

# Process of putting CCI content into the new bSDD

bSDD workshop – May 19<sup>th</sup>, 2021

# CCI - Background



## Construction Classification International Collaboration (CCIC)

CCIC is a non-profit organisation advocating the adoption of a common construction classification system. This will help to increase international competitiveness, improve cooperation and knowledge sharing and enable faster adoption of digital working methods in the construction and real estate sectors.

[READ MORE](#)

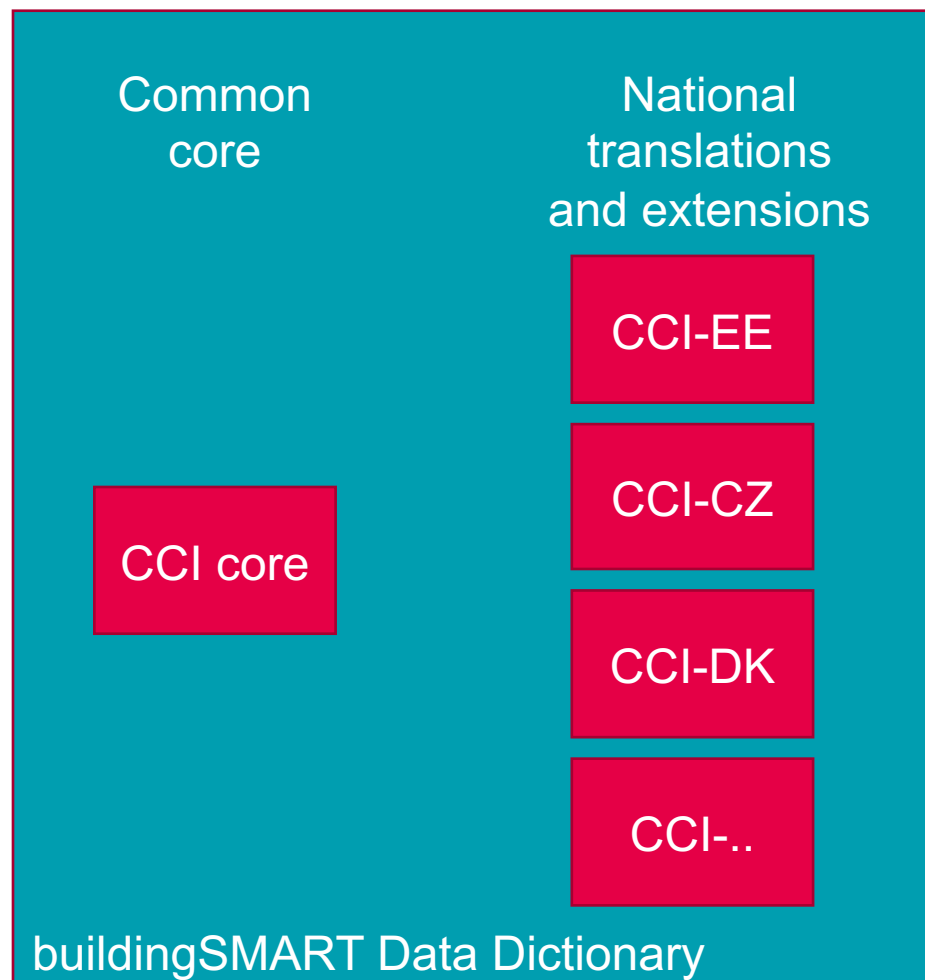
CCI is a classification system based on ISO/IEC 81346-2 and -12

The tables in CCI are to a large extent based on the CCS classification system from Denmark

The CCIC organization consisting of members from 4 countries is the forum for collaboration around CCI

Representatives from 4 more countries are participating in the CCIC Technical Committee work

# Expected benefits



The aim of putting CCI into bSDD is to make it publicly available through a common interface

Translations of terms and definitions will be available through bSDD

As National editions evolve over time, it will be possible to discern the areas where the National versions are deviating from the core

# IFC alignment

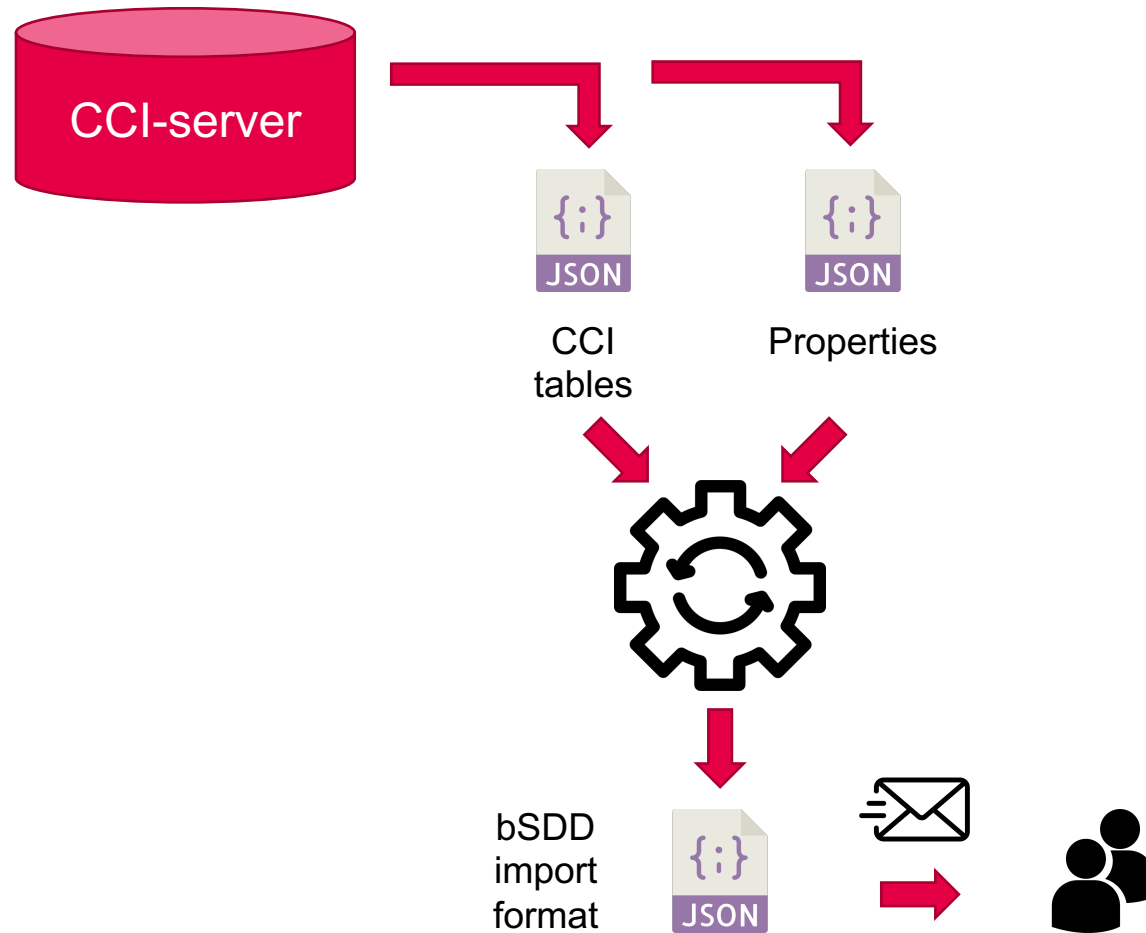


Classification	
Window	ENGLISH
Namespace URI	http://identifier.buildingsmart.org/uri/molio/cciconstruction-1.0/class/L-QQA
Domain	CCI Construction
Domain version	1.0
Domain license	<a href="#">MIT license</a>
Domain state	Released
More info	<a href="https://anvisninger.molio.dk/Gratis-vaerktojer/CCI_Klassifikation">https://anvisninger.molio.dk/Gratis-vaerktojer/CCI_Klassifikation</a>
Domain quality assurance procedure	Private
Owner	Molio
Parent classification	<a href="#">Space access object</a>
Related IFC entities	<a href="#">IfcWindow IfcWindowStandardCase</a>
Description	space access object for light entry only
Synonym(s)	Window element
Properties	
<a href="#">FireExit</a>	Indication whether this object is designed to serve as an exit in the case of fire TRUE or not FALSE . Here whether the space in case of e.g., a corridor is designed to serve as an exit space, e.g., for fire escape purposes.
<a href="#">FireRating</a>	Fire rating for the element. It is given according to the national fire safety classification.
<a href="#">GlassLayers</a>	Number of glass layers within the frame. E.g. 2 for double glazing.
<a href="#">HasDrive</a>	Indication whether this object has an automatic drive to operate it TRUE or no drive FALSE
<a href="#">IsExternal</a>	Indication of whether the junction box type is allowed for exposure to outdoor elements set TRUE where external exposure is allowed .
<a href="#">ThermalTransmittance</a>	Thermal transmittance coefficient U Value of an element.

Relationships between CCI classes and IFC entities are included in the upload

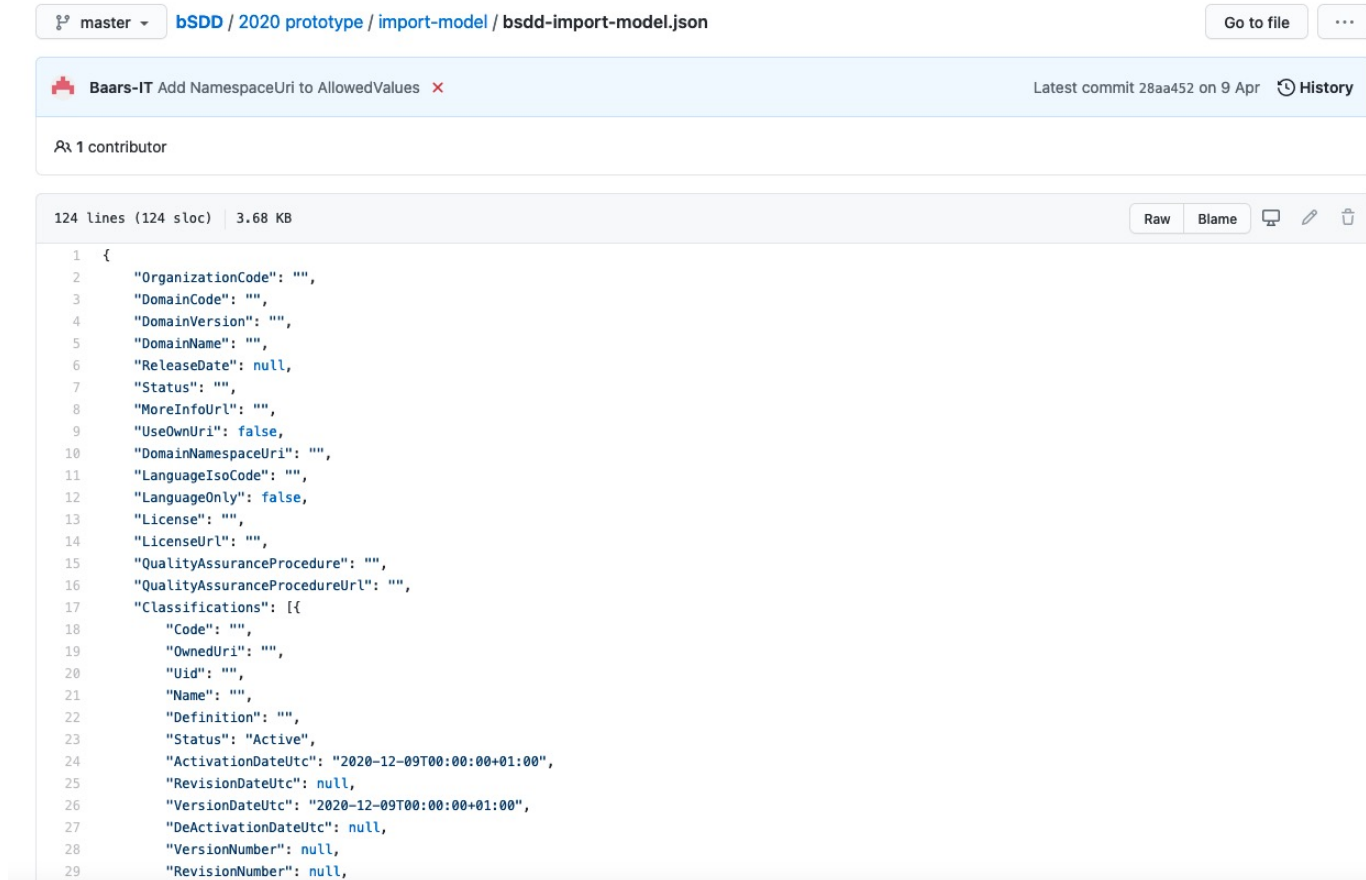
The most commonly used IFC properties for the classes are linked to the content

# Scope of task



1. Retrieve CCI classes and properties from CCI API
2. Convert CCI JSON to bSDD JSON
3. Send bSDD JSON to Léon and Erik

# Import template



```
1 {
2   "OrganizationCode": "",
3   "DomainCode": "",
4   "DomainVersion": "",
5   "DomainName": "",
6   "ReleaseDate": null,
7   "Status": "",
8   "MoreInfoUrl": "",
9   "UseOwnUri": false,
10  "DomainNamespaceUri": "",
11  "LanguageIsoCode": "",
12  "LanguageOnly": false,
13  "License": "",
14  "LicenseUrl": "",
15  "QualityAssuranceProcedure": "",
16  "QualityAssuranceProcedureUrl": "",
17  "Classifications": [{
18    "Code": "",
19    "OwnedUri": "",
20    "Uid": "",
21    "Name": "",
22    "Definition": "",
23    "Status": "Active",
24    "ActivationDateUtc": "2020-12-09T00:00:00+01:00",
25    "RevisionDateUtc": null,
26    "VersionDateUtc": "2020-12-09T00:00:00+01:00",
27    "DeActivationDateUtc": null,
28    "VersionNumber": null,
29    "RevisionNumber": null,
```

Github repository:

<https://github.com/buildingSMART/bSDD/tree/master/2020%20prototype/import-model>

Format for properties:

<http://identifier.buildingsmart.org/uri/buildingsmart/ifc-4.3/prop/ThermalTransmittance>

# Considerations?

How many  
domains?

Which  
properties  
to include?

How to  
refer to  
properties?

Each domain in bSDD has one  
"starting point" and all content in  
the domain relates to that

Only IFC properties are included  
because we are in a transition  
phase concerning the handling of  
properties

Properties are linked through  
namespace uri's for IFC4.3  
properties

# Support

180 Lines (154 sloc) 30.2 KB Raw Blame

## buildingSMART Data Dictionary JSON import model

You can deliver data for the buildingSMART Data Dictionary by using the bSDD JSON import model format. This document explains this format.

Click on the link to get the list of allowed codes for [countries](#), [languages](#), [units](#), [reference documents](#) and [ifc classification names](#). If you think there are reference items missing, please let us know.

### General notes

-- Default values will only be applied if a field is not specified. If you specify a field, "null" will not always be a valid value, even if there is a default.

### Domain

Contains general information about the domain and the delivered data.

Field	DataType	Required?	Translatable?	Description
OrganizationCode	Text	Yes	No	If you do not have a code for your organization yet, request one at <a href="mailto:bsdd_support@buildingSMART.org">bsdd_support@buildingSMART.org</a>
DomainCode	Text	Yes	No	Code of the domain, preferably short, only alphabetical characters and numbers allowed, must start with alphabetical character E.g. "ifc"
DomainVersion	Text	Yes	No	Version of the domain data in format "x.y". E.g.: 4.3

Documentation:

<https://github.com/buildingSMART/bSDD/blob/master/2020%20prototype/import-model/bSDD%20JSON%20import%20model.md>

Issues solved through mail dialogue with Léon and Erik in 7 emails over a 10 day period



# Import file

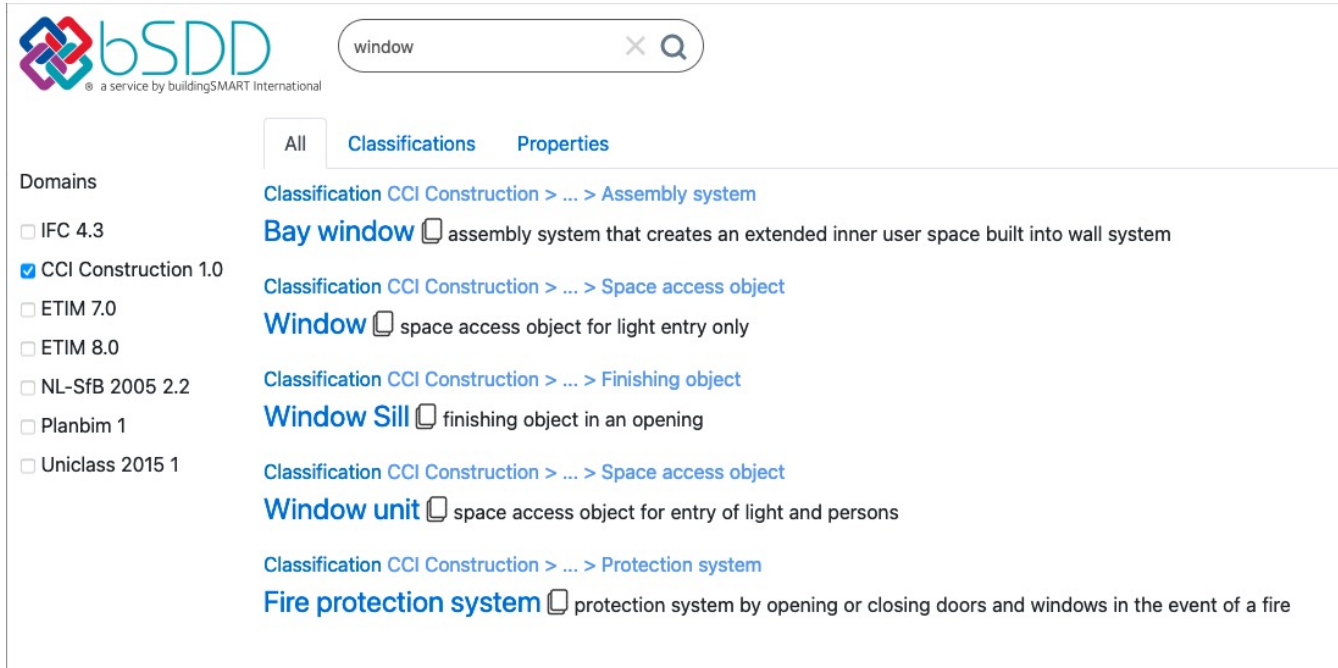
```
() bSDD_CCIImport.json x
Users > sorenspile > Dropbox (Personlig) > Epsilon it > IMT-7 Klippeport 2020-10 > CCI2bSDD > {} bSDD_CCIImport.json > ...
1  {}
2  "OrganizationCode": "molio",
3  "DomainCode": "cciconstruction",
4  "DomainVersion": "1.0",
5  "DomainName": "CCI Construction",
6  "ReleaseDate": "2020-01-01T00:00:00",
7  "Status": "Released",
8  "MoreInfoUrl": "https://anvisninger.molio.dk/Gratis-vaerktojer/CCI_Klassifikation",
9  "LanguageIsoCode": "en-GB",
10 "LanguageOnly": false,
11 "License": "MIT license",
12 "LicenseUrl": "https://ccs.molio.dk/Home/News/EndUserLicense?sc_lang=en-gb",
13 "QualityAssuranceProcedure": "Private",
14 "QualityAssuranceProcedureUrl": "",
15 "Classifications": [
16   {
17     "ActivationDateUtc": "2020-01-01T00:00:00",
18     "ClassificationProperties": [
19       ],
20     "Code": "cefc",
21     "CountriesOfUse": [
22       "DK",
23       "EE",
24       "CZ"
25     ],
26     "CountryOfOrigin": "DK",
27     "CreatorLanguageIsoCode": "da-DK",
28     "DeActivationDateUtc": null,
29     "Definition": "construction element with characteristics which represents a general inherent function",
30     "Name": "Construction Elements - Functional Systems",
31     "RelatedIfcEntityNamesList": [
32       ],
33     "RevisionDateUtc": null,
34     "RevisionNumber": "1",
35     "Status": "Released",
36     "Synonyms": [
37       ],
38     "VersionDateUtc": "2020-01-01T00:00:00"
39   },
40   {
41     "ActivationDateUtc": "2020-01-01T00:00:00"
```

Finished file for bSDD import

Header-section and all classes at the same level

Tree-structure is established by referring to parent-classes

# Outcome



The screenshot displays the bSDD search interface. At the top left is the bSDD logo with the tagline 'a service by buildingSMART International'. A search bar at the top center contains the text 'window'. Below the search bar are three tabs: 'All', 'Classifications', and 'Properties'. On the left side, under the heading 'Domains', there is a list of domain checkboxes: IFC 4.3, CCI Construction 1.0 (which is checked), ETIM 7.0, ETIM 8.0, NL-SfB 2005 2.2, Planbim 1, and Uniclass 2015 1. The main content area shows search results for 'window'. The first result is 'Bay window' under the classification 'Classification CCI Construction > ... > Assembly system', with a description: 'assembly system that creates an extended inner user space built into wall system'. The second result is 'Window' under 'Classification CCI Construction > ... > Space access object', with a description: 'space access object for light entry only'. The third result is 'Window Sill' under 'Classification CCI Construction > ... > Finishing object', with a description: 'finishing object in an opening'. The fourth result is 'Window unit' under 'Classification CCI Construction > ... > Space access object', with a description: 'space access object for entry of light and persons'. The fifth result is 'Fire protection system' under 'Classification CCI Construction > ... > Protection system', with a description: 'protection system by opening or closing doors and windows in the event of a fire'.

The result can be browsed at  
[https://bs-dd-search-  
prototype.azurewebsites.net/](https://bs-dd-search-prototype.azurewebsites.net/)

It shall be perceived as a preliminary POC-version which will be updated as the work in the CCIC Technical Committee progresses