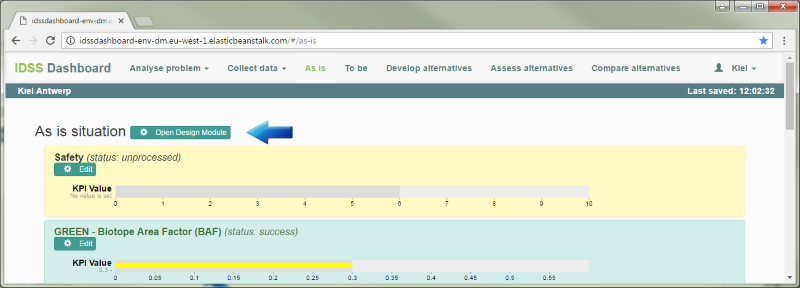
**Design module**

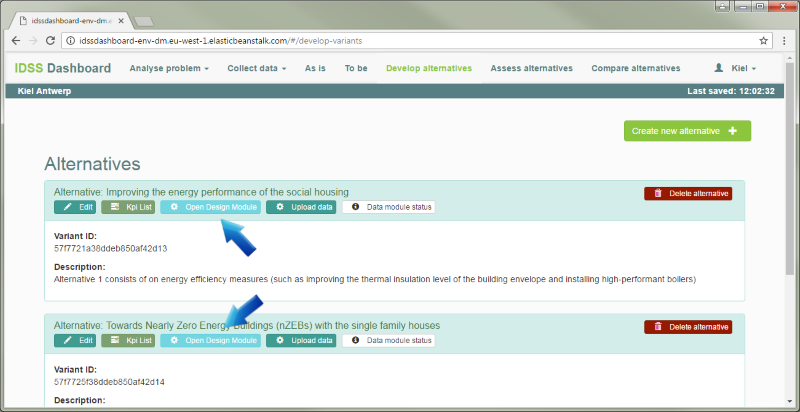
**What the design module is used for**  
The goal of the design module is to visualize map based data on the district and manipulate the data by applying measures on objects within the district.

**Visualizing data**  
Data is visualized by coloured objects like buildings based on properties of those buildings. Colouring is done through the use of a legend defined per visualized property or based on the definition of KPIs. KPIs are defined within the dashboard, not in the design module. All defined and processed KPIs are automatically available as a “Detail” item in the design module.

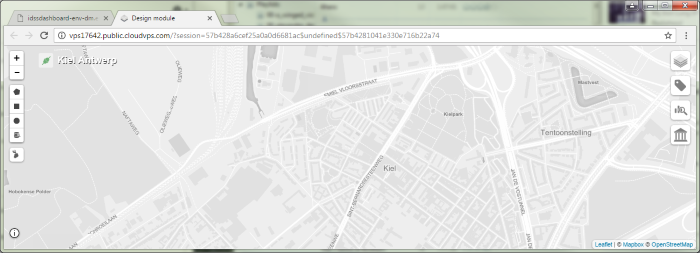
**Changing data**  
In the design module objects like buildings can be selected. Per project measures are defined that can be applied on specific objects or on the district as a whole. When applied on a set of selected objects these measures change values of properties of the selected objects. A second way of changing object properties is by means of a dialog where properties can be manipulated directly. Calculation modules can read these changed values and calculate KPIs based on those values. The KPIs that are related to objects can in turn be visualized by the design module. This chain of modules is controlled by the Ecodistrict dashboard.

**How to start the design module**The design module is started from within the Ecodistrict dashboard by clicking the “Open Design Module” button for “As-is” or by clicking the “Open Design Module” button in “Develop alternatives”.





**The design module**  
The user interface part of the design module is implemented as a web application. The central part is a map centred on the district.

**Control elements for visualization**

1 Map

Measures history

4 Select detail layers

3 Select domains

2 Base map/basic layers

Current project/alternative

1b Zoom control

Show help

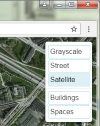
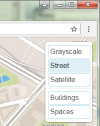
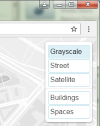
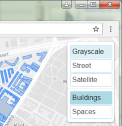
Select objects

Select measures

**1 Basic control of the map**

* Drag the map by selecting the left mouse button on an empty part of the map and then move the mouse. Release the mouse button to stop dragging.
* Zoom the map by selecting the “+” and “-“ zoom controls (1b) in the upper left corner on the centre of the map.
* Zoom the map by scrolling the mouse wheel on an empty part of the map (1). The map is zoomed at the current mouse location.

**2 Selecting what to show**Select the base map out of 3 options from the Base map/basic layers control in the right upper corner.

**   **

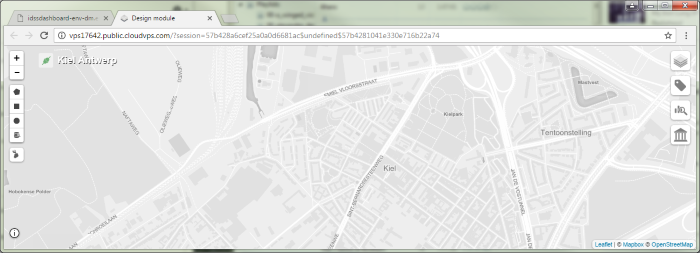
Besides the base map the basic object layers can be selected to be shown or hidden. In the example above basic objects “Buildings” and “Spaces” are available. All defined object types within the district can be shown as basic layers. They can be displayed on the map without specific colouring, just the outline of the objects for orientation and selecting objects. The Basic layers are coloured blue by default.

**3 Domains**  
The set of properties that are available to be shown are grouped in domains. In the “Domains” control those groups can be enabled/disabled to filter the list of properties available in the details control below it. Deselecting items here reduces the number of items shown in the “Details” control.

**4 Details**  
Properties of objects can be displayed on the map. Colouring is done by predefined legends.



In the above example “Building function” is selected and overlaid on the map. The corresponding legend is always shown on selecting an item but can be closed by selecting the cross in the upper right corner of the legend. The legend can be dragged to a different position. To make a closed legend visible: deselect and re-select a “Details” item.

**Applying measures to objects and changing object properties directly** 

3 Map

5 Measures history

Select detail layers

Select domains

1 Base map/basic layers

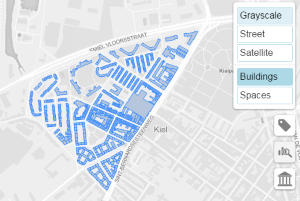
Current project/alternative

Zoom control

Show help

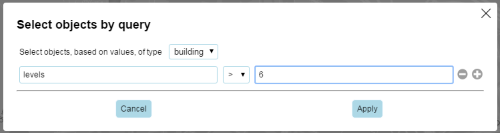
2 Select objects

4 Select measures

**1 Basic layers**Basic layers can help with selecting objects. An enabled basic layer for buildings shows all known buildings in blue.

**2 Select objects**Objects can be selected in different ways:

* Drawing a polygon, rectangle or circle on the map: all intersecting and enclosed objects are selected. The selection mode can be chosen with the upper three icons in the left upper corner as shown here to the right.
* Objects can be selected based on values of their properties through a query build in a objects query dialog (see below). This selection mode can be chosen with the lower icon from the set of 4 icons in the upper left corner as shown here on the right.



Selected objects are drawn in pink.

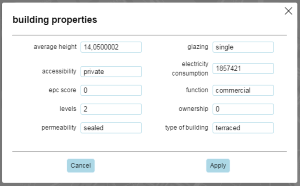
**3 Select objects by clicking on the map**An object can also be selected by clicking the mouse on the map within or near an object. Enabling the corresponding “Basic layer” helps locating objects. The first object selected determines the type of objects that can be added to the selection.

Any object defined in the project can be selected even if not visible. If the first object selected is a building additional buildings can be selected and deselected by holding down the CTRL key while clicking on or near a building object. Clicking away from any of the objects resets the selection.

**Right click on the map or on selected objects**A right click on the map or on a selected object shows a popup menu.  
The “Deselect objects” option is always available and will clear any previous selection. The “Properties” option is only available when the click was on one or more selected objects.

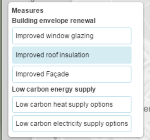
**Edit properties of objects**

Right clicking selected objects shows a popup menu. Selecting “Properties” from that menu shows a dialog with common values for the selected objects. These values can be changed in this dialog and the changed values are applied into the database for all selected objects.

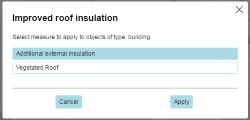
****

**4 Measures**  
In the Ecodistrict database measures are predefined per project and can be applied to selected objects or on the district as a whole. The measures available for the type of the selected objects are show when the “Measures” icon (4) is selected in the left upper corner. District wide measures are always shown.

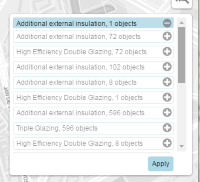
Following is a set of measures available to be applied to buildings within the Antwerp case.



Selecting a measure shows a dialog with specific options for that measure:



When applied, that measure, including the selected objects, are stored under the “Measures history” control (5) on the upper right side.

**5 Measures history/measures to be applied control**

In this control measures are collected to be applied en masse to the database. This control also gives an opportunity to re-use previous applied measures on other variants.

**Re-use the selection of measure objects**   
When a measure is selected the corresponding objects that measure is to be applied to are selected on the map. This selection of objects can then be used to apply yet another measure.

**Re-apply measures from the history list**  
Measures applied to another alternative can be added to the active measures to be applied by selecting the “+” icon behind it. The “-” icon removes that measure from the active measures list.

**Examples**

**Workflow visualization of data**

* Start at the upper right corner.
* Select the base map you want to use. “Grayscale” keeps the focus on the coloured data, “Street” shows more information on the surroundings.
* Keep de basic layers switched of.
* Use the second icon in the upper right corner to select the domains of interest.
* Use the third “Details” icon to select a layer. A second layer can be selected with lower opacity on top of the first one by pressing and holding the CTRL key while selecting an item from “Details”. Selecting an already enabled item from “Details” while holding the CTRL key toggles that items visibility.

This paragraph should give an **overall description of the module**, including what it does and what the **purpose** of module is. Explain also which **other modules this module connects** to.

**Step by step guide of XX module**   
This paragraph should describe how the user should/can use the module, as a **step by step guide**.

Preferable by *either* bullets:

* Explaining step 1
* Explaining step 2
* Explaining step 3
* Explaining step 4
* …..

*Or* flowchart of the process, e.g. :  
(if flowcharts or any other figure is used, *an explaining text is needed*)

View 1

View 2

View 3

View 4

….

Explanation of flowchart:

* Explaining view 1
* Explaining view 2
* Explaining view 3
* Explaining view 4
* ….

**Example XX (name your example)**Describe a chosen example that can illustrate **different options** that the user has to do and the **results of these different options.** This should be illustrated **by print screen pictures** of e.g. drop down lists, charts, maps, different views etc. *Note that all pictures must be explained!*Also describe how the **results of the options can be interpreted**.

Email separately pictures (or figures) in picture format.

**Write suitable explaining title of paragraph here**

**Additional module specific information** (external links (url address), templates, documents,…)