SUMMARY

1. Short description of the activity/practice

The interactive map of the Actual Energy Consumption Class (AECC) is a tool to stimulate the population in residential buildings to consume heat energy in efficient way and was introduced to the citizens of Vilnius city in 2013, when the analysis of heat consumption of buildings and recommendations were provided to citizens. Actual energy consumption is presented in 15 classes (1-best and most efficient building, 15-worst). This energy efficiency criterion AECC is a unit, from which is eliminated various influencing factors – different heating seasons temperatures, durations, heating areas, so can be compared different buildings during different heating seasons. Calculation of AECC is based on a specially prepared methodology, defined by academic people (Dr. Romanas Savickas). According to AECC people can directly online evaluate how efficient corresponding building consumes heat energy and can compare energy consumption with buildings of the same project type. Visit online website: http://www.vilnius.lt/vmap/t1.php?layershow=siluma

Video: https://www.youtube.com/watch?v=KiVII7hqsl0

2. Detailed description of the activity/practice

In Vilnius there are 2,800 residential multi-apartment buildings that should be renovated, each with an average total area of 3000 m².

96 residential multi-apartment buildings were renovated in Vilnius between 2004 and 2012. It is planned to renovate a further 240 residential buildings by 2016. In total it is planned to renovate around 600 buildings by 2020 and this would constitute around 30% of the total number of buildings to be renovated.

Having implemented the building renovation plans by 2020, 14321 tones CO_2e emissions will be reduced.

In order to increase residential building renovation in the city the interactive map of the Actual Energy Consumption Class was implemented.

This interactive map enables to compare particular building heat energy consumption with others same type buildings. This tool stimulates inhabitants start to think how to improve building energy class by implementing recommended energy efficiency tools.

Moreover this interactive map is a great tool to compare how much heat a building consumes during different heating seasons, to compare data with residential multi-apartment buildings in the neighborhood and become familiar with recommendations – what the residents of the building should do in order to lower heating expenses. Also it increases heating systems maintenance efficiency, as people can compare the same buildings and if one of them consumes more energy than other (for exp. has 7 AECC instead as the same buildings typically has 6 AECC), the reasons of inappropriate heating systems maintenance should be found.

The analysis is provided on the interactive map of Vilnius City Municipality, by choosing to display the actual energy consumption in residential buildings. There is also a link to the map on the left side of the Vilnius City Municipality website www.vilnius.lt.

This map provides information on 4,799 heat units according to the actual energy consumption in a residential building and which class the residential multi-apartment building belongs to according to this. There are in total 15 actual energy consumption classes which are grouped into 6 categories by color on the map: good, average, bad, very bad, especially bad and renovated buildings.
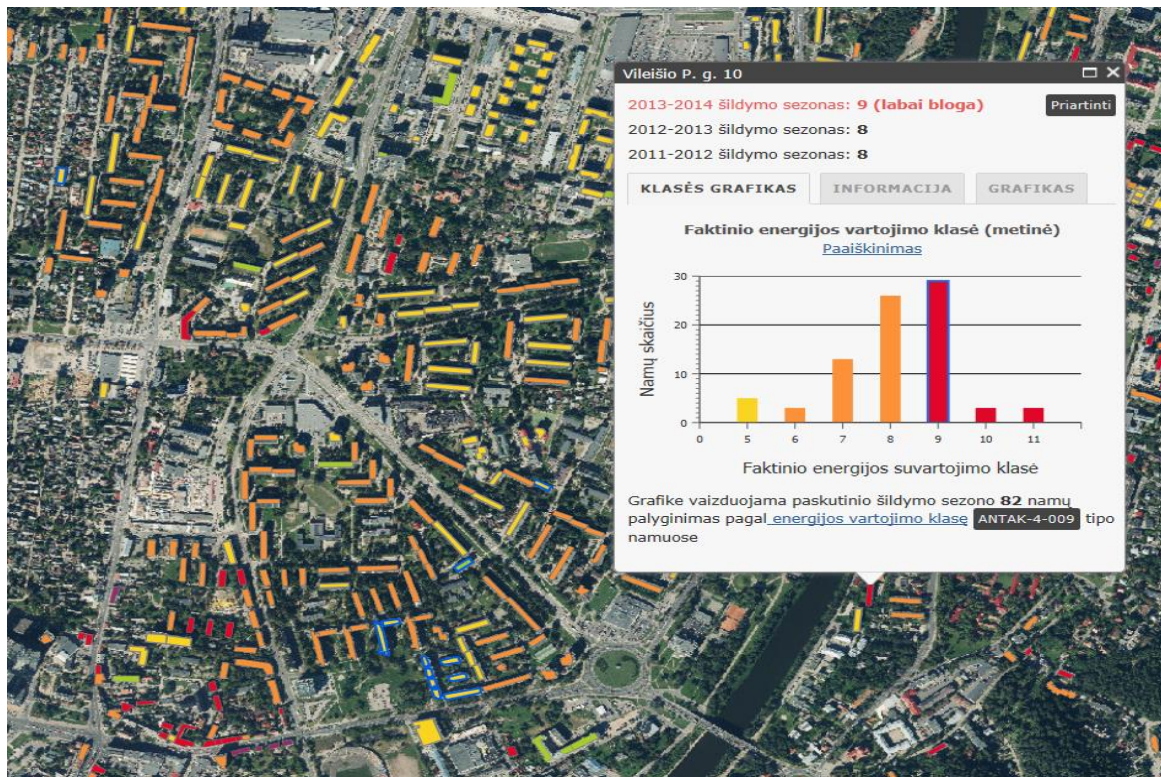
Of all the provided heat units 349 residential buildings fall into the good class (93 of them are renovated), 1,104 – into the average class, 2,715 – into the bad class, 512 – into the very bad class, and 119 – into the especially bad class.

Citizens can find their multi-apartment buildings by address. Information regarding which class it belongs to, the year of construction, the type of building, the supervisor of the building, which class it belonged to during the heating seasons of 2011-2012, 2012-2013 and 2013-2014 according to its actual heat consumption and what actions are recommended by the Vilnius City Municipality to be undertaken are displayed next to it.

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Implementation

The interactive map of actual energy consumption of residential multi-apartment buildings was introduced to the citizens of Vilnius city in 2013, when the analysis of heat consumption of buildings and recommendations were provided to citizens.

Vilnius city municipality on April 2014 participated in two biggest exhibitions of renovation in Lithuania and promoted this tool (one of them 21st largest international exhibition for the construction and renovation industry in the Baltic states RESTA 2014). Experts were meeting citizens in order to show and analyse particular situation about the building they are living. The map was demonstrated on special big screen. Addition to it we created movie with typical residential building with bad energy consumption class in Vilnius where you can see how energy consumption is decreasing by implementing 5 main different energy efficiency tools (roof and walls insulation, windows and door replacement, heating system modernization, ventilation system implementation). Citizens were interested in very much.   , as prime minister of the Republic of Lithuania Algirdas Butkevičius, minister of Ministry of Environment of the Republic of Lithuania Valentinas Mazuronis and other important persons also.

This project is considered as a successful and at the moment we are implementing this big screen and energy efficiency game in Vilnius city municipality building lobby where citizens will be able to check out any building.

Partners and citizens involvement

Heat supply company of a Vilnius City has presented all required data, Dr. Romanas Savickas has developed special methodology and by the help of Vilnius City municipality was created an interactive map of Actual Energy Consumption Class.

The project is very successful as from 2013 year this interactive AECC map was visited more than 20'000 times.

Success of the activity/practice and faced difficulties

As the project is very successful and have a lot of visitors (at a present moment more than 20'000 visitors), the user friendly presentation of a data required. All results must be understandable for a typical citizen without a special education. Also must be ensured proper functioning of a web page in a case if major part of visitors would like to connect at one time.

The feedback of this interactive map is increased amount of participants in National Renovation and Modernisation of residential multi-apartment buildings programme from 93 till 2012 to 400 participants after 2013.

Innovation

The interactive map of actual energy consumption of residential multi-apartment buildings meets innovation criteria:

-        Relevant in meantime. High price of heat to residents encourages look for solutions how to lower this price, how to live in more energy effective building. Additionally it is multifunctional tool useful when renting or buying the flat.

-        Easy to use. Scientific analysis adapted to use simple. We also created application for mobile phones. It is available to check energy class everywhere anytime (QR code attached).

-        All necessary data concentrated in one tool.