ICEG Building:

Thematic Workshop #3

Welcome!

Wednesday September 28th 2022
Virtual working group – Google Meet

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
#2	Process, input and timeline
#3	Booster on the legal framework *by Benoit F.*
#4	Presentation and discussion of the latest version of the model
#5	Kick-off of the public review period
#6	Next steps

Goal for today

Discussion on the updated version of the model and current open issues.

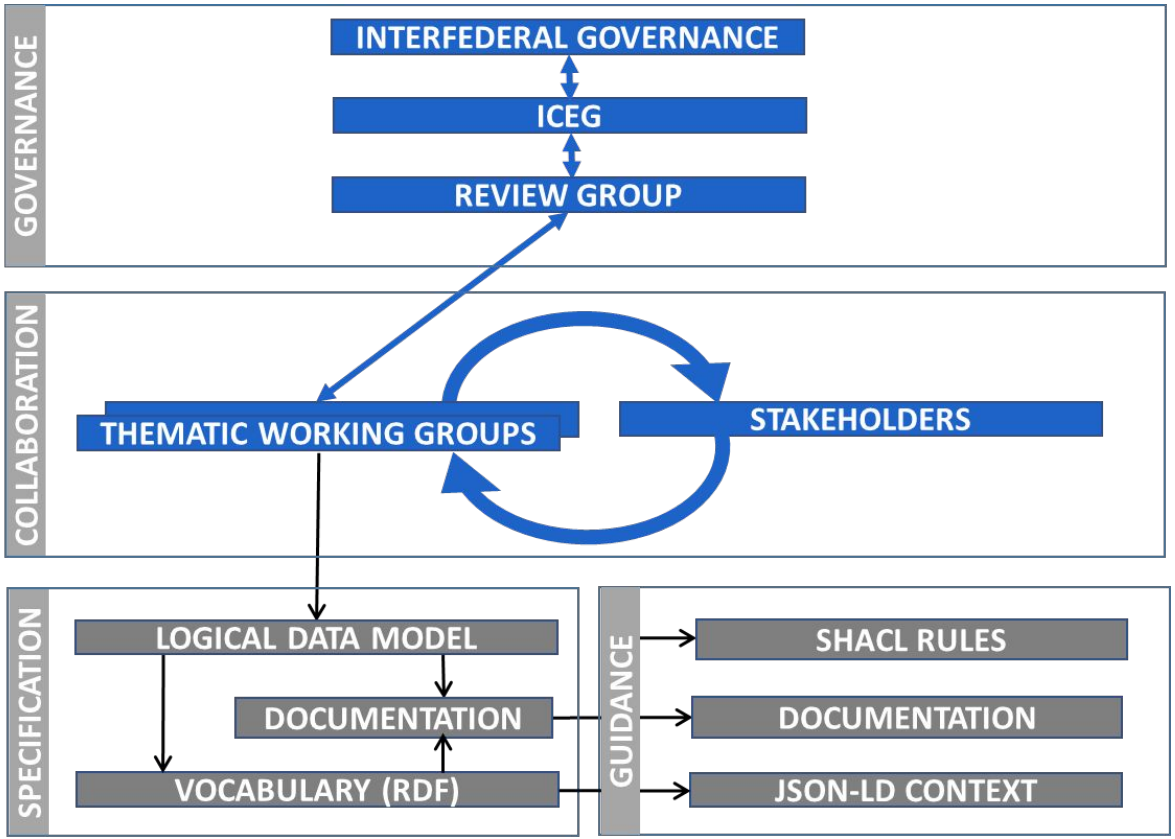
Summary of the second thematic workshop & discussions on GitHub

Presentation of the changes to the model

Solving current open issues

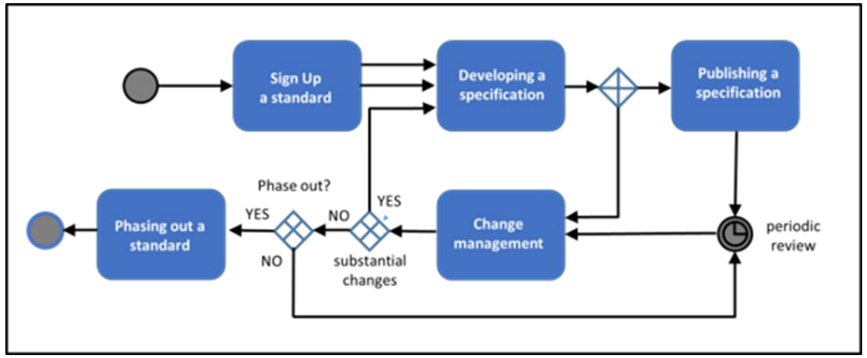
Process, input & timeline

Governance


GOVERNANCE
INTERFEDERAL GOVERNANCE
ICEG
REVIEW GROUP
COLLABORATION
THEMATIC WORKING GROUPS
STAKEHOLDERS
SPECIFICATION
LOGICAL DATA MODEL
DOCUMENTATION
VOCABULARY (RDF)
GUIDANCE
SHACL RULES
DOCUMENTATION
JSON-LD CONTEXT

Governance: ICEG process and method

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

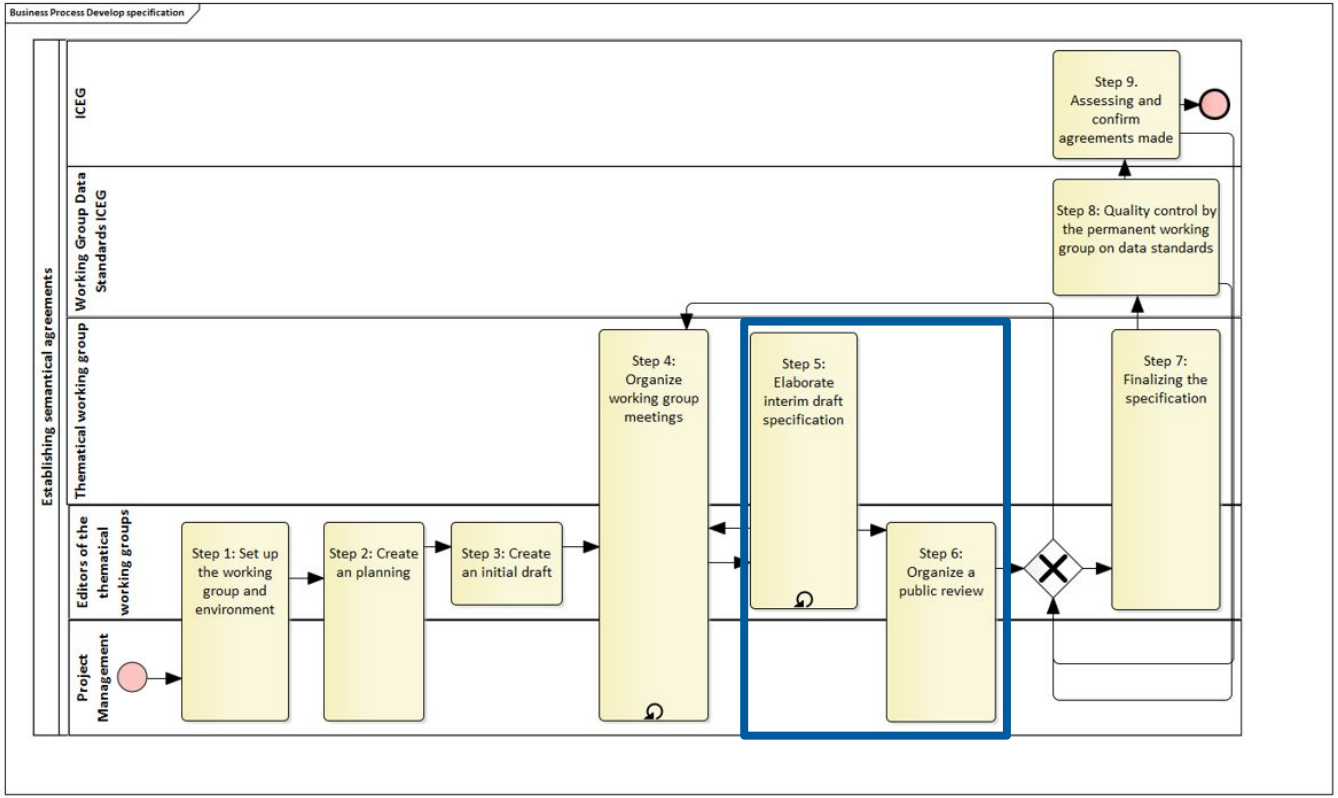


Abstract: French, Dutch
Full paper: English

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

How do we achieve this

Process and methodology defined by ICEG



INFORMATIE VLAANDEREN

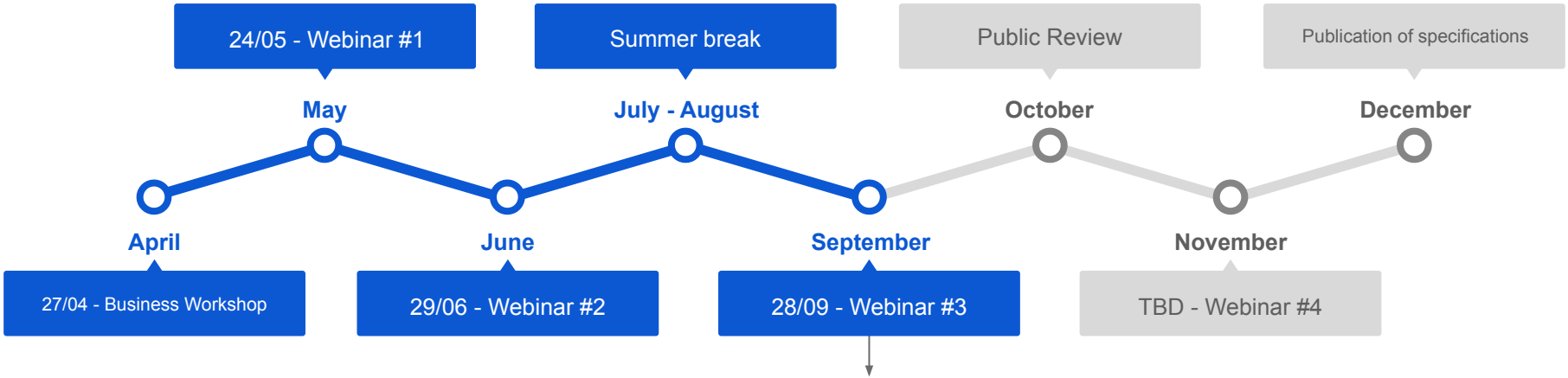
PROCESS AND METHOD FOR THE DEVELOPMENT OF DATA STANDARDS

Version /// 1.0

Publication date /// 24 may 2019

Timeline

The HTML specifications for the public review will be ready by the 05/10



- Defining building
- Defining building unit
- How does everything in the model connect?
- Which extra information needs to be included?
- Received feedback

Legal framework

cirb.brussels
IT is for you

Modélisation des bâtiments

Etat des lieux et évolutions futures

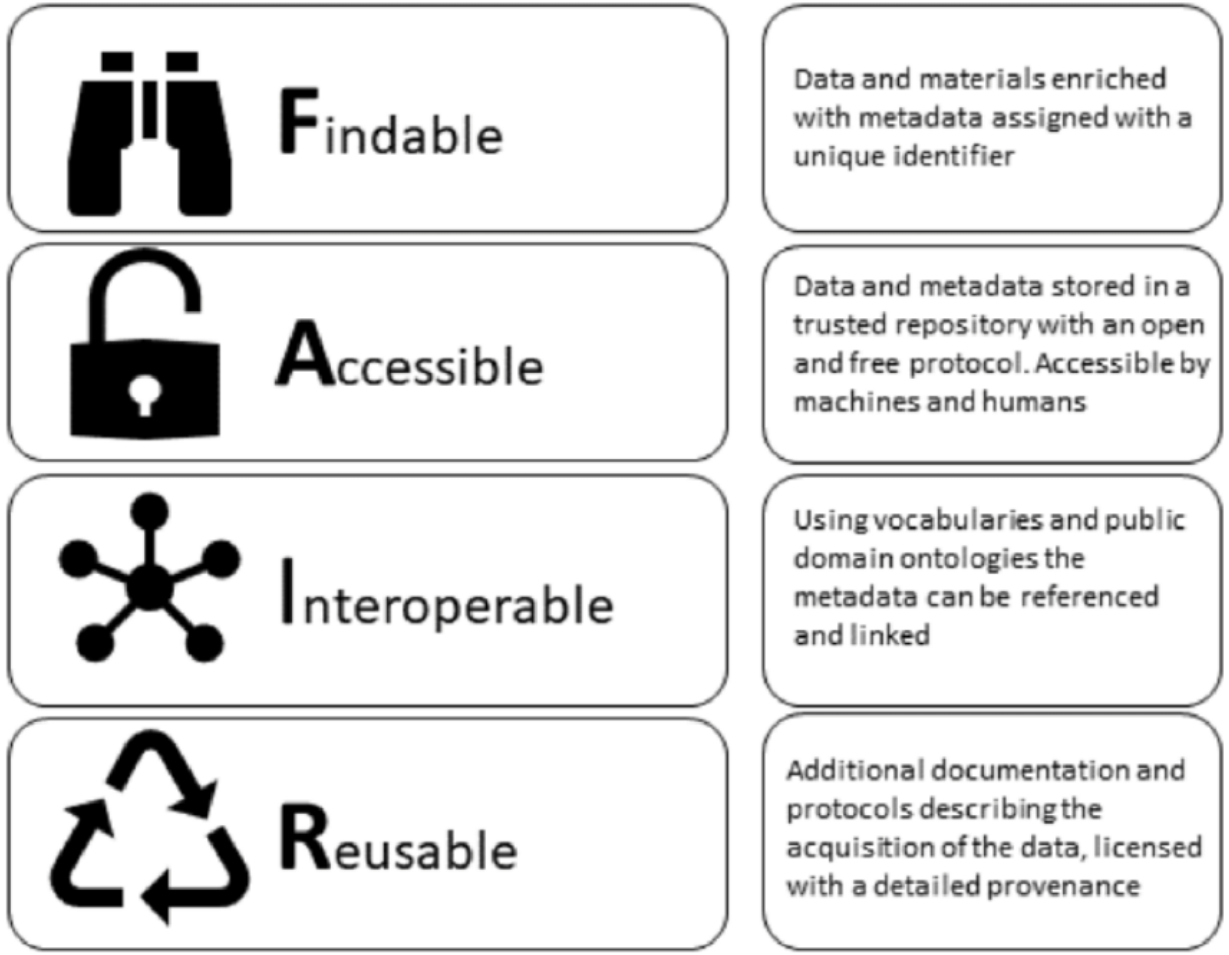
Aperçu de la présentation

- Rappel du cadre légal et des finalités
- Présentation de la situation existante
- Prochaines étapes

Cadre légal et finalités

- Produire des données harmonisées des bâtiments
  - Structure attributaire commune au niveau européen/belge
  - Format machine readable
  - Documentation et accès machine to machine
  - Règles d'encodage communes au niveau belge et normes de qualité sur les données

Cadre légal et finalités



Cadre légal et finalités

- Règlement 1089/2010
  - Fixe le cadre sémantique et géométrique des (types d'')objets spatiaux
  - Version consolidée au 31/12/2014

- Accord de coopération BUNI
  - Accord de coopération intra-belge
  - Obligation de suivre l'implémentation INSPIRE commune
  - Obligation de distribuer de documenter le jeu de données dans le géoportail national
  - Obligation de mettre à jour les données et de veilleur à leur qualité

Situation existante

- Modèle INSPIRE : situation très propre aux bâtiments
- Modèle « core » imposé par le Règlement 1089/2010
- Modèle sémantique étendu proposé par les Technical Guidelines

Situation existante

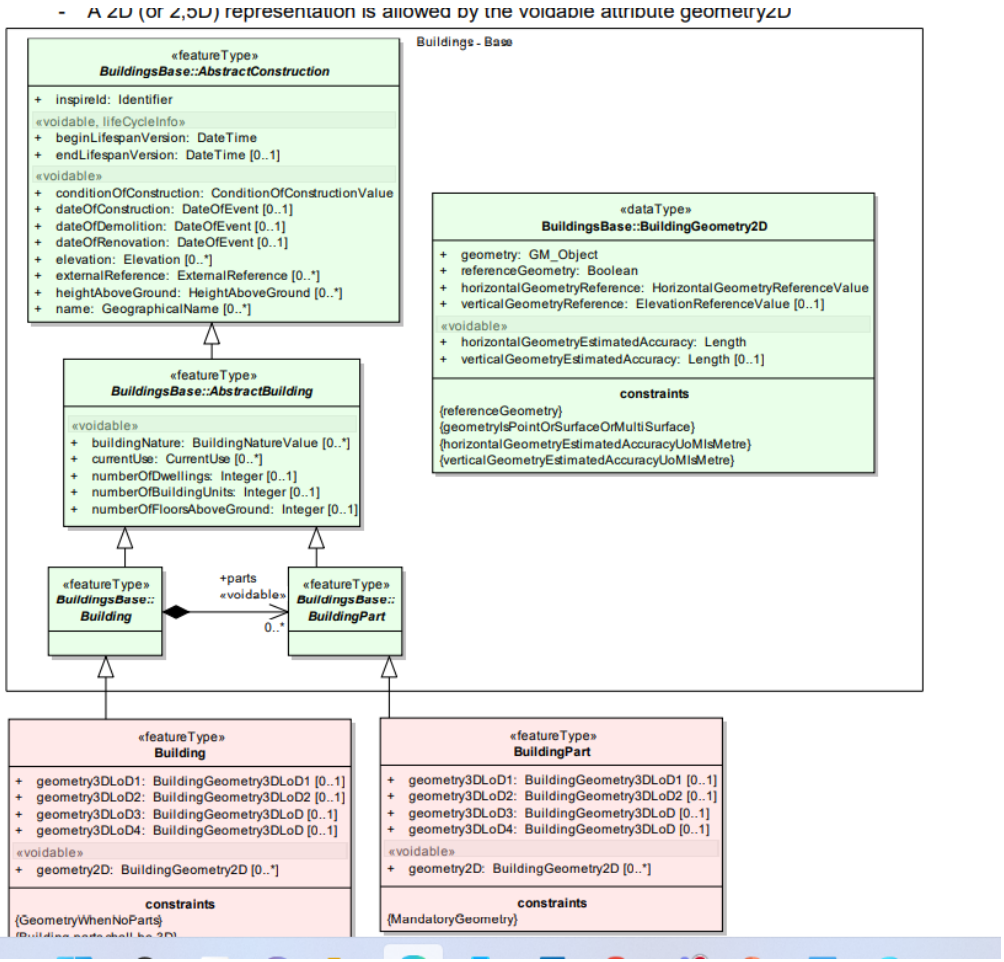
Attributs du type d'objet géographique «AbstractConstruction»

Attribut	Définition	Type	Voidability
inspireId	Identifiant externe d'objet de l'objet géographique.	Identifier	
name	Dénomination de la construction.	GeographicalName	voidable
dateOfConstruction	Date de la construction.	DateOfEvent	voidable
dateOfDemolition	Date de la démolition.	DateOfEvent	voidable
dateOfRenovation	Date de la dernière rénovation importante.	DateOfEvent	voidable

2010R1089 — FR — 31.12.2014 — 003.001 — 226

Attribut	Définition	Type	Voidability
elevation	Propriété dimensionnelle, assortie d'une contrainte de verticalité,	Elevation	voidable

Situation existante



Situation existante

- Deux grands types d'objets créés par le Règlement
  - Building : bâtiment
  - BuildingPart : subdivision d'un bâtiment pouvant être considérée comme un bâtiment (aile, clocher, gradin d'un stade, …)
- Mêmes attributs et même modélisation géométrique
- Modélisation géométrique supporte
  - 2D (emprise au sol)
  - 3D
- Focus sur la modélsiation sémantique

Situation existante

- TG apporte de nouveaux attributs sémantiques

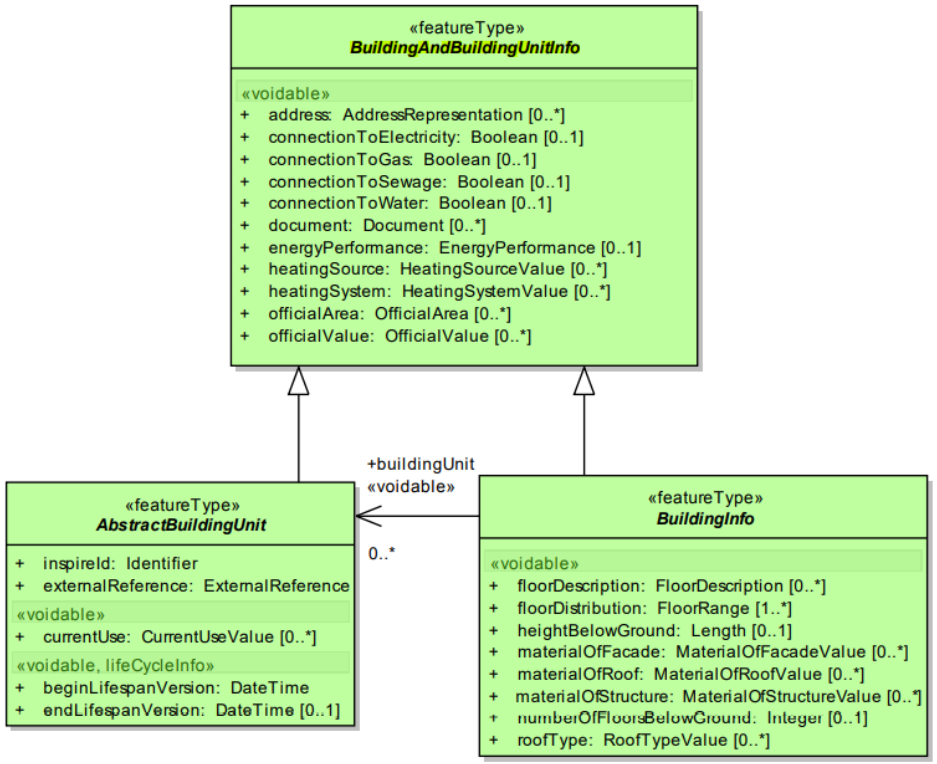


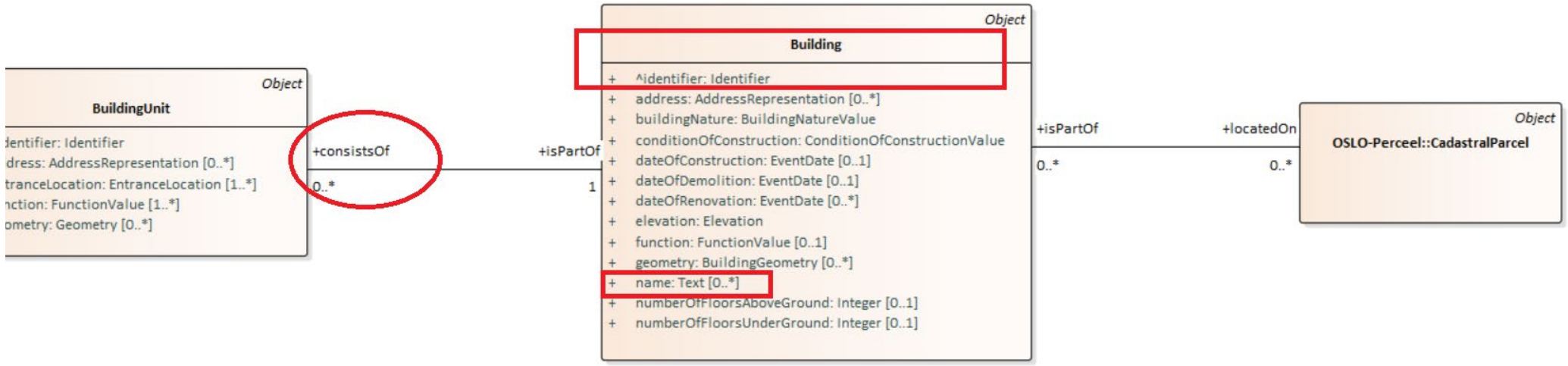
Figure 40: The new properties of buildings / building parts

Situation existante

- TG apporte de nouveaux types d’objets
- BuildingUnit
- Unité fonctionnellement autonome et théoriquement close

Situation existante

- Modèle proposé dans le cadre d'ICEG non-conforme



Prochaines étapes

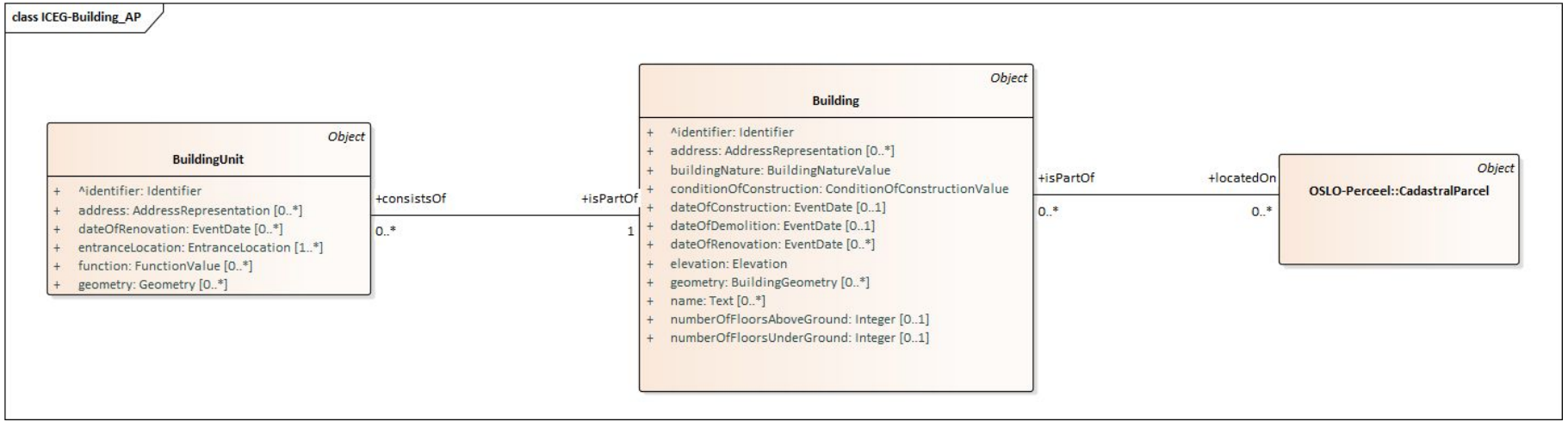
- Éviter les erreurs de BeST
- Comprendre les livrables attendus
  - Modèle de DB
    - INSPIRE compliant (au moins pour le core)
    - Répondant aux besoins de la majorité des interlocuteurs

Prochaines étapes

- Comprendre les livrables attendus
  - Règles de création d'objets harmonisées (politique de langue, critère de sélection identique, définition des attributs identiques, …)
  - Produire un jeu de données utile et utilisable (identifié de manière univoque et distribué de manière efficace)
  - Promouvoir son utilisation auprès des parties prenantes de l'accord
  - Créer une expertise auprès des partenaires

Presentation and discussion of the latest version of the model

Overview


class ICEG-Building_AP
Object
BuildingUnit
+ ^identifier: Identifier
+ address: AddressRepresentation [0..*]
+ dateOfRenovation: EventDate [0..*]
+ entranceLocation: EntranceLocation [1..*]
+ function: FunctionValue [0..*]
+ geometry: Geometry [0..*]
+consistsOf
0..*
+isPartOf
1
Object
Building
+ ^identifier: Identifier
+ address: AddressRepresentation [0..*]
+ buildingNature: BuildingNatureValue
+ conditionOfConstruction: ConditionOfConstructionValue
+ dateOfConstruction: EventDate [0..1]
+ dateOfDemolition: EventDate [0..1]
+ dateOfRenovation: EventDate [0..*]
+ elevation: Elevation
+ geometry: BuildingGeometry [0..*]
+ name: Text [0..*]
+ numberOfFloorsAboveGround: Integer [0..1]
+ numberOfFloorsUnderGround: Integer [0..1]
+isPartOf
0..*
+locatedOn
0..*
Object
OSLO-Perceel::CadastralParcel

Use cases in scope of ICEG building

Existing use cases from the 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 from the business workshop

- 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)

Initial scope

Mandatory attributes imposed by INSPIRE

beginLifespanVersion	externalReference	numberOfBuildingUnits
endLifespanVersion	heightAboveGround	numberOfFloorsAboveGround
conditionOfConstruction	name	buildingPart
dateOfConstruction	buildingNature	inspireID
dateOfRenovation	currentUse	geometry2D
elevation	numberOfDwellings	geometry3D

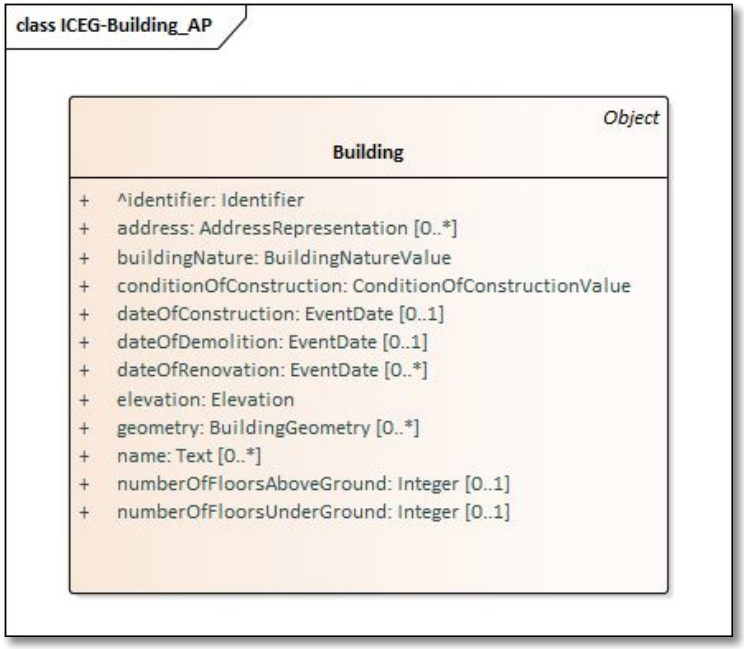
- Already proposed
- Will be proposed to be added to comply with the regulation
- TBC

Optional attributes suggested by INSPIRE

connectionToElectricity	heatingSource	numberOfFloorsBelowGround
connectionToGas	heatingSystem	floorDistribution
connectionToSewage	address	floorDescription
connectionToWater	officialArea	roofType
document	officialValue	materialOfFacade
energyPerformance	cadastralParcel	materialOfRoof
materialOfStructure		

- Already proposed
- Can be added provided that the information exists in the respective Belgian entities

Building



'image: Flaticon.com

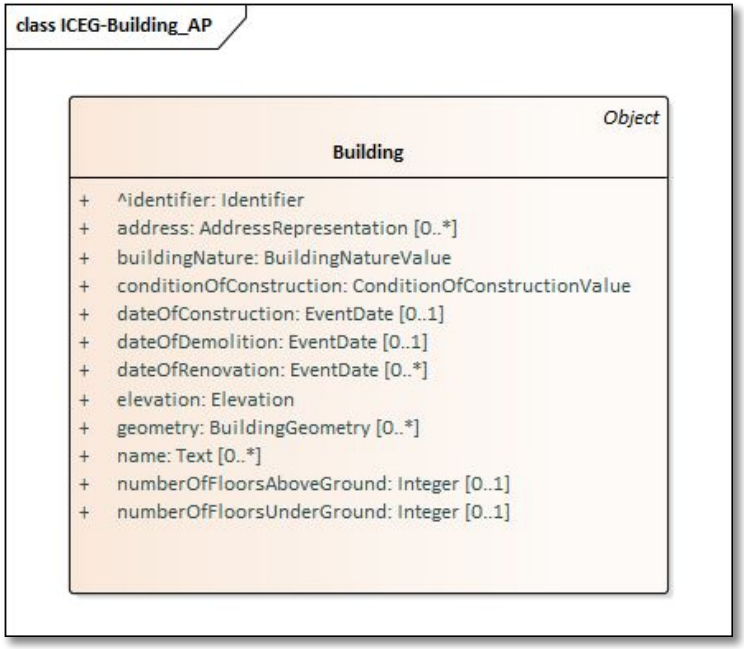
Updated

- No consensus has been reached yet on how **entranceLocation** should be modeled, however the attribute is suggested to be dropped at Building level and added at Building Unit (see issue #92)

Open issues

- Issue #88 | Proposed a definition for quality criteria and question to the WG whether additional ones should be added (previous slide - INSPIRE optional), discussion on fit-for-purpose vs characteristics.
- Issue #86 | **function** should be captured only at building unit level.
- Issue #87 | “Construction” could be seen as an abstract class to “**Building**” and “**Building unit**”
- Issue #89 | Modeling 2D & 3D (Level 1 & 2) geometry

Building



'image: Flaticon.com

Issue #88 | Quality criteria

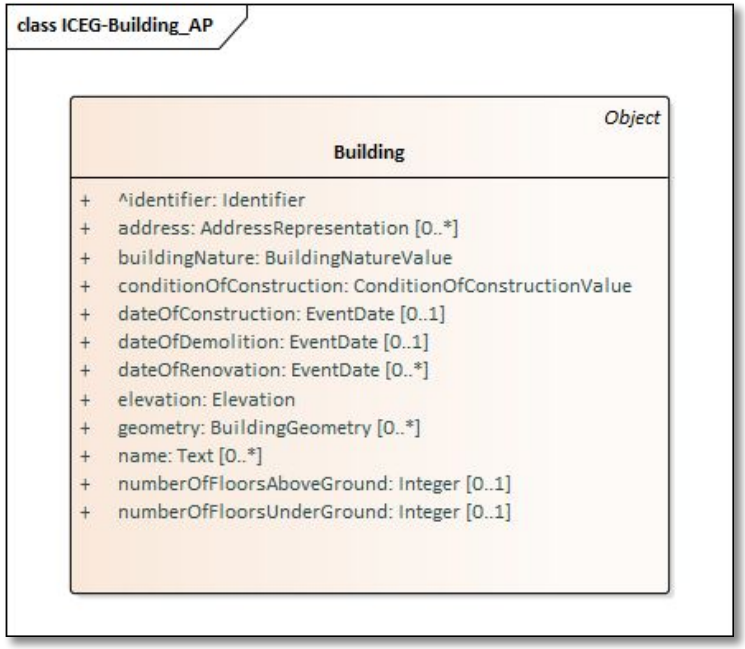
- **What is meant with quality criteria?** Characteristics that determine whether a building is fit for purpose.

Merriam-Webster → "peculiar and essential character", "an inherent feature, property"

Cambridge English Dictionary → "Quality" is defined as "a characteristic or feature of someone or something".

- **Fitness for purpose is an abstract concept**. It supposes that we capture clearly the purpose as well as agree on the characteristics supporting the various purposes. We propose to focus on fundamental characteristics.
- Are there **fundamental characteristics** that could be added to our model? See INSPIRE optional elements for inspiration.

Building



'image: Flaticon.com

Issue #86 | Defining and capturing **function**

- **function** should be captured only at building unit level.

Function for which the building unit is used in reality (as determined on site).

- **nature** of the Building.

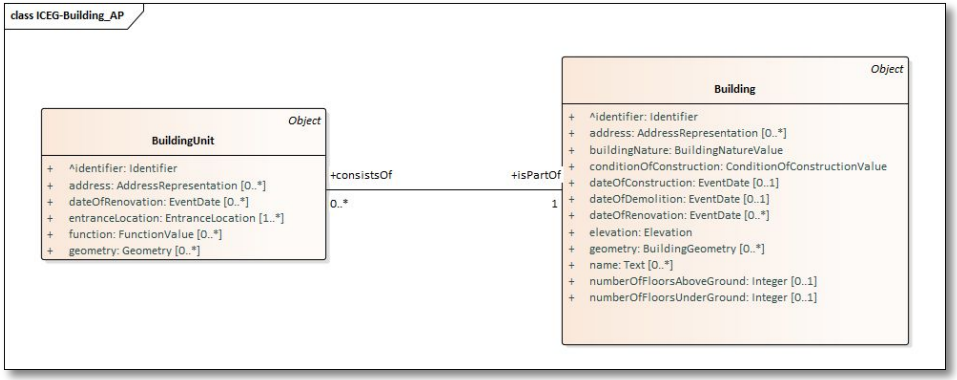
Characteristic of the building that makes it generally of interest for mappings applications. The characteristic may be related to the physical aspect and/or to the function of the building.

- **Code lists** Should we stick to INSPIRE or look into the AAPD/AGDP code list or other code lists?
  - Proposition to point or recommend certain code lists
  - Include a limited code list

Nature (from GitHub) | Limited code list:

- school
- airport
- port
- train station
- prison
- post office
- fire station
- police station
- community house
- hospital
- telecommunication tower
- Place of worship
- Other

Building Unit



Updated

- Addition of **dateOfRenovation** to Building Unit
- Addition of **entranceLocation** to Building Unit

Open issues

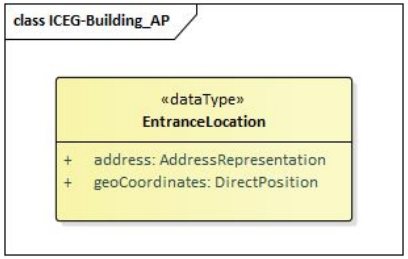
- Issue #86 | **function** should be captured only at building unit level.
- Issue #87 | “Construction” could be seen as an abstract class to “**Building**” and “**Building unit**”

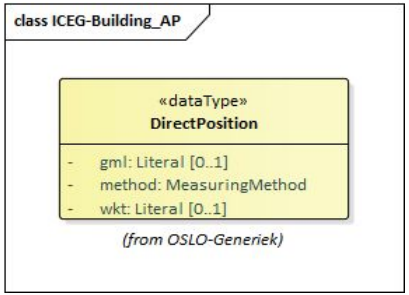
Questions

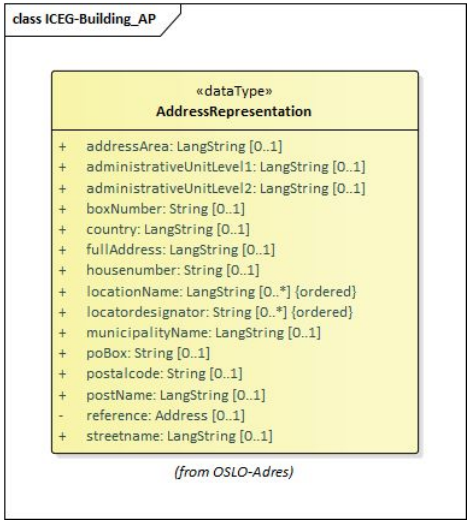
- Should Building unit be linked to CadastralParcel?

'image: Flaticon.com

Building (unit) address







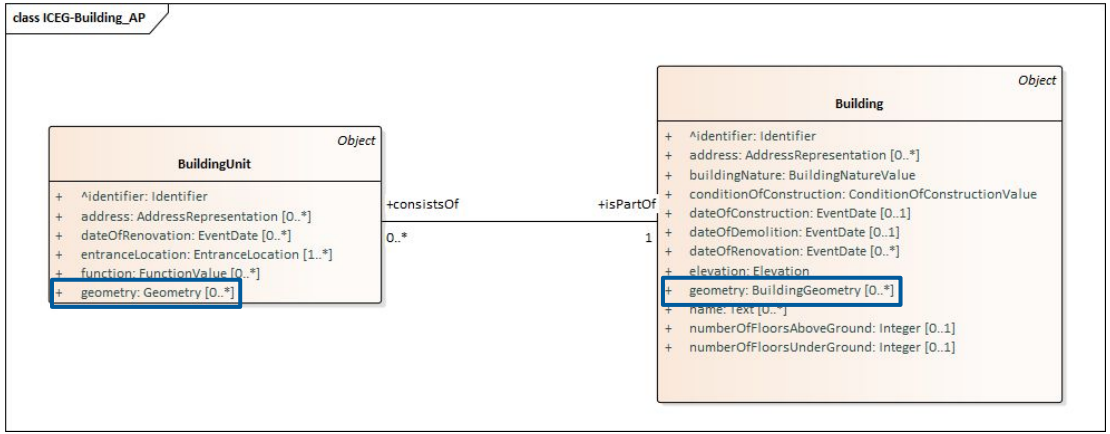
'image: Flaticon.com

Updated

- Renaming Langstring to LangString
- Renaming of GetypeerdeString to Literal

Geometry

Google wants to find and use 2D and 3D information to update their maps.



3D geometric representation at different levels of detail.

Level of detail 1
Consisting of the generalized representation of the outer boundary by vertical lateral surfaces and horizontal base polygons.

Level of detail 2
Consisting of the generalized representation of the outer boundary by vertical lateral surfaces and a prototypical roof shape or cover (from a defined list of roof shapes)

Level of detail 3 & 4
Consisting of the detailed representation of the outer boundary (including protrusions, facade elements and window recesses) as well as the roof shape (including dormers, chimneys)

Updated

- **HorizontalGeometryEstimatedAccuracy** and **VerticalGeometryEstimatedAccuracy** repositioned in the parent class

Next steps

Public review period

1

Start of the **public review period** next Week – a stable version of the model will be published by then

2

Members of the WG are invited to **review the specifications** and share it further with colleagues, domain experts, etc.

3

Members of the WG are invited to **share their feedback,** if any on GitHub – **minor comments**, such as editorial issues, fixes, will be addressed directly, and **major comments** will be subject for discussion and consensus on GitHub only!

4

Volunteers may **test the model against real-life data** to ensure its soundness. Volunteers may come forward now or via email and a template will be provided.

5

Feedback will be addressed by the editorial team and the **final specification** will be published online and presented during the **next and last webinar**, in late November

Feedback & collaboration

Feedback can be provided by email to the following people:

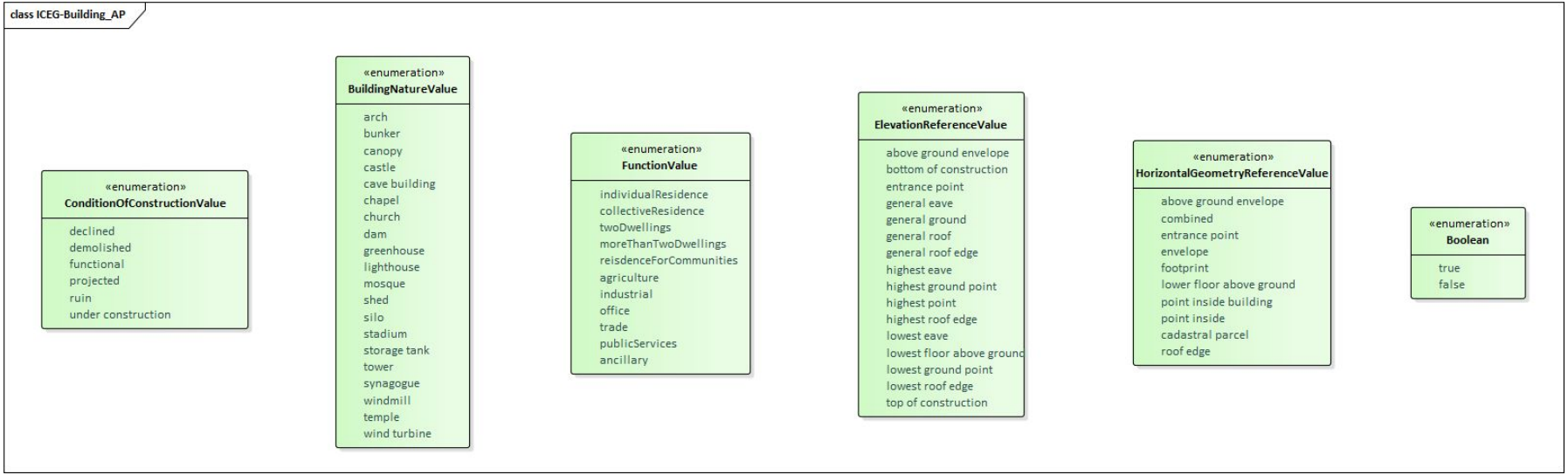
- christophe.bahim@pwc.com
- yaron.dassonneville@pwc.com

GitHub

Feedback/input can be provided through GitHub: https://github.com/belgif/thematic/issues
Use the label Building in your new issues.
Don’t hesitate to watch the activities!

Thanks!

Enumerations



Geometry Levels of detail