

Smart City Project Graz

District management

Graz, Austria



The Graz Living Lab for a Smart City District Management

To guarantee the broad participation of stakeholders and citizens in the Smart City urban area of Waagner Biro in Graz, a Smart City district management was established in 2013. It is run by StadtLABOR Graz and serves as an information hub between citizens, local companies, the City of Graz and the other twelve consortia members of the project. The development of this urban area, into a low-emission and energy-autonomous district with attractive housing and office buildings, good local supply and recreational leisure activities, is based on the implementation of some innovative energy demonstration technologies that guarantee the sustainable use of energy and resources. StadtLABOR Graz is responsible for the conception, coordination and implementation of the *informal* planning process and supports also the *formal* urban planning processes (e.g. the legally binding land-use plan). Work started in 2013 and the process is currently in the middle of the planning period. Initial activities have fostered the increased engagement of local actors, identified realisable projects in the neighbourhood, and stimulated input into the formal planning processes and competitions. For the urban planning competition, on the brownfield in middle and north of the Waagner Biro area the winning concept has been already selected. The district management has developed a very efficient and successful planning approach, which is fostering on communication processes for the implementation of sustainable and attractive energy solutions, living and working places, public and green spaces. As a consequence the same district management approach will be used in other urban development processes, and has started in the Smart City area of Reininghaus.

Country/ City Profile



Country		City	
Population (2014)	8.6 million [4]	Population (2014)	269,997 (city)[6] 605,143 (metropolitan) [6]
Land area (km ²)	83,878	Land area (km ²)	127,46 (city) [6] n/a (metropolitan)
GDP per capita (2014, current international \$, at purchasing power parity)	47,682 [5]	GDP per capita (2011, US\$, at purchasing power parity)	36,300 [7]
Region	Central Europe	Region	inland (47°07'N 15°42'E)

City's physical geography

Location	<ul style="list-style-type: none"> ✓ Southeast of the Alps laying in a basin on the Mur river (flooding risk, air pollution, urban heat islands) ✓ Elevation 353 m
Climate	<ul style="list-style-type: none"> ✓ a humid continental climate (average temperature: 10.8 C°) with warm summers, cold winters, and strong seasonality ✓ Average annual precipitation:818 mm/year

Initiating context

The City of Graz started to work on Smart City with development project "I live Graz" [1] in 2010. This resulted in a Smart City Graz Vision & Strategy (officially integrated in the urban development concept) and identified two main urban areas in which the Smart City strategy will be implemented: Smart City Graz West - including Waagner-Biro project and Graz Reininghaus [2] - and Smart City Graz South. The information in this brochure is mainly concentrating on Smart City Graz Waagner-Biro area because experiences and results are already available. On the former industrial area of Waagner Biro close to the main railway station, the city's first realisable Smart City project is currently under development. Activities started in 2012 and the plan is to change this area to a sustainable and energy-autonomous urban district. A consortium of thirteen national and international partners in

the energy, mobility, building technology and public space sectors, headed by the Stadtbaudirektion Graz, started this Smart City Project. To foster the participative planning process the StadtLABOR Graz was set up in 2012 as a “city lab” [3].

Project description

The development of the Graz Waagner-Biro urban area, into a low-emission and energy-autonomous district with attractive housing and office buildings, good local supply and recreational leisure activities, is based on the implementation of some innovative energy demonstration technologies, which guarantee a sustainable use of energy and resources. These include:

- a research tower with innovative photovoltaic cells (Grätzel cells), an integrated energy storage and a semi-public garden on the roof top,
- Grätzel photovoltaic cells to be implemented also in other building façades,
- a local energy centre with a small combined heat and power (CHP) plant fuelled by biogas,
- smart heat grids,
- innovative energy-efficient building technologies, and
- a sustainable urban mobility infrastructure based on an up-graded connection to the public transportation system via a new tram line and new bicycle lanes.

Other important urban aspects to be covered in this participative planning process are attractive living and working places, public and green spaces, public and cultural facilities.

To foster the broad participation of stakeholders, including interested/affected citizens, enterprises and local organisations, the district management was established in early 2013 with an on-site office. It is run by StadtLABOR Graz and serves as an information hub for citizens, local companies, the City of Graz and the other twelve consortia members of the project. The management team accompanies the developments and planned projects of the Smart City Graz Waagner-Biro project. Apart from fixed weekly opening hours, a number of participative formats are offered: - regular meetings (“Stammtisch”), neighbourhood projects, events on smart mobility and other “smart” issues (waste prevention, energy), projects with schools, yearly large-scale information events, projects with artists, impulse utilisation projects, etc..

Currently the district management is engaged in the competition for ideas on the design of public and green spaces in this area. In a participative planning process, citizens and local players have been asked to submit their ideas for the planned green park, the central district square and the promenade. There are three different ways available for the participation [8]:

- Submitting a written statement;
- Introducing or presenting an idea at the above regular meetings, and
- Participating in specially organised meetings.

A public opinion poll on the engagement process is currently under way. The ideas and proposals are gathered and documented continuously. They are available on the official internet website of Smart City Graz, where other useful information on the whole Smart City Graz Waagner-Biro project is also available [9]. Proposals have already been made public and they will be presented again and discussed in special events.

Furthermore the district management was involved in four different urban planning and architectural competitions with first results now available [10].

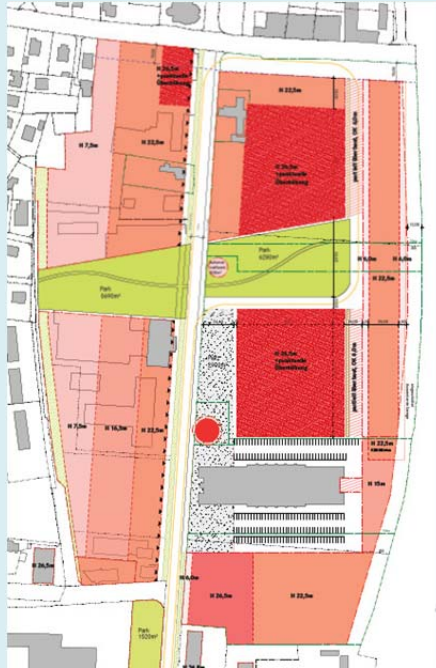
Implementation process

StadtLABOR Graz is responsible for the conception, coordination and implementation of the *informal* planning processes (mainly via the district management), in addition they are supporting the *formal* urban planning processes (e.g. participation formats during the legally binding land-use plan). This includes [11]

- The development of a district management for a broad information and participation of citizens, entrepreneurs, and other organisations within the project area;

- Support of competition procedures;
- Creating and raising awareness, including smart consumer coaching with multi stakeholder training concepts;
- Holding of expert discussions and events on linked urban topics;
- Organisational handling of one “Smart City Awards”.

Projects implementation details

Process	A district management was set up in 2013 for the Smart City Graz Waagner-Biro project by the StadtLABOR Graz as part of the Smart City Graz Demo project.	
Financing	The activities of StadtLABOR Graz and the Smart City Graz Waagner-Biro project are funded by the Climate and Energy Funds (Klima- und Energiefonds) via the Smart Cities Demo Programme. The overall budget is about 4,2 Mio € for a period of 5 years (2012 - 2017) [12].	
Leadership	City of Graz	Organizational Structure The consortium of Smart City Graz is headed by the City of Graz. The StadtLABOR Graz is an independent non-profit research association and is one of the thirteen members of the Smart City Graz project consortium, which is carrying out the informal district management.
Involved stakeholders	Other consortia members: <ul style="list-style-type: none"> ✓ StadtLABOR Graz ✓ Holding Graz (municipal services) ✓ SFL technologies GmbH ✓ FIBAG Forschungszentrum für integrales Bauwesen ✓ AVL List GmbH ✓ DI Markus Pernthaler Architekt ZT-GmbH (architectural office) ✓ Energie Steiermark AG (energy utility of Styria) ✓ Energie Graz (energy utility of Graz) ✓ TU Graz (Graz University of Technology) ✓ Eco World Styria ✓ SOT Süd-Ost Treuhand GmbH ✓ Alfen Consult GmbH Users <ul style="list-style-type: none"> ✓ City residents ✓ Employees ✓ Entrepreneurs ✓ Public institutions 	Urban master plan  <p>3,500 living places, 1,000 work places, 12,000 m² green spaces</p>

Results

The work of the district management started in 2013 and the process is currently right in the middle of the planning period. Initial impacts include the increased engagement of local actors, tangible projects in the neighbourhoods (surrounding housing complexes), ongoing inputs into the formal planning processes and competitions, impulse utilisation projects, cooperation with artists.

A success-story is the urban planning competition for brownfields in the middle and north of the area [13]. The winning concept, by the architect Nußmüller Architekten ZT GmbH, is characterised by designing all residential areas as quiet zones, constructing a PV façade which serves also as a noise protection wall to the railway yards. All residential buildings have green backyards. Between them a green natural area (part of the district park), partly public and semi-public, will be developed. Surrounding the Science Tower, which is currently under construction, a large urban square with restaurants and offices is planned.

Lessons learned

An opening urban planning process is a huge challenge to all actors involved in terms of finding a common understanding of things, finding a common “language” and to understand the needs and interests behind the positions. Therefore fostering communication and establishing appropriate communication processes are key factors for the implementation of innovative and sustainable energy technologies and energy-efficient buildings. Obviously, the willingness of decision makers to an open planning process and to communicate in a meaningful and positive way is a prerequisite for mutual understanding. Acceptance is a question of experience and peoples’ mind-set – open discussion and communication cannot be mandated but evolves over time by building trust.

Participation processes often lack successful methods and tools for addressing, activating and inviting people in the early stages (while there are already thousands of proven participation tools if people are already involved) and they lack efficient processes, timeframes and quality of engagement. Moreover, the inclusion of the whole array of citizen groups representing the demographic realities in cities often fails which leads to suboptimal innovation ecosystems. For attract people to activities in their district rather unconventional methods which go beyond e-mail, direct mails or post cards, may be needed. Due to the already positive effects with this planning process, the same approach will be applied in other urban development processes such as for Smart City area of Reininghaus [14].

References

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