



For high efficiency solar power generation

SOLAR ROOF POTENTIAL CADASTRE BY HANSA LUFTBILD

ENERGY MANAGEMENT



The creation of a solar roof cadastre has several advantages. It is a comprehensive service to the citizens and strengthens the renewable energy sector. The available photo-voltaic potential is clearly illustrated and easy to understand. Customers can neutrally check the efficiency of their roofs before they contact an installation company. Additionally, a solar roof potential cadastre serves as a portal to support the local economy and can cause a significant cash flow to your region.

According to industry estimates, the global photovoltaic power market will grow five-fold by 2020. This means enormous challenges to local authorities and the local industry. Our solar roof potential cadastre is a comprehensive planning tool for the expansion of renewable energies in your region and the adaptation of current electricity networks to the increased use of photovoltaic installations.

ROOF SURFACE MODELLING

On the basis of aerial photographs or airborne laser scanning (LiDAR) all sides of the building's roof will be determined. This method has many advantages, e.g. the availability of these data for further analysis (3D city models, green roofs etc.) and a significant increase in quality in comparison to a more general classification roof data.

SUITABILITY TEST

Based on this analysis, the potential photovoltaic capacity will

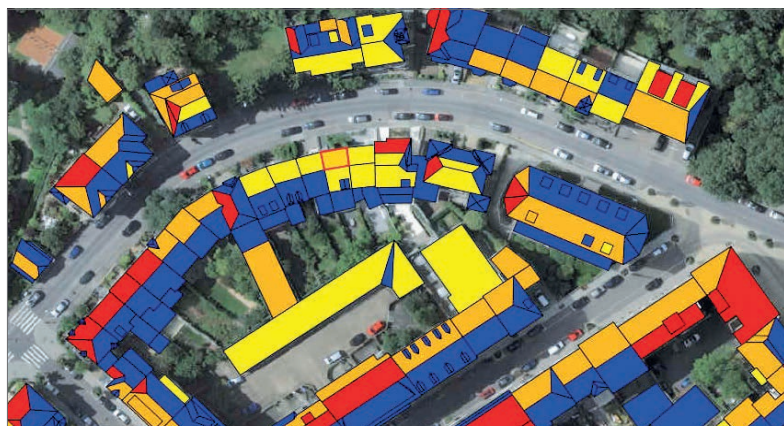
be calculated. The determining location factors are the exposure, the roof pitch, the roof size and the shading. These factors will be computed for each side of the roof for a whole year. The next step is the classification of the detected roofs on the basis of their solar capacity factor.

VISUALISATION

The solar potential results can be incorporated into maps or 3D city models as neutral data. By using a WebGIS based upon existing digital orthophotos the data can also be displayed on the internet for effective public presentation. On the web the roof surfaces can be queried interactively on their solar potential (proceeds and CO2 reduction per year). In combination with an integrated solar energy calculator the portal allows extensive economic analysis and its simple and intuitive user interface caters even to the needs of untrained users.



Aerial images are often the basis for further modelling processes



Different colours are representing the different roof classifications

OUR SERVICES, YOUR ADVANTAGES:

- > You will be able to offer a comprehensive service to citizens and industry and strengthen the renewable energy sector
- > You will receive a comprehensive planning tool for the expansion of the distributed electricity generation
- > To generate added value, you can use the captured data for additional applications, e.g. 3D city models or green roof modelling
- > Publish all information via an internet portal and give even untrained users the opportunity to analyse the economic potential of building-integrated photovoltaics (BIPV)

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