

# Platform front-end interfaces

## D5.3 BuiltHub integrated platform (DRAFT)



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# Platform front-end interfaces

1. Introduction
2. Authentication
3. SPARQL Editor
4. Dashboard

# 1. Introduction



# Introduction to BuiltHub Web-Platform

Link: [platform.builthub.eu](https://platform.builthub.eu)

Some web interfaces have been developed in order to create a GUI for the platform. These interfaces have the basic and advanced functionalities to retrieve data from the database.

Two main interfaces have been developed:

- a) SPARQL entry point: editor to launch your own queries (advanced).
- b) Dashboard: user-friendly with easy filters (basic).

- **Authentication**
  - Login
  - Logout
- **Dashboard**
  - Filters
  - Table data / Graphics
  - Map
  - Data download
  - Data disclaimer
- **SPARQL Integration Point**
  - Editor
  - Features
  - Output download data options



## 2. Authentication



# Authentication

Once you access to [platform.builthub.eu](https://platform.builthub.eu), the first screen is for access control:



To Log in, an User and Password must be granted by the system administrator

Username

Password

Two buttons:

- Log In: click to verify the credentials
- Reset: remove the Username and Password



# Authentication

Once you have been logged, you can log out clicking on “Log out” in the top-right side of the screen:



Button to close the current session

## 3. SPARQL Editor





# SPARQL editor



Home SPARQL Queries **Dashboard** Log out

Records per country × BuiltHub Master Query × Energy consumption in cooking (Greece 2015) × Energy consumption in Households (Austria 2000-2015) × Total number of dwellings NUTS 2 (UK 1900-2006) × +

```
prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#>
prefix cbhsv: <https://data.builthub.eu/ontology/cbhsv#>
11 SELECT ?identifier ?startDate ?endDate ?location ?nutsLevel ?btype ?energy ?measuredElement ?topic ?msrValue ?msrUnit
12 WHERE {
13   ?s dc:identifier ?identifier ;
14     dct:temporal/dcat:startDate ?startDate ;
15     dct:temporal/dcat:endDate ?endDate ;
16     dcat:spatial ?locationUri ;
17     dcat:spatial/skos:prefLabel ?location ;
18     cbhsv:hasNUTS/nuts:level ?nutsLevel ;
19     cbhsv:measuredElement ?measuredElement ;
```

Vocabularies used in the query

Button to download results

Table Response 272 results in 0.671 seconds

Filter query results Page size: 50 

	identifier	startDate	endDate	location	nutsLevel	btype	energy	measuredElement	topic	msrValue	msrUnit
1	Ukd7TotalY19191945Dw1292700	"1919-01-01"^^xsd:date	"1945-12-31"^^xsd:date	"United Kingdom"@en	"2.0"^^xsd:decimal			Total number of dwellings		"129270.0"^^xsd:float	Number
2	Ukd7TotalY19461960Dw979650	"1946-01-01"^^xsd:date	"1960-12-31"^^xsd:date	"United Kingdom"@en	"2.0"^^xsd:decimal			Total number of dwellings		"97965.0"^^xsd:float	Number
3	Ukd7TotalY19611970Dw898400	"1961-01-01"^^xsd:date	"1970-12-31"^^xsd:date	"United Kingdom"@en	"2.0"^^xsd:decimal			Total number of dwellings		"89840.0"^^xsd:float	Number
4	Ukd7TotalY19711980Dw605050	"1971-01-01"^^xsd:date	"1980-12-31"^^xsd:date	"United Kingdom"@en	"2.0"^^xsd:decimal			Total number of dwellings		"60505.0"^^xsd:float	Number
5	Ukd7TotalY19811990Dw462300	"1981-01-01"^^xsd:date	"1990-12-31"^^xsd:date	"United Kingdom"@en	"2.0"^^xsd:decimal			Total number of dwellings		"46230.0"^^xsd:float	Number
6	Ukd7TotalY19912000Dw475350	"1991-01-01"^^xsd:date	"2000-12-31"^^xsd:date	"United Kingdom"@en	"2.0"^^xsd:decimal			Total number of dwellings		"47535.0"^^xsd:float	Number
7	Ukd7TotalY20012005Dw230800	"2001-01-01"^^xsd:date	"2005-12-31"^^xsd:date	"United Kingdom"@en	"2.0"^^xsd:decimal			Total number of dwellings		"23080.0"^^xsd:float	Number
8	Ukd7TotalY19191945Dw1675450	"1900-01-01"^^xsd:date	"1919-12-31"^^xsd:date	"United Kingdom"@en	"2.0"^^xsd:decimal			Total number of dwellings		"167545.0"^^xsd:float	Number
9	Ukd7TotalY19191945Dw713100	"1919-01-01"^^xsd:date	"1945-12-31"^^xsd:date	"United Kingdom"@en	"2.0"^^xsd:decimal			Total number of dwellings		"71310.0"^^xsd:float	Number
10	Ukd7TotalY19461960Dw699350	"1946-01-01"^^xsd:date	"1960-12-31"^^xsd:date	"United Kingdom"@en	"2.0"^^xsd:decimal			Total number of dwellings		"69935.0"^^xsd:float	Number
11	Ukd7TotalY19611970Dw603350	"1961-01-01"^^xsd:date	"1970-12-31"^^xsd:date	"United Kingdom"@en	"2.0"^^xsd:decimal			Total number of dwellings		"60335.0"^^xsd:float	Number
12	Ukd7TotalY19711980Dw393900	"1971-01-01"^^xsd:date	"1980-12-31"^^xsd:date	"United Kingdom"@en	"2.0"^^xsd:decimal			Total number of dwellings		"39390.0"^^xsd:float	Number
13	Ukd7TotalY19811990Dw299100	"1981-01-01"^^xsd:date	"1990-12-31"^^xsd:date	"United Kingdom"@en	"2.0"^^xsd:decimal			Total number of dwellings		"29910.0"^^xsd:float	Number

Table of results



# SPARQL editor

HomeSPARQL QueriesDashboardLog out

Records per country × BuiltHub Master Query × Energy consumption in cooking (Greece 2015) × Energy consumption in Housholds (Austria 2000-2015) × Total number of dwellings NUTS 2 (UK 1900-2006) × +

```
20  cbhsv:siec/skos:prefLabel ?energy ;
21  cbhsv:measuredElement ?measuredElement ;
22  cbhsv:measurementUnit ?msrUnit ;
23  cbhsv:measurementValue ?msrValue .
24  OPTIONAL { ?s cbhsv:btype/skos:prefLabel ?btype }
25  OPTIONAL { ?s cbhsv:topic/skos:prefLabel ?topic }
26  OPTIONAL { ?s cbhsv:btype ?btypeUri }
27  OPTIONAL { ?s cbhsv:topic ?topicUri }
28  FILTER (lang(?location) = 'en')
29  FILTER (?startDate >= "2000-01-01"^^xsd:date)
30  FILTER (?endDate <= "2015-01-01"^^xsd:date)
31  FILTER (?locationUri=http://publications.europa.eu/resource/authority/country/AUT>)
32  FILTER (?nutsLevel="0.0"^^xsd:decimal)
33  FILTER (?measuredElement="Energy consumption in households")
34  FILTER (?siecUri=http://dd.eionet.europa.eu/vocabulary/eurostat/siec/E7000>)
35  } LIMIT 1000
```

Filters used in the query

TableResponse15 results in 0.255 seconds

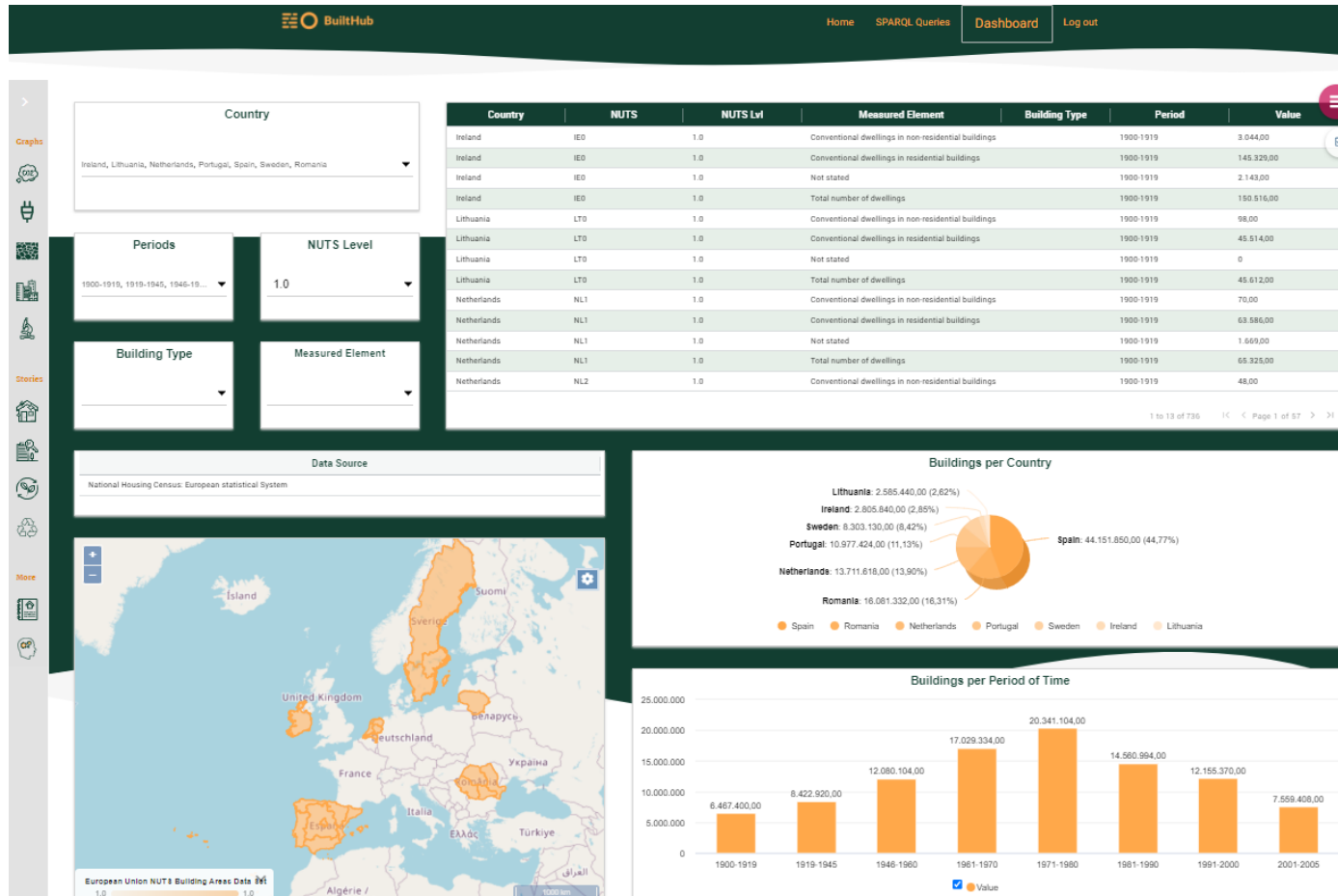
identifier	startDate	endDate	location	nutsLevel	btype	energy	measuredElement	topic	msrValue	msrUnit
1 Austria2000Electricity	"2000-01-01"^^xsd:date	"2000-12-31"^^xsd:date	"Austria"@en	"0.0"^^xsd:decimal		Electricity	Energy consumption in households		"20.27"^^xsd:float	Percentage
2 Austria2001Electricity	"2001-01-01"^^xsd:date	"2001-12-31"^^xsd:date	"Austria"@en	"0.0"^^xsd:decimal		Electricity	Energy consumption in households		"20.82"^^xsd:float	Percentage
3 Austria2002Electricity	"2002-01-01"^^xsd:date	"2002-12-31"^^xsd:date	"Austria"@en	"0.0"^^xsd:decimal		Electricity	Energy consumption in households		"22.35"^^xsd:float	Percentage
4 Austria2003Electricity	"2003-01-01"^^xsd:date	"2003-12-31"^^xsd:date	"Austria"@en	"0.0"^^xsd:decimal		Electricity	Energy consumption in households		"22.63"^^xsd:float	Percentage
5 Austria2004Electricity	"2004-01-01"^^xsd:date	"2004-12-31"^^xsd:date	"Austria"@en	"0.0"^^xsd:decimal		Electricity	Energy consumption in households		"22.89"^^xsd:float	Percentage
6 Austria2005Electricity	"2005-01-01"^^xsd:date	"2005-12-31"^^xsd:date	"Austria"@en	"0.0"^^xsd:decimal		Electricity	Energy consumption in households		"21.45"^^xsd:float	Percentage
7 Austria2006Electricity	"2006-01-01"^^xsd:date	"2006-12-31"^^xsd:date	"Austria"@en	"0.0"^^xsd:decimal		Electricity	Energy consumption in households		"21.7"^^xsd:float	Percentage
8 Austria2007Electricity	"2007-01-01"^^xsd:date	"2007-12-31"^^xsd:date	"Austria"@en	"0.0"^^xsd:decimal		Electricity	Energy consumption in households		"22.62"^^xsd:float	Percentage
9 Austria2008Electricity	"2008-01-01"^^xsd:date	"2008-12-31"^^xsd:date	"Austria"@en	"0.0"^^xsd:decimal		Electricity	Energy consumption in households		"22.35"^^xsd:float	Percentage
10 Austria2009Electricity	"2009-01-01"^^xsd:date	"2009-12-31"^^xsd:date	"Austria"@en	"0.0"^^xsd:decimal		Electricity	Energy consumption in households		"22.82"^^xsd:float	Percentage
11 Austria2010Electricity	"2010-01-01"^^xsd:date	"2010-12-31"^^xsd:date	"Austria"@en	"0.0"^^xsd:decimal		Electricity	Energy consumption in households		"21.47"^^xsd:float	Percentage
12 Austria2011Electricity	"2011-01-01"^^xsd:date	"2011-12-31"^^xsd:date	"Austria"@en	"0.0"^^xsd:decimal		Electricity	Energy consumption in households		"22.67"^^xsd:float	Percentage
13 Austria2012Electricity	"2012-01-01"^^xsd:date	"2012-12-31"^^xsd:date	"Austria"@en	"0.0"^^xsd:decimal		Electricity	Energy consumption in households		"22.59"^^xsd:float	Percentage
14 Austria2013Electricity	"2013-01-01"^^xsd:date	"2013-12-31"^^xsd:date	"Austria"@en	"0.0"^^xsd:decimal		Electricity	Energy consumption in households		"21.92"^^xsd:float	Percentage

## 4. Dashboard



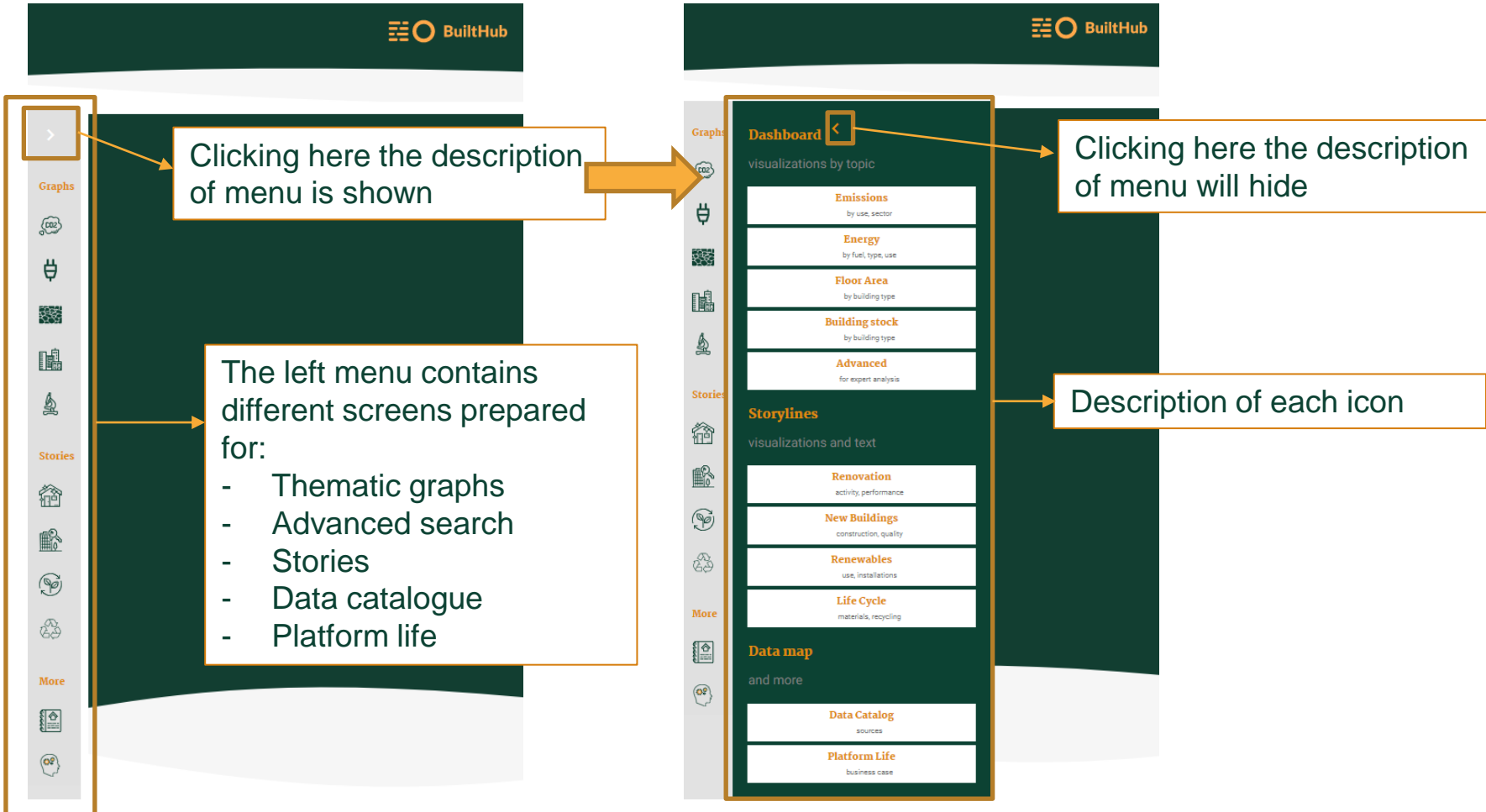
# Dashboard

Holistic view of the dashboard:



# Dashboard – Left side menu

There is a left bar that contains a menu with the customised screens of each section:



The diagram illustrates the BuiltHub dashboard interface, focusing on the left side menu. It shows two states: the menu expanded and the menu collapsed.

**Left Side Menu (Expanded):**

- Graphs:** Contains icons for various data visualizations.
- Stories:** Contains icons for various content types.
- More:** Contains a 'More' icon and a 'Platform Life' icon.

**Annotations:**

- Clicking here the description of menu is shown:** Points to the 'Graphs' section of the left menu.
- The left menu contains different screens prepared for:**
  - Thematic graphs
  - Advanced search
  - Stories
  - Data catalogue
  - Platform life
- Clicking here the description of menu will hide:** Points to the 'Dashboard' icon in the top right corner of the dashboard area.
- Description of each icon:** Points to the 'Stories' section of the left menu.

**Dashboard Area (Collapsed Menu):**

- Dashboard:** Visualizations by topic.
  - Emissions (by use, sector)
  - Energy (by fuel, type, use)
  - Floor Area (by building type)
  - Building stock (by building type)
  - Advanced (for expert analysis)
- Storylines:** Visualizations and text.
  - Renovation (activity, performance)
  - New Buildings (construction, quality)
  - Renewables (use, installations)
  - Life Cycle (materials, recycling)
- Data map:** and more.
  - Data Catalog (sources)
  - Platform Life (business case)



# Dashboard - Filters

Using selectors, it is possible to filter the data:

**Country**  
Ireland, Lithuania, Netherlands, Portugal, Spain, Sweden, Romania

**Periods**  
1900-1919, 1919-1945, 1946-19...

**Building Type**

**NUTS Level**  
1.0

**Measured Element**

Country	NUTS	NUTS Lvl	Measured Element	Building Type	Period	Value
Ireland	IE0	1.0	Conventional dwellings in non-residential buildings		1900-1919	3.044,00
Ireland	IE0	1.0	Conventional dwellings in residential buildings		1900-1919	145.329,00
Ireland	IE0	1.0	Not stated		1900-1919	2.143,00
Ireland	IE0	1.0	Total number of dwellings		1900-1919	150.516,00
Lithuania	LT0	1.0	Conventional dwellings in non-residential buildings		1900-1919	98,00
Lithuania	LT0	1.0	Conventional dwellings in residential buildings		1900-1919	45.514,00
Lithuania	LT0	1.0	Not stated		1900-1919	0
Lithuania	LT0	1.0	Total number of dwellings		1900-1919	45.612,00
Netherlands	NL1	1.0	Conventional dwellings in non-residential buildings		1900-1919	70,00
Netherlands	NL1	1.0	Conventional dwellings in residential buildings		1900-1919	63.586,00
Netherlands	NL1	1.0	Not stated		1900-1919	1.669,00
Netherlands	NL1	1.0	Total number of dwellings		1900-1919	65.325,00
Netherlands	NL2	1.0	Conventional dwellings in non-residential buildings		1900-1919	48,00

**Data Source**  
National Housing Census: European statistical System

**Buildings per Country**  
Lithuania: 2.585.440,00 (2,62%)  
Ireland: 2.805.840,00 (2,85%)

The filters only show the available data



## Dashboard – Result (1/2)

After choose filters, the data is retrieved and shown:

Button to download table

Country		Country	NUTS	NUTS Lvl	Measured Element	Building Type	Period	Value
Ireland, Lithuania, Netherlands, Portugal, Spain, Sweden, Romania		Ireland	IE0	1.0	Conventional dwellings in non-residential buildings		1900-1919	3.044,00
		Ireland	IE0	1.0	Conventional dwellings in residential buildings		1900-1919	145.329,00
		Ireland	IE0	1.0	Not stated		1900-1919	2.143,00
		Ireland	IE0	1.0	Total number of dwellings		1900-1919	150.516,00
		Lithuania	LT0	1.0	Conventional dwellings in non-residential buildings		1900-1919	98,00
		Lithuania	LT0	1.0	Conventional dwellings in residential buildings		1900-1919	45.514,00
		Lithuania	LT0	1.0	Not stated		1900-1919	0
		Lithuania	LT0	1.0	Total number of dwellings		1900-1919	45.612,00
		Netherlands	NL1	1.0	Conventional dwellings in non-residential buildings		1900-1919	70,00
		Netherlands	NL1	1.0	Conventional dwellings in residential buildings		1900-1919	63.586,00
		Netherlands	NL1	1.0	Not stated		1900-1919	1.669,00
		Netherlands	NL1	1.0	Total number of dwellings		1900-1919	65.325,00
		Netherlands	NL2	1.0	Conventional dwellings in non-residential buildings		1900-1919	48,00

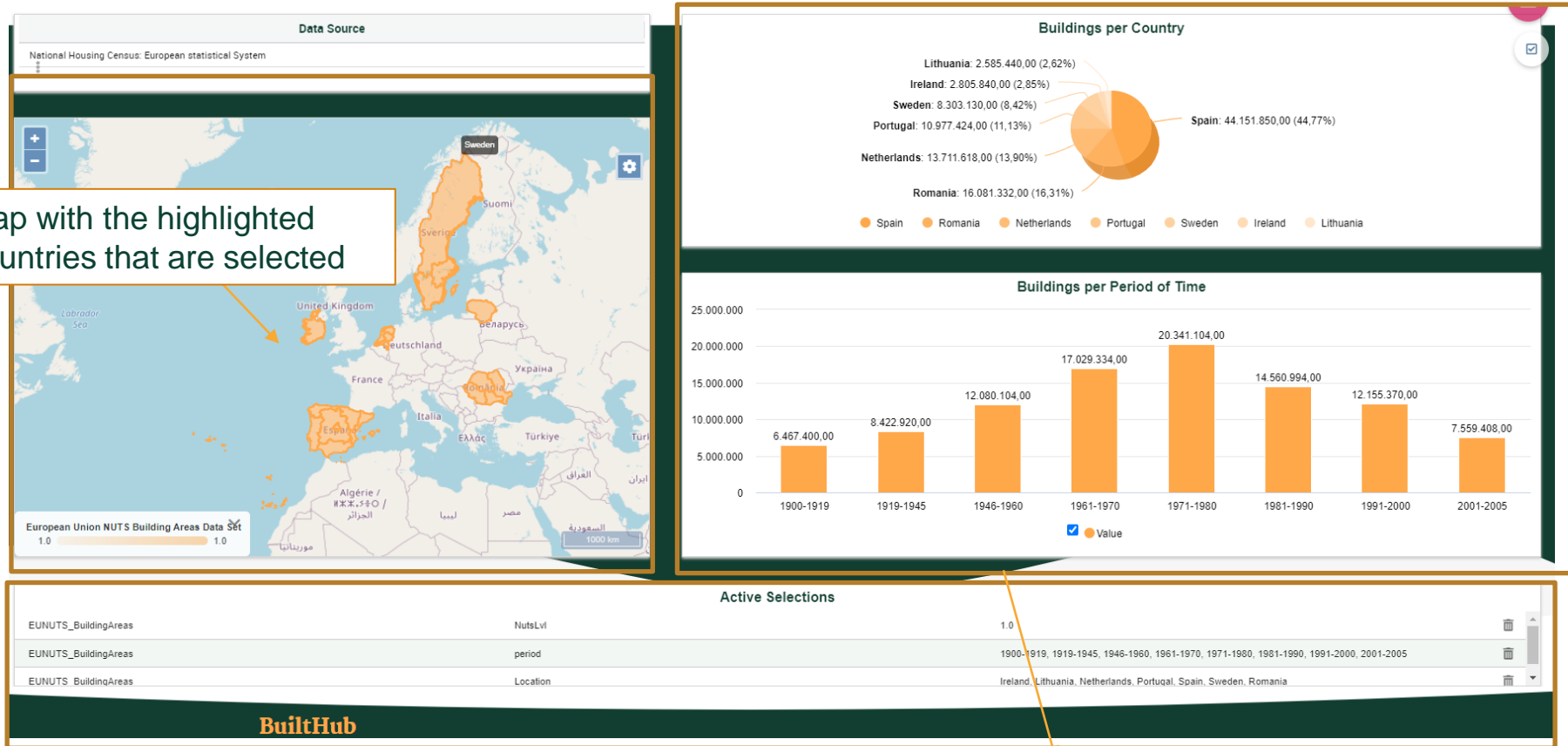
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The data sources to retrieve the data are also shown

Table with results of the filters selected

## Dashboard – Result (2/2)

After choose filters, the data is retrieved and shown:



The selectors that are active

Graphical representation of the topic in different dimensions





## Dashboard – Data catalog

This section shows the datasets that are already integrated in the database. This catalog is important to relevant to share which datasets is the platform using. Additionally, it helps to choose the right predicates in the SPARQL query editor:

**Builthub Data Catalog**

Current datasets included in the data base:

1. dataset011
2. dataset014
3. dataset015
4. dataset016
5. dataset017
6. dataset023
7. dataset024
8. dataset025
9. dataset026
10. dataset027
11. dataset028

Button to access to the Data Catalog

List of datasets



# Dashboard – Dataset example

Going to the detail of a dataset:

## Dataset 14

...

EUROSTAT: Final energy consumption in households.

The final energy consumption in households is a measure of the total energy consumed by households as final users. In this dataset it is expressed in thousands tonnes of oil equivalent.

List of datasets

Dataset metadata

Geo Info	NUTS	Measured Elements	Units	Time Ranges	SIEC (Standard International energy product classification)	Periodicity
Countries from europe	NUTS 0 Level	Energy consumption in households	TOE	Divided by years starting in 1990 until 2019	Total	Annual

Detailed metadata

Dataset database predicates

Title	Description	Predicate (Fields' name)	Range/Data Type	Cardinality	Content
<b>Record Type</b>	Defines the type of the record. This type must be defined in a known ontology. Usually, the ontology is specified with a prefix.	rdf:type	IRI	1..1	blthb:Dataset014
<b>Record Key</b>	The primary key of the record.	dc:identifier / skos:notation	rdfs:Literal (xsd:string)	1..1	"Denmark201544481767578125"
<b>Frequency</b>	This property refers to the frequency at which the Dataset is updated. Refers to a temporal period that the Dataset covers. It is defined	dct:accrualPeriodicity	dct:Frequency	1..1	http://purl.org/cld/freq/annual

Detailed content description and ontologies used



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