

I explore the published content of iGUESS as an unregistered user

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What am I going to learn?



How I can navigate in the iGUESS tool.



How I can explore the published maps of my city and of another city.



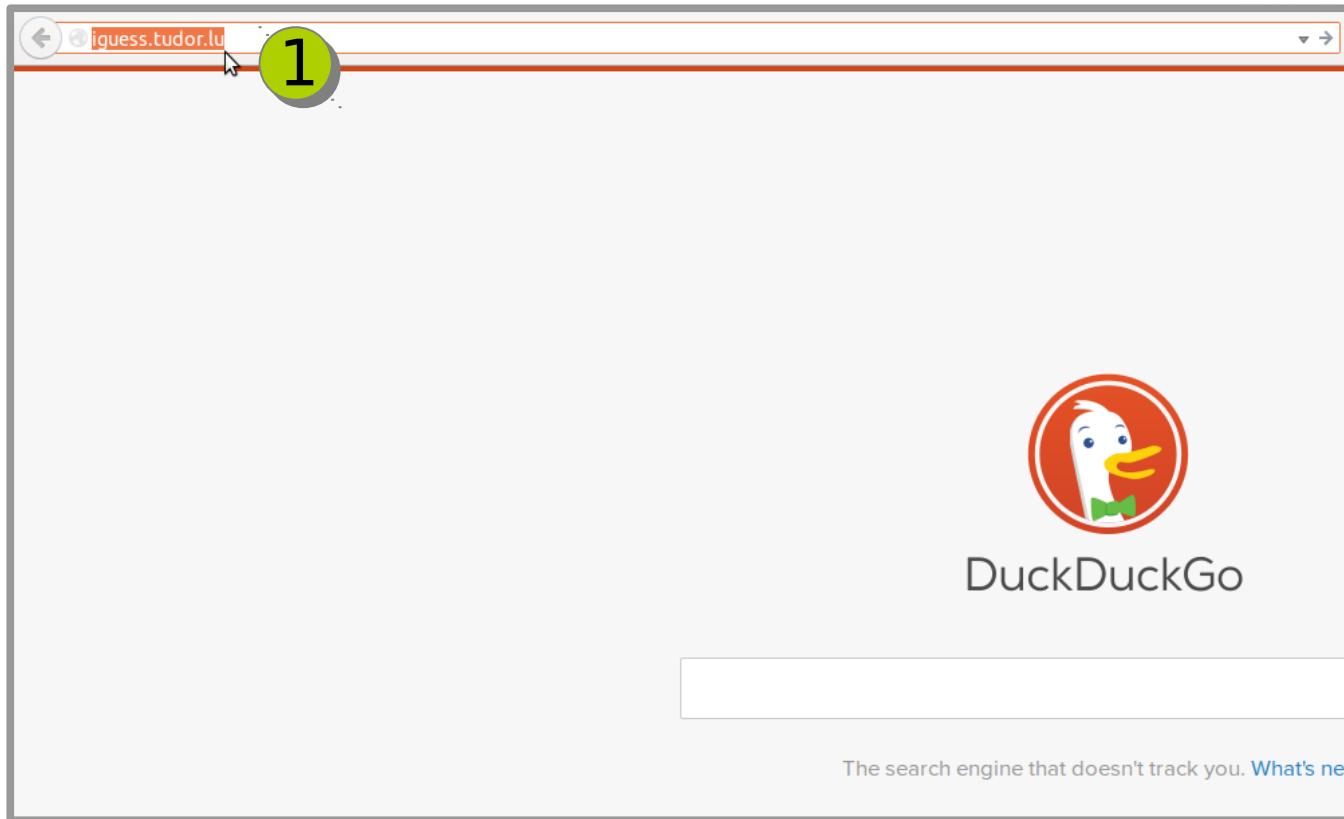
How I can check the configuration of the modules for my city.

The iGUESS tool is accessible from your browser with the limitation that that iGUESS properly works only with Firefox .



1

I type ***iguess.tudor.lu*** in the url line. And I type enter

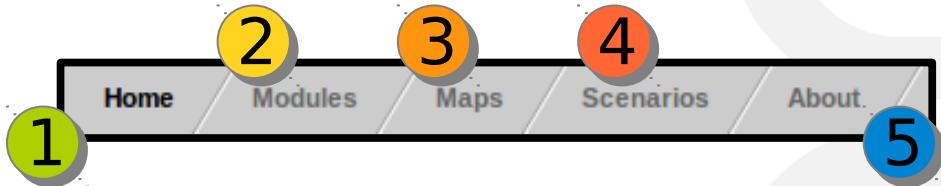


I arrive on the main page of the iGUESS platform.

The screenshot shows the iGUESS platform's main interface. At the top, there's a green header bar with the 'tudor' logo, the 'iGUESS' title, and a subtitle 'Integrated Geospatial Urban Energy Information and Support System'. Below the header is a navigation menu with links for 'Home', 'Modules', 'Maps', 'Scenarios', and 'About'. To the right of the menu are icons for 'MUSIC' and 'EUSIS', and links for '[New User]' and '[Login]'. A large yellow circle with the number '1' is positioned above the 'Home' link in the main menu. Below the header, there are two main sections: 'understand your options...' on the left and 'plan your future.' on the right. The 'understand your options...' section contains three buttons: 'View Some Data', 'Run Calculation Module', and 'Check Running Module'. The 'plan your future.' section contains four buttons: 'Explore maps of my city', 'See my datasets', 'Register new data', and a large central button with a white plus sign. A horizontal city skyline graphic is at the bottom of the page.

- 1 The main menu bar provides me with an access to the main features of the iGUESS platform.

The items of the main menu bar



As an unregistered user you obtain the following functionalities:

- 1 always gives access the start-up page of the platform.
- 2 allows to check the modules that are already configured for my city.
- 3 opens to the map explorer of the cities partner of the iGUESS platform.
- 4 provides the scenarios published by my city.
- 5 provides access to some information about the software and the development team.

In order to access the maps of my city...

The screenshot shows the iGUESS web application. At the top, there's a green header bar with the Tudor logo on the left and the text "iGUESS integrated Geospatial Urban Energy information and Support System" on the right. Below the header, there's a navigation menu with "Home", "Modules", and "Maps" (which is highlighted with a yellow circle and a number "1" above it). A sub-menu for "Maps" is open, showing options like "View maps" and "Visualize data and model results". To the right of the menu, the text "understand your options... plan your future." is displayed. On the left side of the main content area, there are three buttons: "View Some Data" (in red), "Run Calculation Module" (in blue), and "Check Running Module" (in blue). The main content area has a large button with a white plus sign in the center, and to its right, the text "Explore maps of my city", "See my datasets", and "Register new data" is listed.

1

iGUESS
integrated Geospatial Urban Energy information and Support System

Home Modules Maps Scenarios About

View maps
Visualize data and model results

understand your options... plan your future.

View Some Data

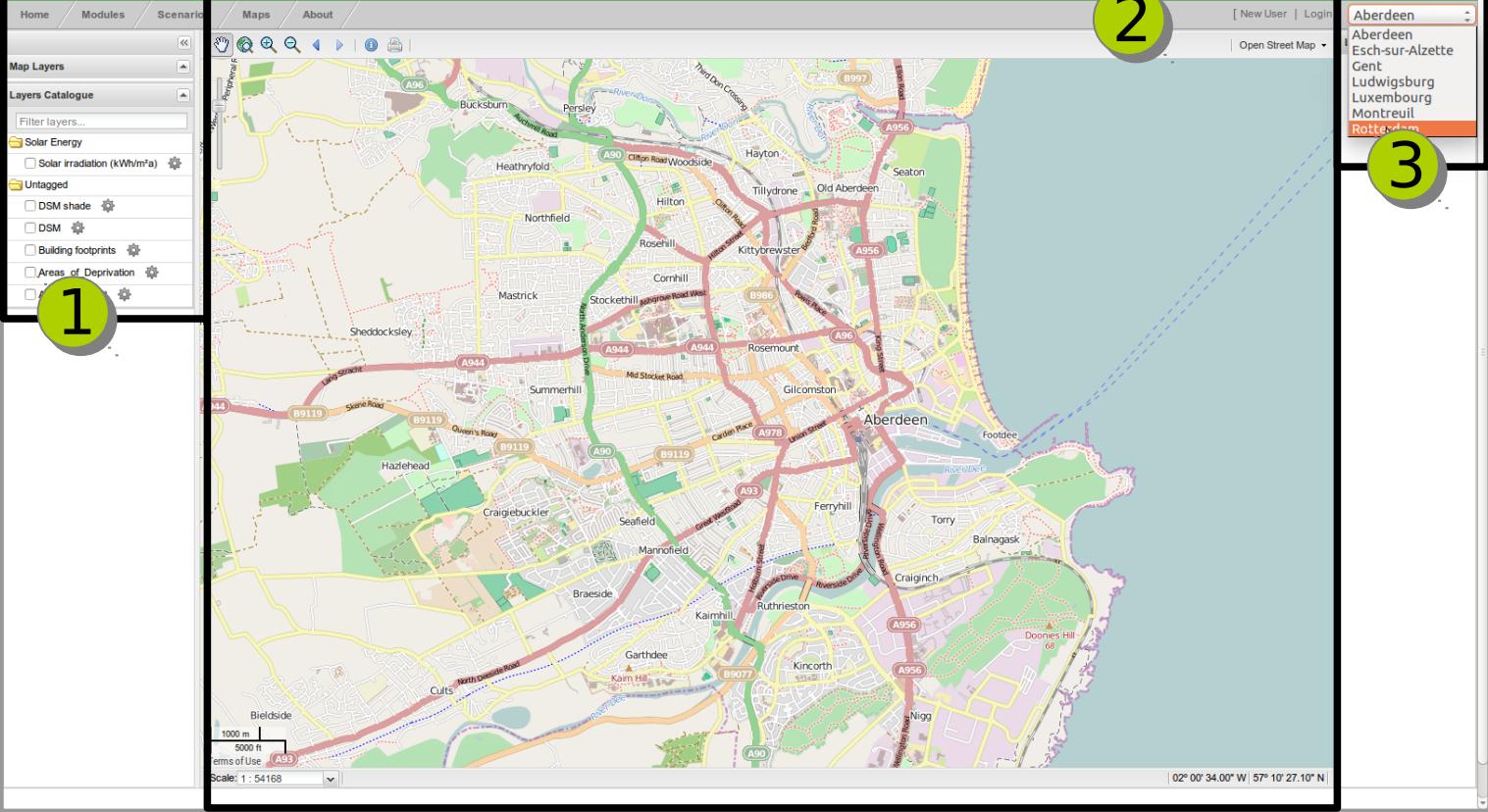
Run Calculation Module

Check Running Module

Explore maps of my city
See my datasets
Register new data

1

... I click on maps!



In zone 1 I can view the published layers for Aberdeen. As no layer is marked, zone 2 only displays the layout map of the city of Aberdeen.

In zone 3 I can select another city. I choose Rotterdam to explore its published layers.

I access the Map viewer of iGUESS!

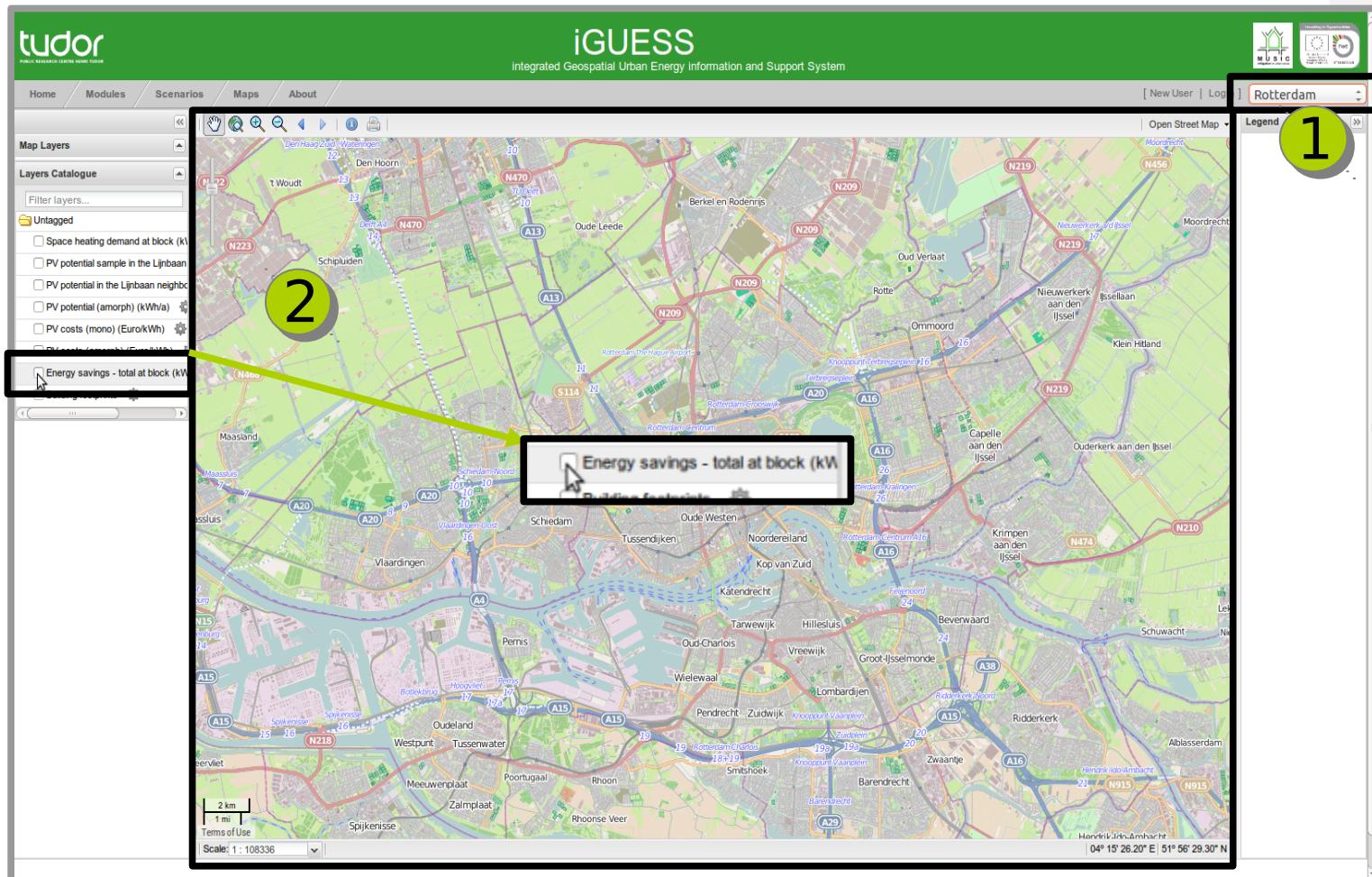


1

I access the layout of Rotterdam.

2

In order to select the layer Energy Savings of my city I check the corresponding layer line.



1

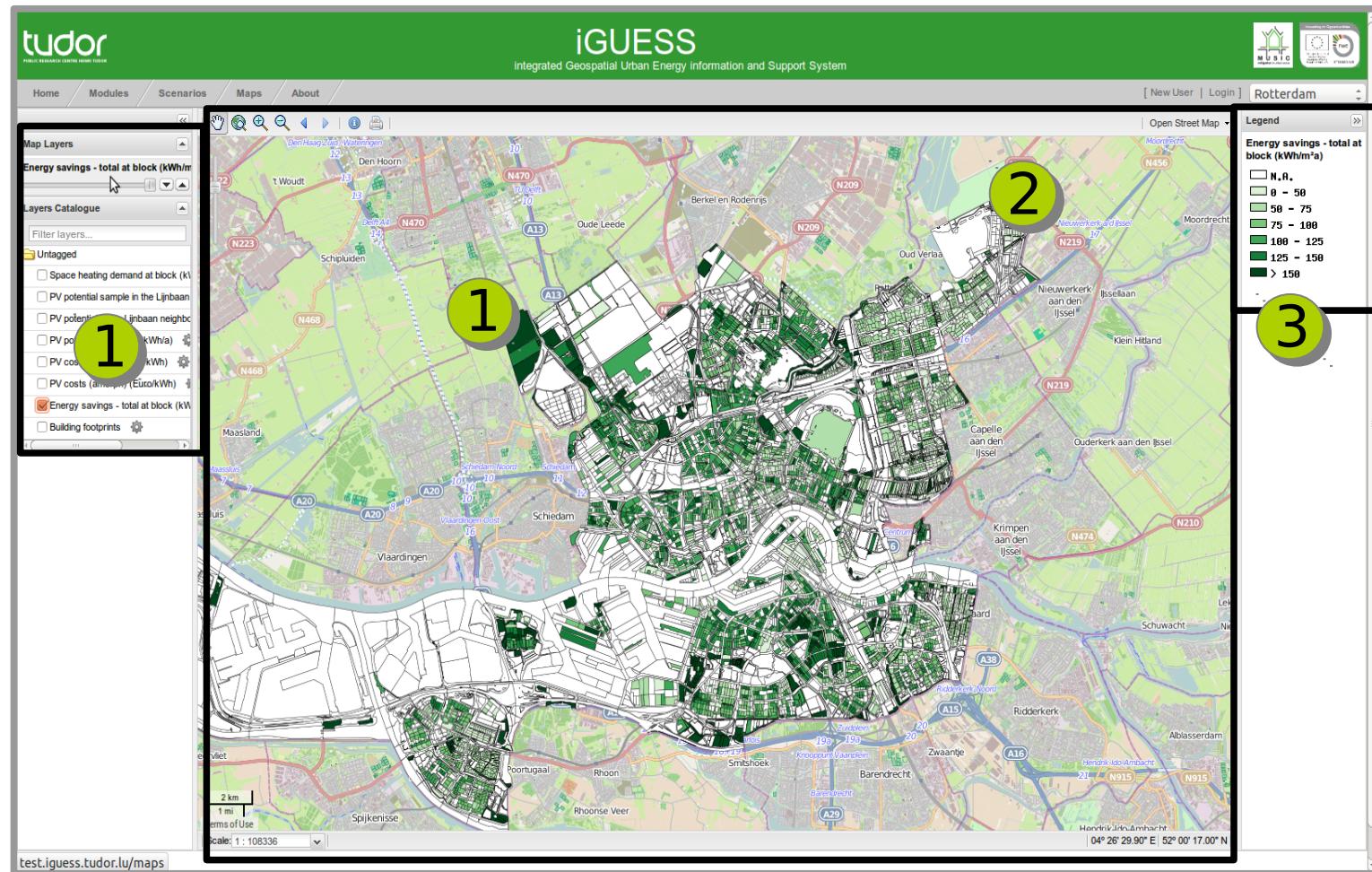
When I access a new layer of map for my city, I can always check which layer I am looking at by the checked sign  on the left.

2

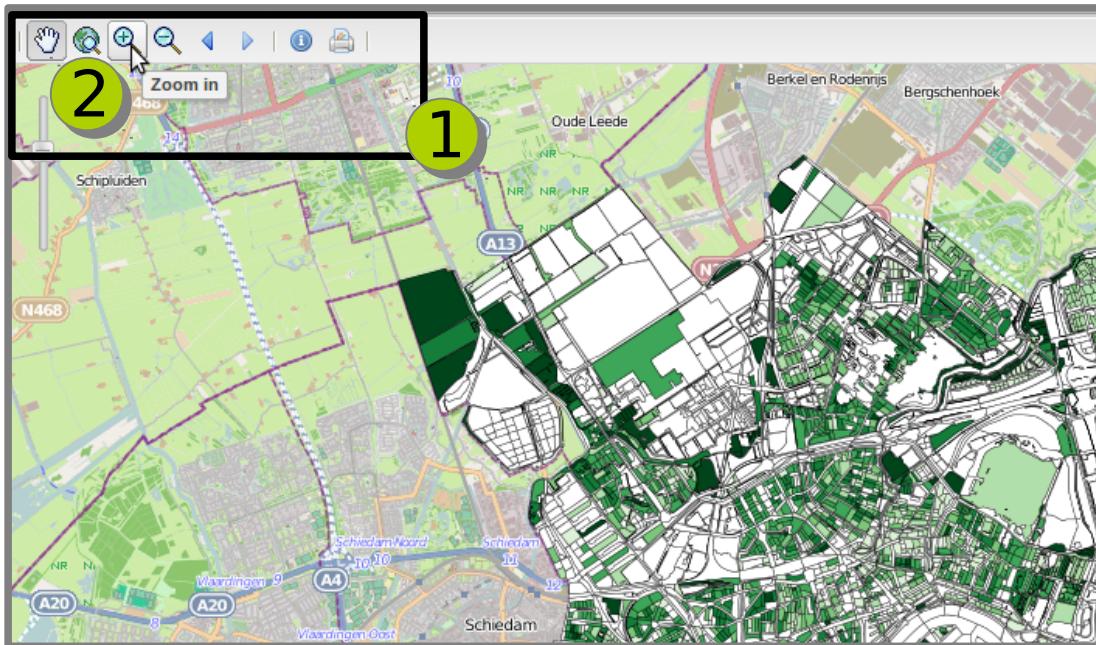
In the mapping window, the new map layer appears on the top of the city layer.

3

An explicit legend appears on the right with the title of the layer.



- 1 At the top left corner of the map layers, tools to manipulate the maps are available.



Hand in tool



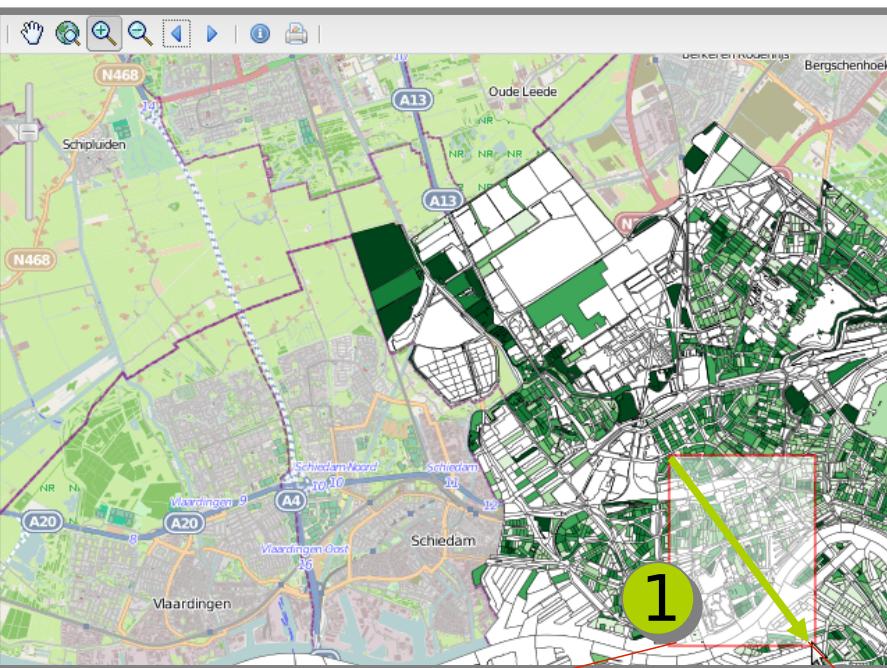
Zoom to the scale of the city



Zoom in and zoom out

- 2 I want to look at the energy savings potential more in detail for a district of the city and I click on the zoom in button !

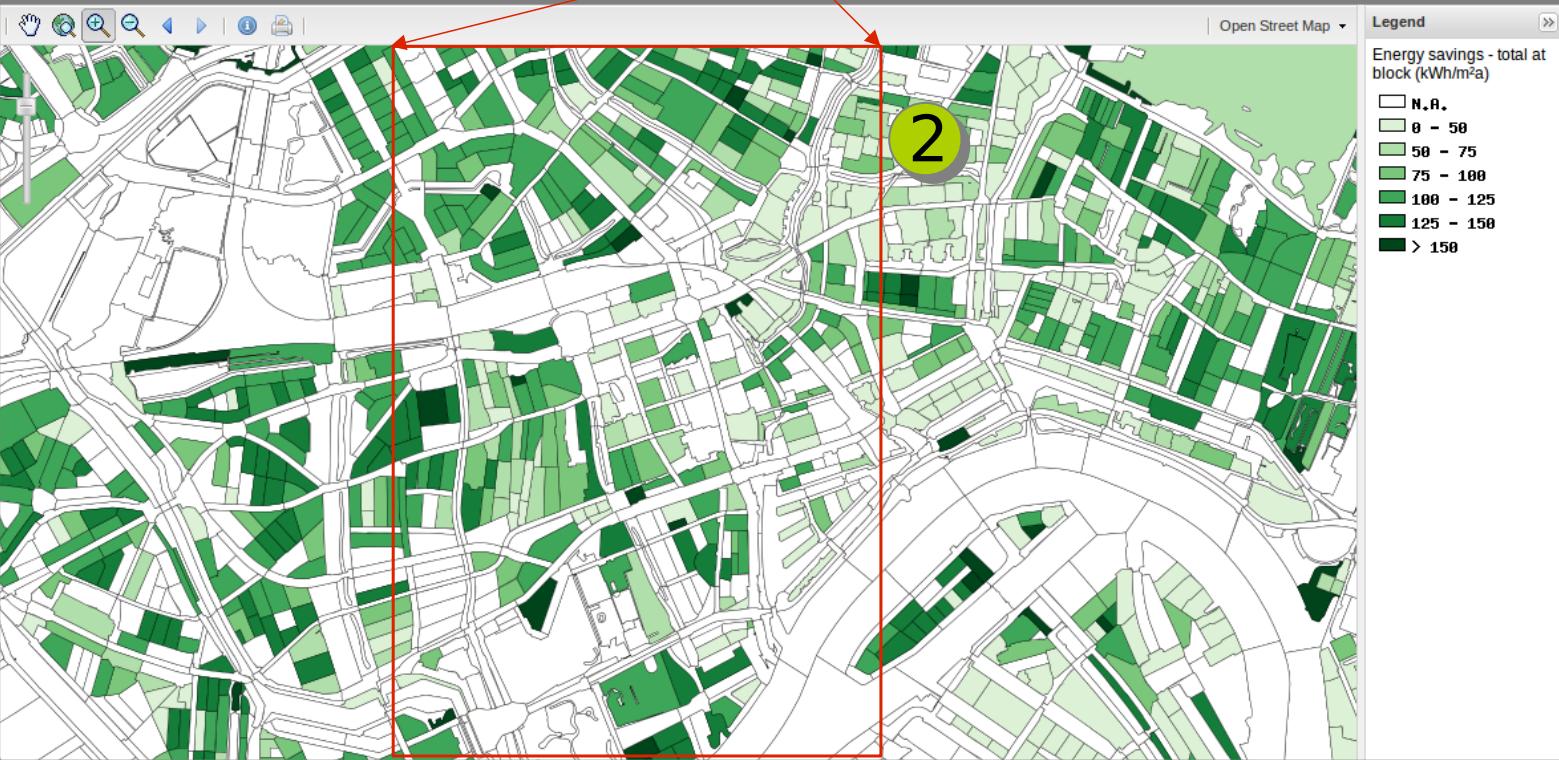




1 I can zoom in by defining a box that will define the zooming window.

I click from a top corner to the opposite bottom corner.

2 I arrive in a zoomed view containing the window of interest. I can see results at a more detailed scale for analysis.



Home Modules Scenarios Maps About

Map Layers

Energy savings - total at block (kWh/m²)

Layers Catalogue

Filter layers...

Untagged

 Space heating demand at block (kW) PV potential sample in the Lijnbaan PV potential in the Lijnbaan neig PV potential (amorph) (kWh/a) PV costs (mono) (Euro/kWh) PV costs (amorph) (Euro/kWh) Energy savings - total at block (kW) Building footprints 

- 1 If I click on another Map layer on the left side of the map the layer appears in zone 2

Now I want to explore another map of my city!

I want to explore the PV potential of Rotterdam.

Now I can see the area that has been calculated for the PV potential!

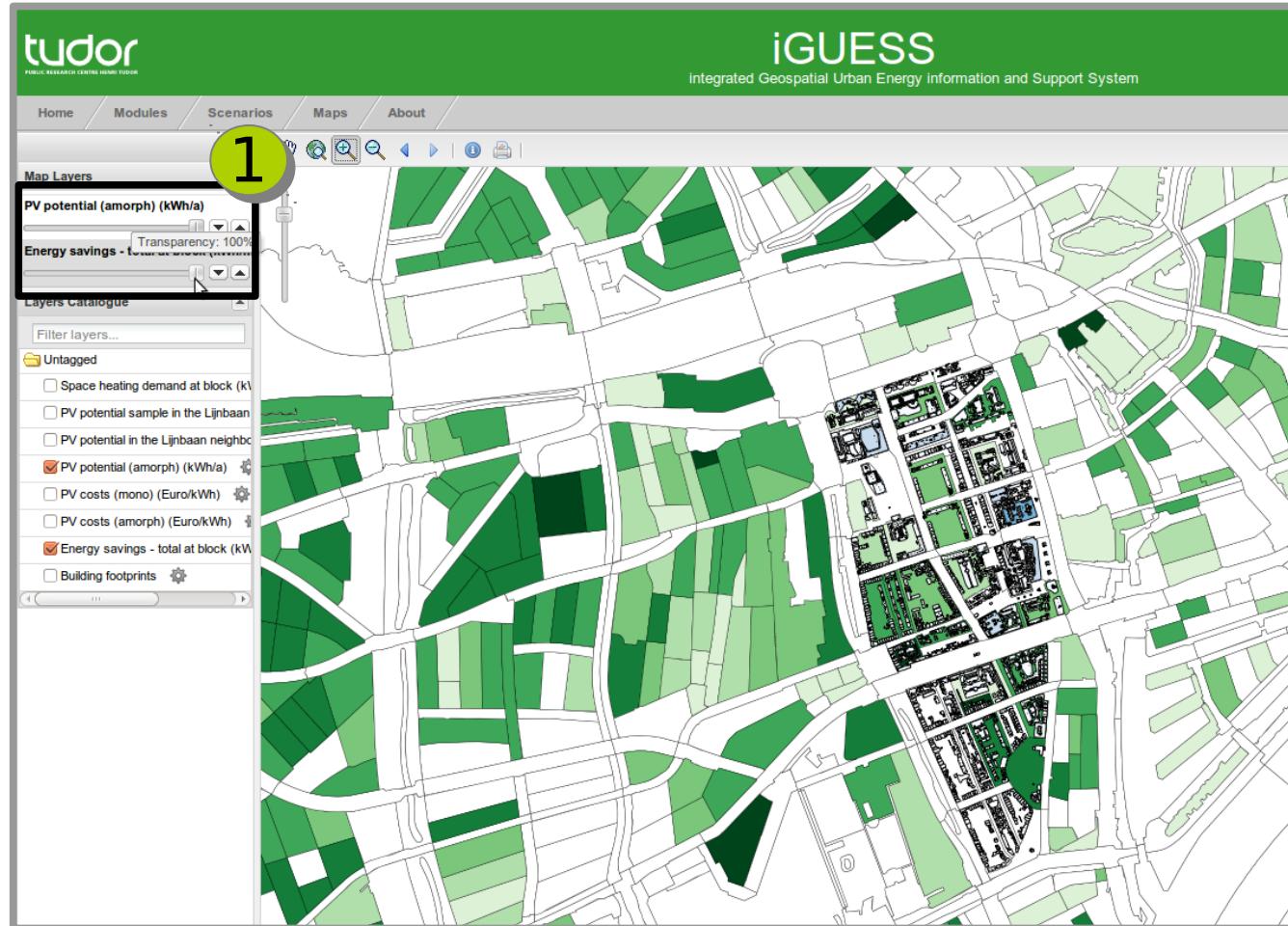
1

- In order to look precisely at the calculated area, I use again the “zoom in” tool from the navigating tool and select with the mouse the area of interest.

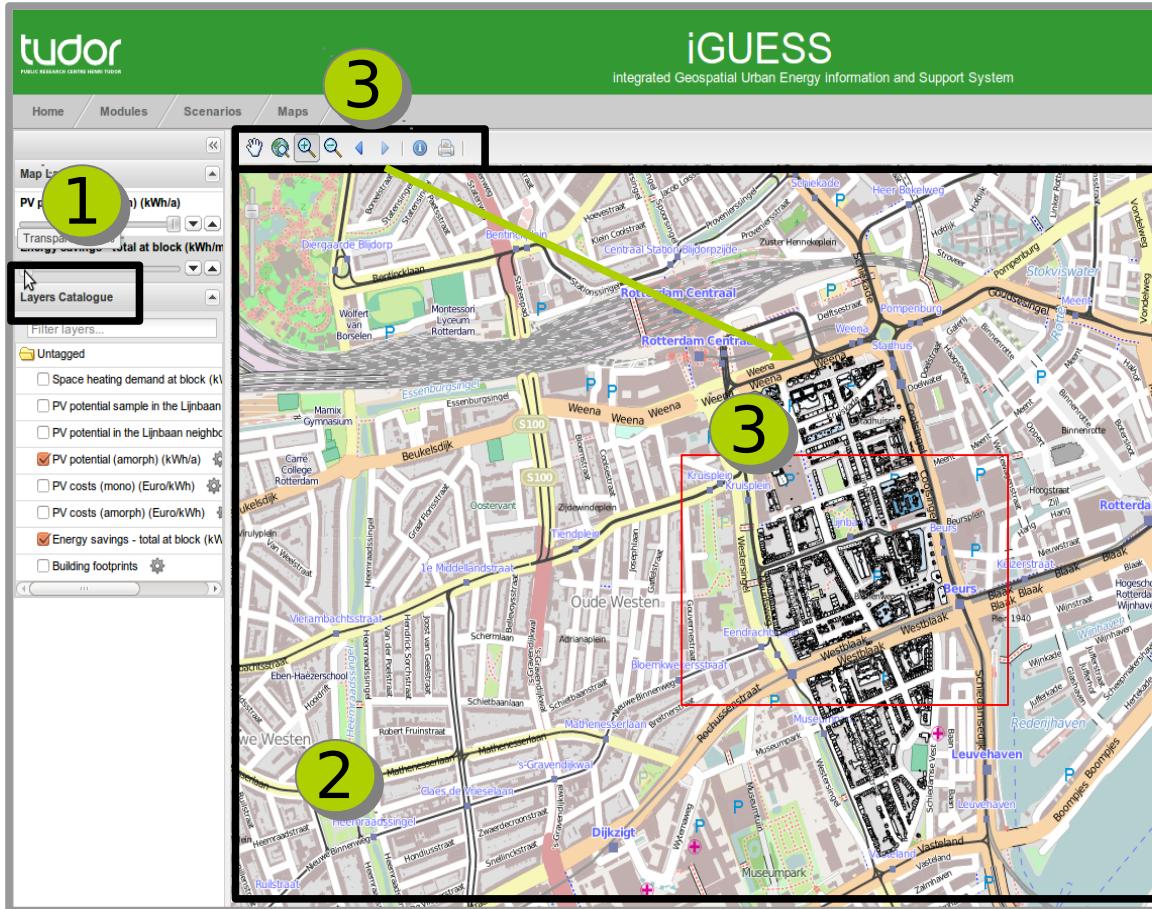


I got closer but I cannot read the PV potential of roofs individually!

In zone 1, it is possible to change the transparency of the layers. With the slider tool, I can move for example the Energy Savings layer from not transparent...

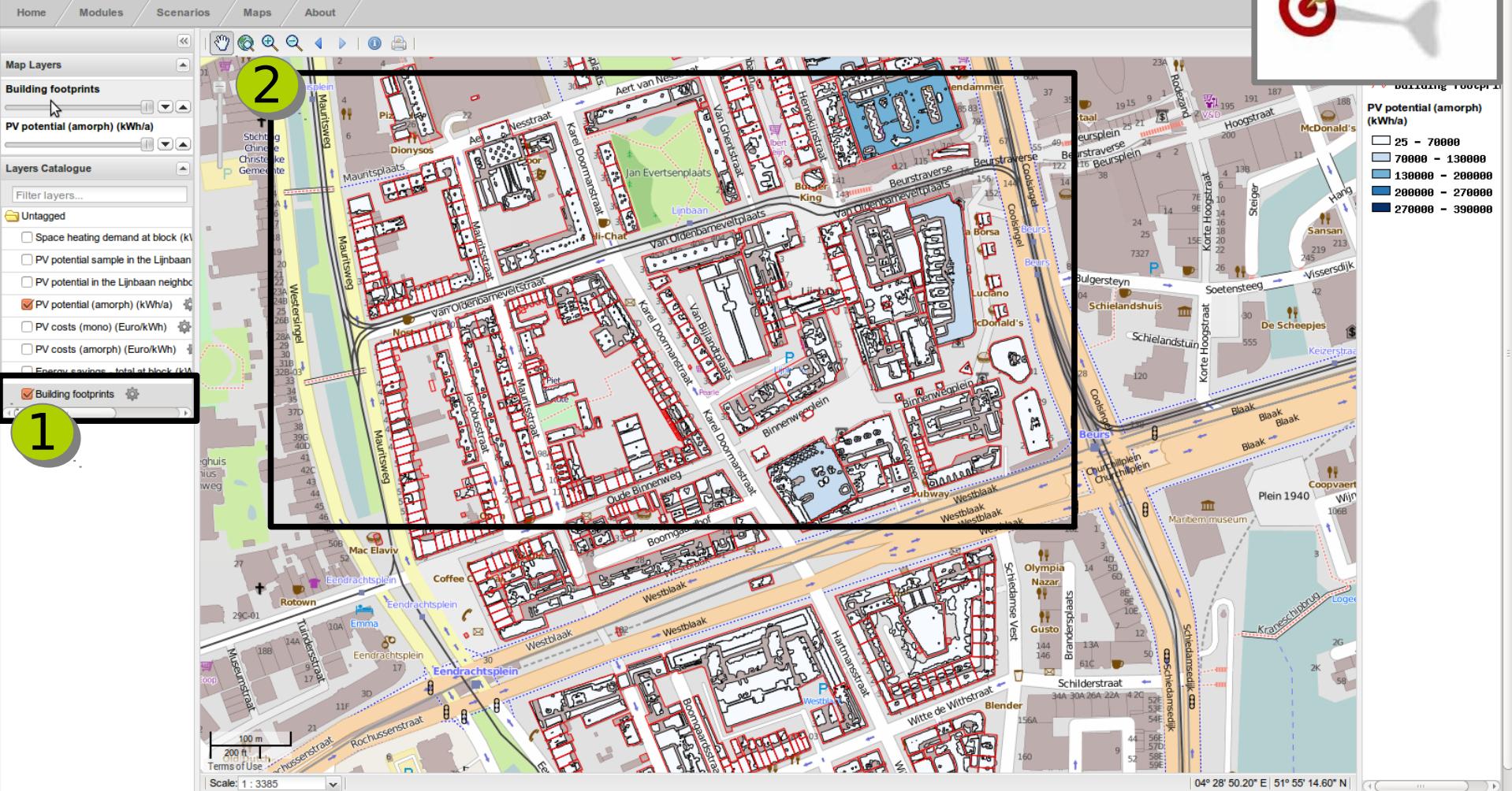


... to transparent switching the button 1, the layer about Energy Savings disappears in the map zone 2.



3
In order to zoom more on the PV potential calculation I use the “zoom in” button once again and select the right zone.

If I click on Building footprints 1, now I can closely analyse the PV potential per roof in zone 2 !!!

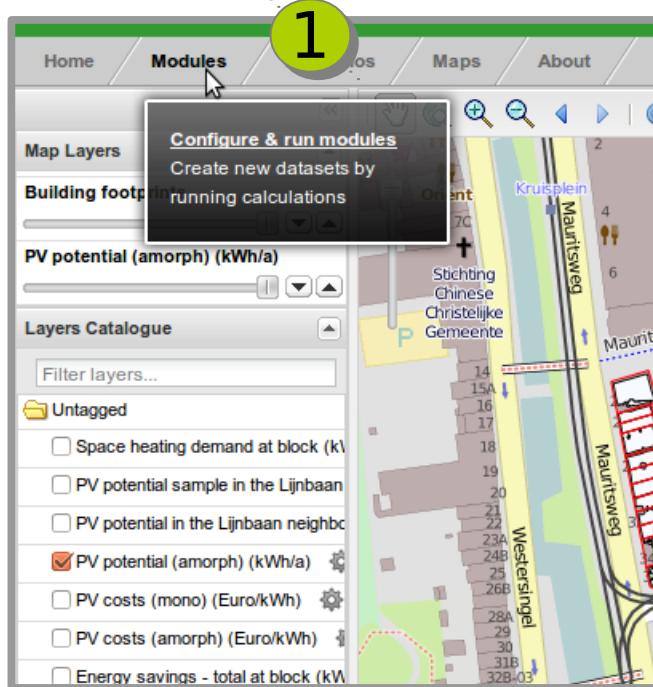


To better understand how the results were obtained, I want to explore the structure of the PV potential calculation.

1

In the menu bar I click on the button

Modules



- 1** In the **Module Catalog** tab, the details about the module appear below the line **PV Potential** when I click on the line.
- 2** As I do not see all the details I scroll down with the scroll down button on the right hand side of the window - or with the mouse.

tudor PUBLIC RESEARCH CENTRE HANNOVER TUDOR

iGUESS
integrated Geospatial Urban Energy information and Support System

[New User | Login]

Modules

Module Catalog

Registered users can create Modules based on processes available on various remote web servers. The Catalog below shows some of the modules that other users of iGUESS are using.

- Aggregation service with support for slider tool
- Building stock energy consumption and savings
- Geothermal cadastre
- Green roofs
- PV Potential with user based input

This process calculates the electrical potential on roof tops based on different inputs of economical parameters of PV panel technologies. Inputs are spatial data sets from solar irradiation module and economic parameters given by the user.

Hosted by: MUSIC PyWPS Server

Identifier: `pv_potential_user`

Model Inputs

Parameter Name	Identifier	Description
Building footprints	<code>[building_footprints]</code>	A vector polygon data set which represents the building footprints. Except of feature geometries no other additional information is needed. If attribute data is attached it will be ignored during import process.
Economic panel life time in years	<code>[econ_lifetime]</code>	Envisioned economic panel life time in years [a].
Panel cost in Euro	<code>[panel_cost]</code>	Panel costs in Euro per square meter. Usually in a range from 1500 to 2000 Euro/m ² . Typical values for amorph, multi- or mono-crystalline panels would be 1500, 1800 or 2000 Euro/m ² respectively.
Panel efficiency	<code>[panel_efficiency]</code>	Panel efficiency in percent defined by the user. Usually in a range of 8 to 20 percent. Typical values for amorph, multi- or mono-crystalline panels would be 8, 14 or 16 percent respectively.
Payback price	<code>[payback_price]</code>	Guaranteed payback price over the economic panel lifetime in Euro per kWp [Euro/kWp].

Now I can check the configuration of the PV Potential module!!

First, I can check the list of needed inputs to run the model which appears under the title Model Inputs 1.

Second, I can check the outputs computed by the model shown under the title Model Outputs 2.

This process calculates the electrical potential on roof tops based on different inputs of economical parameters of PV panel technologies. Inputs are spatial data sets from solar irradiation module and economic parameters given by the user. Identifier: `pv_potential_user`

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Model Inputs

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Panel efficiency	[panel_efficiency]	Panel efficiency in percent defined by the user. Usually in a range of 8 to 20 percent. Typical values for amorph, multi- or mono-crystalline panels would be 8, 14 or 16 percent respectively.
Payback price	[payback_price]	Guaranteed payback price over the economic panel lifetime in Euro per kWh [Euro/kWh].
Roof patches with suitable area for PV installations	[roof_patches]	A vector data set which delineates the suitable roof patches for a solar PV installation. This input is an output of the solar irradiation process of iGUESS.
Solar Irradiation	[solar_irradiation]	A raster data set representing solar irradiation on rooftops. This input can be an output of the solar irradiation module of iGUESS, but can also be delivered by the cities themselves as preprocessed data raster set. Pixel value must be yearly sum of irradiation in kWh per square meter.

Model Outputs

Parameter Name	Identifier	Description
PV potential	[pv_potential]	PV potential generated by roof patches. This result can be used as input for the 'slider application'

Solar irradiation
 Urban Heat Island characterisation



Next steps

As an unregistered user, I can only navigate among the Map layers that have been published by the City staff working on iGUESS as registered users.



I register in iGUESS as a new user