SMART CITY

What is a smart city?

What is a smart city?

The term "smart city" was coined towards the end of the 20th century. It is rooted in the implementation of user-friendly information and communication technologies developed by major industries for urban spaces. Its meaning has since been expanded to relate to the future of cities and their development. Smart cities are forward-looking, progressive and resource-efficient while providing at the same time a high quality of life. They promote social and technological innovations and link existing infrastructures. They incorporate new energy, traffic and transport concepts that go easy on the environment. Their focus is on new forms of governance and public participation.

Intelligent decisions need to be taken at the strategic level if cities want to become smart. It takes more than individual projects but careful decisions on long-term implementations. Considering cities as entire systems can help them achieve their ultimate goal of becoming smart.

Smart cities forcefully tackle the current global challenges, such as climate change and scarcity of resources. Their claim is also to secure their economic competitiveness and quality of life for urban populations continuously on the rise.

FLEXIBLE
ATTRACTIVE **intelligent** RESOURCEFUL effective
shrewd ADAPTABLE INTEGRATIVE BUSINESS-LIKE
across systems CLEVER SOPHISTICATED
SMART NETWORKED EFFICIENT

Urbanisation

More than half the world's population already occupies urban spaces. Estimates reckon that number to reach two thirds by 2050. This dramatic development is ultimately due to the many opportunities people are awarded to design their own lives in cities.
Rising urbanisation, however, also means greater challenges: as cities grow people's needs and demands must be met in ways that go easy on the environment.

Scarce resources

Resources such as fossil energy, clean water and disposable land are limited as most of us are aware of. We also know that cities consume the lion share of all energy produced worldwide. Food, housing, mobility and waste removal require raw materials and energy.
To maintain a high standard of living for the long term cities must reduce their ecological footprint and seek for alternatives to scarce fossil resources.

CURRENT CHALLENGES

Climate change

Climate change is one of the most pressing issues we are currently faced with. CO_2 emissions must be reduced in the decades to come while measures need to be taken to reign in global warming, floods and extended heat waves. Cities are responsible for approximately three quarters of greenhouse gases worldwide. Being major polluters they are also called upon to provide solutions.

Globalisation

Worldwide networking of labour forces, institutions and information has its repercussions on cities too. Economic and social structures are changing and urban politics need to adapt their strategies to these new circumstances. It means positioning cities internationally between cooperation and competition. The measures taken must not serve the sole purpose of appearances but must focus on internal social, economic, spatial and structural aspects as well.

All is smart – all is well?

Concepts and ways towards becoming a smart city are as diverse as cities themselves. Some approaches are technology-oriented, while others, such as the Vienna Way, have put the social aspect in the fore. Measures cover the full range in between but they all have in common their aim to continuously add substance to the concept of smart cities.

New technologies must be assessed as to their benefit for the public interest and the preservation of creative freedom in public spaces. Smart ideas, to be implemented, require active public participation. Skills must be acquired to handle the new tools with care, especially with regards to data management and data security. Ultimately synergies must be developed across systems so that objectives and solutions can be found for smart cities to become forward looking, use resources with caution and provide an environment worth living in for everyone.

FIELDS OF ACTION

Smart urban development?

SMART URBAN DEVELOPMENT?

The first step towards becoming a smart city is taken at the strategic level. Main fields of action in this context are energy, mobility, the environment, the economy, society, politics, administration and quality of life. Some of the above are intertwined and increasingly networked with the support of IT. Technical, economic and social innovations provide the foundation for such activities. Smart cities build on sustainability but also on resilience in the sense that cities as systems are made more resistant and adaptable to influences from inside and out.

Economy

Smart economies actively support education, qualification, research and entrepreneurial spirit, innovation, productivity and flexibility. Continuous knowledge acquisition and transfer, as well as local and global networks are the main ingredients for creative output.
Enterprises offering IT, environmental and energy services in particular are considered the driving force for smart economies.

Energy and the environment

Reducing energy and raw material consumption and forward-looking resource management are among a city's major concerns. Smart supply and disposal systems are just as important as process-driven changes, technological developments and networks for energy, mobility, infrastructure and buildings. Smart grids, for that matter, are a step towards smart energy consumption: intelligent networks and monitoring systems are put in charge of energy generation, storage and consumption. Smart meters are installed to make actual energy consumption more transparent.

Governance

Smart Governance promotes both, changes in governance and coordination processes, and planning processes with public participation. The administration encourages cooperation among municipal organisation units and is opening itself up to a wide range of players from business, research, civil society and other local authorities.
Projects in their implementation stage increasingly rely on cooperation among the above. Public digital data are widely accessible to allow for more transparency and enable people to participate in decision-making processes.

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Mobility

Smart mobility means innovative traffic and transport infrastructure that saves resources and builds on new technologies for maximum efficiency.
Accessibility, affordability and safety of transport systems, as well as compact urban development are essential factors in this context. New user-friendly facilities will make it easier for people to switch to integrated transport systems focussed on environmentally friendly transport modes. Joint utilisation, i.e. "car sharing", instead of private ownership is what counts these days when using motor vehicles.

Society

Increasing people's quality of life requires more than technical innovations. Also and above all it is the social dimension that needs to be taken into account. Civil society must be actively involved in making smart cities become reality. Main focus must be on education, lifelong learning, culture, health, safety of individuals, plurality of society and social cohesion. Urban everyday life provides sufficient leeway to promote people's creativity and competences. Networking and self-management are major pillars of society without which smart cities would be doomed to fail.

FUN DING

How is smart urban development funded?

HOW IS SMART URBAN DEVELOPMENT FUNDED?

The European Union has developed numerous funding programmes meant to boost the development of smart cities in Europe. The SET Plan and the 7th Framework Programme for Research in particular have given "smart cities" a European dimension.
In Austria it is the Federal Ministry for Transport, Innovation and Technology (BMVIT), as well as the Climate and Energy Fund, which are primarily responsible for developing and implementing smart city initiatives.
Various funding schemes have been put in place to support the City of Vienna and Vienna Urban Planning in creating smart initiatives that would not be possible without national and international funding programmes.

Strategic Energy Technology Plan (SET Plan)

The **Strategic Energy Technology Plan** was launched in 2007 as a first major tool at European level. It seeks to secure affordable and sustainable energy supply for the long term and enable rapid market introduction of innovative energy technologies. Investments for a period of ten years are envisaged at approx. 70 bio Euros.
The SET Plan's aims are to:

- accelerate the development of low-carbon technologies
- improve the competitiveness of innovative energy technologies
- pull its weight to achieve the climate objectives by 2020
- focus on demonstration and implementation
- employ technologies with the greatest potential
- implement major projects or project clusters

In 2010 the European Commission introduced the **"European Initiative on Smart Cities"** as part of the SET Plan. Its aim is to promote cities and regions that want to reduce their greenhouse emission by 40% by 2020 through sustainable energy utilisation and generation.

The European Innovation Partnership for Smart Cities and Communities (EIP-SCC)

In July 2012 the European Commission established the Innovation Partnership to promote development and utilisation of smart urban technologies. Main emphasis is on networking cities and promoting cooperation in an effort to find joint solutions for increasing energy efficiency, amongst others. Investments in the public sector and industry are clustered to support implementation of lighthouse projects in the fields of energy, traffic and transport, as well as ICT.

Strategic Implementation Plan (SIP)

The Strategic Implementation Plan was introduced in 2013 as an action plan for putting into practice the EIP SCC. The Plan covers actions in a variety of different areas, the following three having a clear substance definition:

- sustainable urban mobility
- urban districts and built environment
- integrated infrastructures

Other areas, such as public participation, governance, financing, etc. are to serve as catalysts in the process.

EU funding programmes

EU Framework Programme for Research

A total of seven EU Framework Programmes for the promotion of research were implemented between 1984 and 2013. The SET Plan was the first tool introduced by the European Commission and in fact kicked off the "Smart Cities and Communities" initiative in the 7th Framework Programme for the period of 2007 to 2013.
Primary objective of the Framework Programme was to enhance the EU's scientific and technological foundations and to promote its international competitiveness. The last two rounds of competitive bidding in 2011 and 2012 featured "smart cities" -relevant topics in several of the programme's lines.
The 7th Framework Programme promoted the TRANSFORM (Transformation Agenda for Low Carbon Cities) project, amongst others. Selected cities, among them Vienna, are developing practical strategies for becoming smart.

Horizon 2020

"Horizon 2020", the current Framework Programme for Research and Innovation, combines research funding with the Framework Programme for Competitiveness and Innovation and other programmes initiated by the European Institute for Innovation and Technology. Horizon 2020 promotes projects related to excellent science, industrial leadership and societal challenges. Roughly 80 billion Euros have been made available for the period 2014–2020, "Smart Cities and Communities" received a sum of 107 million Euros for 2015.

EU Structural Fund

Implementing smart cities measures in different urban districts alone requires a minimum of several million Euros. The Structural Fund budget for the European Union regional policy for the new funding period 2014-2020 could provide a major source of financing.
Austria has launched the "STRAT.AT 2020" process in cooperation with BMVIT and the Association of Austrian Cities and Towns to promote increased utilisation of these funds for implementing smart cities measures.

National funding programmes

BMVIT – city of the future

BMVIT with its research and technology programme "city of the future" installed in 2013 has also pledged support for the smart city efforts in Vienna. The programme promotes research and development of new technologies, technological systems and urban services. The current bidding will make available 3 million Euros for research and development projects in energy-oriented urban planning and design, innovative business models, technology development for building improvements and modernisation, demonstration buildings, as well as technologies for urban energy systems.

Climate and Energy Fund KLIEN – FIT for SET

Back in December 2010 the Climate and Energy Fund introduced its own smart cities initiative and since then has played a major role in putting smart cities on the Austrian agenda. Its preliminary work and achievements have made sure that Austrian players, across Europe, are viewed as competent partners in EU research projects initiated by the European Commission, as well as in transnational cooperation projects and networks.
The Climate and Energy Fund's vision for the programme "Smart Cities – FIT for SET" is to implement, for the first time ever, a "Smart City" or a "Smart Urban Region", in other words, emission-free urban districts, emission-free residential areas or urban regions in Austria.

VIENNA IS NETWORKED

Farsighted, robust and sustainable for generations

STEP 2025

The Urban Development Plan

This development focus is targeted towards advancing the mobility system and preserving green and social infrastructure as prerequisites for securing a high quality of life and the environment. Priority in the transport and traffic system is given to the environmental alliance and attractive design of public space. At the same time the network of open spaces will continue to grow and large green spaces will be preserved and expanded to ensure lasting quality for a growing population. Ultimately social infrastructure too must keep pace and fulfil its integrating function.

PLANNED MEASURES	EXISTING GREEN SPACE	SITUATION
Upgrading of recreational areas	Predominantly woods (woods, vineyards, meadows)	Built-up area (2013)
New parks (2-10 ha)	Predominantly agricultural land	Woods in the surrounding countryside
Planned open space links, partly implemented	Large urban green spaces (e.g. Schönbrunn, Central Cemetery)	Danube waters
Open space links (with a landscaping effect)	Parks (2-10 ha)	Stagnant waters
Open space links (urban), upgrading of existing green space	Parks (10-50 ha)	City boundary
Links to the surrounding countryside	Fresh air corridors	Aboveground traffic infrastructure (roads or tracks)
	Parks smaller than 2 ha are not depicted.	Planned aboveground infrastructure (roads or tracks)

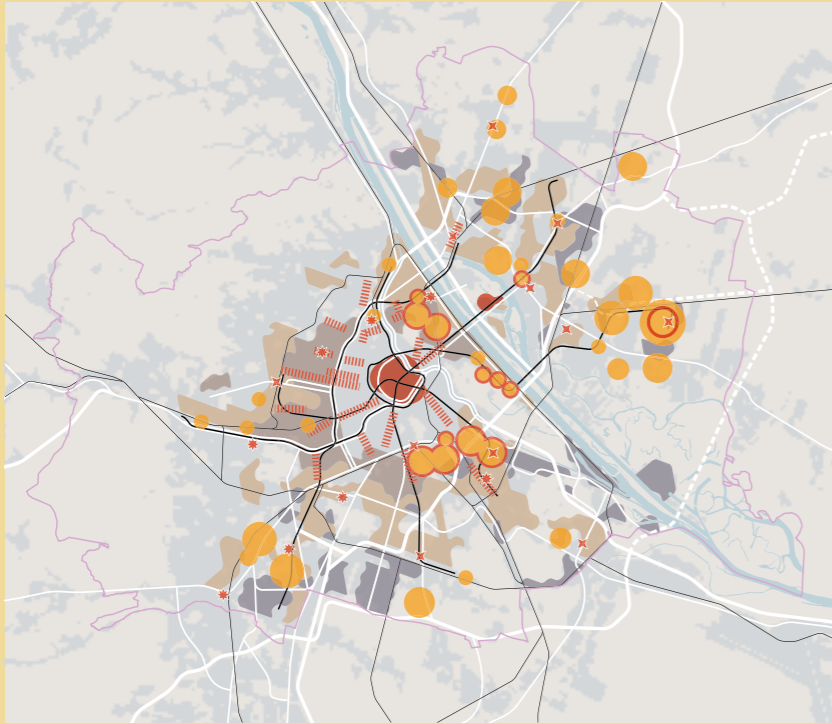Mission statement green spaces

We provide for the city

The Urban Development Plan for Vienna STEP 2025 constitutes the main strategic document for Vienna's urban planning. It sets the course for developments in Vienna for the coming ten years. It has taken up the guiding ideas, principles and objectives set out in the Smart City Wien Framework Strategy.

STEP 2025 was developed in a public participation process where ideas for the city's future development were widely discussed. STEP 2025 provides a guideline for the city administration and local businesses, as well as for other players involved in the development processes.

The main actions set out in STEP 2025 are aimed at three development focuses. Its strategic specifications are developed and substantiated on an ongoing basis.

VIENNA EXPANDS UPWARDS

Quality urban structure and diverse urbanity

This development focus is all about future urban development in built-up urban areas and provisions for urban expansion, taking into account the expected population growth and new utilisation needs. Vibrant urbanity is our motto which means we need sufficient open and green spaces for social infrastructure. Energy efficiency and integration of renewable energy generation and storage are vital innovations. Effective and efficient use of land, resources and public funds is also a major objective. Established centres are boosted while sites lacking in efficiency are revamped. All of the above measures make for a balanced, polycentric location development.

RESIDENTIAL DEVELOPMENT

- Portfolio development, predominantly for buildings dating back to the late 19th century
- Building activities in areas developed between the 1950ies and the 1970ies
- Areas with development potential for housing and work

DEVELOPMENT OF BUSINESSES AND HUBS

- City
  Areas with quality office and administrative functions, universities, trade, culture, etc.
- Areas for enterprises not suitable for mixed use
- City expansion – area dedicated to future city functions
- Established district centre
- District centre in need of development (additional functions, upgrading)
- Major shopping street

SITUATION

- Built-up area (2013)
- Danube waters
- City boundary

TRAFFIC INFRASTRUCTURE

- Underground/ suburban train
- Major roads
- Motorways/ trunk roads
- Planned motorways/ trunk roads

Mission statement residential development

VIENNA OUTGROWS ITSELF

Growth and knowledge society are transforming the metropolitan area

The focus here is on Vienna as a centre of business, education, research and culture in a growing metropolitan area. To further expand these strengths Vienna has committed itself to promoting universities, high-tech production and knowledge-based services. The city is dedicated to forward-looking land planning for new industry and trade, as well as district management for established industrial and commercial estates. Major importance is attached to developing regional and international cooperation to further exploit development potentials and bypass negative developments. Upgrading transport and traffic infrastructure ensures cross-border mobility with neighbouring countries.

- Cooperation between city and surrounding countryside Development focus (locations functioning as centres)
- Target areas for urban development acc. to STEP 2005
- Development axis – places along major traffic infrastructure between several development targets
- Polycentric locations – locations between several development targets closely linked to their functions
- Complementary locations – locations in gaps between axes of special relevance for future regional development
- Highly sensitive areas of particular ecological significance
- Waterways
- Federal borders

Principles of spatial development
City region+

Portfolio development
in areas dating back to the late 19th century

Building activities
in areas developed between the 1950ies and the 1970ies

Areas with development potential
for housing and work

Areas for enterprises not suitable for mixed use

City –
city expansion

Established district centre
District centre in need of development
Major shopping street

INTERVIEW with Lukas Lang

SMART URBAN LAB aspern

Lukas Lang is project manager with Wien 3420 aspern development AG responsible for mobility and the environmental impact declaration for the northern part of aspern – Vienna's Urban Lakeside.

How "smart" is Vienna compared to other cities?

Cities are competing to assert themselves as internationally desired locations. "Smart city" may well prove a strategy for finding answers to the most burning issues. However, I don't believe that rankings as to who is smartest are relevant in this context. It is far more important to see how smart citizens absorb the idea, how much awareness there is among people for the guiding principles of smart and sustainable organisation in urban life.

It is only right and proper, therefore, and absolutely essential that the social component takes on such a prominent role in the Smart City Wien Framework Strategy. I really appreciate the city's holistic approach. Other cities tend to focus on technologies far too much.

Where would Vienna be without smart city in 20 years time?

Vienna is proud to have such a high quality of life. Its efforts towards becoming a smart city are making sure this quality is maintained. The Smart City Wien Framework Strategy is also an opportunity to pool measures, to combine economic aspects with innovation and sustainability.

What sets aspern – Vienna's Urban Lakeside apart? What makes the project so innovative?

All plans for the Urban Lakeside place people and their needs centre stage.

Central elements of the master plan are diversity and a thorough social mix. Smart planning makes for a balanced combination of individual living and contemporary working conditions. Small-scale townhouses with multi-purpose ground floors bring life to **aspern.** High ceilings for ground floors offer space for shops, restaurants and other meeting places and the ground floors themselves are open towards paths and squares.

What also makes the project so innovative is its principle of joining forces in the process: the **aspern** terrace leisure area, for example, was planned with the participation of the local neighbourhood. Cooperative planning, as in the case of open space design across the different building sites, also boosts the quality of the entire neighbourhood.

Excellent public transport connections, brave regulations for parking spaces, as well as numerous communal garages will help to make sure that many errands no longer require the use of a car. Spacious bicycle and pedestrian paths, smart "furnishing" of public space with bicycle racks and a dense network of local supply facilities will turn the Urban Lakeside into a "city of short distances". At **aspern** sustainability and environmental protection are addressed from the very beginning, as early as the construction site. Excavation material from the lake site is used for landscaping and concrete production, demolished conveyors are recycled on site and reused for road construction.

Thanks to its role as "Urban Lab" for Smart City Wien the Urban Lakeside is in a position to test smart concepts and technologies with far-reaching effects in the future.

How will people in Vienna benefit from the project?

Growth at Urban Lakeside is a forward-looking quality process. This is to the benefit of people who are going to move here because above all it will be a place for them to enjoy life.

What conclusions can you draw from the project? Were there any "surprises"?

The lessons we are learning here at Urban Lakeside will prove valuable for people across Vienna. Of course, we encounter surprises on a daily basis. Turning good ideas into reality is a major challenge in all our endeavours – conceiving good ideas does not take long but the real task is finding the right partners and conditions for putting them into practice.

The Smart Urban Lab **aspern** – Vienna's Urban Lakeside – studies practical aspects of smart urban development in a development area. Green areas and fallow land are used as testing grounds for implementing new ideas, technologies and smart concepts.

The focus here is on exploring innovative building technologies, smart infrastructure and sustainable mobility concepts from scratch. The experience gained in the course will be useful for other urban development areas.

Smart Urban Lab aspern

Smart Urban Lab liesing
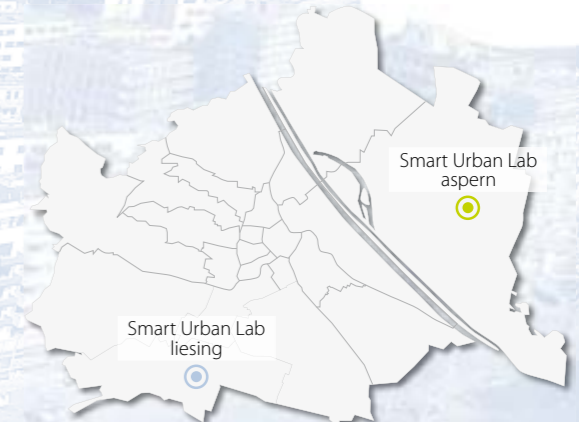
as pe rn +

Space for smart ideas

aspern – Vienna's Urban Lakeside – is one of the largest urban development areas in Europe and as such provides the perfect setting for a Smart Urban Lab. Until 2028 a total area of 240 ha will make available a variety of different spaces for testing and implementing smart concepts, ideas and technologies.
Approximately 20,000 residents and a further 20,000 people working on site will participate in the development of this smart neighbourhood from the very beginning. Theirs will be the role of smart citizens. Smart is what makes life simple. At aspern – Vienna's Urban Lakeside – many "smart" aspects are pooled, which in their entirety will grant residents an uncomplicated and sustainable way of living.

PIONEERING PROJECTS

aspern IQ

The technology centre aspern IQ was established by Vienna's Business Agency to set the course for innovative research, production and work at Urban Lakeside. One of the first plus-energy office buildings in Austria aspern IQ has become the innovation hotspot for Vienna. This is the place for start-up businesses and forward-looking research institutions to establish offices, laboratories and production areas and develop sustainable technologies.

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Baugruppe JAspern

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JAspern is considered a model for a jointly developed housing project which reflects the ideas and needs of future residents. At its core are quality open spaces and a socio-cultural approach on living in a community. It has also developed an ecological building concept that meets the highest energy standards.

SMART FROM DAY ONE

CAR SHARING
URBAN LAKESIDE FLEET e-mobility MOBILITY CARD
BIKE DELIVERY SERVICE
community garages BICYCLE GARAGES
PUBLIC TRANSPORT

Mobile at Urban Lakeside

Residents' mobility behaviour has been a major focus in the design of Urban Lakeside since the very beginning. 80% of all distances are to be covered on foot, by bicycle or public transport. Transport facilities are to motivate people accordingly.
U2 underground stations Aspern Nord and Seestadt offer direct access to Vienna's outstanding public transport network from day one.
The Urban Lakeside fleet, a bike rental system for residents with a total of six stations, boasts a full range of bicycles, including e-bikes and cargo bikes.
Communal garages will service residents at strategic points across the construction fields. Both public transport stops and parking spaces are within the same walking distance, encour-

aging residents to opt for public transport as their preferred transport mode.
Access roads along the main roads are designed to keep car traffic away from residential areas. Efforts to eliminate above-ground parking spaces ensure quality public space for improved recreation areas and extra space for pedestrians and cyclists.

aspern mobility fund – promoting infrastructure for generations

At Urban Lakeside mobility means a mix of numerous attractive measures promoted by a mobility fund financed through fees for garage installation and operation. aspern – Vienna's Urban Lakeside – was awarded the 2014 VCÖ mobility prize for creating and operating the mobility fund.

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Temporary cultural installations on the construction sites

While construction sites are working at full speed and first tenants are moving into their apartments large parts of the future Urban Lakeside have not been touched yet. These areas provide plenty of room for temporary activities that add life and encourage identification with the location. Information points, such as the Flederhaus, a mobile youth centre and various events have been organised so that people across the city can learn more about this urban neighbourhood and participate in its design.

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SMART ENERGY RESEARCH

Aspern Smart City Research

At aspern – Vienna's Urban Lakeside – the focus is on developing smart building technologies, participation of residents (smart citizens) and smart energy grid management (smart grids). These three objectives in combination are bringing the city a major step closer to developing smart energy efficiency, CO2 reduction and user-friendly solutions.
The research association Aspern Smart City Research (ASCR GmbH) established for the purpose is responsible for implementing the project which extends across three large building sites and incorporates different building types.

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Local supply in a city of short distances

Forward-looking ground-floor and shopping-street management guarantees that residents have essential goods and services for their daily needs readily available from the very start. Ground-floor premises have been reserved for shops and restaurants along main routes. These provide the basis for quality public space full of life.

Urban neighbourhood aspern – Vienna's Urban Lakeside

The urban neighbourhood management is a point of contact for residents of Urban Lakeside and those of adjacent residential areas. Its focus is on encouraging people to develop Urban Lakeside as a community, as well as on linking old and new urban neighbourhoods. Projects and events are designed to encourage participation, to support new arrivals and to share ways of making this neighbourhood lively and attractive.

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Smart buildings and smart grids

The education campus (kindergarten and primary school), a student hostel and one residential building have been designed as smart buildings. The three building types provide a testing ground for exploring various energy generation, storage and consumption technologies. Main emphasis in the process is on linking, i.e. combining different technologies for maximum results.
The vision behind these efforts is that buildings will optimise their own energy consumption with a view to the future.
They will know in advance when they require energy and when the energy they are generating can be fed into the grid. Together they will actively participate in the energy market by offering either energy generated or flexible loads as needed.
Smart grids rely on communication technologies to establish a balance between energy consumption and generation among all the buildings involved.

SMART URBAN LAB liesing

Volkmar Pamer is responsible for coordinating the target area "Liesing Mitte" and plays a major role in developing and implementing smart urban development projects in Liesing.

How "smart" is Vienna compared to other cities?
Vienna's public transport and housing subsidy policies have been very smart for some time now and public transport in particular has really spoilt people, seeing as they have been enjoying its high quality for decades already.

Where do you see most challenges and need for action in Vienna? Which areas does the city still have to improve in? How can urban planning contribute?
Social aspects are as important in the smart-city process as technological ones and people need to be told what the benefits are for the future. There is no smart city without social perspective.

What was the purpose of "gardening³"?
Main purpose was to pay attention to the identity of the location and include the cultural past of gardening into social housing. It is important to keep track of the identity of a location during all urban planning endeavours.
Creating quality leisure time in harmony with the location's identity was another major concern. The area always has been and continues to be a site of commercial gardening. Its quality will be transformed but maintained and incorporated into future housing constructions.
Gardening has many aspects, be they social, educational or ecological ones, and these will be integrated into social housing projects. It is not about giving the latter the "eco touch" but about developing them together with residents and the adjoining neighbourhood. Gardening is very much in demand and people take to it with enthusiasm.

Which smart city targets (resources/innovation/quality of life) do you associate the project with? How does it tie in with the different target levels?
The project is relevant for all three levels.
The project promotes resource preservation not only as a physical aspect but as a mental attitude as well. Including the third dimension when planning utilisation of land has produced cultivation areas in addition to mere utilisation of the level surface. Building activities will be complemented by planting beds, raised beds, greenhouses and much more.
Innovation is particularly relevant for subsidised housing and urban gardening. One of our concerns was to see that urban gardening becomes less formal than globally witnessed and that it is viewed as elementary for housing projects.
Urban gardening is multi-faceted and as such constitutes an important leisure-time activity. People no longer see the need to escape the city on weekends because the city is proving its worth as a quality place to stay.

How will people in Vienna benefit from the project?
Positive effects for people in Vienna are manifold.
Neighbouring residents too have continuous access to the area and its upgraded qualities and can join in the ongoing gardening activities. The horticultural school of Schönbrunn has offered cooperation with a focus on vegetable and fruit cultivation, promoting both a reputation and funding for the project beyond its boundaries, as well as triggering incentives at many different levels.
Good marketing may even turn the area into a tourist destination (we no longer need to fly to Kyoto to see cherry trees in bloom, Liesing is only a stone's throw and an underground ride away) and Vienna can make a name for itself worldwide: the project was presented to the urban planning department in New York City and planners there were quite taken. Quote: "Vienna has found a solution for reconciling density and quality."

Quote: your final statement on smart cities
Smart city currently is still too vague an idea. The term is considered too general by many and there is a risk that it will be used for all kinds of different concepts and that it will be worn out all too quickly.

Smart Urban Lab aspern

Smart Urban Lab liesing

The Smart Urban Lab liesing is located in a developed area of transformation where smart city projects are implemented. The challenge here is to put areas to new use or convert them and to ultimately connect them coherently with their surroundings. Neighbourhood inclusion is vital if residents are to accept the projects. Development and implementation of concepts to improve existing structures from the technical and the functional point of view are setting the course for the future and provide stepping stones for similar projects.
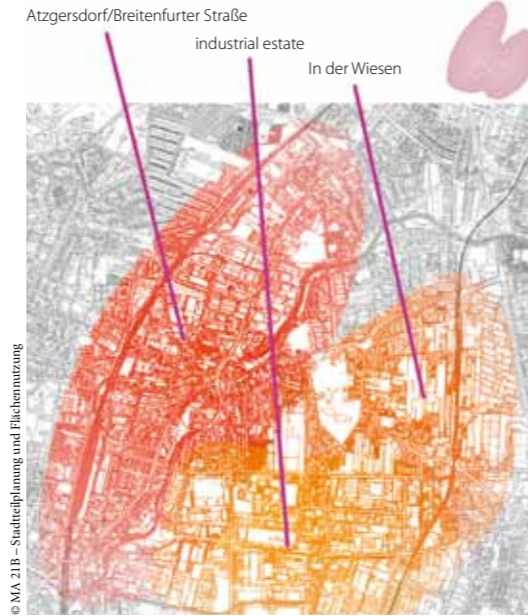
WOW!

HOUSING
ECOLOGY
BUSINESS

©MA 18

Diversely smart

Liesing as a dynamic urban district constitutes the perfect setting for putting smart urban development into practice. The district is made up of a variety of quite distinct urban structures: extensive agricultural land (In der Wiesen), large industrial estates (industrial estate Liesing), as well as small-scale village structures and single-family dwellings (Atzgersdorf) exist side by side. Each of these has its own challenges to meet, such as how to deal with urban renewal in developed areas, change of use of areas taking into account and involving residents directly concerned or how to create an attractive setting for local businesses.

This diversity of urban structures calls for quite distinct and often contrasting requirements. To harmonise the different planning and construction projects the City of Vienna developed the perspective Liesing in cooperation with the Technical University of Vienna. This strategy plan deals with issues related to the district development from a holistic point of view, aiming at transparency and proximity to people.

Atzgersdorf/Breitenfurter Straße
industrial estate
In der Wiesen

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GREEN COMMUNITY IDENTITY
neighbourhood OPEN SPACE URBAN GARDENING
DEVELOPMENT HARVESTING Agriculture

IN DER WIESEN

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In der Wiesen is an urban development area of agricultural character embedded in a structurally diverse urban environment. The focus here is on gradually developing the area without spoiling its original character and identity. Project coordinators set great store by involving local residents in the planning process and encouraging urban agriculture.

Developing new neighbourhoods inside existing functioning ones may cause conflicts. An area's identity must be preserved if local residents are to accept any changes. Urban agriculture in Liesing is not just a recent trend but is deeply rooted in the area's history.

Gardening³

Urban gardening as part of the development plan for a new neighbourhood "In der Wiesen Ost" promotes both a community approach and general awareness for food production and scarcity of resources. The district's traditional agricultural identity is boosted in the course. Gardening³ is the largest project worldwide that combines urban gardening and social housing. It provides solutions for ensuring quality density in the city through attractive leisure-time facilities and amenity qualities in the district.

ERnteLAA

Residents are given plenty of opportunity for gardening, both in open spaces at ground level and on rooftops. Community open space is characterised by fruit trees, berries and espalier fruit. Greenhouses on rooftops are used to nurture seedlings and to house plants for the winter. There is also room for individual small kitchen gardens. All these activities contribute towards the community approach and the neighbourhood family and encourage residents to identify with and develop commitment for their living environment.

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INDUSTRIAL ESTATE LIESING

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The industrial estate Liesing is a major business location for Vienna. The district's emphasis is placed on protecting existing businesses and giving them the option of developing further. Favourable conditions for local businesses trigger incentives which in turn foster the location's long-term conversion into a science and technology hub.

e-delivery – smart infra-structure for the economy

e-delivery is a pilot project developed as part of the Transform+ research project for the purpose of preparing an e-car sharing concept for businesses on the industrial estate Liesing. The idea is to make a pool of e-cars available for one or more businesses. Sharing environmentally friendly cars not only impacts positively on the carbon footprint but also saves public space and costs for participating businesses.

Business location Liesing

The business location Liesing project was initiated with a view to securing the industrial estate Liesing as an attractive business location for the long term. At its core is a neighbourhood management responsible for information and consulting services and which also acts as a cooperation hub for local businesses. The neighbourhood management supports businesses with funding for energy supply, energy, water and resource efficiency, as well as sustainable mobility. All of these efforts are major steps towards making Liesing a smart business location.

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ATZGERSDORF

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Atzgersdorf with its village character and historical village centre fulfils an important function for this part of the city. Urban structures have found their way into parts of the neighbourhood and now require refurbishment. Upgrading existing buildings and putting abandoned factories to new use are some of the challenges Atzgersdorf must face, all of which with a view to handling buildings with care and preserving the identity of the village.

Carrée Atzgersdorf

As businesses moved away they left behind areas in the middle of Atzgersdorf that used to be experienced as barriers. These bear enormous potential for upgrading the entire neighbourhood. Carrée Atzgersdorf is an urban transformation process geared towards generating quality for local residents. Areas with little or no access will become available for the public and barriers will be removed. Reuse of space left behind by businesses but well connected to public transport will combat urban sprawl as a contribution towards smart quality urban development.

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