PROJECT FACTSHEET

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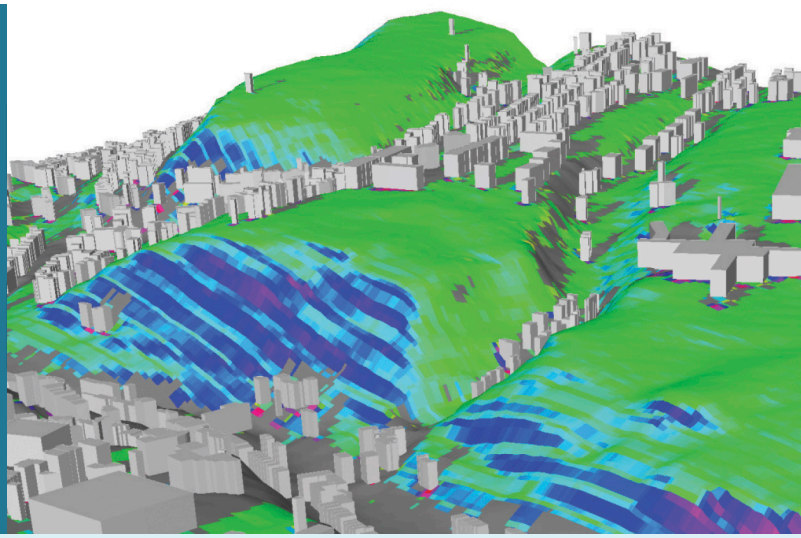
MUSIC

Developing new solutions to increase renewable energy share and energy efficiency in urban areas



With the deadline for Energy 2020 on the horizon, countries across the EU are focusing their efforts on reducing CO2 emissions to meet their goals. Luxembourg is a small country with a large CO2 footprint, leading to strong local interest in initiatives to improve energy efficiency. Luxembourg Institute of Science and Technology (LIST) is a partner in MUSIC, an INTERREG IVB project focused on decreasing CO2 emissions in urban areas that is creating new urban planning tools that can promote more sustainable development in Luxembourg and across Europe.

Inspiration

Cities can play an important role in mitigating climate change by reducing their levels of CO_2 emissions. With city officials positioned between citizens and higher levels of government, city administrations are able to understand and address both local and national challenges. By facilitating the cooperation between public and private actors at local level, sustainable energy policies can be created that will lead to cleaner cities and a reduction in national CO_2 emissions. Urban planning requires detailed insight into energy consumption, renewable energy and energy saving potential as well as tools to monitor progress and provide meaningful decision support. This need for improved cooperation and new energy mapping and decision support tools led to the creation of MUSIC.

Innovation

The project brings together five cities, Aberdeen in the UK, Ghent in Belgium, Ludwigsburg in Germany, Montreuil in France and Rotterdam in the Netherlands and two research centres, the Dutch Research Institute for Transitions and LIST, to work together using a social, scientific and technology-based approach to reduce CO_2 emissions in urban areas around North West Europe. MUSIC focuses on three types of innovation to reduce CO_2 emissions: the promotion of cooperation among local stakeholders through inspirational and inclusive workshops, the development of iGUESS, a tool to generate urban energy maps using geographic information systems (GIS) and georeferenced data, and pilot projects to reduce the CO_2 emissions of public buildings such as schools and community centres in each participating city. LIST is contributing to the project through the development of iGUESS, an interdisciplinary open source mapping and decision support tool that can calculate the potential for renewable energy and energy savings in cities and create future scenarios highlighting changes in CO_2 emissions based on actions taken (or not taken) to mitigate them.

Impact

The results of MUSIC will benefit future efforts aimed at reducing CO_2 in cities by developing ways to inspire citizens and city planners to work together to create sustainable solutions. The iGUESS tool provides simplified access to complex modelling tools and will be made freely accessible, allowing city planners, government administrations and other stakeholders to access energy maps, visualise their CO2 emissions, identify opportunities for energy exchange and monitor the effects of energy saving measures in their city, leading to more informed decisions. A flexible tool, iGUESS has links with the ERIN-developed model Luxembourg Energy Air Quality (LEAQ), is currently being adapted for use in ongoing LIST projects LaMiLo, which focuses on freight transport in urban areas, and Weastflows, which looks at multi-modal freight transport over the West-East European corridor, and will also be integrated into other upcoming projects. Follow-up projects are currently under discussion, potentially furthering the impact of this innovative and integrated multi-city project.

Learn more about MUSIC in the video below:

Partners

Aberdeen City Council (UK) , Gent City Council (BE) , Ludwigsburg City Council (DE) , Montreuil City Council (FR) , Rotterdam City Council (NL) , Dutch Research Institute for Transitions - DRIFT (NL)

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