

# Simmering Smart Urban Renewal

Implementation Report of Smarter Together Vienna  
2016 — 2019



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 691876



**City of  
Vienna**



**SMARTER  
TOGETHER**  
gemeinsam  
g'scheiter

**Austria** Vienna

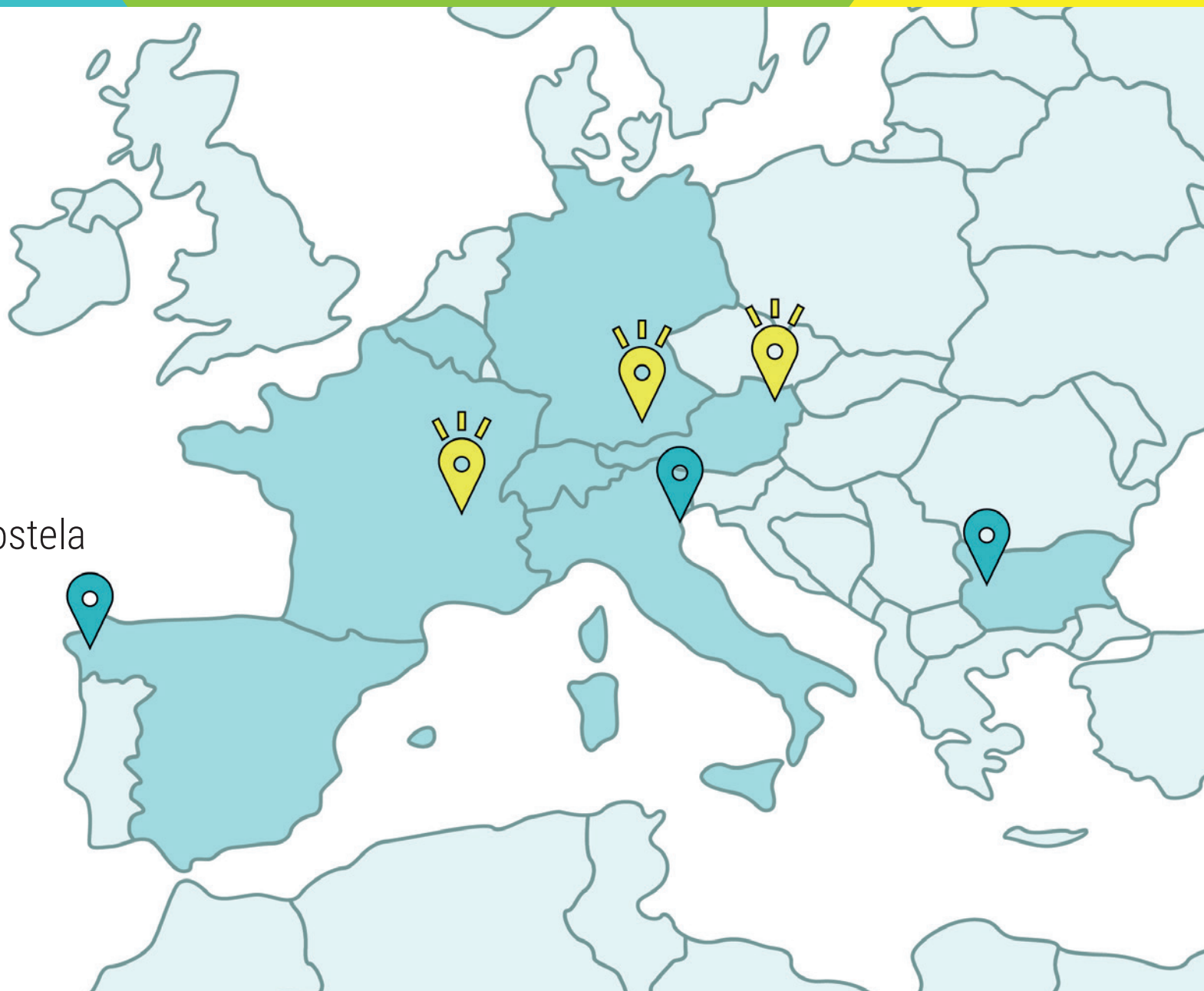
**France** Lyon

**Germany** Munich

**Bulgaria** Sofia

**Italy** Venice

**Spain** Santiago de Compostela



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On-site visit to Siemens in Simmering



1st Research Festival Simmering



1st Research Festival Simmering



Groundbreaking ceremony Hörbigergründe

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Executive Board





# Dear readers,

Vienna is renowned as a Smart City with a high quality of life based on social integration, high ecological standards and future-oriented governance. Our contribution to addressing the global societal and environmental challenges that we all have to tackle together is a social Smart City focusing on the needs of citizens, where technology is at the service of people. In order to make this vision become reality, we showcase concrete solutions on the district level.

Therefore, in 2015, Vienna, together with Lyon and Munich, joined the club of Smart Lighthouse Cities within the EU-funded programme Horizon 2020.

In 2016, with the formal launch of the project, our goal was to boost urban renewal and climate action with innovative solutions in the emblematic working class district of Simmering. Our challenge was to develop a joint approach with numerous project partners and citizens in the district in order to put in practice the idea of being “smarter together”.

Smarter Together Vienna is offering a variety of great solutions and innovations for a liveable, green and socially sustainable city of the future. Smarter Together is forward-looking because it connects people, involves the business sector, underlines the partnership-based co-op-



eration of all, and even promotes Vienna’s attractiveness as an international business location.

This commitment has even contributed and respectively led to a series of awards and recognitions. In 2017, Vienna was for instance awarded the UN Habitat Global Green City Award, and Smarter Together specifically won the VCÖ Mobility Award in the category “Active Mobility and Public Space.”

From a European and global perspective, the project achievements also show that Vienna’s social and/or subsidized housing model can be considered as a contribution to the global UN climate goals.



We invite you to discover the panoply of activities that make up Smarter Together in Vienna. The EU and its Horizon 2020 Programme have provided a great opportunity to meet the challenges thanks to all who have worked on co-creating the project with commitment and passion.

Enjoy the reading!

**Michael Ludwig**

Mayor of the City of Vienna

**Kathrin Gaál**

Executive Councillor  
for Women and Housing





Vienna project launch 2016, © Stephan Hartmann



# Dear fellow “Smarties”,



and all who have co-created the success story of Smarter Together, dear readers,

It is our special pleasure to present a first summary of our project achievements on behalf of the whole team. Based on a broad societal vision, responsibility and political mandate, we have implemented a huge number of actions. Moreover, we have succeeded all together in developing a dynamism that has triggered a variety of additional processes, project activities and tangible results. Numerous project partners were involved, from governance to businesses ranging

from SMEs to world players, and research institutions. We actively included nine departments or units of the city administration, and 80 people from different local project partners. During the process, many other institutions, local actors and stakeholders have joined our social Smart City journey with a human face.

For us, this has been a challenging, but also very fulfilling and fun job – thanks to a motivated and great project team! Thanks to the support of the European Union Horizon 2020 call, Smarter Together Vienna has implemented far beyond 40

different individual projects. With approximately 7 million euros in funding, it has triggered a leverage effect leading to a total investment of over 80 million euros in Vienna alone. Numerous first-of-its-kind demonstrations and new add-ons to existing processes were implemented. Thus, Smarter Together became the smart city token for urban renewal in Vienna, not only within the city, but also internationally.

Smarter Together has also witnessed an increasing international and local interest from people who want Smarter Together has also witnessed an increasing interna-

tional and local interest from people who want to know the story of the project.

It is a privilege and a responsibility to report on the actions we are working on and what lessons there are to learn in creating a city fit for the future. Smarter Together acts locally while having a European and a global vision.

Enjoy the reading!

## **Julia Girardi-Hoog**

Project manager  
Smarter Together Vienna

## **Stephan Hartmann**

Co-Project manager  
Smarter Together Vienna



### Siemens

e-mobility (e-forklifts e.a.), plant logistics, participation of employees



### New Secondary Schools I+II

**Enkplatz 4:** extension incl. 4 zero-energy gyms, PV system + STE system feeding surplus heat into district heating, exhibition of the project competition, solar benches



### Education Quarter Enkplatz

Public library, touch screen computer, pupils' participation



### Community College VHS

Information and local activities



### Refurbishment Hauffgasse 37-47

485 flats on 53.000 m<sup>2</sup> and PV-system



### e-car-sharing

with charging stations and "Active Group"



### Refurbishment Lorystraße 54-60

95 flats on 8.800 m<sup>2</sup> and PV-system



### Refurbishment Herbortgasse 43

52 flats on 3.800 m<sup>2</sup>



### WienMobil Station

The first mobility station in Vienna: car-sharing, e-cargo bike, e-bike sharing, bike boxes, charging station and infoscreen



### Central Cemetery

E-bikes at Gate 2

### also

### Citizen's participation

SIMmobile, info stands, workshops, participation and co-creation in mobility and refurbishment, gamification

### Sustainable Mobility

Strategy for the quarter, testing area for e-mobility, green path network, city logistics

### Data Management

Data Infrastructure in FIWARE: smartdata.wien

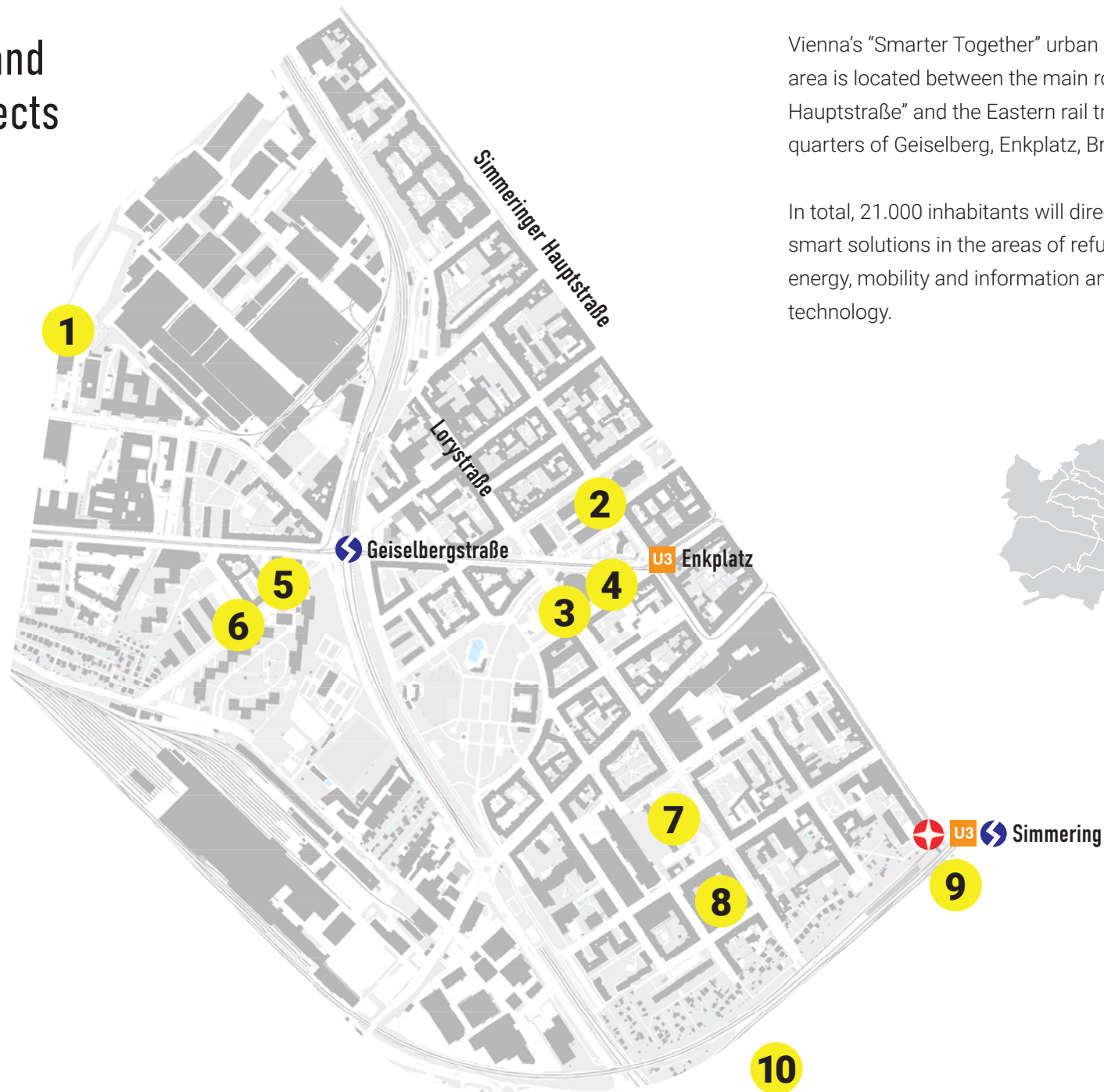
### Smart City

Governance learning, replication, research cooperation, international, network of excellence

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## Project Area and Selected Projects



Vienna's "Smarter Together" urban renewal project area is located between the main road "Simmeringer Hauptstraße" and the Eastern rail track (i.e. the quarters of Geiselberg, Enkplatz, Braunhuberviertel).

In total, 21.000 inhabitants will directly benefit from smart solutions in the areas of refurbishment, energy, mobility and information and communication technology.

# Smarter Together at a Glance

**Smarter Together is an EU-funded project under the Horizon 2020 Programme** bringing together the Lighthouse Cities of Lyon, Munich and Vienna as well as the Follower Cities of Santiago de Compostela, Sofia and Venice and the Observer Cities of Kiev and Yokohama.

The project was launched in February 2016 and includes an implementation phase until 2019, followed by monitoring and evaluation activities to be concluded in 2021. The total EU funding of 25 million euros and 7 million euros for Vienna respectively, triggered a total investment of over 80 million euros and over 40 single projects in Vienna alone. Important initiatives for the urban renewal of Simmering have been triggered. More recently, Smarter Together has joined the EU network of 80 Lighthouse Cities contributing its experience to the common European Smart City vision.



**Simmering, Vienna's 11th district in the south-east**, is characterized by its working class history, a diverse building stock with a high share of municipal and subsidized housing. With a higher than average percentage of citizens with migration backgrounds and lower than average levels of education, the project area is a perfect testbed for a real life implementation of innovative solutions that are relevant for replication.

The Smarter Together  
project area in Simmering

© SiPI



# Citizen Focus

## Giving “Smart City” a Human Dimension



**Smarter Together tackles environmental and societal challenges that already have an impact on the local communities and on the citizens’ everyday life.** Smarter Together strives to ensure that the necessary changes are supported and “owned” by the society as a whole. An open and participatory dialogue builds the trust and the commitment of stakeholders that is needed to ensure that many citizens are willing to contribute their individual “last mile” of environmental action. Over 10,000 local inhabitants directly participated in Smarter Together activities designed to reach different target groups through a variety of approaches. Outreach was either based on information or gamification, making children the real Smart City ambassadors.



# The SIMmobile

**The SIMmobile is a mobile information and communication booth in public spaces used by a variety of partners and local actors for their outreach to the local population.**

In co-operation with and operated by the Urban Renewal Office (Gebietsbetreuung Stadterneuerung, GB\*) – a key institutional player with regard to citizen participation – the SIMmobile has been set up as a mobile Urban Living Lab. Numerous institutions like the Science Pool, Balu & Du or the WAFF (the Vienna Employment Promotion Fund) used the SIMmobile for their outreach activities.

From spring to autumn, it opens on average three days a week in different locations for six consecutive weeks before moving to another location in the district. It provides relevant project-related or general information as well as interactive tools and also offers workshops.

On one occasion, the SIMmobile made a stop at the Siemens factory site to disseminate project information and gather ideas for sustainable mobility solutions. The inputs received resulted among other things in an e-bike and an e-car charging station implemented by the Siemens management.



Jana Hann from the GB\* informing a citizen at the SIMmobile, © PID/Jobst



The SIMmobile next to the NMS school, © PID/Jobst

10 locations,  
93 days open,  
more than 3.500  
visitors.

# Smart Kids

**“Kids in focus” has become another pillar of Smarter Together’s outreach and particularly, in our effort to anchor responsible environmental behaviour in all generations. Starting from the school refurbishment, the smart kids programme encompassed a variety of activities.**

## WORKSHOPS IN SCHOOLS

Workshops were held in the two refurbished schools. They were created autonomously by the teachers that also explain the technology of the four new zero-energy-gyms.

## WORKSHOPS BY SCIENCE POOL

Science Pool is a local NGO which seeks to spark scientific interest in school kids in Eastern Austria, focusing particularly on energy, mobility and other smart city issues. So far, it has reached more than 630 children from 10 schools. Science Pool uses interactive methods designed to raise enthusiasm for smart city issues and technology. These workshops would usually not be affordable for typical families in the district.

Sport school mural project, © Martina Vogel-Waldhütter



## FIRST RESEARCH FESTIVAL IN SIMMERING

In November 2018, Science Pool hosted Simmering’s first research festival. The festival built on the series of workshops in schools, and four classes from three schools have continued their smart city workshops autonomously. Their results have been awarded with a prize presented by City Councillor Kathrin Gaál and renowned local science hero “Science Buster” Elisabeth Oberzaucher.

## MURAL PAINTING

Some 50 youngsters painted a mural in a public space next to a railway station with the statement “Simmering is my future”. The activity was facilitated by the Urban Renewal Office (GB\*) in co-operation with Balu & Du, a local streetwork association.

## KEITH HARING-STYLE MURAL

The project was developed on the initiative of the refurbished sport-centred secondary school, and was promoted by Smarter Together.



**SCIENCE POOL:**  
10 schools,  
26 workshops,  
about 630 Kids taking  
part in workshops

1st Research Festival in Simmering, © Bojan Schnabl



# Gamification

**Offering easy access information and triggering interest through low-threshold outreach: Smarter Together employed gamification concepts to reach out to kids and through them also to their parents with often diverse backgrounds, thus contributing to community building across traditional borders.**

## BEAT THE STREET

A large-scale active mobility and health game for kids that mobilized thousands of local inhabitants from all generations during 6 weeks in autumn 2017 and in 2018. It also contributed to social integration and community building in the district. School kids received chips and their parents were given chip cards with which they had to touch at least two of many Beat Boxes installed across the district in order to collect virtual points and count

the kilometres walked or cycled. In 2017 alone, some 6,000 inhabitants of Simmering participated in the collective game and walked over 80,000 km. Three schools were awarded with sports equipment.

In 2018, the Simmering pilot was taken up by the district of Donau-stadt with great success and was reinstalled in Simmering due to the massive request of the kids and their parents.



Beat the Street, © DDBVB, Konrad Khittl

Beat the Street  
attracted 6.000  
participants  
in 2017 alone

## PHOTO COMPETITION

The photo competition "Summer in the City" invited locals to reflect on climate change. Over 30 most authentic photos were presented and proved to be a real challenge for the awarding jury. The activity was supported by the local newspaper and local institutions.

Beat the Street 2018, Kickoff, © Mobilitätsagentur Wien/Christian Fürthner







Beat Box

Bike bell



SIMmobile at VHS Simmering



1st Research Festival Simmering



Images from top left ©:  
 Mobilitätsagentur Wien/Christian Fürthner  
 B&F Wien/Tobias Natter, GB\*, PID/Bohmann,  
 SmarterTogether/Sakir Sarioglu (Flying Pizza),  
 PID/Bohmann

SIMmobile team with Sakir Sarioglu from Flying Pizza



Kathrin Gaál and Elisabeth Oberzaucher at the 1st Research Festival Simmering





# VHS Simmering

**VHS Simmering, the local adult education college and cultural centre, has become a key geographic anchor of the project. Numerous events take place in the events hall and numerous workshops and trainings in the class rooms. The Municipal Library has a high quality touch screen computer with project information available to the users.**

## **THEMATIC EVENTS AND CONFERENCES**

In 2017, Smarter Together held three thematic events linked to the project issues of energy, mobility, data management and infrastructure.

## **ON-SITE VISITS**

The VHS Simmering is regularly the starting point for local or international visitor groups to the project area and hosts debriefing meetings or workshops for these groups.

## **A HIGH-END TOUCH-SCREEN COMPUTER**

was supplied to the local municipal library, giving project information to kids and offering start-ups the opportunity for creative use.

## **EDUCATION QUARTER SIMMERING**

Vienna is structuring co-operation amongst educational institutions from a certain neighbourhood. Smarter Together's many school-oriented activities have prepared the ground for this well before the formal start of the co-operation. Those activities will be intensified.

## **EDUCATION DAY**

Every year, VHS Simmering organizes a day of education that brings the variety of offers to a wider audience. Smarter Together regularly collaborates with the GB \* with info, painting activities or the district e-cargo-bike.



VHS Simmering / © PID/Votava



Touchscreen Computer (knowledge carrier) at the VHS Simmering  
© PID/Votava

# Co-Creation

**Co-Creation is what we call the direct involvement of citizens in the development of a solution. Smarter Together used a variety of activities from information to deeper co-creation to increase citizens' and stakeholders' ownership of their city and neighbourhood.**

## E-CAR SHARING

The e-car sharing project in the co-operative social housing estate of the BWSG in the Hauffgasse has been initially designed to provide additional dimensions to the concept of social housing. Smart mobility is implemented as a part of the smart city concept. It has been promoted in co-operation with "wohnbund:consult", a long term implementation partner of the social housing provider BWSG as well as with the carsharer CARUSO.

Initial surveys and in-depth interviews resulted in the definition of the initial concept with three different cars and an "Active Group" of approximately 15 members who take care of the everyday management. Some 80 users (out of 1000 tenants) drive up to 4000 km per month and car.

From the start, the highly advantageous tariffs in the testing phase have been communicated as a promotion



E-car sharing active group, © wohnbund.consult

The BWSG e-car-sharing represents a best practice of co-creation within Smarter Together.

tool for the new smart city concept. This "Active Group" is intensely involved in the elaboration of the final business case "car sharing in social housing". This is done in close co-operation with the car-sharing operator CARUSO.

During the academic year 2018/2019 a group of students from the Sustainability Challenge, implemented by the four major universities of Vienna, conducts a field study on the future business model as a contribution to the achievement of the United Nations SDGs (Sustainable Development Goals).

## E-BIKE SHARING BY SYCUBE

In the blue-collar district of Simmering, e-bike sharing and e-car sharing were very little known or used.

Smarter Together launched a series of informational activities in order to give residents often the first opportunity to test different brands of e-bikes. Based on an on-site survey, one specific type of e-bike was chosen for the planned future e-bike sharing scheme. 2 terminals with 12 e-bikes and a CargoBike are up and running by Sycube.



SIM BIKE, © PID/Votava

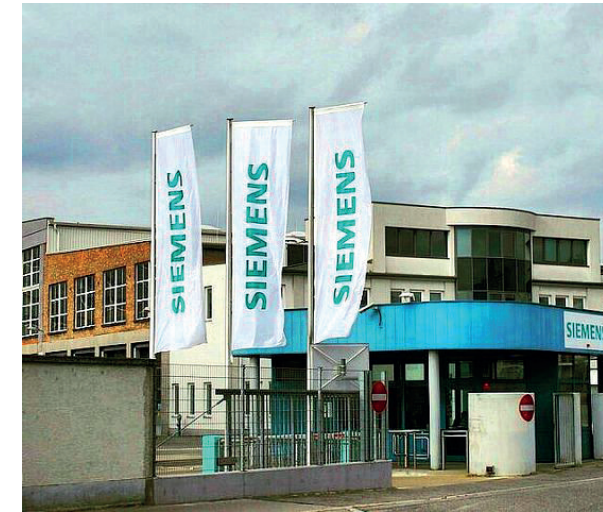
## REFURBISHMENT

Two refurbishment projects at the municipal housing blocks in Lorystraße and Herbortgasse served to address the tenant participation process in co-operation with the City's responsible communication and mediation called "wohnpartner". A new kind of communication strategy on upcoming refurbishments has been elaborated and tested. It is shifting the focus from top-down information to information relevant for individual tenant concerns. This new communication strategy is now deemed a best practice and will be rolled out to all units involving approximately 222,000 municipal flats and a quarter of Vienna's population.

In Lorystraße, the tenants participated in the decision-making on the use of the green backyard, triggered a new technical solution for the ventilation of the staircase in case of fire and voted on the colour of the facade.

## SIEMENS PLANT SIMMERING

The Siemens plant in Simmering is a worldwide successful high-tech enterprise in the construction of railways and metro lines. The knowledge and the commitment of the staff at all levels represents a special added value. Within the EU-project, innovative ideas suggested from within the work force have been implemented. As a result, new energy-saving charging stations for small devices have been tested and subsequently rolled out. A new centre for small items logistics has been designed and built, adding value to the initial new e-forklifts. The consumption of diesel has been reduced drastically thanks to this set of measures and the ecological balance of the industrial site improved. Another result of the co-creative process is the installation of charging stations for employees' e-bikes as well as two charging stations for e-cars.



Siemens Plant Simmering / © Bojan Schnabl

## A SURVEY IN THE SCHOOLYARD

on ideas for the future school has been carried out by GB\* while the SIMmobile was stationed for one month in front of the schoolyard of the NMS Enkplatz. Results have been forwarded and integrated in the planning of the school. As a result of the particular interest in "solar benches" for the future courtyard, those benches have been installed in 2017.



# Information and Communication

**Smarter Together Vienna has established an internal communication structure that focuses on the project dynamics and supports future replication. It supports all citizen participation activities as well as the communication endeavors of the international partners. From the strategic level all the way to participatory activities of residents and international exchange – communication work makes a contribution everywhere.**



© G J McLittle / fotolia / Montage

[www.smartertogether.at](http://www.smartertogether.at)



## A COMMON VISION AND MISSION STATEMENT

on communication has been elaborated at the start of project implementation, ensuring that Smarter Together serves as a promotion tool for all project partners which substantially contributes to their individual activism and multiplies their project outcomes.

It also contributed to “translating” the international perspective into a citizen-oriented approach including the local branding of the project in a dialect version of the project name “Gemeinsam g’scheiter” (Smarter Together in Viennese dialect).

## THE COMMUNICATION WITH CITIZENS

in general and with different target groups in particular is the responsibility of all partner institutions within their specific spheres of competences in order to ensure a long-term sustainability. Specific communication activities were undertaken by GB\*, wohnpartner, wohnbund: consult, VHS Simmering, Science Pool, DIE UMWELTBERATUNG, Balu&Du, WAFF, and many more.

## COMMUNICATION HUB

Smarter Together Vienna serves as a communication hub employing different tools and platforms such as the website [smartertogether.at](http://smartertogether.at), a monthly (bilingual) newsletter, Twitter, Flickr (a database of pictures and clips comparable to Wikipedia Commons), Facebook, etc.

## VIDEO CLIPS

Smarter Together Vienna has produced a series of video clips that are featured via the project website or via project partners.

## MEDIA COVERAGE

Smarter Together has received a vast amount of local, regional, national and international media coverage confirming its status as thematic leader and establishing issues in the public discourse.

## INTERNATIONAL OUTREACH

Smarter Together Vienna is regularly invited to international conferences in Austria and abroad in order to share its best practices. It has become a Smart City showcase project in regards to urban renewal of Vienna.





Heinrich Himmer, Barbara Novak e.a.  
at the NMS Enkplatz school



Bojan Schnabl, Daniel Glaser e.a.



SIM BIKE at the Central Cemetery



Walking Café



International visitors at the NMS Enkplatz school


Walking Café



Images from top left ©:  
PID/Gökmen, Mobilitätsagentur/Rupp,  
B&F Wien/Tobias Natter, Mobilitätsagentur Wien/Rupp,  
SWM/Zsolt Marton, Mobilitätsagentur Wien/Rupp

# Holistic Refurbishment

## An Essential of Urban Renewal



**Housing refurbishment is at the core of any urban renewal** as the existing housing stock is a major energy consumer and thermal retrofitting is a priority in light of our climate targets. Vienna's advantage: its large social (subsidized) housing and municipal housing stock where deep renovations are much more likely than in private multi-flat buildings.



# BWSG Hauffgasse

## Holistic Refurbishment

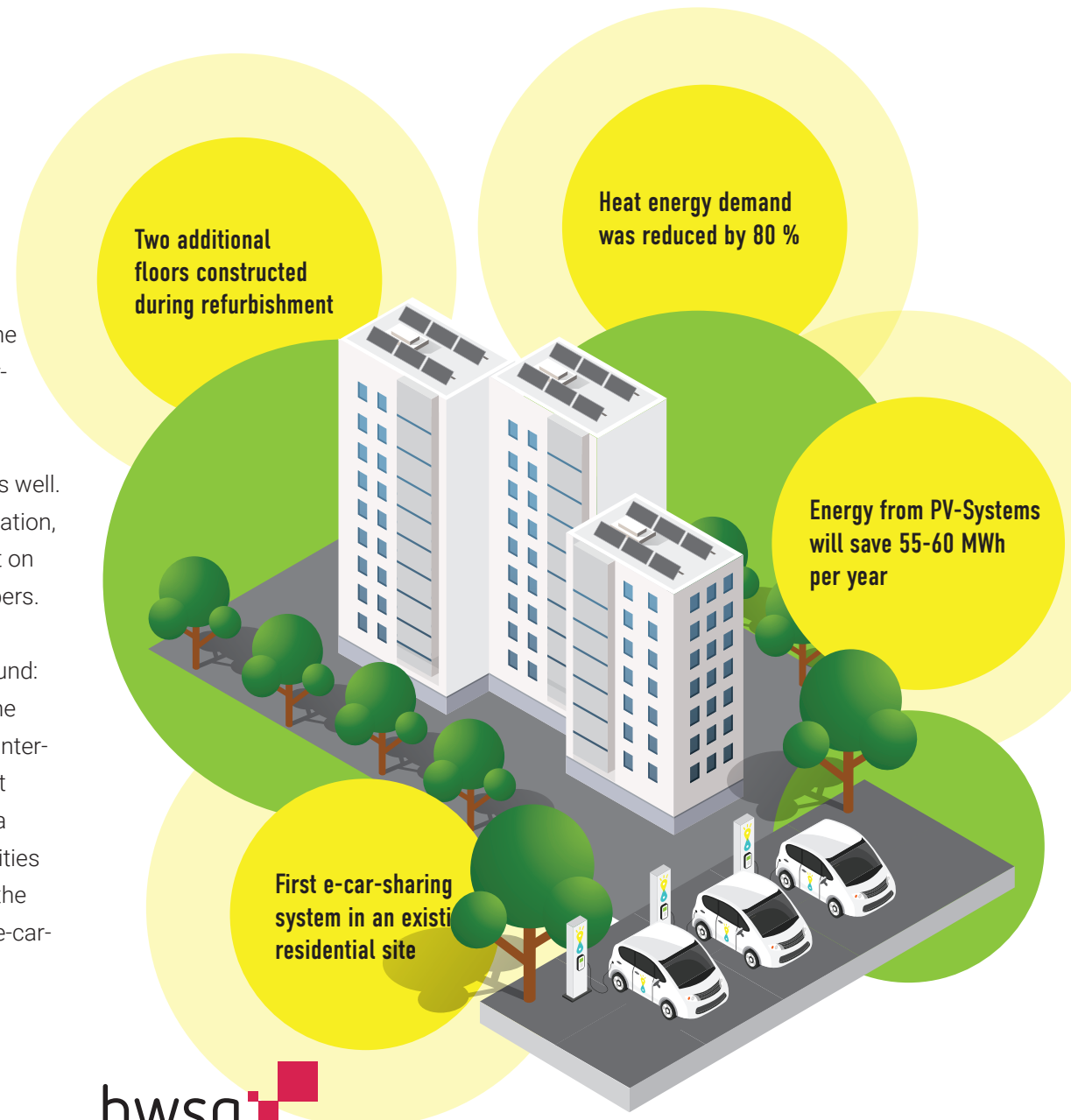
**The housing estate Hauffgasse 37-47 was built by the social housing association BWSG in the late 1970s. There are 486 flats, a community centre and a kiosk.**

The thermal refurbishment of the façade has reduced heat energy demand by 81 percent, from 103 kWh/m<sup>2</sup> per year to approximately 22 kWh/m<sup>2</sup> per year. In addition, the project partner "KELAG Energie & Wärme" installed a 280 m<sup>2</sup> large PV System with 56 kWp on the roof. The electricity generated will be used for warm water supply and will save about 55-60 MWh per year. The energy savings and the CO<sub>2</sub> emission reductions are a valuable contribution to combating climate change.

The living comfort has also increased significantly through the improvement of elevators, staircases and communal facilities.

Green areas will be upgraded as well. In addition, as part of the renovation, 79 new apartments will be built on the top of the existing skyscrapers.

The mediation institute wohnbund:consult fostered on behalf of the BWSG the dialogue and social interaction during the refurbishment process. wohnbund:consult is a key partner in all dialogue activities of Smarter Together including the installation and running of the e-car-sharing project.



# Municipal Housing Lorystraße and Herbortgasse

**The municipal housing estate in Lorystraße 54-60 was built from 1964 to 66. There are 95 flats, 3 laundry facilities and 2 business units.**

The thermal refurbishment of the façade reduced the heat energy demand by more than 80 percent, from 130 kWh/m<sup>2</sup>yr to approximately 23 kWh/m<sup>2</sup>yr. Additionally, a 50 m<sup>2</sup> large PV-System with 9 kWp was installed at the roof. The electricity generated will be used for elevators, laundries and other common facilities. The

surplus will be fed into the grid. The refurbishment process was accompanied by an innovative communication and participation scheme in co-operation with "wohnpartner", which is the institution appointed by Vienna Housing for the communication with tenants. The innovation will be used in all residential units of Vienna Housing all over Vienna in the future.

**The municipal housing estate in Herbortgasse 43 was built in 1929 and is under heritage protection. There are 52 flats, 1 laundry facility and 3 business units.**

The thermal refurbishment of the façade will reduce heat energy demand by about 75 percent, from 118 kWh/m<sup>2</sup>yr to approximately 28 kWh/m<sup>2</sup>yr. 8 additional flats are constructed in a rooftop extension.

**Heat energy demand reduced by 75 %**

Both municipal housing estates are owned and managed by Wiener Wohnen, the City owned housing company which owns a total of 220,000 housing units, and provide housing at very affordable rents to their tenants. The refurbishment ensures energy savings and emission reductions as well as additional improvements to make the buildings fit for the future.

**Electricity from 50 m<sup>2</sup> PV-systems used for elevators, laundries and other shared facilities**

**Heat energy demand reduced by 80 %**

**Tenants were invited to decide on façade color**

**STADT WIEN  
WIENER  
WOHNEN**



BWSG Hauffgasse



Julia Girardi-Hoog, Michael Ludwig, Werner Auer and Martin Skrivanek at the launch of the block refurbishment Simmering

NMS Enkplatz school



Heinrich Himmer and Barbara Novak at the groundbreaking at the NMS Enkplatz school



Temporary playground Greifgasse



Groundbreaking ceremony NMS Enkplatz school



Images from top left ©:  
SWM/Zsolt Marton, PID/Jobst,  
SWM/Zsolt Marton, PID/Gökmen,  
A. Tschismasia, PID/Jobst

# Smart Energy Resources, Instruments and Actions

**In its Smart City Framework Strategy, the City of Vienna has set itself the goals of reducing its CO<sub>2</sub> emissions by 80% in 2050. The necessary reduction of energy demand and increase in the share of renewable energy and waste heat requires sound strategies, resources, instruments and, finally, concrete actions.**

Smarter Together demonstrates innovative approaches to increase energy efficiency, such as replacing fossil sources by renewables or integrated energy planning: two solutions to generate heat through the integration of waste heat from a data centre and the use of the return flow of district heating have been planned. The installation of photovoltaic panels and the integration of solar thermal energy into the district heating grid have been implemented. These pilot actions have been complemented by a systematic analysis of energy and building data of the area, which forms the basis for integrated energy planning. With this combination and integration of activities, Smarter Together contributes to a holistic view helping to develop a strategy for the energy transformation of the building stock.



# Secondary Municipal Schools Enkplatz 4

**The reconstruction and modernisation of a public gym and the addition of 16 classrooms to the schools serves as a testbed for the use of new energy solutions in non-residential buildings.**

The extension encompasses 4 zero-energy gyms, 16 classrooms, and a total gross floor area of 3,800 m<sup>2</sup>. The renewable energy will be sourced from a photovoltaic system (67 kWp) and near-surface geothermal energy (heat pump). The latter will also provide cooling facilities to inhabitants in anticipation of periods of extreme heat. The solar thermal system allow for surplus heat to be fed into the secondary district heating system. This is an

important testbed for the integration of renewable heat sources into the district heating system. An ICT-based central monitoring and energy management system to regulate the solar heat energy flow into the secondary district heating grid will be established.

After completion of the construction works, a generous open air sports area with around 3,500 m<sup>2</sup> will be available to the 1,000 pupils. The new construction of the gym offers additional opportunities for leisure activities of residents of the neighbourhood.

4 zero-energy-gyms,  
16 new classrooms  
3.800 m<sup>2</sup> gross floor area  
3.500 m<sup>2</sup> open air sports area

Solar thermal energy for the school and the district heating grid

SIMmobile participation

Underground gym for school and community

Solar benches with smartphone charging stations

Geothermal energy also used for cooling

## Integrative Energy Planning

For the first time, the city of Vienna has carried out a detailed energy assessment of an urban neighbourhood. The maps that have been drawn up are designed to provide a) standard information about the energy demand, b) type of energy used and c) potential for renewable energy sources. The potentials for refurbishment and coverage by renewables have also been determined. Data gaps have been identified and the refinement of an energy planning scheme for the entire city has been initiated. In addition, Smarter Together has identified specific urban development instruments and actions necessary for integrated energy planning for the building stock.

## Electricity from PV

Four PV projects with a total capacity of 452 kWp have been carried out in the area. A system of 66 kWp has been installed on the refurbishment object BWSG-Haufigasse and a system of 9 kWp on the object in Lorystraße. The electricity generated will be used for elevators, hot water generation and other building services. The secondary school at Enkplatz produce 67 kWp. A further 310 kWp were installed on the roof of a new logistics centre in the area. Two solar benches have been placed in the front yard of the schools on Enkplatz. These benches feature PV panels on the table as well as batteries and sockets for everyone to charge their electronic devices with renewable energy.

total capacity of  
PV panels combined:  
452 kWp

## Increasing connection to District Heating

In order to reduce CO<sub>2</sub> emissions, the density of the district heating system needs to be increased. This will also help to reduce the duplication of infrastructural installations and of housing management costs.



The City of Vienna  
has set itself the goals of  
reducing its CO<sub>2</sub> emissions  
by 80 % in 2050.



Top:  
Solar Benches at the Municipal School  
© PID/Jobst

Left:  
PV panels on the roof of the  
BWSG Haufigasse housing estate,  
© Kelag Energie Wärme GmbH



# Energy Saving: Workshops and Quiz

## WORKSHOPS

Smarter Together provides workshops on energy saving and the correct use of new appliances for the households of the refurbished buildings. "DIE UMWELTBERATUNG" is a specialized environmental counselling institution. Additional workshops targeted at the specific needs of asylum seekers are also provided in co-operation with Caritas.

## LEAFLETS

Information material on how everyone can save energy in their homes has been translated into English by Smarter Together in order to support communication.

Energy-saving workshop by  
"DIE UMWELTBERATUNG"  
© Bojan Schnabl

## ENERGY QUIZ

As part of the gamification strategy and in order to meet the communication needs of the GB\* within the SIMmobile, an energy quiz has been developed in co-operation with DIE UMWELT-BERATUNG and has been used especially in the interaction with children.



How much energy can you produce? © PID/Jobst



© Smarter Together / OBprod/fotolia.com

# Smart Mobility Innovation To Go

The background is a solid yellow color. Overlaid on this background are white line-art illustrations. In the upper right, there is a stylized car with a rounded body and two large circular wheels. In the lower left, there is a stylized bicycle with a diamond frame, two wheels, a seat, and handlebars. The lines are thick and clean, creating a modern, minimalist aesthetic.

**Smarter Together has worked intensely on innovative (e-)mobility solutions as part of an integrated urban renewable energy and Smart City approach.** 8 mobility projects were implemented to provide alternative services and vehicles for energy and climate efficient mobility of the future. These project range from conceptual research and surveys to participatory and co-creative activities up to business and industrial logistics. For this holistic approach, Smarter Together was awarded with the Mobility Award in September 2017 by the Austrian Mobility Club VCÖ in the category “Active Mobility and Public Space”.

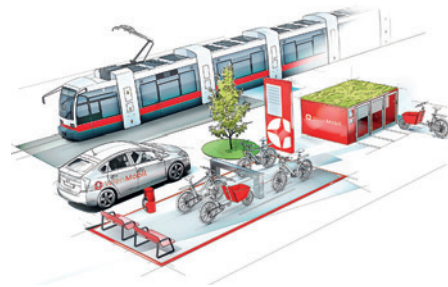


## BWSG E-Car-Sharing Hauffgasse



In the refurbished residential building BWSG Hauffgasse, an e-car sharing service was launched as a first-of-its-kind in October 2017. The three e-cars are intensively used. A group of active tenants takes care of the everyday running of the service and also promotes the scheme. The service is operated by BWSG in co-operation with Caruso, while wohnbund:consult is supporting promotion and co-creation activities. It is already making concrete plans for replicating the scheme.

## WienMobil Station



Since September 2018, Vienna's first public mobility point has been providing different mobility services in one location. The "WienMobil Station" offers an all-season public e-bike and e-cargo bike terminal, a charging station for e-cars, a car-sharing station, lockable bike boxes, a digital information terminal, an air pump and public seating. The main operator is "Wiener Linien". It is co-operating with 4 different sub-operators which underlines the connected approach of future mobility.

## E-Bike Sharing for the District



In April 2018, Sycube opened Simmering's first e-bike terminal at the Vienna Central Cemetery. The cemetery proved an excellent partner which was interested in offering a modern mobility service to its many visitors to help them navigate the expansive site. A second terminal is located at the mobility point. 12 e-bikes and a cargo bike are in operation. The e-bikes are available via the SIMBike App or through a chip card offered at the terminal. Sycube has developed the whole system including a new locking system for the e-bikes.

## E-Cargo Bike



In 2017, a special promotion campaign for e-cargo bikes was run in Vienna featuring the common platform [www.graetzelrad.at](http://www.graetzelrad.at). Smarter Together tagged onto this campaign to promote and to provide information about cargo bikes. The project also offers a Bakfiets e-cargo bike to citizens through the local GB\*. This fits in well with the project focus on smart mobility.

# E-Logistics at Siemens and Post

One of the focus areas is e-mobility solutions for industrial logistics. As a result of the co-operation with Siemens Austria, more than 20,000 litres of diesel are being saved every year through the use of e-forklifts, an e-delivery car and an e-transport carrier. In addition, e-car and e-bike charging stations were installed at the factory site in Simmering.

Siemens has also adapted its logistics concept to reduce truck deliveries. Charging facilities for small devices have been launched through an innovative bottom-up approach involving employees.

For the first time ever, Austrian Post added e-vans to its vehicle fleet and is using them for the delivery of bigger parcels as part of their effort to achieve their goal of CO<sub>2</sub>-free delivery in urban areas.



Forklifts in Simmering, © Siemens



E-vans, © Österreichische Post/Christian F. Houdek

The use of e-forklifts at the Siemens Plant saves 20.000 litres of diesel per year.



Local Mobility Strategy, © MA18/Michael Erdmann

## Local Mobility Strategy

The drawing up of a local mobility strategy at the outset of the project was an important foundation for demonstration activities. A SWOT analysis of all modes of transport was carried out and potential measures and locations of mobility services were identified. In a dialogue with the citizens on the street and relevant stakeholders, the mobility measures were closely interconnected with the urban renewable approach at neighbourhood level.

## Mobility Survey

In 2016 and 2018, two mobility surveys were carried out (one on-site and one on the internet) by the Austrian Institute of Technology (AIT) in close co-operation with the project partners and the GB\*. 241 full samples were evaluated in 2016, and the ongoing monitoring was intended to assess changes on mobility patterns. Results were shared with all partners to feed into individual projects and monitoring.



# Active Mobility

Arguably, one of the nicest ways to save energy is by using active mobility (walking and cycling) in daily life. The second best mobility option is to use eco-friendly public transport followed by sharing e-mobility services and, lastly, individually owned e-vehicles.

## WALKING CAFÉ

In co-operation with the Mobility Agency, a Walking Café was organised in the Smarter Together area. This “café” attracted an acquainted audience from all over Vienna and provided an opportunity to share information on the Smart City project.

Walking Café, © Mobilitätsagentur Wien/Christian Rupp



## BIKE REPAIR WORKSHOPS

Within the outreach activities of the SIMmobile, the GB\* also facilitated several bike repair workshops free of charge in order to boost the use of private bikes for daily mobility.



Beat the Street, © DDBVB/Mobilitätsagentur/Smarter Together/Philipp Lipiarski

## BEAT THE STREET

An awareness-raising programme for children and their parents which included a training of new mobility habits was implemented by way of gamification in form of the “Beat the Street” in autumn 2017 and 2018. The events took place in co-operation with the Vienna Mobility Agency and other partners.

## URBAN GREEN

In addition, Smarter Together also focuses on the network of green and open spaces in the district. A concept was created by the Urban Planning Department and actions are under evaluation.

## MOBILITY AWARD

In September 2017, Smarter Together received the Mobility Award of the Verkehrsclub Österreich (VCO) in the category ‘Active Mobility and Public Space’.



VCO Mobility Award 2017, © VCO/Matthäus Schmid

# Data Collection and Monitoring Serving the Smart City Idea



**Data management has traditionally been at the core of the Smart City concept**

and still is an important issue, as measurement is a relevant tool for understanding processes, developments and indicators. Smarter Together has developed an open source data platform to enable long-term sustainability.





smartdata.wien



## Data Collection

Along with the project implementation, infrastructure for data management and collection has been developed and put in place in a dialogue with all stakeholders. The aim is to facilitate the future use and analysis of data for the city as well as for the project partners in their respective fields of responsibility or business.

## Data Monitoring

For all smart solutions implemented within Smarter Together Vienna, an integrated monitoring concept has been established by AIT and has been tested in a co-creation process involving various city stakeholders. It covers the whole automated process of sensor-based data collection, transfer and storage on the Vienna data management platform as well as the final consolidation, processing and timely visualization of the results to generate relevant indicators including energy savings achieved, share of RES and CO<sub>2</sub> reduction.

## Central Data Management System

Based on an evaluation of data platforms used in different cities, the Viennese project team opted for the development of an open source data platform using FIWARE. Data has been integrated for the building, energy and mobility sectors from the following data sources: open data, statistical data based on measurements and assessments, sensor (real time) data. The platform allows, for instance, to view data for each e-car sharing vehicle. Users can view the (dynamic) datasets in the form of maps or different types of diagrams. A user management system ensures data privacy.

## ICT Challenge Vienna

In December 2018, Smarter Together was invited to join the ICT 2018 conference with approximately 6000 participants. Developers worked 48 hours on concrete apps based on the Smarter Together FIWARE platform. In addition, the Hackathon provided the 7 Smarter Together teams a huge target audience of decision makers and professionals in the ICT sphere. Two of the teams were among the winners.

ICT Challenge 2018, © Stephan Hartmann



# Smart City Network of Excellence

A decorative graphic on a yellow background. It features two stylized human heads in white. The head on the left is smaller and has six yellow circles arranged in a hexagonal pattern inside. The head on the right is larger and has six yellow circles arranged in a hexagonal pattern inside. A thick white line starts from the top left, curves around the top of the larger head, and then curves down to the bottom right. Another thick white line starts from the bottom right, curves around the bottom of the larger head, and then curves up to the top left, forming a continuous loop that connects the two heads.

**Apart from being the project's name, "Smarter Together" also stands for the project's programmatic cooperative approach.** It is a contribution to Vienna's future-oriented governance. Thus, one of the major structural achievements of the project has been the establishment of a "Network of Excellence" by all partners involved. It enabled Smarter Together to make the shift from a "SMART" (**S**pecific, **M**easurable, **A**tttractive, **R**ealistic, **T**imed) project implementation to a sustainable, process-oriented approach. As a result, motivated human resources who have been trained and qualified in the process over time will ensure the institutional anchoring of knowledge and innovation in their respective units as well as the replication of the (pilot) projects. The goal is to turn them either into bankable and ready for market solutions to be used in business and/or in sustainable processes and solutions in the governance sectors.



# Governance Learning

**Governance lies at the core of our endeavours to create sustainability of project results. In Smarter Together we are aiming to anchor any knowledge gained in a systematic way within Vienna's governance structure and processes.**

## PROCESS FOCUS

From the outset, the project design has aimed at ensuring sustainability of the individual project activities by intensively involving all relevant administration staff in the project implementation. This way, Governance Learning happens naturally through creative involvement and participation rather than through top down trainings and guidelines. The project's philosophy of inter-departmental co-operation is anchored in the administration by dedicated project financing for specific personnel who already hold functions in the respective area also after completion of the project.

## LIGHTHOUSE AND FOLLOWER CITIES

Peer-to-peer learning facilitated through the proactive involvement of Energy Cities also resulted in the deployment of lighthouse ideas and solutions in Santiago de Compostela, Sofia and Venice. Specific local or on-site workshops contributed to the replication of solutions: In Venice the concept of the SIMmobile and citizen focus is said to be inspired to a significant degree by the Vienna model. In Sofia too, specific exchange with Vienna has enabled tailored solutions, e.g. the rollout of e-charging station. Munich is working on its own "Beat the Street" project.



Workshop at the General Assembly 2018, © Bojan Schnabl

## PEER-TO-PEER

Peer-to-peer learning and exchange is ensured on the European level through project partners like Fraunhofer Institute or Energy Cities and is locally related to targeted interested experts and challenges.

VHS Simmering, © Stephan Hartmann



**70** staff members in Vienna  
**9** municipal departments  
**over 30** local project partners

# Replication

Encouraging replication of the tested solutions is at the center of the endeavours of the project partner Urban Innovation Vienna (UIV). First and foremost, replication efforts will concentrate on Vienna and include, inter alia, supporting the uptake of the experiences from *Simmering* in other parts of Vienna. *Smarter Together* offers a wide range of experiences to share and replicate: from housing to mobility and from process to technological innovations. Accordingly, the activities to foster replication are also manifold.

## TARGETED EXCHANGE WITH MUNICIPAL DEPARTMENTS

*Smarter Together* gives representatives from municipal departments insights into the project activities or offers guided tours through the project area. With this exchange, replication is mostly process-oriented covering methods and approaches that are materialised in the implementation projects in order to support governance learning.

## THEMATIC HARVESTING WORKSHOPS

Urban Innovation Vienna (UIV) organised a series of so-called harvesting workshops with the aim of consolidating experiences within the partner organisations on site (institutional learning) and enabling in-depth knowledge transfer between administrative and technical staff.



Executive Board, © PID/Jobst

## LEARNING FROM PEERS

Peers are often best placed to motivate and convince others. They offer first-hand experience in an authentic way. In *Smarter Together*, peers from housing operators, mobility providers, the urban renewal office etc. support the take-up of the tested solutions by exchanging their firsthand experiences, e.g. on tenants' involvement in the design and implementation of the social housing e-car sharing scheme.

## IBA\_WIEN 2022

The co-operation with the Vienna Housing Exhibition IBA\_Wien 2022 ensures sustainability of learnings and established networks regarding social housing.

## SMART CITY WIEN FRAMEWORK STRATEGY

*Smarter Together* feeds into the monitoring and update process of Vienna's Smart City Framework Strategy ensuring the uptake of relevant learnings into the strategic development of the city.



# Research Co-operation

**Smarter Together aims at a high level of technical excellence and scientific standards. For this purpose, Smarter Together co-operates with the AIT (Austrian Institute of Technology) and Fraunhofer Institute as well as other research institutions and universities and provides numerous learning and research opportunities to students. Thus, sustainable contributions to the EU-wide economic, social and environmental sustainability are made.**

## SUSTAINABILITY CHALLENGE

A structured co-operation of four of Vienna's major universities providing interdisciplinary learning and research opportunities for students.

**In 2017/18**, the Sustainability Challenge conducted a research on green façades in view of school planning projects and was taken up by the relevant municipal department MA 22.

**In 2018/19**, the Sustainability Challenge focuses on the elaboration of a sustainable business model for the BWSG e-car sharing scheme – as a contribution to the UN Sustainable Development Goals.

## FH VIENNA TEACHING

A regular co-operation has been implemented with the FH Wien University of Applied Sciences, combining courses, conferences and on-site visits in the project area of Simmering.

## SCIENTIFIC PAPERS

Smarter Together is requested to publish its findings and best practices. So far eight scientific papers on the findings have been published.

For more details visit  
**[smartertogether.at/mediathek/dokumentationen-und-jahresberichte](https://smartertogether.at/mediathek/dokumentationen-und-jahresberichte)**



Sustainability Challenge, kickoff,  
© Daniel Schmelz/RCE Vienna



Sustainability Challenge, Stakeholder workshop 2018, © Daniel Schmelz/RCE Vienna

# International

**International exchange and co-operation is providing a huge number of opportunities and positive challenges for excellence and is also a most valuable expression of European integration and vision.**

## PEER EXCHANGE

within Smarter Together Lighthouse and Follower Cities is an important international source of knowledge and inspiration. Numerous solutions developed in the project are the direct result of the intensive exchange among project partners from Vienna, Munich, Lyon, Santiago de Compostela, Sofia and Venice. The conception of Vienna's Mobility Point was preceded by an intensive exchange with Munich and its German network of best practices. In Venice, the participatory elements of a mobile Urban Living Lab are said to be inspired by Vienna's SIMmobile. In Sofia, interest was expressed for some of Vienna's mobility solutions. Santiago de Compostela, too, showed a keen interest in Vienna's refurbishment approaches in general and in the city's way of involving tenants in particular.

## EU EXCHANGE

Smarter Together Vienna participates in knowledge sharing events in the EU community. In this context, Smarter Together closely co-operates with institutions such as GOPA-com and Energy Cities and all other H2020 Lighthouse Projects.

## INTERNATIONAL SMART CITY FAIRS

Smarter Together Vienna is regularly present at international Smart City fairs and events to share best practice examples and look for new ideas to be implemented in Vienna. Barcelona Expo or Nordic Edge Expo are only two examples.

## FORMAL EU NETWORKS

Smarter Together is also formally active in all H2020 network activities to promote the programme and innovative solutions. Smarter Together Vienna has been appointed as Vice Chair of the network of 80 Smart Cities within the H2020 programme.

## BILATERAL INVITATIONS

Smarter Together Vienna is regularly invited to bilateral exchange events all over Europe, from Berlin to Amsterdam, Rennes (FR), Koper (Slovenia) and Larnaka (CY).

## HOUSING FOR ALL CONFERENCE

On 4 and 5 December 2018, Smarter Together had a booth at the Housing for All Conference and hosted one on-site visit to the district for international guests. It underlined that Vienna's social and/or subsidized housing is a major contribution to achieving the UN climate goals.

## INTERNATIONAL VISITS

Smarter Together Vienna regularly welcomes international delegations to share knowledge either in workshops and/or on-site visits of the project area.

Smarter Together Plenary, © SPL Lyon Confluence/Laurence Danière







Housing for All-Conference



P2P Workshop

General Assembly 2018



General Assembly 2018



General Assembly 2018



Housing for All-Conference



Images from top left ©:  
SWM/Zsolt Marton, MA25/Andrea Klem,  
MA25/Stefan Zamisch, Bojan Schnabl  
MA25/ Stefan Zamisch, SWM/Zsolt Marton

# The Smarter Together Network of Excellency in Vienna

## For an Integrated and Social Smart City

### DEPARTMENTS OF THE ADMINISTRATION OF THE CITY OF VIENNA

- **MA 25** – Project management
- **MD-OS** – Strategic follow up data management
- **MA 01 (MA 14)** – Implementation of a data platform with real time data from projects
- **MA 18** – local mobility strategy, green area network and evaluation
- **MA 20** – participation in energy projects, Energy and building data
- **MA 33** – Street lightning, solar benches at NMS and ONMS schools on Enkplatz 4
- **MA 34** – Energy management
- **MA 46** – Support of mobility projects
- **MA 50** – Coordination refurbishment, activities, housing research
- **Wiener Wohnen** – Refurbishment of two social housings
- **MA 56** – Enlargement of NMS and ONMS schools Enkplatz

### ENTITIES OF THE CITY OF VIENNA

- **Wohnpartner** – Participation
- **Wohnfonds Wien** – Refurbishment
- **Wiener Wohnen Kundenservice** – Refurbishment
- **Urban Renewal Office (GB\*)** Participation and SIMmobile

### WIEN HOLDING

- **EU Förderagentur GmbH** – Accounting and staff
- **WIP Wiener Infrastruktur Projekt GmbH** – School building

### OTHER PROJECT PARTNERS FROM THE CITY OF VIENNA

- VHS Simmering - Community College
- Vienna Cemeteries
- Mobility Agency Vienna
- MA 13 – City Libraries
- Vienna Business Agency
- IBA\_VIENNA, New Social Housing
- Numerous schools in the 11th district within "Beat the Street"

### OTHER IMPLEMENTATION PARTNERS

- Wohnbund:consult
- Caruso Carsharing
- DIE UMWELTBERATUNG
- Science Pool
- Dopplinger&Dopplinger
- Balu&Du

### CONSORTIAL PARTNERS

- **BWSG** – Refurbishment housing Hauffgasse 37-47 & e-car sharing
- **Wiener Stadtwerke GmbH** – Wien Mobil Station of the Wiener Linien with Upstream
- **Wien Energie**: Feeding renewable energy into the district heating system, re-densification of district heating as well as photovoltaic system
- **Siemens** – E-mobility and industrial logistics at the site Simmering
- **Post AG** – first e-vans in Austria for parcel delivery
- **Kelag Energie & Wärme** – Renewal of local heating network and PV
- **Sycube** – e-bike sharing, SIMBIKE
- **Urban Innovation Vienna** – Energy, replication
- **Austrian Institute of Technology** – Monitoring and evaluation

### INHABITANTS AND BUSINESSES in the project area

### CITIES AND INTERNATIONAL NETWORK

Partners from Lyon, Munich, Santiago de Compostela, Sofia and Venice as well as additional European entities



# Vienna's Smarter Together Project Partners



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Maria-Restituta-Platz 1  
1200 Wien  
Tel.: +43 1 4000-25101  
smartertogether@post.wien.gv.at  
www.smartertogether.at

**Editors**

Julia Girardi-Hoog, Stephan Hartmann, Bojan-Ilija Schnabl

**Taskleaders**

Daniel Glaser, Ali Hainoun, Herbert Hemis, Andrea Kinsperger, Hans-Martin Neumann,  
Wolfgang Ponweiser, Waltraud Schmid, Petra Schöffmann, Andreas Tschismasia

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