

AlpBC Pilot implementation

[RSA: Implementation of a web-based geographical indicator tool for decision support]



1. Basic information

<i>Title of your AlpBC pilot implementation</i>	Implementation of a web-based geographical indicator tool for decision support
<i>Overview, description</i>	After checking the needs and possible ways of implementation through the case study concrete steps for a technical solution are carried out. This includes concrete indicator calculations, a stand-alone tool and the connection and direct integration of results created with this tool in the regional energy certificates database giving people working with energy certificates the possibility to query additional site information and included them in their calculations, suggestions and recommendations.
<i>Outputs (guidance doc, tool, methodology, bills of law, etc)</i>	Web mapping tool and technical integration of indicator queries in the official energy certificates database used by the authorities of Salzburg for various purposes

2. Delivering Project Partner

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3. Description of the regional state of the art (300 words)

At the moment various tools exist which are not yet connected with or integrated in the officially used tool to assess the energy performance of buildings which is also the basis for approval and funding support of building measures. At the moment the use of additional context based information for

people dealing with energy certificates is often difficult because there is no direct connection to such data and the existing data are also not properly prepared for a use like that. Additionally different institutions and people dealing with planning and consultancy issues often refer to different data sources. Although lots of data exist, some people in need of those data don't even know they exist or how to use them. Furthermore the shared use of data within the authorities and also with concerned companies is lacking thus leading to inefficient and sometimes even contradictory conclusions and actions. Tools and methodologies used are numerous but one central information hub for all energy related questions is still missing. Recent demands for sustainable spatial planning make it necessary to interlace buildings and their surroundings better to reach sustainability goals. Therefore also people working on the building level need to take into consideration the spatial context to contribute effectively to overall goals. Examples, showcases and specialized tools existing within the region therefore need to be adapted and enhanced to meet those requirements.

4. Expected improvements by conducting your pilot implementation

4.1. Expected improvements (300 words)

The implementation of those context related information as an add-on for energy certificates can help people dealing with them to be better prepared for all sorts of planning and consulting tasks thus supporting other people and the general cause of sustainable planning in the building context. The enhanced information base can make work for concerned people easier and more efficient. Additionally when more users' needs are met with one central tool the likelihood of consistent identical information used and spread to others grows. This makes planning and consulting energy issues more reliable and consistent.

On the whole sustainability of buildings and settlements, use of existing infrastructure and regional resources should be improved significantly and thus hopefully also lead to a strengthening of regional closed loop economies.

Furthermore the quality of energy counselling can expect severe improvements as well as the choice of people in their habitations and according improvements as well as the installation of suitable heating systems due to better consideration of existing infrastructure and surrounding conditions.

4.2. Possible emulation effects in the region (200 words)

Other than originally planned in the case study not all indicators foreseen to be implemented could be implemented but all the indicators which have been calculated were implemented for the whole region of Salzburg and not only the pilot region which makes them even more useful for people and authorities and a further use and integration in daily routines. So far only one of the indicators (distance to gas grid) has been directly integrated for access in the energy certificates database ZEUS in Salzburg. But the chance that this additional information connected to energy certificates will be used and furthermore enhanced with more information yet only suggested or implemented in the separate tool in this stage of development is very high, as demand and interest have been communicated from concerned parties. Actually one second indicator on the distance to the district heating lines is already agreed upon to be integrated after project closure even though there are several obstacles in the data collection and preparation which got in the way of finishing the integration within project lifetime.

As the integration of indicators is carried out for a platform which is also used by other regions within Austria it is also likely that the enhancements will find their way to additional regions in the long-term.

Furthermore parties targeting SMEs in the building sector which were not originally foreseen and targeted by the measures have shown interest in the use of additional site information which may lead to further emulation effects. Through the efforts in the project a process could be triggered to develop

further energy indicators on surrounding conditions which play a role in planning and recommending heat pump usage. Two projects that are dedicated to this task have already started to develop such indicators after consultation and support through the project team thus an actual effect on growing planning and energy tasks together is already visible also outside the project.

5. Actual implementation activities of the pilot implementation

5.1. Steps undertaken by the PP (400 words)

After narrowing down the needs and an initial planning of potentially realisable features through research, analysis and stakeholder consultation the actual implementation could be started.

First step was the collection of data needed for the development of indicators, after that, models for the calculation of the data could be developed which were optimized through testing and also feedback with the experts of the authorities meant to make use of the information afterwards.

Additionally to the indicator development, the development and programming of the web service and the interface to the energy certificates was carried out. The later was conducted also in coordination with the authorities and the company in charge of maintenance of the system who integrated the interface from the authorities' server side for testing one first indicator on the distance to the gas grid. For the web service which holds all the indicators realised in this first step to collect important indicators for a combined spatial and energy planning view some extended efforts were made to improve the system compared to already existing web services. For most indicators the developed models were integrated in the system to support on the fly calculations. This is especially important to keep costs and efforts low when updating the underlying data making the system easier to maintain and keep up-to-date.

To make the update and calculations easier for the foreseen purposes also intense talks were held with the data providers and as the information on district heating seems on the one hand to be of special importance and interest and on the other hand difficult to handle from the data preparation side also a short recommendation for minimum requirements of data quality was drafted together with an agreement to realise the integration in the energy certificates system as soon as possible also after project closure.

The stakeholders were informed in meetings. Additionally further steps for activities outside the project and after project closure were discussed and coordinated as well to create a long-term effect of the initiated movement.

5.2. Lesson Learned (200 words)

The activities show that a change of mind-sets needs some time but can get really strong and effective when patience, constant information, high visibility of the benefits and a strong involvement of relevant stakeholders are considered throughout the process. With time the target groups can get the strongest drivers behind an evolvement of the system bringing spatial and energy planning closer together. Additionally the consideration of using already established tools of instruments and adapting them for enhanced use is a key element for long-term developments and success. The time until efforts which have been undertaken to actually put a new service in effect in an existing environment though take longer than one would imagine.

6. Conclusions

(400 words)

The implemented indicator system and according services form a next step in the development of a holistic sustainable planning system which does not only look on individual topics and entities but the

whole system. Building upon already existing systems, applications and tools it develops the idea of planning indicators further. It thrives to connect spatial and energy planning and to introduce the idea of connecting buildings and their surroundings stronger also on a consultancy view and in direct communication with people. Behind this also lies the idea of generating a common information/knowledge base which makes it possible to align the efforts that are being undertaken to reach the overall sustainability goals and the messages sent out not only to a broad public but also individuals.

Only with coordinating and sharing the same data to all the stakeholders being involved in the process not matter which department or level of the authorities or private company, is it possible to align their actions and support them in their daily work.

Additionally the integration of this partially new information in processes and tools, already established, makes it possible to ensure a long-term use and thus have an effect on the implementation of the overall sustainability goals.

The implementation as is and the next steps already planned will support the energy consultancy in Salzburg in their daily work and create a bigger awareness in the usefulness of geographical data and their potential to work as a linkage between stakeholders their goals and working environments.

The implementation may serve as an example for other regions and help transport ideas and tools or even the way of data collection and preparation for the use of a cross-sector and cross-border planning approach.

7. Transnational value (200 words)

identify which elements from PPs experiences could have a transnational value thus contributing to the transnational outputs: “Guidelines/Strategy for territorial competitiveness based on EU 2020 Strategy” and “Guidelines for spatial and energy planning instruments

The experiences on how people in the “energy planning and consultancy business” can benefit from geographical indicators and better knowledge on the surroundings of individual buildings is surely something which can be of great transnational value as the according people in the other Alpine Space countries face similar challenges and could get support through the development of similar tools and the better integration of new instruments in already existing tools, structures and processes as demonstrated in Salzburg.

Especially the possible solutions for better maintenance of such systems and the findings on the necessity of data harmonisation and prearrangements for specific purposes can contribute to the design of effective integration of geographical information in more planning processes making them a common key element for joint efforts and messages.

8. Suggestions for the AlpHouse centres

The AlpHouse Center within the region has a slightly different focus. Nevertheless the results of the implementation and enhancement of the tool energy certificates as well as associated web pages could be marketed through the AlpHouse center to make the results better known to a broader audience and probably trigger additional emulation effects of people realizing the power of data and information combination and analysis for building purposes.

The example could also be spread to other AlpHouse Centers and Contact points focusing on planning issues to spread the idea of using energy certificates as central information hub and decision support instrument to other regions of the Alpine Space.



9. Annexes:

Knowledge Base Factsheets on produced outputs:

- web-based geographical indicator tool for decision support