

Test ICEG -building 20221117

maandag 5 december 2022 10:23

This is a test of the datamodel of [ICEG-building](#) version 20221117 with real data. With [the data we received](#) we fabricated the following data examples in JSON-LD:

- TODO: [Data example single-family home](#)
- TODO: [Data example apartment](#)
- [Data-example VAC building](#)

Feedback can be found [here](#).

Validated in [JSON-LD playground](#).

Data

maandag 5 december 2022 10:39

See mail:



FW_ Objectdiagram _ datavoorbeeld ICEG Building

Thijs Geert

Van: Laporte Jan
Verzonden: maandag 28 november 2022 13:42
Aan: Thijs Geert
CC: Van Loo Christophe
Onderwerp: FW: Objectdiagram / datavoorbeeld ICEG Building
Bijlagen: GebouwEenheid_ErnestClaeslaan20_9051_Gent.json.txt; Gebouw_ErnestClaeslaan20_9051_Gent.json.txt; Gebouweenheid8_KoninginFabiolaan_3_json.txt; Gebouweenheid7_KoninginFabiolaan_3_json.txt; Gebouweenheid6_KoninginFabiolaan_3_json.txt; Gebouweenheid5_KoninginFabiolaan_3_json.txt; Gebouweenheid4_KoninginFabiolaan_3_json.txt; Gebouweenheid3_KoninginFabiolaan_3_json.txt; Gebouweenheid2_KoninginFabiolaan_3_json.txt; Gebouweenheid1_KoninginFabiolaan_3_json.txt; Gebouw_KoninginFabiolaan_3_json.txt; Gebouw2_KoninginMariaHendrikaplein_70_json.txt; Gebouweenheid2_KoninginMariaHendrikaplein_70_json.txt; Gebouw1_KoninginMariaHendrikaplein_70_json.txt; Gebouweenheid1_KoninginMariaHendrikaplein_70_json.txt

Opvolgingsvlag: Opvolgen
Vlagstatus: Met vlag

Hallo Geert,

Kan je hiermee verder?

Bye,
Jan

Van: De Coster Anaïs <anais.decoester.aiv@vlaanderen.be>
Verzonden: maandag 28 november 2022 13:22
Aan: Van Loo Christophe <christophe.vanloo@vlaanderen.be>; Laporte Jan <jan.laporte@vlaanderen.be>; Idziejczak Igor <igor.idziejczak@vlaanderen.be>; Claeys Koen <koen.claeys.aiv@vlaanderen.be>; Schaetsaert Nico <nico.schaetsaert@vlaanderen.be>
Onderwerp: RE: Objectdiagram / datavoorbeeld ICEG Building

Dag Jan,

Hieronder de voorbeelden.

We hebben dit ook intern gedocumenteerd op deze pagina:

<https://vlaamseoverheid.atlassian.net/wiki/spaces/VBR/pages/6193812988/Gebouwen+-+Voorbeelden>.

Hieronder de gegevens om naar Thijs te sturen.

We hebben voor 3 zaken gekozen: een eengezinswoning, een appartement en dan het VAC.

Per soort vindt u de gegevens van het adres, het detail gebouw URL en het detail gebouweenheid URL.

In bijlage kan u telkens de inhoud van deze details (ook de geometrie) terugvinden.

Laat maar weten als u nog voorbeelden nodig heeft.

Gegevens eengezinswoning:
Ernest Claeslaan 20, 9051 Gent



Gebouw URL: <https://api.basisregisters.vlaanderen.be/v2/gebouwen/5692082>

Gebouweenheid URL: <https://api.basisregisters.vlaanderen.be/v2/gebouweenheden/5693213>

Attachments: GebouwEenheid_ErnestClaeslaan20_9051_Gent.json.txt en

Gebouw_ErnestClaeslaan20_9051_Gent.json.txt

Gegevens appartement:

Koningin Fabiolalaan 3, 9000 Gent

Gebouw URL: <https://api.basisregisters.vlaanderen.be/v2/gebouwen/5747291>

Gebouweenheden URL: <https://api.basisregisters.vlaanderen.be/v2/gebouweenheden/5749407>,

<https://api.basisregisters.vlaanderen.be/v2/gebouweenheden/5749408>,

<https://api.basisregisters.vlaanderen.be/v2/gebouweenheden/5749409>,

<https://api.basisregisters.vlaanderen.be/v2/gebouweenheden/5749410>,

<https://api.basisregisters.vlaanderen.be/v2/gebouweenheden/5749411>,

<https://api.basisregisters.vlaanderen.be/v2/gebouweenheden/5749412>,

<https://api.basisregisters.vlaanderen.be/v2/gebouweenheden/5749413> en

<https://api.basisregisters.vlaanderen.be/v2/gebouweenheden/5749414>

Attachments: Gebouw_KoninginFabiolaan_3_json, Gebouweenheid1_KoninginFabiolaan_3_json,

Gebouweenheid2_KoninginFabiolaan_3_json, Gebouweenheid3_KoninginFabiolaan_3_json,

Gebouweenheid4_KoninginFabiolaan_3_json, Gebouweenheid5_KoninginFabiolaan_3_json,

Gebouweenheid6_KoninginFabiolaan_3_json, Gebouweenheid7_KoninginFabiolaan_3_json en

Gebouweenheid8_KoninginFabiolaan_3_json

Gegevens VAC:

Koningin Maria Hendrikaplein 70, 9000 Gent

Gebouwen URL: <https://api.basisregisters.vlaanderen.be/v2/gebouwen/18889551> en

<https://api.basisregisters.vlaanderen.be/v2/gebouwen/20882296>

Gebouweenheden URL: <https://api.basisregisters.vlaanderen.be/v2/gebouweenheden/18890634> en

<https://api.basisregisters.vlaanderen.be/v2/gebouweenheden/20882301>

Attachments: Gebouweenheid1_KoninginMariaHendrikaplein_70_json,

Gebouw1_KoninginMariaHendrikaplein_70_json, Gebouweenheid2_KoninginMariaHendrikaplein_70_json en

Gebouw2_KoninginMariaHendrikaplein_70_json

Met vriendelijke groeten,

Anaïs De Coster

Extern test consultant

Programma Geo- en Open Data Diensten – Team Basisregisters

Afdeling Data-Oplossingen

DIGITAAL VLAANDEREN

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Meer weten? Surf naar www.vlaanderen.be/digitaalvlaanderen



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From: Van Loo Christophe <christophe.vanloo@vlaanderen.be>
Sent: maandag 28 november 2022 10:11
To: Laporte Jan <jan.laporte@vlaanderen.be>; Idziejczak Igor <igor.idziejczak@vlaanderen.be>; De Coster Anaïs <anais.decoester.aiv@vlaanderen.be>; Claey's Koen <koen.claeys.aiv@vlaanderen.be>; Schaetsaert Nico <nico.schaetsaert@vlaanderen.be>
Subject: RE: Objectdiagram / datavoorbeeld ICEG Building

Dag Jan,

Had de vraag ook aan Nico gesteld, zet Nico mee in CC.

Groeten,
Christophe

Van: Laporte Jan <jan.laporte@vlaanderen.be>
Verzonden: maandag 28 november 2022 10:05
Aan: Idziejczak Igor <igor.idziejczak@vlaanderen.be>; De Coster Anaïs <anais.decoester.aiv@vlaanderen.be>; Claey's Koen <koen.claeys.aiv@vlaanderen.be>
CC: Van Loo Christophe <christophe.vanloo@vlaanderen.be>
Onderwerp: FW: Objectdiagram / datavoorbeeld ICEG Building

Hey,

Wie van jullie kan een uittreksel voor Geert aanmaken?
Zie hieronder.

Bye,
Jan

Van: Thijs Geert <geert.thijs@vlaanderen.be>
Verzonden: maandag 28 november 2022 9:22
Aan: Laporte Jan <jan.laporte@vlaanderen.be>; Van Loo Christophe <christophe.vanloo@vlaanderen.be>
CC: Van Hemelryck Hendrik <hendrik.vanhemelryck@vlaanderen.be>
Onderwerp: RE: Objectdiagram / datavoorbeeld ICEG Building

Hallo collega's,

Ik ontvang nog geen uittreksel uit het Gebouwenregister van jullie, zie onderstaande vraag. Is precies niet zo evident? Intussen is de tijd waarin ik het datavoorbeeld kon testen tov ICEG Building voor het afsluitende webinar verstreken. Sowieso is de looptijd van de publieke review in dat traject veel te kort (amper 1 maand), ik ga dat nu woensdag op het webinar ook zeggen. Misschien kan iemand van jullie dat bijtreden als je ook aanwezig bent?

Groeten,

Data example single-family home

maandag 5 december 2022 10:59

TODO

Data example apartment

maandag 5 december 2022 10:59

TODO

Data example VAC building

maandag 5 december 2022 10:56

The data-example:

```
{
  "@context":
  ["https://raw.githubusercontent.com/GeertThijs/MyFiles/master/ContextFileIc egBuilding.jsonld", {
    "xml-schema": ""http://www.w3.org/2001/XMLSchema#",
    "iso": ""http://def.isotc211.org/iso19103/2015/MeasureTypes#"
  }],
  "@graph": [{
    "@id": ""https://data.vlaanderen.be/id/gebouw/18889551"",
    "@type": "Building",
    "Building.identifier": {
      "@type": "Identifier",
      "Identifier.identifier": {
        "@value":
"https://data.vlaanderen.be/id/gebouw/18889551",
        "@type": "xml-schema:anyURI"
      }
    },
    "Building.geometry": {
      "@type": "BuildingGeometry2D",
      "BuildingGeometry2D.geometry": [{
        "@type": "Polygon",
        "Geometry.gml": {
          "@value": "<gml:Polygon srsName=\"https://www.opengis.net/def/crs/EPSG/0/31370\" xmlns:gml=\"http://www.opengis.net/gml/3.2\"><gml:exterior><gml:LinearRing>
<gml:posList>103689.89399524033 192103.54298338667 103685.38397923857
192105.16999138892 103679.44701923430 192088.59200737998 103678.78301923722
192086.73799137771 103687.47997923940 192083.63098337501 103694.07197924703
192102.03597538918 103689.89399524033 192103.54298338667</gml:posList>
</gml:LinearRing></gml:exterior></gml:Polygon>",
          "@type": "geosparql:gmlliteral"
        }
      }
    },
    "BuildingGeometry2D.horizontalGeometryReference": {
      "@type": "HorizontalGeometryReferenceValue",
      "@id":
"http://inspire.ec.europa.eu/codelist/HorizontalGeometryReferenceValue/combined"
    },
    "Building.conditionOfConstruction": {
      "@type": "ConditionOfConstructionValue",
      "@id":
"http://inspire.ec.europa.eu/codelist/ConditionOfConstructionValue/function al"
    },
    "Building.consistsOf":
    ["https://data.vlaanderen.be/id/gebouweenheid/18890634"],
    "Building.locatedOn": [{
      "@type": "CadastralParcel",
      "@id":
"https://data.vlaanderen.be/id/perceel/44809I0649-52E002"
    }],
    "Building.buildingNature": [{
      "@type": "BuildingNatureValue",
      "@id":
"http://inspire.ec.europa.eu/codelist/BuildingNatureValue/tower"
    }],
    "Building.dateOfConstruction": {
      "@type": "EventDate",
      "EventDate.startDate": "2011",

```



```

    "EventDate.endDate": "2014"
  },
  "Building.name": [{
    "@value": "Virginie Lovelinggebouw",
    "@language": "nl"
  }, {
    "@value": "Vlaams administratief Centrum Gent",
    "@language": "nl"
  }],
  "Building.numberOfFloorsAboveGround": 22,
  "Building.heightAboveGround": [{
    "@type": "HeightAboveGround",
    "HeightAboveGround.value": {
      "@type": "iso:Length",
      "iso:Measure.value": 90,
      "iso:Length.uom": {
        "@type": "iso:UomLength",
        "iso:UnitOfMeasure.uomIdentifier": "m"
      }
    }
  },
  "HeightAboveGround.heightReference": {
    "@type": "HeightReferenceValue",
    "@id":
"http://inspire.ec.europa.eu/codelist/ElevationReferenceValue/highestPoint"
  }
  ]],
  }, {
    "@id": "https://data.vlaanderen.be/id/gebouweenheid/18890634",
    "@type": "BuildingUnit",
    "BuildingUnit.identifier": {
      "@type": "Identifier",
      "Identifier.identifier": {
        "@value":
"https://data.vlaanderen.be/id/gebouweenheid/18890634",
        "@type": "xml-schema:anyURI"
      }
    }
  },
  "BuildingUnit.geometry": [{
    "@type": "Point",
    "Geometry.gml": {
      "@value": "<gml:Point srsName=\"https://www.opengis.net/def/crs/EPSSG/0/31370\" xmlns:gml=\"http://www.opengis.net/gml/3.2\"><gml:pos>103664.60 192046.67</gml:pos></gml:Point>",
      "@type": "geosparql:gml:literal"
    }
  }],
  "BuildingUnit.isPartOf":
"https://data.vlaanderen.be/id/gebouw/18889551",
  "BuildingUnit.address": [{
    "@type": "AddressRepresentation",
    "AddressRepresentation.streetname": {
      "@value": "Koningin Maria Hendrikaplein",
      "@language": "nl"
    }
  },
  "AddressRepresentation.houseNumber": "70",
  "AddressRepresentation.postalCode": "9000",
  "AddressRepresentation.municipalityName": {
    "@value": "Gent",
    "@language": "nl"
  }
  },
  "AddressRepresentation.fullAddress": {
    "@value": "Koningin Maria Hendrikaplein 70, 9000
Gent",
    "@language": "nl"
  }
  },
  "AddressRepresentation.reference":
"https://data.vlaanderen.be/id/adres/3706808"

```

```

    }],
    "BuildingUnit.currentUse": [{
      "@type": "CurrentUse",
      "CurrentUse.currentUse": {
        "@type": "CurrentUseValue",
        "@id":
"https://inspire.ec.europa.eu/codelist/CurrentUseValue/commerceAndServices"
      },
      "CurrentUse.percentage": 100
    }]
  }]
}

```

Comments:

- In the original data a structured identifier is used with an instantiated versionid. Here we used a simple identifier.
- As a result the versionid is lost, however we do not consider this a part of an application profile, it would be added in an implementation model (and then there would be other possibilities to include versioninfo).
- The Identifier.identifier was typed as xml-schema:anyURI, but something like mycodelist:buildingidentifier-flanders would be an alternative.
- Actually, an identifier is not necessary here as it is identical to the URI.
- We substituted GeographicalName by LanguageString.
- The BuildingUnit.currentUse was unknown in the data, we substituted this value with the INSPIRE commerceAndServices.
- All fields of the Building and BuildingUnit could be mapped to ICEG-Building except for gebouweenheidStatus.
- Some elements were not in the original data and could be added. For Building: buildingNature, dateOfConstruction, name, numberOfFloorsAboveGround, numberOfFloorsUnderGround, heightAboveGround. For BuildingUnit: entranceLocation.
- We used [info](#) from Wikipedia for that.
- As value for buildingNature we took "tower" as the closest possible value and because it is indeed a high building.
- The height of the building was rendered with iso19103.
- Not added: externalReference, elevation, entranceLocation...

Feedback

maandag 5 december 2022 10:44

- Multiplicity Building.identifier should be 1..* (or even 0..* as in RDF context every object has a uri identifier unless embedding in which case none is needed). Idem for BuildingUnit.identifier.
- Currently DirectPosition has an attribute "method", so also add this attribute to Geometry (used by GebouwenRegister, see [Data](#)).
- The attribute BuildingGeometry2D should be promoted to the BuildingGeometry level as it is equally valid for 2D as for 3D BuildingGeometry.
- Better rename the attribute Building.consistsOf by Building.buildingUnit 1) which is more specific than consistsOf and 2) is more in line with INSPIRE-Building BuildingInfo.buildingUnit.
- Same goes for the Building.locatedOn attribute which should be renamed to something like cadastralParcel, again more specific and more in accordance.
- Likewise for the BuildingUnit.ispartOf.
- REMARK: Building.locatedOn is missing in the spec (and the contextfile), probably because it is not tagged.
- The CadastralParcel.isPartOf is badly named (difficult to perceive a CadastralParcel as part of a Building, "building" would be better). It is also unnecessary as CadastralParcels are not central to this data exchange.
- Use GeographicalName only for Building.name, ie replace datatype GeographicalName in the attributes of AddressRepresentation to LangString. Purpose of AddressRepresentation is to describe an address label, not to document its components as GeographicalNames (with attributes like source and so on).
- Alternative (but not recommended): describe in the usageNote the possibility to substitute GeographicalName by rdfs:LanguageString. See also [the INSPIRE rdf guidelines on this topic](#).
- Better to rename EventDate to DateOfEvent in accordance with INSPIRE.
- To avoid two attributes like "currentuse" (BuildingUnit.currenUuse, CurrentUse.currentUse) better rename CurrentUse.currentUse to CurrentUse.type.
- Length should better be mapped on iso:Length (see example 8 in note on [Quantitative values](#)). Further explain in the usageNote that this can be substituted by other classes like qudt:Quantity or, even simpler, qudt:QuantityValue = similar to the OSLO approach) or ucum (resp examples 6 or 7 or 4-5).
- Identifier.identificator should be renamed to Identifier.identifier.
- Datatype of Identifier.identifier should be Literal as this is a language-independent attribute. REMARK: LangString is a subtype of Literal, so it remains an option.
- Change the multiplicity of the attributes of EntranceLocation to 0..1 as it should be possible to just give an address or just geoCoordinates.
- REMARK: Building.entranceLocation is superfluous as 1) its position can be given by an extra Building.geometry of type "Point" and with a horizontalGeometryReference with value "EntrancePoint" and 2) indirect locations like floor number, door number can be described by Addressrepresentation.locatorDesignator. As for BuildingUnit.entranceLocation option 1 is not available but probably unnecessary as it implies collecting gps-coordinates INSIDE a Building.

Quantitative values

woensdag 7 december 2022 9:44

There are several ways to express quantitative values like eg the height of a building (see also note [Eenheid: oplossingen](#)):

Nr	Example	Comment
1	<pre>{ "@context": { "@vocab": "https://example.com/ns/" }, "length": 90 }</pre>	<ul style="list-style-type: none"> - Unit is not part of the data, so agreement needed on a certain unit eg meters AND on used symbol eg ISO2955.
2	<pre>{ "@context": { "@vocab": "https://example.com/ns/" }, "length": "90 m" }</pre>	<ul style="list-style-type: none"> + Unit is part of the data so several units possible - Agreement needed on used symbols eg ISO2955. - Value and unit in one string, parsing needed.
3	<pre>{ "@context": { "@vocab": "https://example.com/ns/" }, "value": 90, "unit": "m" }</pre>	<ul style="list-style-type: none"> - Unit is part of the data so several units possible but agreement needed on used symbols eg ISO2955. + Value and unit separate, no parsing needed. - Unitvalue is string
4	<pre>{ "@context": { "@vocab": "https://example.com/ns/", "ucum": "https://w3id.org/cdt/" }, "length": { "@value": "90 m", "@type": "ucum:length" } }</pre>	<ul style="list-style-type: none"> + Unit is part of the data so several units possible. + Data is a literal with type ucum:length which implies that ucum is used which in turn implies that ISO2955 symbols is used. - Value and unit in one string, parsing needed. +/- Quantitykind is more or less explicit.
5	<pre>{ "@context": { "@vocab": "https://example.com/ns/", "ucum": "https://w3id.org/cdt/ucum" }, "length": { "value": 90, "unit": { "@value": "m", "@type": "ucum:ucumunit" } } }</pre>	<ul style="list-style-type: none"> + Unit is part of the data so several units possible. + Unit is a literal with type ucum:ucumunit which implies that ucum is used which in turn implies that ISO2955 symbols is used. + Value and unit separate, no parsing needed. - Quantitykind is not explicit. - Unitvalue is string
6	<pre>{ "@context": { "@vocab": "https://example.com/ns/", "qudt": "https://qudt.org/schema/qudt/" }, "length": { "@type": "qudt:QuantityValue", "qudt:value": 90, "qudt:unit": { "@type": "qudt:Unit", "@id": "http://qudt.org/vocab/unit/M" } } }</pre>	<ul style="list-style-type: none"> + Unit is part of the data so several units possible. + Unit is typed as such.. + Unit unequivocally identified by uri. + Value and unit separate, no parsing needed. - Quantitykind is not explicit. + Data is typed (as a QuantityValue).
7	<pre>{ "@context": { "@vocab": "https://example.com/ns/", "qudt": "https://qudt.org/schema/qudt/" }, "length": { "@type": "qudt:Quantity", "qudt:hasQuantityKind": { "@type": "qudt:QuantityKind", "@id": "http://qudt.org/vocab/quantitykind/Length" }, "qudt:quantityValue": { "@type": "qudt:QuantityValue", "qudt:value": 90, "qudt:unit": { "@type": "qudt:Unit", "@id": "http://qudt.org/vocab/unit/M" } } } }</pre>	<ul style="list-style-type: none"> + Unit is part of the data so several units possible. + Unit is typed as such. + Unit unequivocally identified by uri. + Value and unit separate, no parsing needed. + Quantitykind is explicitated unequivocally by uri. + Data is typed (as a Quantity).

8	<pre> } { "@context": { "@vocab": "https://example.com/ns/", "iso": "http://def.isotc211.org/iso19103/2015/MeasureTypes#" }, "length": { "@type": "iso:Length", "iso:Measure.value": 90, "iso:Length.uom": { "@type": "iso:UomLength", "iso:UnitOfMeasure.uomIdentifier": "m" } } } </pre>	<ul style="list-style-type: none"> • + Unit is part of the data so several units possible • + Unit has type iso:Length which implies that iso is used which in turn implies that ISO2955 symbols is used • + Unit is typed (as uomLength). • + Value and unit separate, no parsing needed. • + Data is typed (as Length). • - Unitvalue is string. • - Iso uri's not published.
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