



# ASPERN SMART CITY RESEARCH – A STRATEGIC JOINT VENTURE OF SIEMENS AND THE CITY OF VIENNA

*Oliver Juli, Siemens AG Österreich/ Aspern Smart City Research*

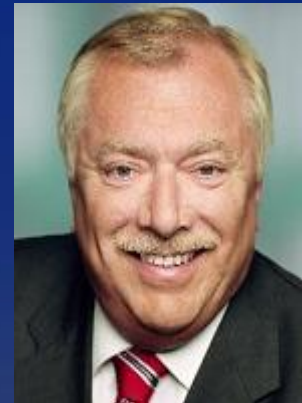
# The Vision: A Sustainable Future

The city: Vienna, 1.8 million people

The commitment: transformation into a smart city

“Today Vienna is the city with the highest quality of living worldwide. This has been stated by several international surveys.

My clear goal now is to become the Greenest City in the world. Therefore we will build ‘Aspern - Vienna’s Urban Lakeside’, one of the biggest city development projects in Europe, as core part of our strategy.”



Mayor Dr. Michael Häupl started the “Smart City Wien” in March 2011



# Vienna

... in international rankings – a perfect launch base

**MEASURING THE CITY**

Impressive numbers and top positions in many international rankings document Vienna's benefits and uniqueness. An intermediate report of a metropolis.

**THE 10 SMARTEST CITIES IN EUROPE**  
 Vienna has long been known as having a very high quality of life, but it is a city that hasn't rested on its quality reputation. Vienna has a stable range of smart cities activities

1. Copenhagen	6. Stockholm
2. Amsterdam	7. London
3. <b>VIENNA</b>	8. Hamburg
4. Barcelona	9. Berlin
5. Paris	10. Helsinki

Source: Boyd Cohen, 2014

**TOP 10 EUROPE GLOBAL CITIES 2014**  
 examines cities based on their global relevance

Rank	City	Score
1.	London	2
2.	Paris	3
3.	Brussels	11
4.	Madrid	15
5.	<b>VIENNA</b>	16
6.	Berlin	19
7.	Frankfurt	23
8.	Barcelona	24
9.	Amsterdam	26
10.	Zurich	31

Source: A.T. Kearney 2014 Global Cities Index

**BEST CITIES FOR YOUNG PEOPLE TO LIVE IN**

1. <b>VIENNA</b>
2. New York City
3. Malta
4. Melbourne
5. Salvador
6. Dubai
7. Vancouver
8. Prague
9. Edinburgh
10. Paris

Source: Eu25.com, 2013

**PROSPERITY OF CITIES**  
 "Prosperity of Cities" - a study of the UN Organisation UN Habitat (regarding productivity, infrastructure, quality of life, sustainability and social equality)

1. <b>VIENNA</b>	2. New York
	3. Toronto
	4. London
	5. Stockholm

Source: UN-Habitat, State of the World Cities 2012/2013

**INNOVATION CITY**  
 Innovation Cities Global Index 2014

1. London
2. Paris
3. <b>VIENNA</b>
4. Munich
5. Amsterdam
6. Copenhagen
7. Berlin
8. Stockholm
9. Hamburg
10. Lyon

Source: Zinnov

**THE MOST LIVEABLE CITIES**  
 Economist Intelligence Unit's "liveability index" lists eight of the most liveable cities. The index crunches 30 factors related to safety, healthcare, educational resources, infrastructure and environment in 140 cities

1. Melbourne
2. <b>VIENNA</b>
3. Vancouver
4. Toronto
5. Calgary

Source: Economist.com, 2014

**QUALITY OF LIVING SURVEY**  
 Mercer's Quality of Living Survey 2015 ranks cities among the best in terms of such quality factors as political, social and economic environment, medical and health considerations, and education

1. <b>VIENNA</b>	2. Zurich
3. Munich	4. Auckland
5. Vancouver	

First Place Six Times in a Row (2009, 2010, 2011, 2012, 2014, 2015)  
 No ranking in 2013  
 Source: Mercer Quality of Living Survey 2015  
 www.mercer.com/qualityofliving

**1. VIENNA THE MOST REPUTABLE CITY**  
 The top cities with the best reputation world-wide are according to CityReputation 2014

2. Munich
3. Sydney
4. Florence
5. Venice

Source: Reputation Institute, Reputation Reports, reputationinstitute.com

**TOP INTERNATIONAL START-UP CITIES 2015**  
 Tech Cocktail, an online platform for start-up companies, ranks Vienna amongst the top ten of the most innovative start-up cities in the world

1. COPENHAGEN	2. SAN FRANCISCO
3. LONDON	4. BERLIN
5. NEW YORK	6. <b>VIENNA</b>
7. SINGAPORE	8. HONG KONG
9. PARIS	10. LOS ANGELES

Source: Tech Cocktail, techco

## Why cities worldwide should discuss „Smart City“

Traditionally, cities have been places of major changes and social innovations.

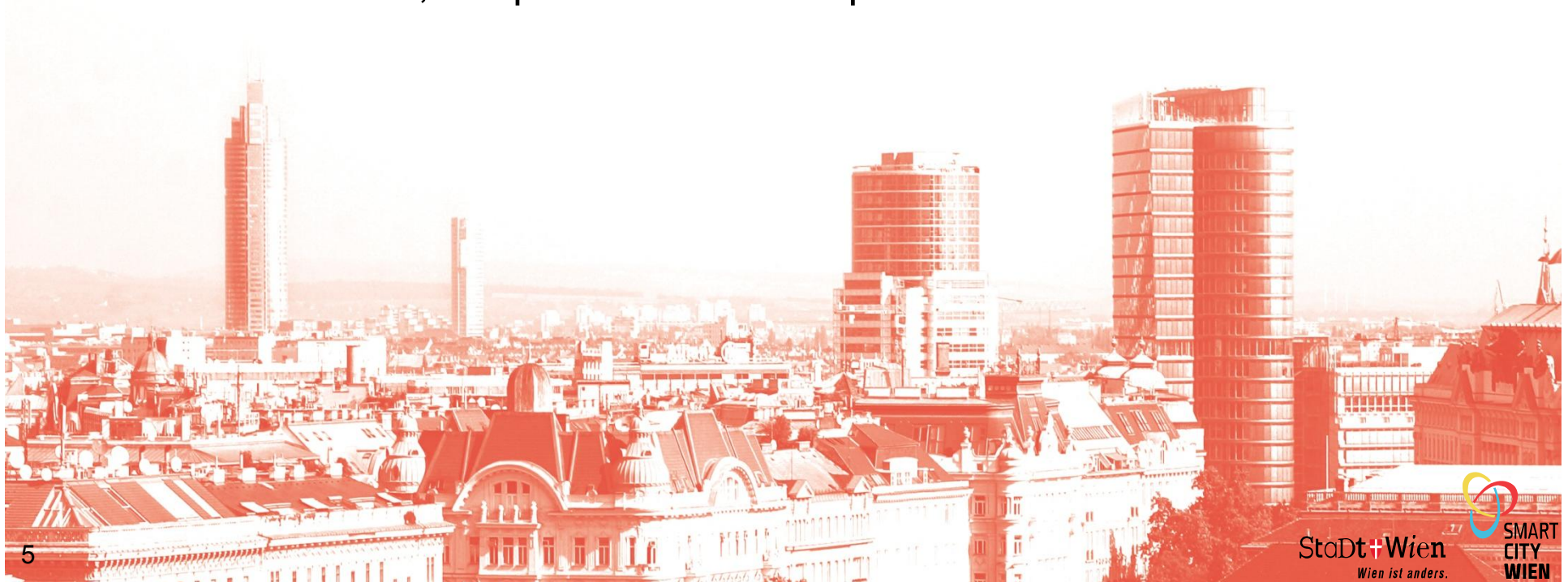
They are home to the majority of the world's population and offer great opportunities for a novel way to deal with resources.

A good city is a place where people want to live, not a place where they have to live.



## Why cities worldwide should discuss „Smart City“

- Climate change and energy policies
- Population growth and urbanization
- Lack of resources and ecological footprint
- Globalization, cooperation and competition



## Population

# 1.7 Million

+9,4% within the last 10 years  
Longtime perspective: from 1.7 to 2.1 million until 2050

## Total area

# 415 km<sup>2</sup>

about 46% green areas

## Renewable energies

# 10.4%

of consumption

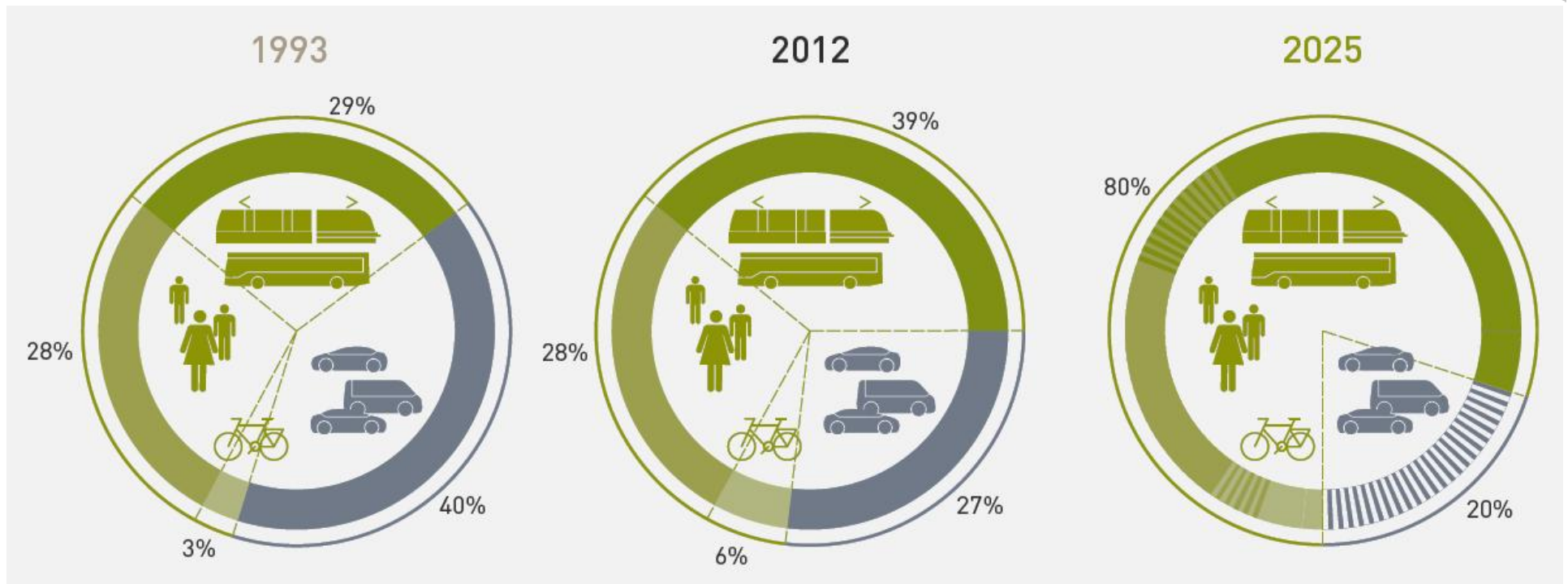
## Co<sub>2</sub>-emissions

# 5.8t

2010, per capita (10.1t Austria)

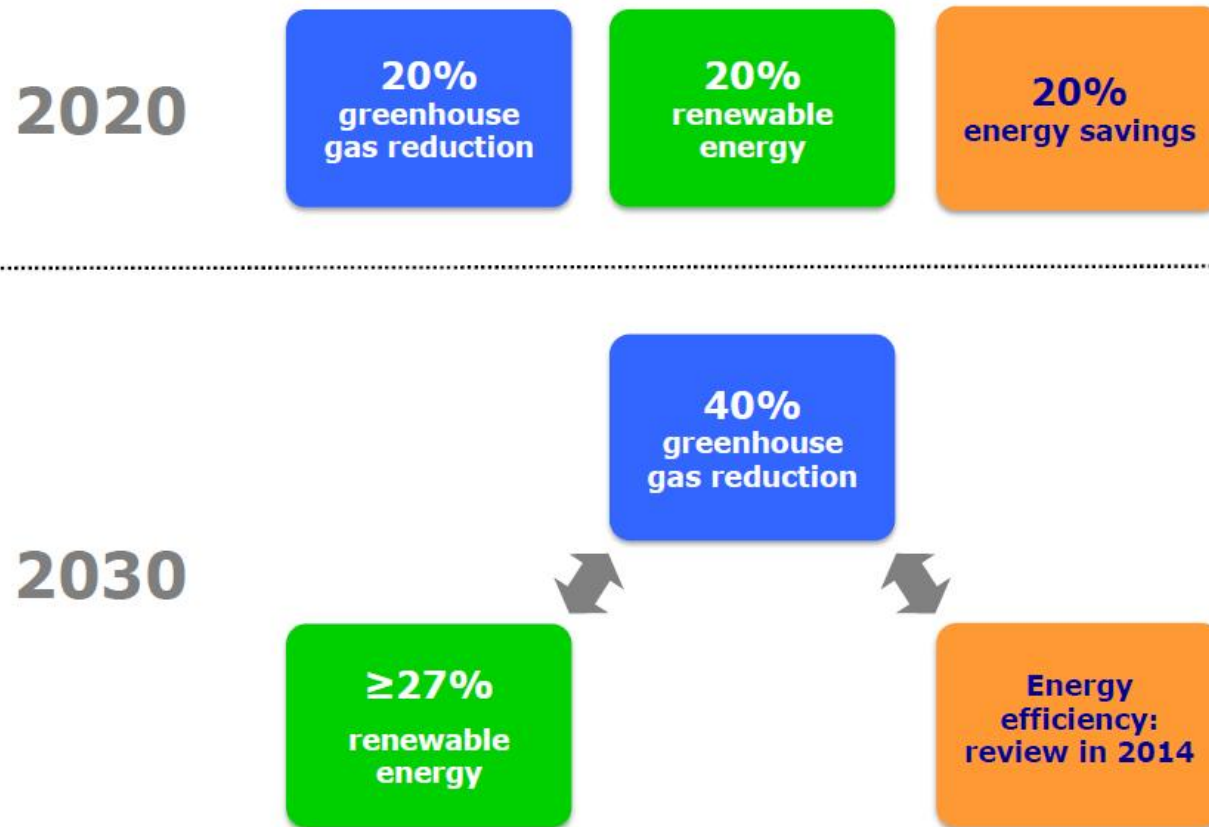
# Vienna

... an environmentally sound modal split ...



## Challenges and targets

### EU climate and energy policy - renewed ambition for 2030



Presentation of J.M. Barroso to the European Council, 20-21 March 2014




## The European Way ...

- Strategic Energy Technology Plan (SET-Plan, 2007)
- European Initiative of Smart Cities (Part of SET-Plan, 2010)
- European Innovation Partnership for Smart Cities and Communities (EIP SCC, 2012)
- Strategic Implementation Plan (Implementing EIP SCC, 2013)
- Supported by Funding Initiatives (FP7, H2020, EU structural funds, JPI Urban Europe, ERA-NET and national fundings)

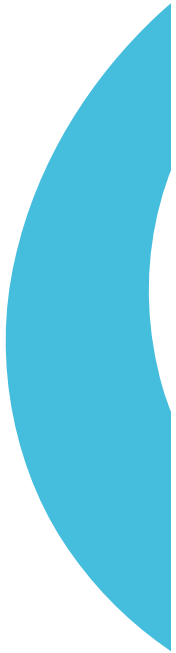
# TRANSFORM(ation Agenda for low carbon cities (2013-2015)





Smart City Wien Framework Strategy  
Key objective for 2050

Highest possible **resource preservation**  
together with optimum **quality of life** for all  
citizens. This can be achieved through  
comprehensive **innovations**.



# Smart City Wien Framework Strategy

...tasks viewed in a cross-cutting manner...

## Quality of life

Social inclusion  
Healthcare  
Environment

## Resources

Energy  
Mobility  
Infrastructure  
Buildings

## Innovation

Education  
Economy  
Research, Technology  
Innovation (RTI)





# SMART CITY RESOURCES

## **Resources**

Per-capita greenhouse gas emissions in Vienna drop by at least 35% by 2030 and by 80% by 2050 (compared to 1990).



# SMART CITY QUALITY OF LIFE

## **Quality of Life**

In 2050 Vienna is the city with the highest quality of life and life satisfaction in Europe.

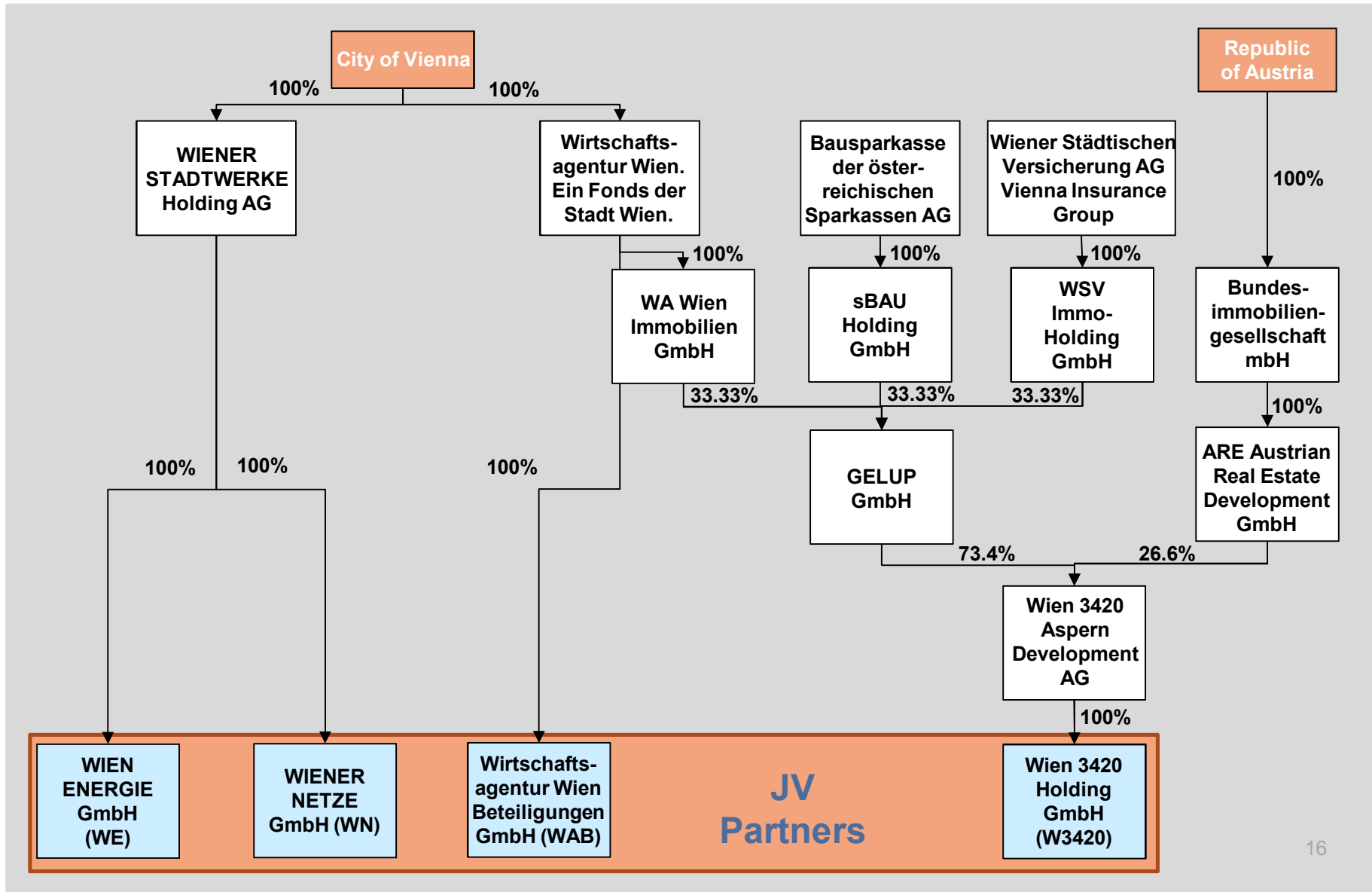


# SMART CITY INNOVATION

## **Innovation**

In 2050, Vienna is an innovation leader due to top-end research, a strong economy and education.

# The „right“ Network





# ASCR Structure

Partner of the ASCR joint venture



**€38.3m**

Planning and construction	€9.7 m
Operative, maintenance and repair	€6.5 m
Research	€14.1 m
ASCR staff	€5.6 m
Miscellaneous (marketing, office,...)	€2.4 m



# aspern

Vienna's Urban Lakeside



# Creating a new city district in Vienna





Vienna's Urban Lakeside

# The Project Overview



# Project facts

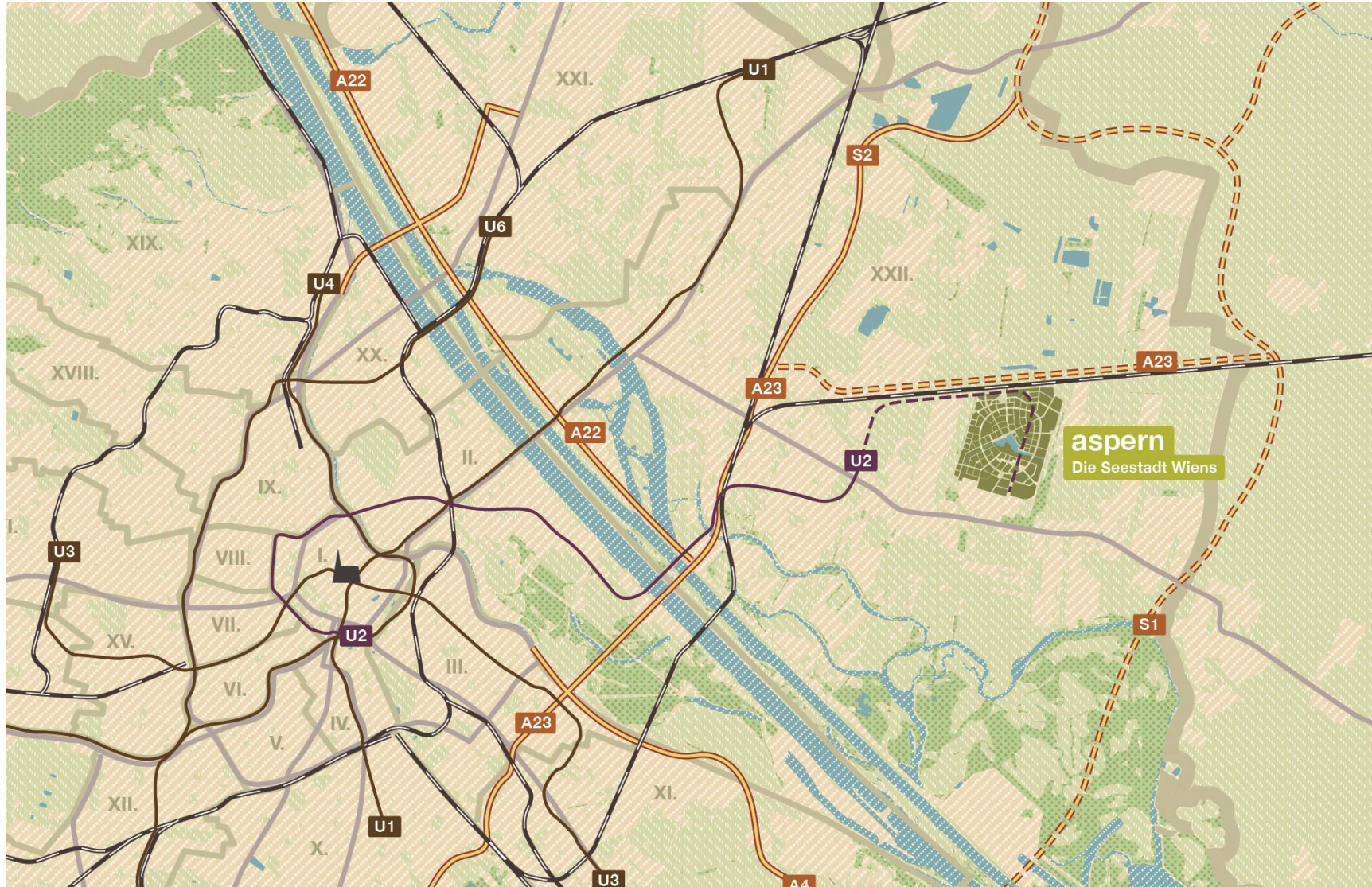
- **Objective:** a new, multifunctional city quarter for Vienna with flats, spaces for offices and service providers and a business, science, research and education quarter
- **Area:** 240 hectares one of Europe's biggest urban development projects
- **Position:** north-east of Vienna, in the 22nd municipal district
- **Net development area:** 100 hectares
- **Development period:** 20 years
- **Planned gross floorspace:** 2.2 million sq m
- **Housing:** 10,500 flats for 20,000 persons
- **Work:** 20,000 workplaces
- Areas managed and administered by **Wien 3420 AG**



# Position within Centropre Region



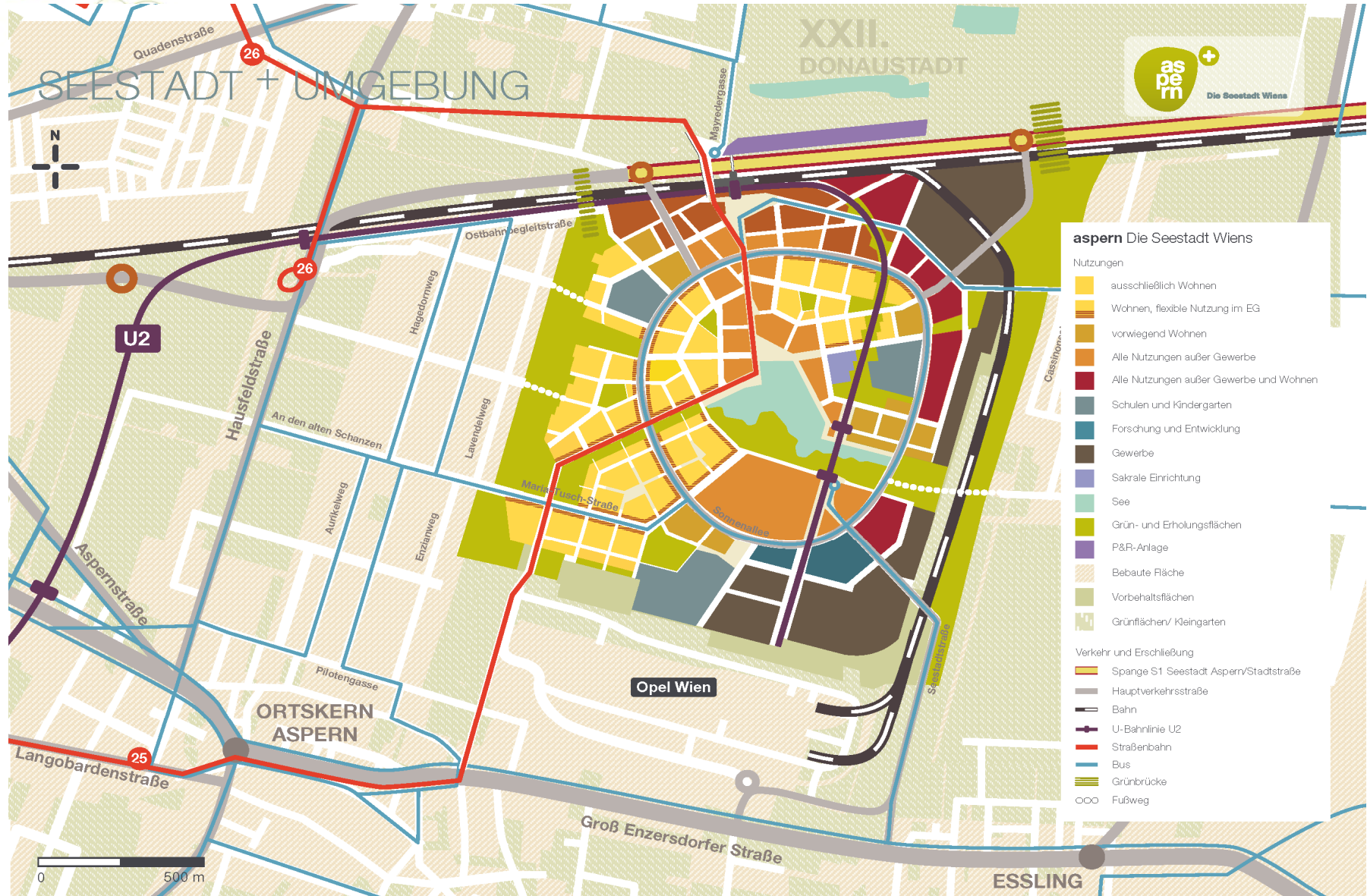
# Position in Vienna





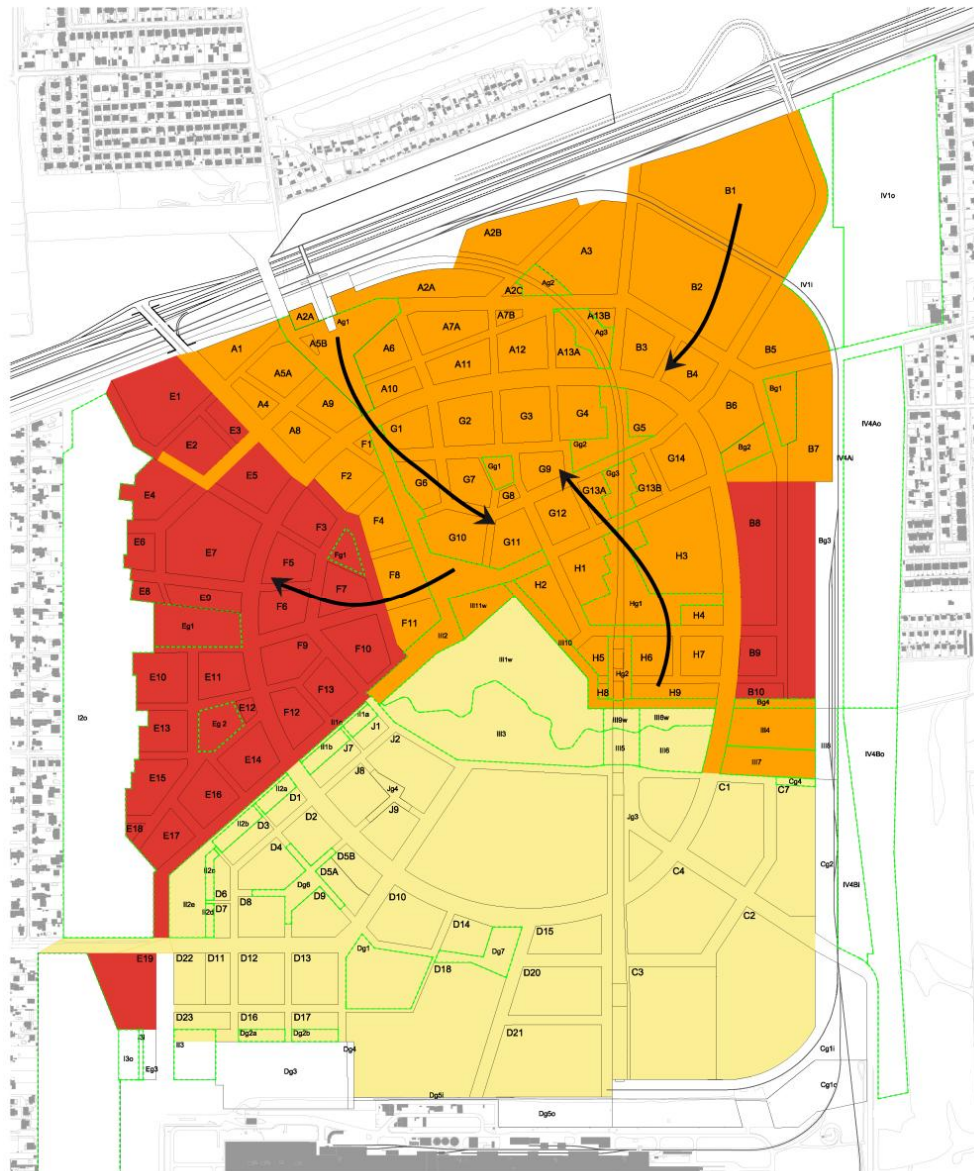
Vienna's Urban Lakeside

# Masterplan and Traffic 2028





# Three-phase planning



2009 – 2017

- Gross Floorspace: 650.000 sq m
- Net Development Area: 400.000 sq m

2017 – 2022

- Gross Floorspace: 900.000 sq m
- Net Development Area: 400.000 sq m

2022 – 2030

- Gross Floorspace: 650.000 sq m
- Net Development Area: 200.000 sq m

# Contribution of Aspern Smart City Research to the Smart City Wien Framework Strategy

## Quality of Life

- User involvement in all participating areas (construction sites) from the beginning ensures social inclusion and participation in research and development activities
- Contribution to increase Quality of Life and environmental protection

## Innovation

- Building-up Testbeds in the domains buildings and distribution networks
- Smart City demonstration of integrated systems
- Creating the base for future R&D
- R&D activities increases economical power and safeguards jobs

## Resources

- Sustainable and efficient energy management to reach the climate protection goals
- Enhancement of energy efficiency potential in urban areas
- Interconnection of Smart Buildings with the actively managed Smart Grid
- Information and communication for interconnecting the domains (Smart ICT)

# Contact

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