





### SMART CITY TARGET AREA GRAZ WEST

The "Smart City Graz"-strategy will be first implemented around Waagner-Biro-Straße in Graz West.

This former industrial area near the center of Graz is an important local land reserve that will be developed into a sustainable place to live and work, boasting a high quality of life.

National funding of the Climate and Energy Foundation facilitates flagship projects that implement modern technologies, deliver sustainable energy and preserve resources. In addition, a new residential area and a high-quality public space will be created.

### THIS IS GRAZ TODAY

The City of Graz aims to combine an excellent historic preserved center (designated a UNESCO World Heritage Site) with a modern "City of Design" and mediterranean flair. A southeast European hub with a dynamic economy, Graz is an internationally recognized location for research and education.

Yet Graz is a growing city with limited building land. Due to its topographic location in a basin, the city faces considerable climatic challenges.

Thus its new official urban development concept revolves around the low-emissions, resource-saving and energy-efficient "Smart City Graz," which will first be implemented in the western part of the city.

### THIS IS GRAZ IN 2050

In 2050, the metropolitan area of Graz is a dynamic city with compact building development and urban mixed usage, attractive public spaces and a high quality of life.

By consistently following Smart City strategies and raising consciousness across the board, resource and energy consumption as well as their related emissions have been reduced and steps have been taken towards making Graz a zero-emissions city. The required energy comes 100% from the region and is produced from renewable energy sources.

As an attractive location for research, training and business, Graz is an international benchmark for added value through innovative urban technologies and systems. Graz is a desirable place to live and work at every stage of life and has become a low-emissions, energy-autonomous and waste-free city. Soil and water quality as well as biodiversity have significantly improved while noise pollution has decreased in downtown Graz.









### ENERGY VISION SMART CITY GRAZ

In 2050, the city of Graz finds itself at a sustainable energy equilibrium. The total energy required is produced 100% from the region and from renewable energy sources. The citizens of Graz understand the value of energy and use it consciously and efficiently. In the first implemented Smart City Graz pilot project, the use of innovative technologies allows the majority of the energy demand to be locally generated. The renovation plan for the Helmut-List-Halle includes the building of an energy plant that will provide the entire city district with carbon-neutral energy. At the same time, the building will offer acoustic insulation for the district. At the heart of the design is the use of "Grätzel" (dye-sensitized solar) cells, which also act as noise protection elements in the glass walls and the roof construction.



# THE CONSORTIUM

13 national and international partners are taking part in the first Smart City Graz project.



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## **KEY FEATURES**

- Currently the only Smart City flagship project in Austria
- Realizing the first local energy network
- Implementing Grätzel cell technology in building facades
- Meeting Smart City goals through PPP contracts in the energy, mobility, building technology and public space sectors
- Accompanying city district management to involve all actors



## SMART CITY GRAZ WAAGNER BIRO

A new, energy-autonomous city district will emerge in the former industrial area next to the main railway station of Graz, surrounding the cultural venue Helmut-List-Halle.

Energy technologies for the intelligent "Zero-Emissions City" will be used for the first time in Graz. The project components include integrating Grätzel cells and implementing flagship construction (e.g. the research tower), a local energy network and residential and commercial areas with innovative building technologies, sustainable urban mobility and generous open spaces.





### SCIENCE TOWER

The cornerstone of Smart City Graz Waagner Biro is the construction of the "Science Tower," by FIBAG and SFL Technologies. The 60-meter-high research tower north of Helmut-List-Halle will house research institutions and feature a publicly accessible rooftop garden.

## THE GRÄTZEL CELLS

One of the core technologies of the Smart City Graz project are Grätzel (dye-sensitized solar) cells. The Science Tower will be enveloped in colored to whitish translucent photovoltaic cells, housed between glass plates. These solar cells imitate the photosynthesis in plant leaves, turning light into electrical current.





