

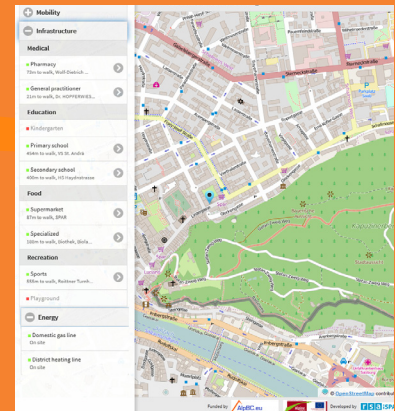
# Web-based geographical geographical indicator tool for decision support

## KEYWORDS:

- Building culture
- Construction
- Closed loops
- Governance
- Planning Tools
- Ecology
- Energy efficiency
- Indicators
- Mobility
- Technology transfer

## TARGET GROUP:

- Architects
- Builders
- Citizens
- Craftsmen
- Home Owners
- Planners
- Politicians
- Policy Makers




## Results and outcomes (use cases):

- A web tool which can calculate on-the-fly several indicators which provide neighborhood information for buildings in the district of Salzburg that have an influence on the sustainability and energy supply in a broader meaning. The indicators cover distance to important infrastructures such as district heating and domestic gas lines, supermarkets and recreational facilities, educational and medical facilities as well as public transport
- An interface to integrate and make those indicators directly visible from within the energy certificates database ZEUS of the district of Salzburg
- A testing implementation of the distance to domestic gas indicator in the ZEUS system and commitment for regular operation and integration of more of the developed indicators in the future

The development enables energy consultants to access very easily additional information relevant for the buildings they are preparing consultancy meetings for. They get substantial help easily built into their routine and commonly used tools to get a glimpse of the bigger picture not only based on absolute heating demand but also linked energy demand and costs. Thus the tools make it easier for them to contribute to the bigger sustainability goals and also communicate accordingly.

They recommend potential heating systems, give an insight on potential additional funding criteria based on the building site and how they can be met, and generate an overall awareness on sustainability criteria of a building not only tied to the building itself but also to its surrounding and potentially needed infrastructure.

 **Description:** Bringing together spatial and energy planning as well as a synchronization of data used for tasks concerning both aspects in one way or another together with support of the regional energy consultancy as an important voice to communicate policy goals to the people was the task at hand to be addressed. Thus first of all spatial indicators which may have an influence on energy performance of buildings in a broader sense such as distance to energy, commodities, education infrastructure and mobility were identified and modelled. As a next step potential ways were thought out, that could help to ensure actual use and easy updatability of said indicators. This led

to the idea that an integration and automation of the analysis model within the tool would make it easier to update the indicators and therefore make sure they are of use in the long-term. Thus an on-the-fly calculation of the indicators was implemented in the tool. Additionally the idea of acceptance and actual use was tackled by generating a direct connection and interface to a commonly used tool such as the online energy certificates database of Salzburg (ZEUS) to make it unnecessary to find additional information with too much extra effort separate from common work routines.

### Relevance for inter-municipal planning (AlpBC):

As the tool and the indicators made available through them, are modelled and calculated without considering municipal borders the results show potentially relevant infrastructure which lies across the border supporting an inter-municipal approach. The indicators are implemented for the whole district of Salzburg but offer not only an overview perspective suitable for regional planning but a detailed view from individual buildings at the neighbourhood relevant for them, making it a truly cross-border, multi-perspective tool.

This, together with the fact that different topics which contribute to sustainability as a broad concept are combined, make it a suitable tool to communicate certain facts to the people which concern all the municipalities as they and their citizens are called on to contribute to the overall goals.

The inclusion in the energy consultancy which is by its nature not only a central task of the regional authorities but also an individual task of enterprises and freelancers distributed in the municipalities also helps to ensure similar messages supporting overall planning goals throughout the whole region which are based on the same data.

### Relevance for policy goals (Alpine Space, Europe and the region):

The indicator mapping tool and especially the integration in existing structures support the use of common databases, additional information from adjacent topics which influence each other and the cooperation between different disciplines thus helping them to see a bigger picture. This helps them in their daily work, making decisions, giving recommendations and communicating to citizens and enables them to work together towards the common policy goals set for energy, planning and sustainability in the Alpine Space and the total of the European Union.