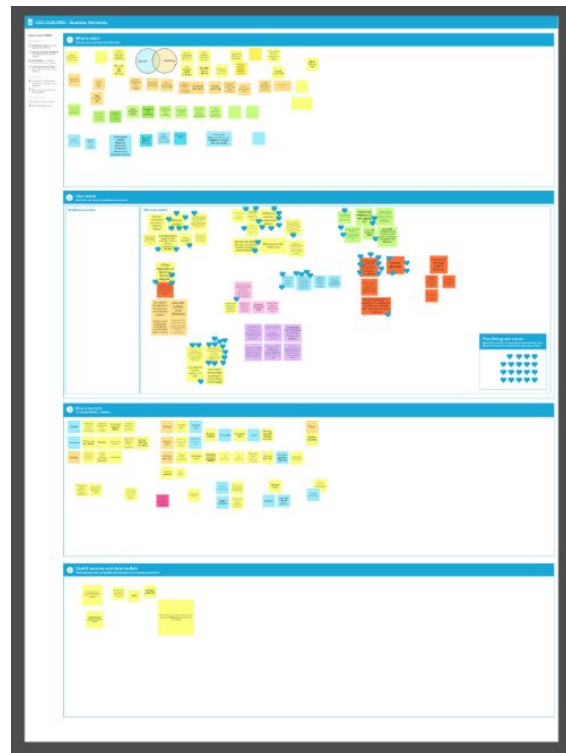
Introduction to ICEG

- Semantic interoperability
- Technical interoperability
- Exchange of data
- Reuse of data



Brainstorm

- What existing standards or information models exist and do we need to work on?
- What are the different use cases?
- Which key concepts can we identify regarding these use cases?



Accessible from:

<https://app.mural.co/t/beadvtc7549/m/beadvtc7549/1647936879319/b8d562999e51e83d52239520e826881fa144c6fb?sender=u43f1b465f3a0938505dc0182>

Based on the voting we come to these use cases

Existing use cases from charter

Building units are addressable objects

Create a link between the following registers; parcels, buildings, building units and addresses

Create a link between a building and his quality criteria

Create a link between a building and urban development control and land use statistics

Create a link between a building and territorial resources allocation as transportation, roads, heating, sewer, electricity..

Create a link between a building and its value and taxation

Additional use cases (previous webinar)

Building units have a unique identifier and a link with both the population register and the cadaster

A building / building unit has an entrance location and some indoor navigation instructions

Every building (unit) has a specific function (f.e. Police station, fire station, school, ...)

Buildings and building units consists of 2D and 3D information

Every building (unit) has a lifecycle

A building is linked with the official registration of buildings (building register)

Scope for ICEG building

Non-exhaustive list of requirements expressed during the last workshop

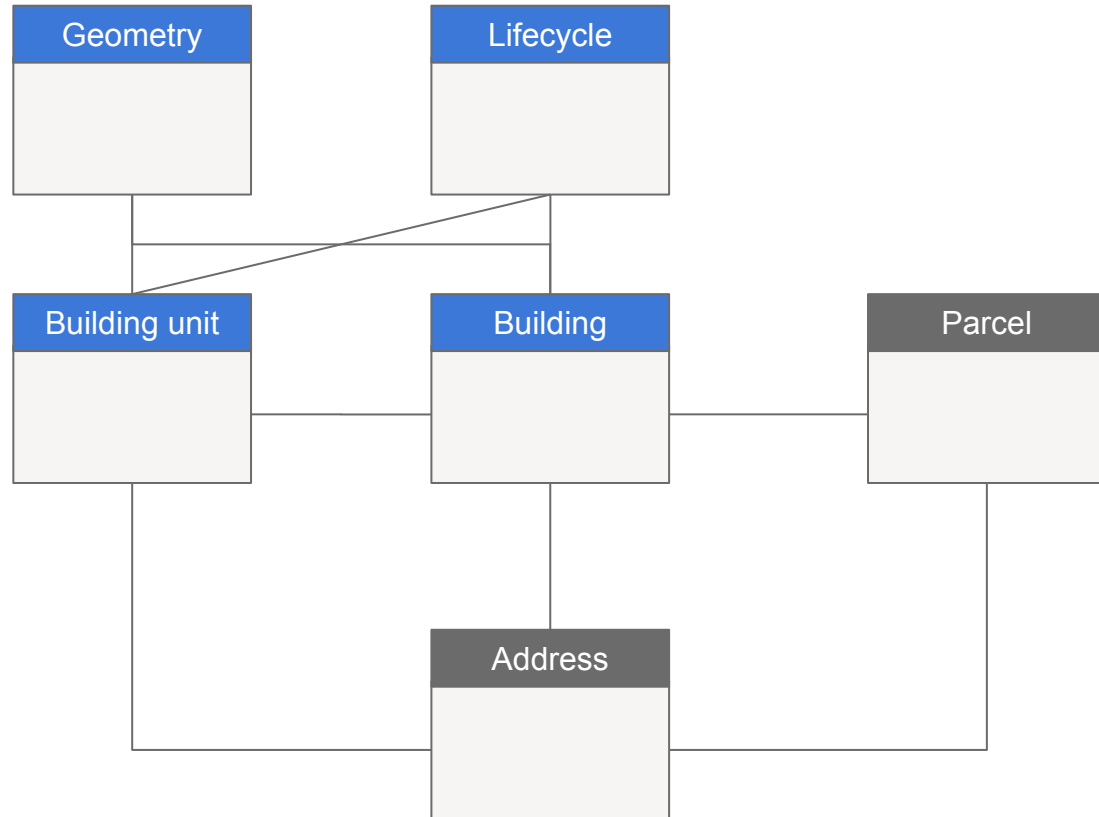
Building	Building Unit	Lifecycle	Building geometry	Parcel	Address
Name	Function	Date of construction	Geographical representation	OUT OF SCOPE	
Entrance location	Status	Date of renovation	3D address points		
Number of levels (above ground / underground)	Location	Status (in project, in use)	3D building unit (where in the building is it)		
Number of apartments	Permit	Owner	3D geometry		
Lot	Building surface	Current use /function	2D geometry		
Accessibility			Geometric accuracy		
Unique ID			Boundaries		
Number of people living in the building			Building height		
Rooms					
Permit					
Number of building units					
Building surface					



Identification and presentation of parts of the model



Overview



Rules and principles for good definitions

General principles and rules

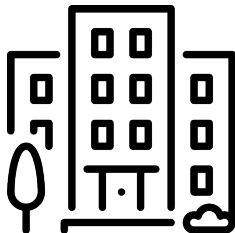
Rule 1: We use INSPIRE as a minimum starting point.

Rule 2: We reuse existing definitions from regional/federal standards to ensure maximal interoperability.

Additional principles for good definitions: see

https://github.com/SEMIceu/OpenGuidelines/blob/main/Principles%20for%20creating%20good%20definitions_v1.00.pdf

Defining building, the key focus



Building

OSLO

An enclosed and/or covered, above-ground or below-ground structure that serves or is intended either to house people, animals and objects or to produce economic goods or provide services. A building refers to any structure that is erected or built on a site in a permanent manner.

Based on INSPIRE

BUNI

"Building" means an enclosed and/or covered structure, above or below ground, intended either for the shelter of persons, animals or things, or for the production of economic goods or the provision of services and refers to any structure permanently built or erected on its site.

Based on INSPIRE

INSPIRE

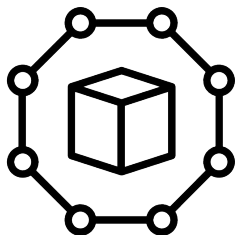
A Building is an enclosed construction above and/or underground, used or intended for the shelter of humans, animals or things or for the production of economic goods. A building refers to any structure permanently constructed or erected on its site.

- Above-ground or below-ground (OSLO and BUNI) vs above and/or underground (INSPIRE)
- House (OSLO) vs shelter (BUNI and INSPIRE)
- Addition of 'provide services' (OSLO / BUNI compared to INSPIRE)
- Any structure that is erected or built vs any structure permanently constructed or erected. "Constructed" avoids circular dependency (building built)

PROPOSITION:

An enclosed and/or covered structure, above and/or below ground, intended either for the shelter of persons, animals or things, or for the production of economic goods or the provision of services, and refers to any structure permanently constructed or erected on its site.

Defining building unit, the key focus



Building unit

OSLO

The smallest unit within a building that is suitable for residential, commercial or recreational purposes and is accessed via its own lockable access from the public road, a yard or a shared circulation area. A building unit is functionally independent. In addition, a building unit can also be a common part.

Based on INSPIRE

BUNI

"Building unit" means the smallest unit of a building adapted for residential, commercial or recreational purposes and which is accessible through its own lockable entrance from the public highway, land or common space. A building unit is functionally independent.

Based on INSPIRE

INSPIRE

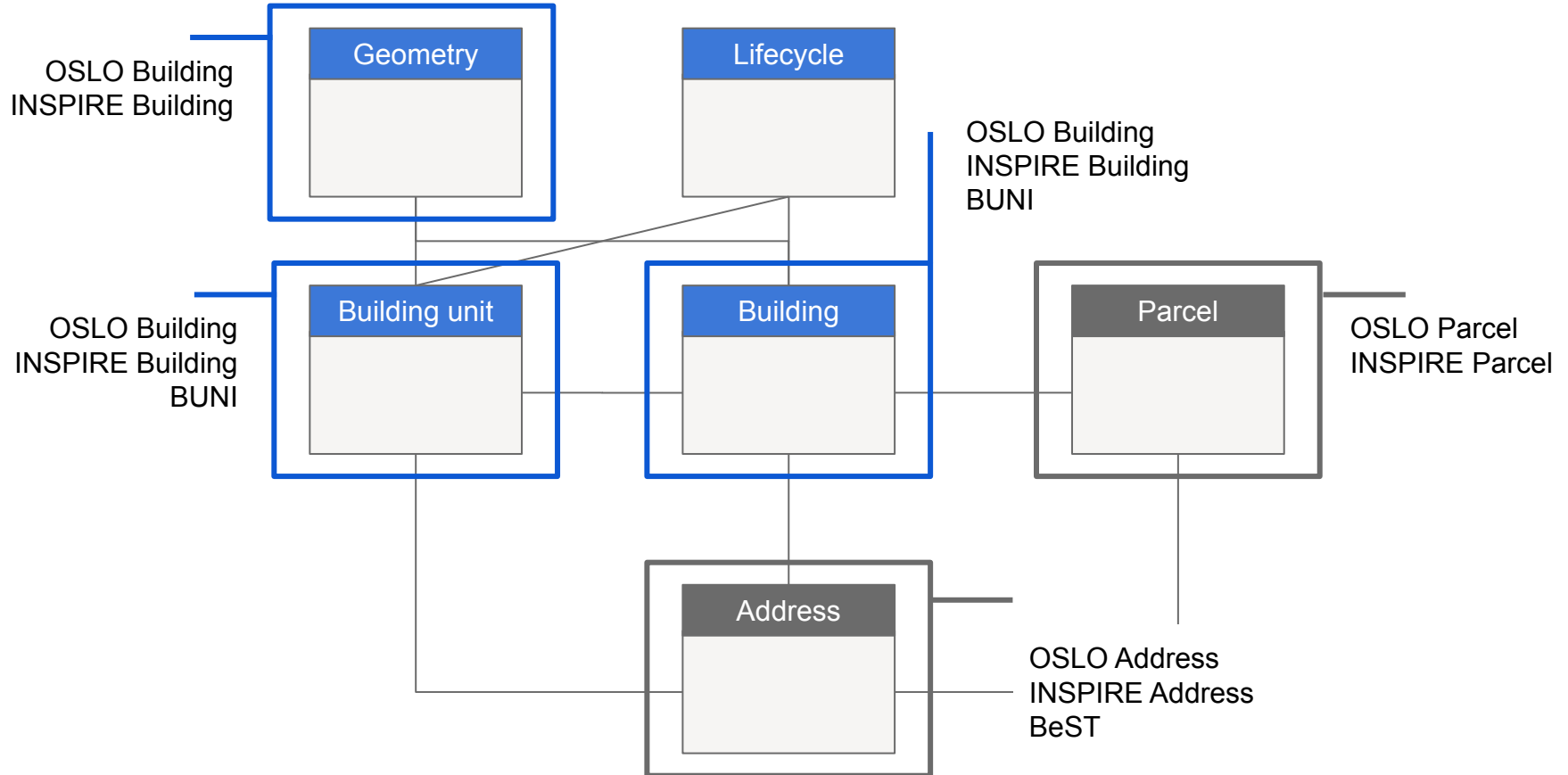
A BuildingUnit is a subdivision of Building with its own lockable access from the outside or from a common area (i.e. not from another BuildingUnit), which is atomic, functionally independent, and may be separately sold, rented out, inherited, etc

- Suitable (OSLO) vs adapted for (BUNI)
- Lockable access (OSLO) vs lockable entrance (BUNI)
- the public road, a yard or a shared circulation area (OSLO) vs the public highway, land or common space (BUNI) vs the outside or from a common area (INSPIRE)
- Addition of 'In addition, a building unit can also be a common part.' (OSLO)
- Addition of 'May be separately sold, rented out, inherited, etc.' (INSPIRE)

PROPOSITION:

The smallest unit within a building that is suitable and adapted for residential, commercial or recreational purposes and which is accessible through its own lockable access from the outside or from a common area. A building unit is atomic, functionally independent, and may be separately sold, rented out, inherited, etc. In addition, a building unit can also be a common part.

Overview: how does it connect?



OSLO & BUNI data models

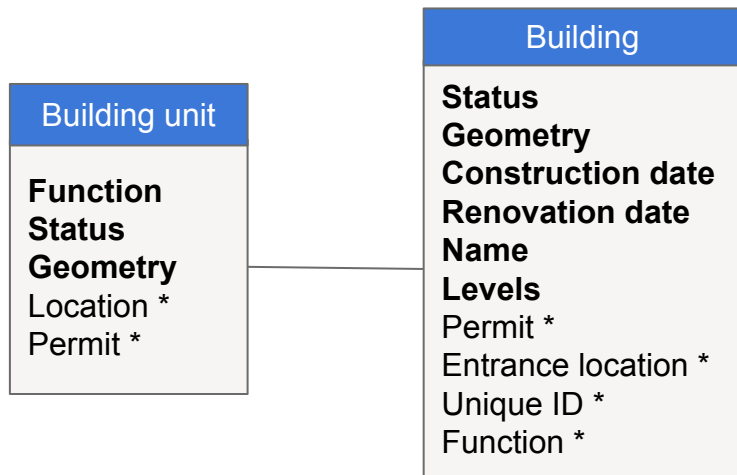
Classes	OSLO	BUNI
Building	✓	✓
Building Unit	✓	✓
Address	✓	✓
Parcel	✓	✓
Owner	✗	✓

Building Unit	OSLO	BUNI
Address	✓	✗
Function	✓	✓
Status	✓	✓
Geometry	✓	✓
Location	✓	✗
Identification	✗	✓
VersionID	✗	✓
GeometryMethod	✗	✓
LocationElements	✗	✓

Building	OSLO	BUNI
Identification	✗	✓
VersionID	✗	✓
Status	✓	✓
Geometry	✓	✓
GeometryMethod	✗	✓
Construction Date	✓	✓
Renovation Date	✓	✓
Name	✓	✓
Levels	✓	✓
Height	✗	✓
Address	✓	✗
Consists_of	✓	✗
Parcel	✓	✗

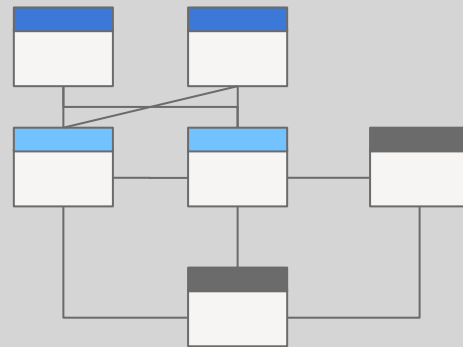
Storyline

Laura (architect) wants to know what are the criteria of a building and its building units and how to connect the different building units to the building.



* Additions out of the workshops (non exhaustive)

BOLD Based on common elements from BUNI & OSLO



Do all Buildings have Building units?

Can a building unit also be a building itself?

How to link building (units) and (building) registers?

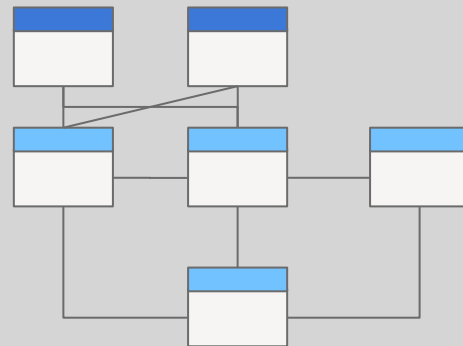
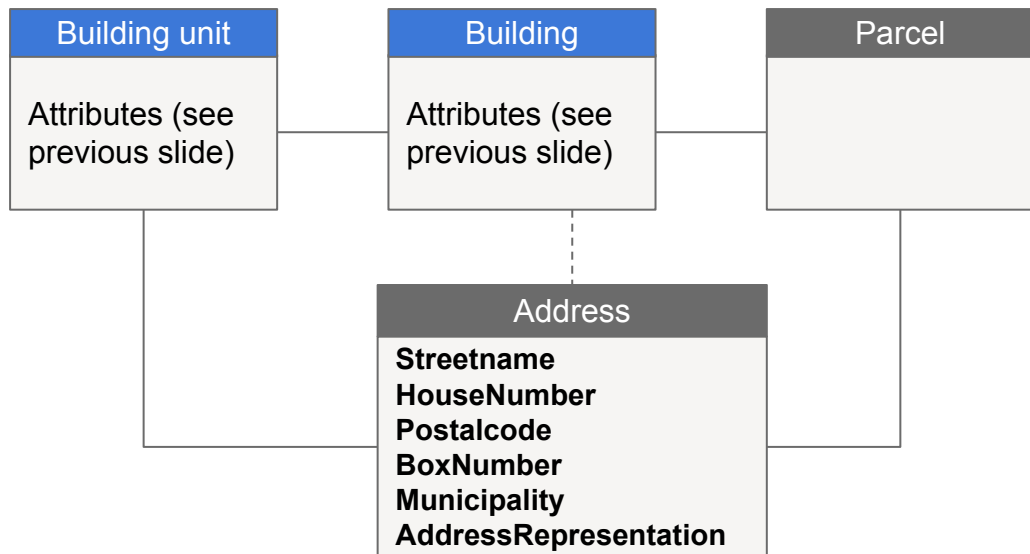
What additional requirements do we need for building unit and building?

- Urban development (e.g., land-use, zone type)
- Territorial resources (e.g., electricity, internet)
- Value and taxation
- Construction type / residency type

[List of already identified requirements for building](#)

Storyline

Laura wants to know the address of the building (unit) she's working on.



Is an address building specific, or specific for a parcel / building unit?

Or can buildings, parcels and building units all have a specific address?

(Cfr. OSLO and BUNI only connect Parcel and Building unit to an address)

We re-use what already exists for address.

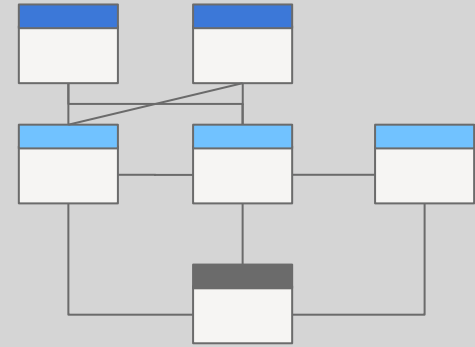
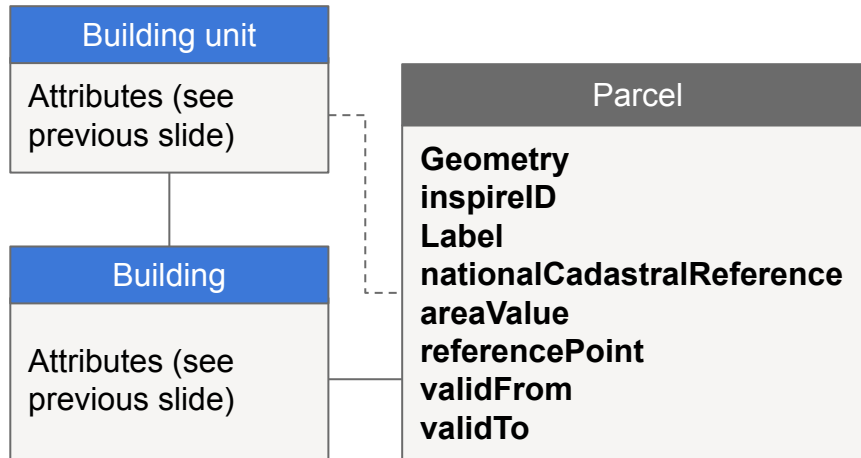
We have INSPIRE address, OSLO address and BeST. So we won't model this in detail.

Do we miss some important 'Address' elements?

Are there important elements, related to an Address, that should be modelled?

Storyline

Laura knows the Building is built on a Parcel



How do we connect to a parcel? Is only a building related to a parcel?

Do we miss some important 'Parcel' elements?

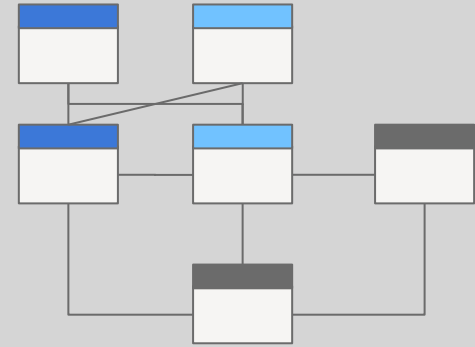
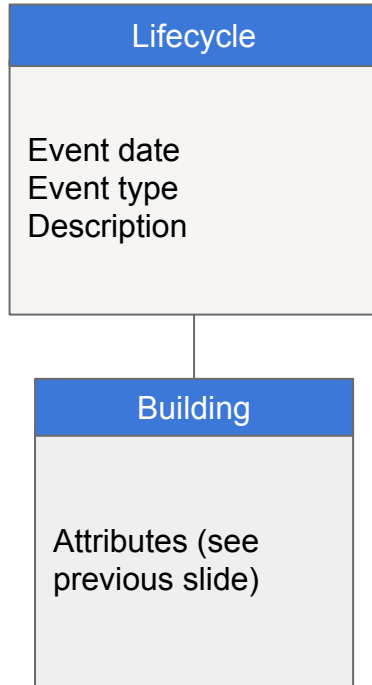
What is a (cadastral) parcel?

OSLO: A part of the Belgian territory, geographically delimited and identified by the AAPD on the cadastral plot plan, which corresponds to the land area of one or more cadastral patrimonial plots

The INSPIRE Directive focuses on the geographical part of cadastral data.

Storyline

Laura wants to add a moment to the lifecycle because the renovation is finished.



Is the lifecycle of a building unit different from the lifecycle of the building?

For example: an apartment may have been renovated, but the building itself may not have been.

Can a building have different owners?

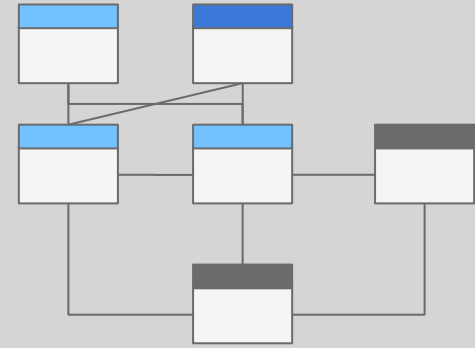
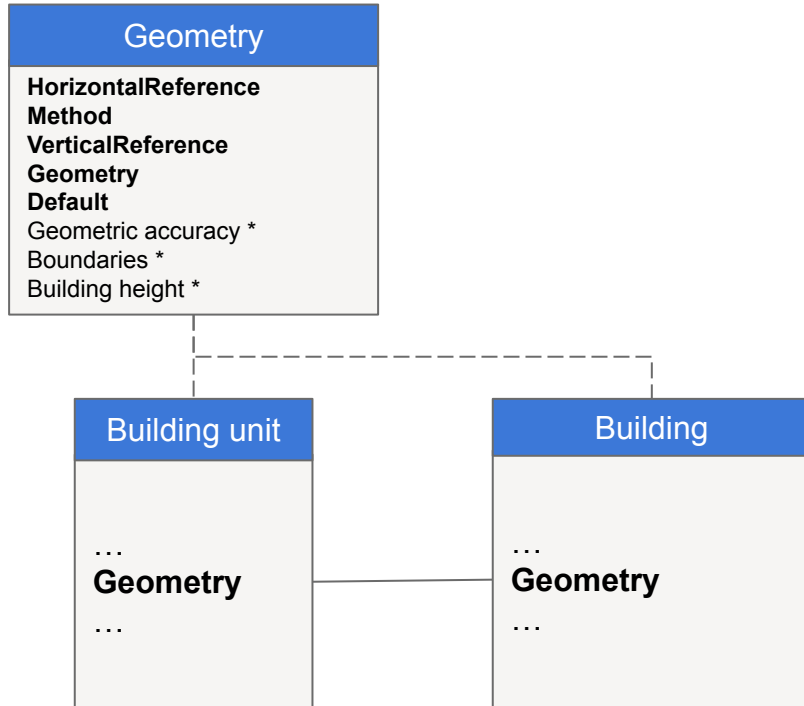
Do the lifecycle attributes capture all possible events?

Such as demolition, construction, renovation, fire, change of owner, collapse, ...

Do we capture all elements for the life cycle?

Storyline

Laura wants to add the 2D and 3D information to the building and building unit.



What other geometrical information do we need?

What level of detail do we need?

How to model Geometry, e.g. as an entity or data type?

Do we need more than 2d Geometry?
Shape and position characteristics of an object.

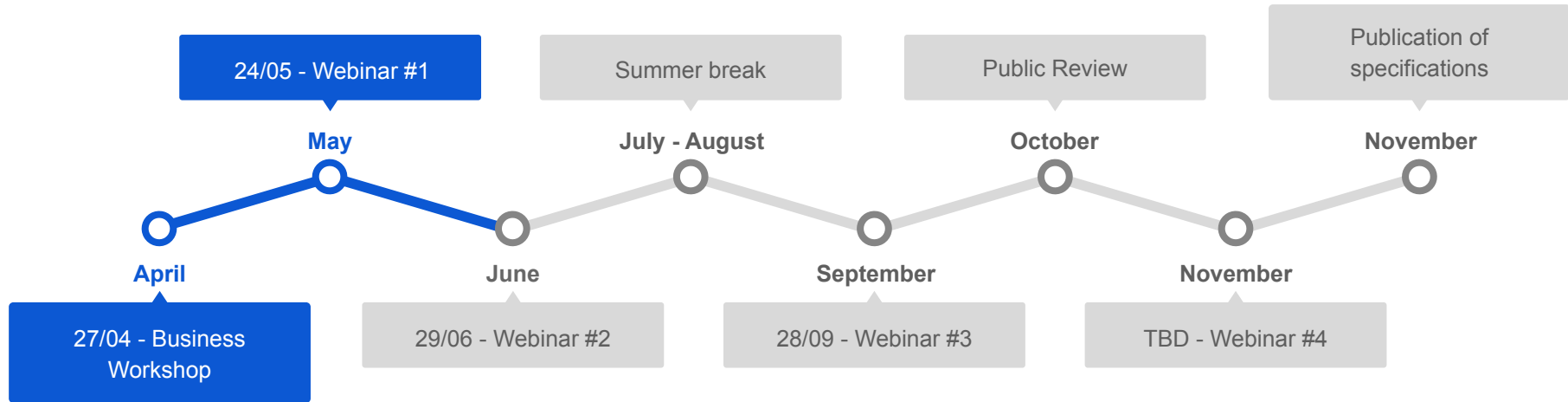


Next steps



Next steps

Second thematic webinar on the 29th of June (time 09:00 CET)



Next steps – In the meanwhile...



Onboard domain experts from the relevant public administrations in the Working Group



Process the input from this workshop



Circulate the main findings/report of this workshop. Feedback is appreciated!



Create a first version of the semantic model. This will be published in advance on [GitHub](#). Feedback is also welcome here!



Capture further input through GitHub!

Feedback & collaboration




Feedback can be provided by email to the following people:

- christophe.bahim@pwc.com
- yaron.dassonneville@pwc.com



Feedback/input can be provided through [GitHub](#):

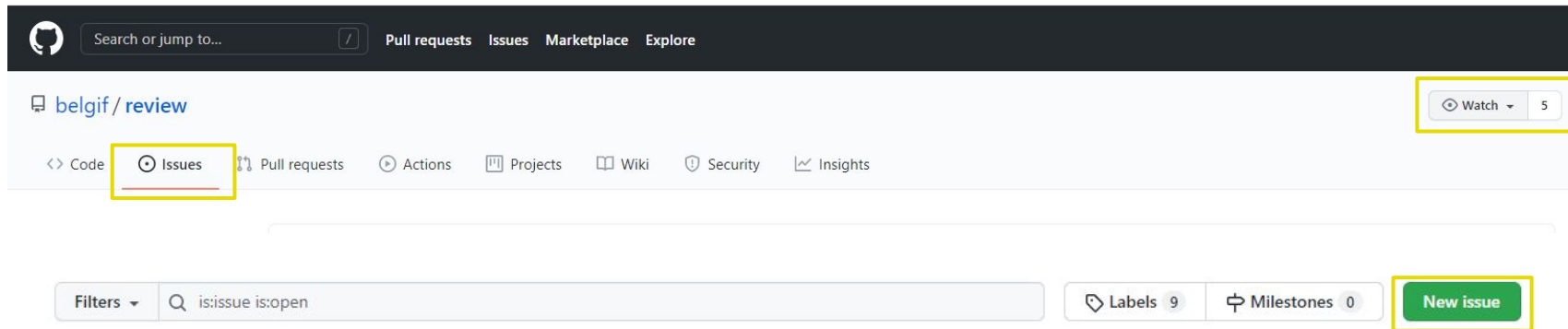
<https://github.com/belgif/thematic/issues>

Use the label  in your new issues.

Don't hesitate to watch the activities!

How to watch GitHub issues log?

How to log an issue on GitHub?



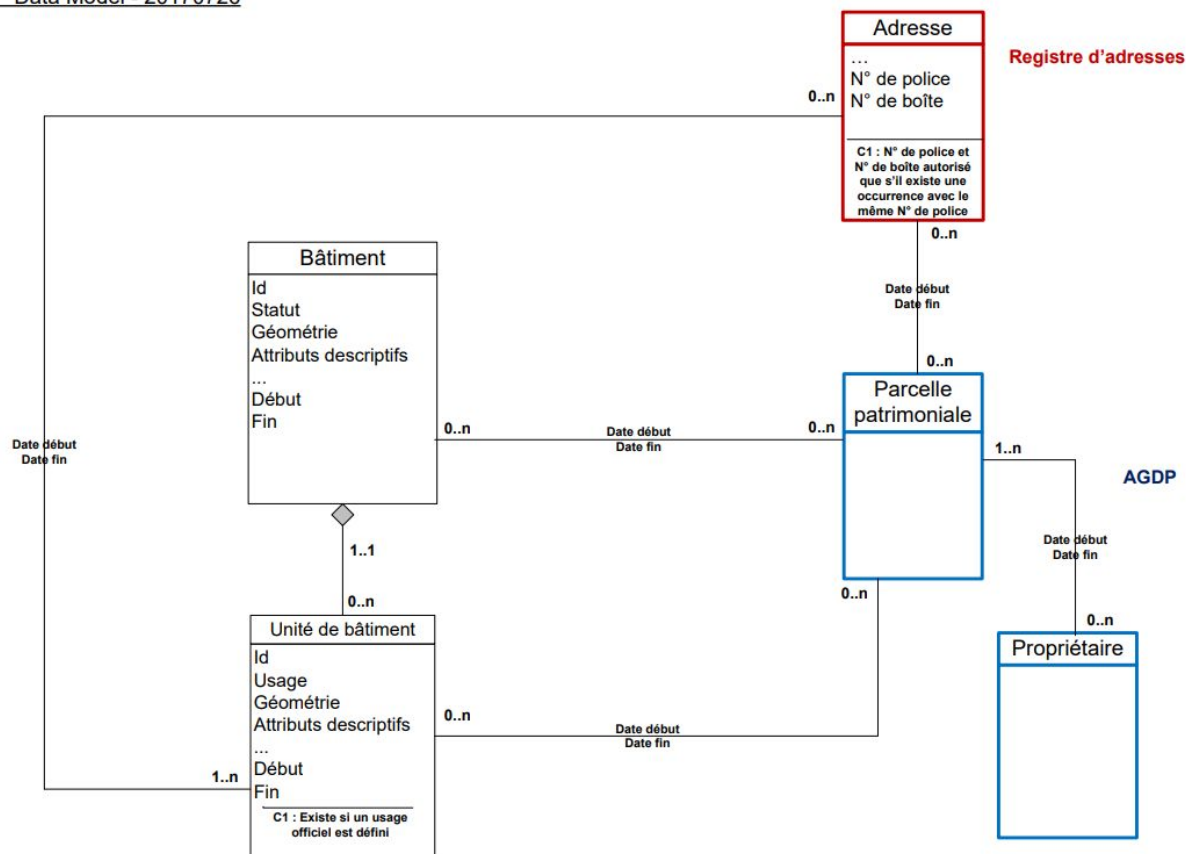
Are there any questions left?

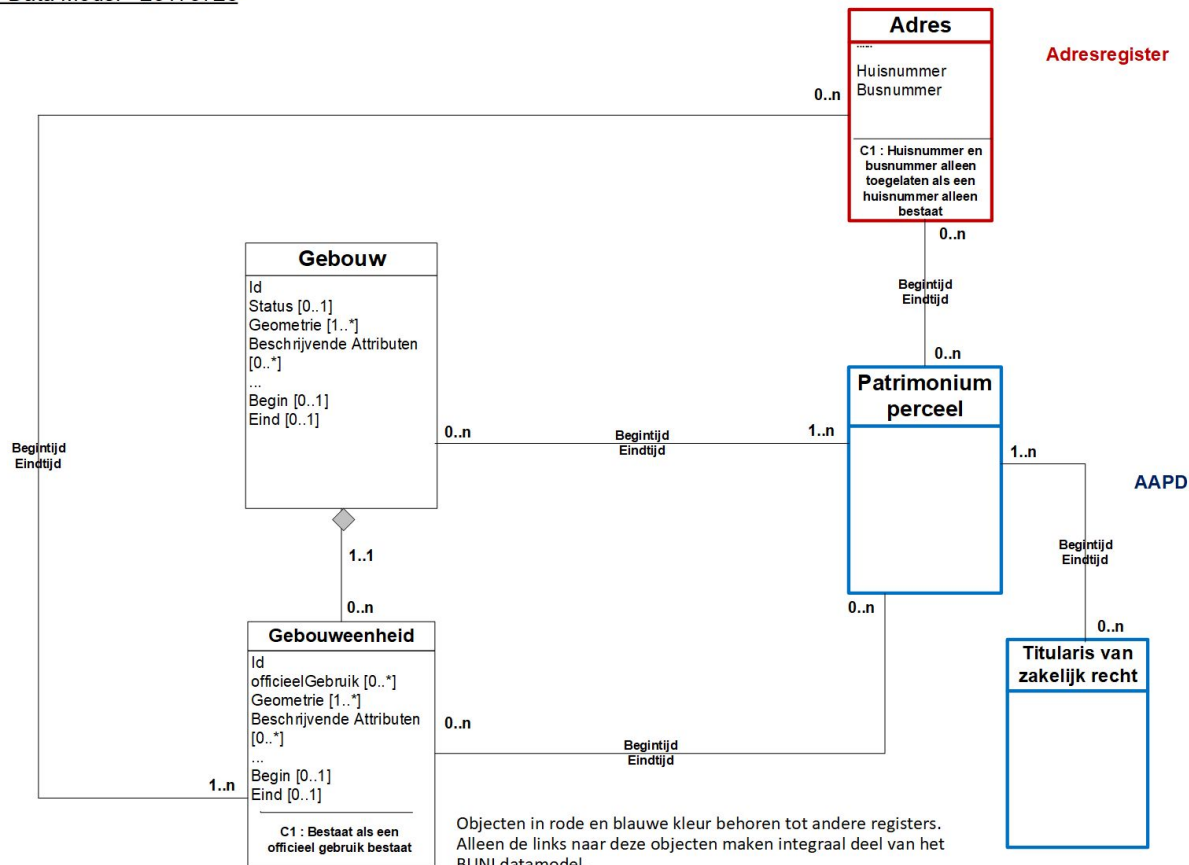




Thanks!







OSLO

