





FOREWORD





Cities mean change, a constant willingness to face new developments and to be open to innovative solutions. Yet urban planning also means to assume responsibility for coming generations, for the city of the future. At the moment, Vienna is one of the most rapidly growing metropolises in the German-speaking region, and we view this trend as an opportunity. More inhabitants in a city not only entail new challenges, but also greater creativity, more ideas, heightened development potentials. This enhances the importance of Vienna and its region in Central Europe and thus contributes to safeguarding the future of our city.

In this context, the new Urban Development Plan STEP 2025 is an instrument that offers timely answers to the questions of our present. The document does not contain concrete indications of what projects will be built, and where, but offers up a vision of a future Vienna. Seen against the background of the city's commitment to participatory urban development and urban planning, STEP 2025 has been formulated in a broad-based and intensive process of dialogue with politicians and administrators, scientists and business circles, citizens and interest groups.

The objective is a city where people live because they enjoy it – not because they have to. In the spirit of Smart City Wien, the new Urban Development Plan STEP 2025 suggests foresighted, intelligent solutions for the future-oriented further development of our city.

Thedead Sunt

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FOREWORD







In order to allow for high-quality urban development and to consolidate Vienna's position in the regional and international context, it is essential to formulate clearcut planning goals and to regularly evaluate the guidelines and strategies of the city. In 2011, the Vienna City Council changed the City Administration with the preparation of a new Urban Development Plan, to be submitted for adoption by 2014.

In our time, however, urban development also means to co-ordinate and manage governmental, societal and economic actors. As presented in this publication, STEP 2025 has a predominantly strategic character and, instead of a map-like planning outline, provides a multifaceted and also motivating overview of measures to steer Vienna's development. It highlights the direction developments will take and lays the cornerstone for key fields of action of the city, such as housing, green and open spaces, economy, or infrastructure.

Urban development corresponding to smart city goals necessitates the support of motivated and competent collaborators. For this reason, STEP 2025 was formulated under the aegis of Municipal Department 18 in an intensive process of dialogue that involved a great number of experts, both of the planning bodies and, cutting across executive policy groups, of many other municipal departments as well as from outside the Vienna City Administration. The outstanding specialised knowledge and commitment of all actors has ultimately resulted in a product that constitutes an important basis for the positive development of Vienna in the future, for which we express our sincere thanks.

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POLITICAL ORIENTATION UNDERPINNING STEP 2025 Vienna is changing. The political upheavals in Europe have pushed the city into an outstanding position. Instead of a peripheral location close to the Iron Curtain, it now occupies a prime Central European spot in the vicinity of the rapidly emerging Eastern European markets. The entire metropolitan region is growing, and urban planning must respond to the resulting social, technological and ecological challenges. We must be farsighted in order to create frame conditions for lifestyles that we are not yet aware of, on behalf of people who are not even born today.

The Viennese appreciate the services for children, schools, mobility, healthcare, old age and recreation – all paid for by their tax contributions – and increasingly view themselves as active coauthors of their own future in an urban society inspired by solidarity. In this context, politics define the framework for urban development. However, what is built and the shape it takes is also dependent on the rules of the market, ownership, the employment situation and overall societal conditions. Social contradictions, such as the gap between rich and poor, cannot be resolved by urban design alone. Yet we want to persevere in our efforts to safeguard all that is necessary to ensure a good life in Vienna. The decisions we take today are essential for defining the way in which urban space can be used tomorrow.

The following objectives and positions for urban development were defined:

A liveable city

It is an objective of urban expansion to create contiguous urban quarters instead of planning future neighbourhoods merely on a plot-by-plot basis. We are aiming at mixed and vibrant urban quarters with high development potential and excellent building culture, with streets and squares as places of encounter and lively ground-floor zones.

Vienna is a city where people like to live. The long-standing tradition of municipal and subsidised housing construction safeguards a good social mix, affordability and high quality of both housing and living and will continue to play an important role for urban growth.

The preservation and creation of high-quality open and green spaces is a prime policy task, as such spaces are imperative for recreation, leisure and biodiversity. Comprehensive roof and façade greening as well as the planting of trees and avenues can mitigate the effects of climate change.

We are committed to the city as a place of condensed diversity. A socially equitable city for all counteracts segregation and also dedicates space for those citizens who live at the margins of society. An active municipal policy on behalf of gender equity supports the creation of equitable life conditions for women and men. Gender-sensitive planning methods thus take conscious account of different interests and needs.

A city that is good for children to live in is good for all generations and enables everybody to enjoy life. We also want to extend particular attention to those who, due to special needs or illness, find the requirements of everyday life more challenging than other citizens.

Robust infrastructure facilities as a public responsibility

The City of Vienna undertakes to safeguard high quality standards for urban infrastructure: streets, sewerage, public transport, street lighting, energy and water supply. The systematic commitment on the part of the municipal administration to provide all services of public interest contributes significantly to Vienna's positive performance in all international location rankings.

Vienna is fast moving towards the two-million-inhabitant mark. This entails greater investment needs in order to provide all necessary infrastructure facilities. In order to reduce public spending without compromising quality, optimised investment control is called for.

Mobility requires humane and eco-compatible forms of transport. The City of Vienna is committed to prioritising public transport, pedestrians and cycling as the most environmentally friendly mobility modes. However, the development towards climate- and eco-friendly mobility includes motorised traffic with all related technical innovations, such as e-mobility.

As a smart city, Vienna consumes resources sparingly, uses energy highly efficiently and draws increasingly on renewable energy carriers.

Intelligent and responsible urban management is essential in order to cope with all challenges resulting from the eco-conscious maintenance and further development of quality of life in the Austrian capital.

A developing city - A learning city

Vienna wants to be a learning city: institutions, structures and processes that are vital for the development of the city are to be adapted to new challenges and improved to ensure ongoing quality assurance. The willingness to learn and the assumption of social responsibility provide a solid basis for the future economic prosperity of the metropolitan region.

Citizen participation and elements of direct democracy create added value for urban development. The participation of current and future inhabitants of urban development zones is a key desideratum in this respect.

The modern city and its cultural heritage are the outcomes of multiple interactions and expressions of different positions. We want to continue building the city into the future, without sentimentality but with respect for the existing fabric. Urban expansion is a project that can only be tackled jointly with the different actors in the market: land owners, housing developers, citizens and private investors creating jobs. The objective lies in motivating these stakeholders to act in concert and take part in sharing the costs for essential infrastructure provision. The legal frame conditions must ensure profitability for both the urban economy and the private sector.

In its urban development planning, the City of Vienna strives for "good governance", i.e. for targeted, partnership-based and transparent co-operation between political-administrative units, civil society and real economy, taking account of the dimensions of quality of life and sustainability.

A city of opportunities and prosperity

Vienna is a city of opportunities and possibilities to realise new ideas and to engage in productive business enterprises. It is a task of urban planning to provide a wealth of suitable company locations for a great variety of different enterprises.

Vienna is committed to its long-standing industrial tradition as well as to the creative input of younger companies. In the future, too, Vienna is to be evolved as a business location by ensuring that industrial, commercial and service companies will find space and appropriate frame conditions to flourish.

The City of Vienna invites new actors able to create manifold types of use to play a role in urban development. Self-organisation and civic engagement are welcome complements to established structures.

Regional co-operation and international networking strengthen the metropolitan region of Vienna as a key Central European space. Viable co-operation structures, the equitable sharing of burdens and advantages as well as joint settlement and regional transport policies are core elements of interregional collaboration.

Vienna is a location embedded in international exchange and therefore reflects the challenges of a globalised world. Its further development as a node of trans-European infrastructure networks is thus of fundamental importance.

VIENNA: SETTING THE STAGE

NEW INSTRUMENTS OF URBAN DEVELOPMENT FOR A DYNAMICALLY GROWING CITY

Development, utilisation and optimisation of land mobilisation instruments under public law

Establishment of methods to involve private actors in infrastructure implementation

Public and private sectors as partners in urban development (governance)

Utilisation of target areas of urban development

Co-operation with municipal districts and within the region

Greater professionalisation and constancy of participation

At the moment, Vienna is one of the fastestgrowing metropolises in the German-speaking region, and all signs point to a continuation of this dynamic growth process in coming years. Over the past 25 years, the city has changed profoundly and at the same time held its own in an environment of fundamental regional and international transformations - Vienna is vibrant, ambitious, attractive and prospering. However, Vienna is also confronted with the frictions and contradictions resulting from this change – urban everyday life has become more intense, condensed and for some more stressful; social and societal differences have become more marked and visible, and public budgets are under pressure. In all and compared to international standards, however, Vienna remains a highly liveable and, more specifically, also a very affordable city – a status that must be preserved and further developed.

It is certainly not a matter of course that ongoing change and challenges should go hand in hand with social integration, high urban quality and social balance. Vienna's urban development in the next ten to fifteen years will take place in an environment of conflicting interests that is characterised by intensified economic competition, dynamic population growth and high investment demand in the face of scarce resources. Opting for urban quality in this context is an ambitious project.

Vienna is aware that this approach can only be successful if the aimed-for urban development quality is desired and actively advanced by political and economic decision-makers as well as by civil society. For all stakeholders, this means being ready to invest – financially, politically and instrumentally – in intelligent resource-preserving, socially balancing, gender-equitable and economic competition-fostering forms of urban development.

For STEP 2025, this means setting different courses simultaneously in several dimensions. The challenge lies in

- I evolving strategies and instruments of urban development so that they not only help to maintain the levels of quality attained, but also allow for new, future-oriented qualities;
- I designing economic and infrastructural conditions to benefit local and international investors and developers in a way that permits quick, flexible and innovative responses to change while meeting the interests and needs of the population;
- I systematically conditioning the city's built stock, (open) spaces and ecological status so as to allow high-quality growth that preserves what is valuable, renews what is obsolete and transforms the outdated;
- I creating a stable social balance in the city and further establishing diversity and equality of women and men as key principles for the use and development of the city;
- emphasising the importance of urban development as a collective responsibility and cooperative task of politics, economy and citizenry and thus designing the processes of planning, managing and implementing urban development in a participatory and efficient manner.

WHERE FROM? WHERE TO? VIENNA ON THE MOVE

Vienna in the 1990s

In the early 1990s, Vienna had a population of approximately 1.5 million. With the dismantling of the Iron Curtain and Austria's accession to the EU, not only the geopolitical environment underwent a change. Vienna's position in the competition between European cities could suddenly be viewed from an entirely new perspective: Vienna as an economic and cultural hub at the heart of Europe, between "old" EU Member States and countries striving to enter the European Union. The process of European integration and the aftermath of the war in Yugoslavia triggered new migration flows all over Europe. After decades of stagnation, Vienna's population was once again growing; the Internet was on the rise, with unheard-of effects for global and local economies; and the Donau City project laid the cornerstone for a new economic hub on the other bank of the Danube.

Vienna after the turn of the millennium

Since the turn of the millennium, Vienna's population has notably increased. Questions relating to social inclusion, housing space provision, sustainability, employment and innovation of the urban economy are decisive issues of urban development policy. Vienna continues to establish itself as an international leader in the field of gender equality policy. The gradual enlargement of the European Union to include Austria's neighbours additionally creates novel preconditions regarding mobility and location development; new large-scale infrastructure projects such as the construction of Vienna Main Station and the expansion of Vienna International Airport are key pointers to enhance the international attractiveness of the city as a business location. The increasing demands posed by modernisation and growth are inter alia met by Vienna with its research, technology and innovation campaign and with the creation of target areas of urban development, which are to serve as drivers of concentrated transformation. In the first decade of the 21st century, Vienna began to take its place as a leading international conference venue and further improved its position in European city tourism. The global financial crisis of 2008 triggered dramatic economic upheavals, which had severe effects on public budgets and exacerbated frame conditions for future development measures and investments. With the Smart City Wien initiative for future-oriented, resourcepreserving urban development, Vienna wants to set international standards in a thematic area of global significance.

Fig. 1:
Demographic development of Vienna from 1910 to 2025
Source: Statistics Austria; own diagram

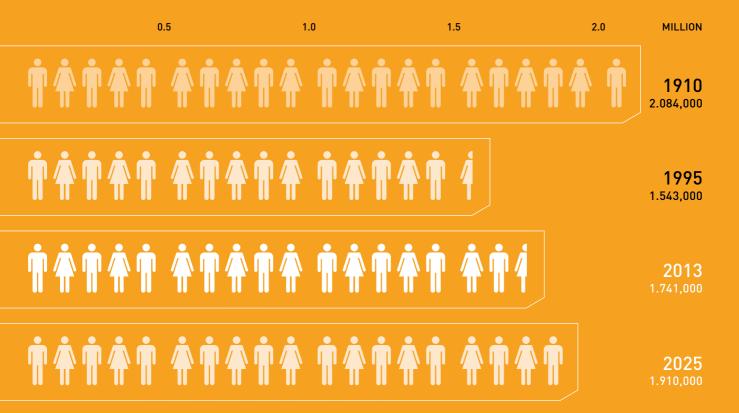
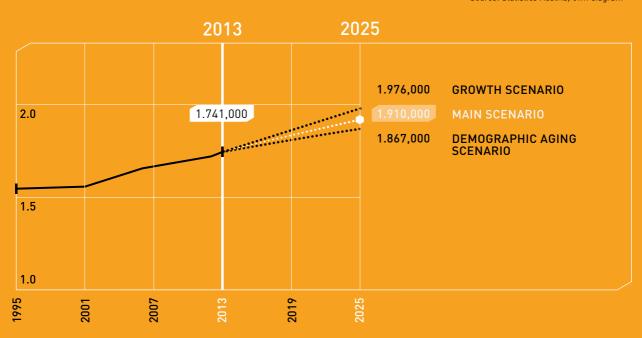


Fig. 2: Population forecast in scenarios Source: Statistics Austria; own diagram



Vienna today and tomorrow

In 2013, Vienna's population had increased by almost 200,000 persons as compared to 2000; at the moment, the city has approx. 1.75 million inhabitants. According to forecasts, this development will continue in coming years; around 2030, Vienna will have arrived at 2 million citizens. For the entire Viennese agglomeration, which comprises the adjoining districts of Lower Austria and parts of northern Burgenland, the population growth predicted for the same period equals more than 400,000 inhabitants. As a result, the metropolitan region of Vienna (→ |≡| Stadtregion +) in 2030 will probably be home and workplace for over 3 million people. The composition of the population, too, will have changed. The group over 60 years of age will have increased, as will the bottom of the demographic pyramid: in all, Vienna will have become the "youngest" and most international of all federal provinces of Austria.

Past growth has already visibly changed Vienna: the city today is more diverse than ever before; people from approx. 200 nations live here; one third of the population is foreign-born, and close to 50 percent have a migration background, i.e. at least one parent was born abroad. Different lifestyles, value systems and attitudes, changing gender roles and a great variety of economic, linguistic, religious and cultural backgrounds characterise housing and living patterns, employment relationships and leisure activities. At the same time, Vienna experienced profound changes as a business location: due to competition and the catching-up process of the new EU Member States, Vienna's economy came under massive modernisation and efficiency pressures over the past two decades, triggering correspondingly rapid structural change: today, the urban economy is dominated by technology-oriented industries and the service sector. Above all knowledge-intensive services, such as telecommunications, insurance, legal and tax counselling, but also the creative industries, have grown significantly.

These changes have left a marked urbanistic and architectural imprint on the cityscape: modern education and research facilities, above all the new campus of Vienna's University of Economics and Business, other new campus sites (→ |≡| "University Location Vienna Concept"), infrastructure projects such as Vienna Main Station or Westbahnhof, company premises, such as Siemens City in the 21st municipal district Floridsdorf or Viertel Zwei in the 2nd municipal district Leopoldstadt, and new urban quarters, such as Donau City, have all altered the city's face.

Fig. 3:

Vienna: coming and going (cumulated for the period from 2002 to 2012;

one symbol equals 10,000 persons) Source: Statistics Austria; own diagram

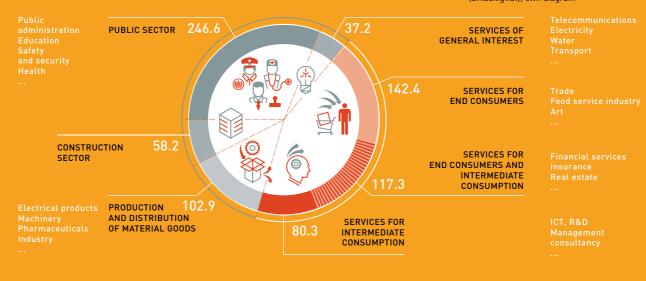
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20.213

NATIONALS OF ...

+ 63,846 - 84,059

Fig. 4: Employed workers in Vienna in 2012 (in 1,000) Source: Federal Ministry of Labour, Social Affairs and Consumer Protection (bmask.gv.at); own diagram



Vienna is international because its population and economy are international. However, Vienna is also international because it impacts international policy as a self-confident and strong actor. At the European level, the city with its concept and practice of social sustainability has above all become a thematic leader in the field of *services of general interest* → |≡| and makes use of numerous networks and initiatives to give a voice as well as clout to the interests of socially inclusive metropolises.

Success entails commitments – challenges of a growing city

The dynamic demographic development of the past 25 years as well as the growth forecast for the coming decades primarily confirm that Vienna is attractive as a modern place to live and do business in. It is not by chance that Vienna finds itself in top positions in several international rankings. Vienna is perceived as a city that takes a leading role not only in one or two areas but that boasts outstanding qualities overall – and it is this balance that makes Vienna so special.

In the field of urban development, however, the efforts to undertake in coming years cannot be limited to just maintaining this level of success and these standards. Rather, innovations must be prepared to safeguard high-quality urban growth despite increasingly tight resources. More people living and working in Vienna means that the city is "used" more intensively; more interaction and mobility means growing demand for efficient and smart transport services. More children and young people need manifold additional educational offerings as well as sport and leisure options; a prospering, growing city entails more production and consumption as well as corresponding demand for space for workplaces, commerce or logistics - and stronger links with the environs as well as within the metropolitan region. Concurrently with quantitative growth, however, the sensitivity of the inhabitants regarding e.g. noise, air quality and questions of good neighbourly relations is increasing, as is the need for open spaces or public services.

All this leads to sometimes contradictory developments and needs. Hence attention is more and more paid to redefining the interaction of lively, vibrant and quiet locations, of spatial and social stress and relief, of city and environs, as well as to redesigning and reorganising the city along these principles.

Continuing to build the city

To this day, Vienna enjoys the privilege of being able to draw on fundamental systems of good urbanism and infrastructure that were designed for a metropolis with more than 2 million inhabitants already over a century ago. In periods of stagnation or slow growth, this basic fabric was partly modernised and complemented with farsighted infrastructure projects such as Danube Island, making it possible to "absorb" growth relatively easily despite rising quality standards. A wide range of measures, e.g. the modernisation and upgrading of Vienna's Underground network, the construction of new campuses and the planning of new urban quarters, moreover provide for the immediate future.

However, as a result of continued growth and changing needs of the modern economy and urban society, some urban planning issues ranging from the siting of future settlement structures, production facilities and open spaces to the co-operative shaping of the metropolitan region - are posed anew or acquire novel importance and urgency and demand rapid solutions. STEP 2025 focuses on these long-term requirements, prepares strategic decisions and guidelines and initiates the necessary spatial, financial and technical planning work. The European financial crisis, which is also leaving its mark at the national and municipal levels, certainly does not render the project of successful urban and metropolitan regional development any easier. This calls all the more for close co-operation between the Federal Republic of Austria and the City of Vienna as well as for the Republic's willingness to provide the necessary funds for further development of the metropolitan region. After all, strong metropolitan regions are guarantors of the competitiveness of national economies, especially under difficult macroeconomic frame conditions.

The predicted development dynamics of coming years open up the possibility of shaping the city according to the general principles of a future-oriented urban development plan, thereby ensuring its high-quality evolution. On the one hand, this means further developing existing urban quarters sensitively and in accordance with the needs and interests of their inhabitants, eliminating deficits and creating new qualities. On the other hand, urban development zones – such as aspern Vienna's Urban Lakeside, the area formerly occupied by the Northern and Northwestern Railway Stations or the new Quartier Belvedere and Sonnwendviertel – are to become fully-fledged parts of the city with urban, mixed-use structures.

Until 2025 or thereabouts, inner-city urban development (by completing existing neighbourhoods and utilising large-scale inner-city zones suitable for development, e.g. the former Northern and Northwestern Railway Stations, etc.) as well as existing urban expansion potentials comprise sufficient space to meet the demand for new building land. However, in order to ensure high-quality and affordable development of a city beyond this scope, structural measures must already be taken today. For this reason, urban development planning is focusing on issues of long-term design of potential settlement areas, the upgrading and networking of green spaces, the creation of strong urban sub-centres, the agreement of measures with neighbouring municipalities as well as municipal land and infrastructure policy.

PRINCIPLES OF VIENNA'S FUTURE URBAN DEVELOPMENT

In dealing with this multifaceted agenda, one objective is central: growth and development dynamics are to lead to a new start that will prove of benefit for the city as a whole. Vienna is to remain a liveable city, where people like to stay, work, study and communicate. The quality that renders Vienna so attractive is to be experienced by all – old and young, long-time residents and newcomers as well as visitors. For the strategic orientation of Vienna, this objective means that the different dimensions of sustainable development are pursued with equal intensity: competitiveness and entrepreneurial spirit as well as affordability, social justice, integration and resource-efficient climate and environmental protection policies.

In this context, STEP 2025 is not a standalone document. Rather, it takes account of the specifics, strong and weak points of Vienna, includes spatially relevant aspects of specialised concepts of various municipal departments and is based on a number of fundamental positions that sketch the perspective of a "city of the future" and are key drivers of Vienna's urban development.

A LIVEABLE CITY

Vienna boasts outstanding quality of life. Factors like the Vienna Woods, one national park, agricultural landscapes, attractive recreation zones and a superb range of cultural events, social cohesion, educational facilities without access barriers, healthcare infrastructure, etc. make Vienna a highly successful city. For many years, international rankings have therefore placed Vienna in top positions, appreciating not only its cultural and leisure offerings, but also the level of personal and social safety and security, housing environment, leisure options or ecological quality.

Vienna is committed to an urban development policy that generates new qualities out of constant change in both existing and newly emerging urban quarters. Vienna subscribes to an urban concept characterised by urban density, high-quality green spaces, high architectural standards and a mixed-use approach. Housing and workplaces are smoothly interlinked on-site; ground floor zones are lively; facilities for everyday use can be found just around the corner. This leads to a city of short distances and to multifaceted public spaces of encounter that meet the needs of current and future inhabitants. Cultural activities, too, are an important factor of urban development. The standards of dealing with the cultural heritage and the principles of building $culture \rightarrow |\exists|$ are described in the Guidelines for Building Culture of the City of Vienna.

A SOCIALLY EQUITABLE CITY

For the Viennese, quality of life also means that the city will remain affordable despite its manifold qualities - compared with other Western European metropolises, Vienna still offers this advantage. The United Nations recently declared Vienna the "most prosperous city in the world", since it does not only score with regard to infrastructure and productivity, but also in the fields of sustainability and distributive justice. Above all with respect to housing, Vienna remains one of Europe's most affordable cities despite rising prices in the private housing market. To keep this position, social housing construction must represent a key pillar of housing provision in the future as well and in particular must also offer attractive and affordable options for lower-income households.

Vienna embraces the tradition of European cities that support upward mobility and social justice. The "Viennese Model" assumes responsibility for the provision of efficient infrastructure, municipal services and, in particular, for affordable housing, thereby preventing segregation and facilitating a good social mix. Despite increasingly tight public budgets, Vienna regards it as its task to safeguard and further develop quality standards in the fields of housing, infrastructure and municipal services by drawing on smart solutions so as to ensure accessibility for all population groups. Social justice also involves planning the city in a way that ensures that all residents, irrespective of their income, can enjoy high-quality building culture and urban aesthetics.

A GENDER-EQUITABLE CITY

For many years, Vienna has been offering excellent frame conditions for gender equity. As a key prerequisite for the compatibility of work and family duties, the Austrian capital provides the country's densest network of free-of-charge childcare facilities, a steadily growing range of public schools with whole-day care and a high density of women-specific counselling points and advancement programmes. Vienna has met with international acclaim for the thematic breadth and methodological depth of its gender-sensitive planning approaches, since a robust urban structure allows for a great variety of use, creates leeway for action for its inhabitants and also supports the goal of rendering the social gender roles of women and men equally permeable and flexible.

→ Vienna is committed to a gender-sensitive quality assurance process in planning since planned and designed environments strongly impact the quality of everyday life and living opportunities of all inhabitants. This means taking systematic account of the different needs and life realities of women and men at all levels of planning and hence implementing the principles of gender-sensitive planning geared to the requirements of every life (Manual → I≡I "Gender Mainstreaming in Urban Planning and Urban Development").

AN EDUCATING CITY

In our age of the service and knowledge society, education, training, vocational qualification and lifelong learning constitute vital prerequisites for the social and economic development of a city and are moreover key factors for individual life chances, equal opportunities and self-determined action by citizens. Well-trained specialised personnel as well as newcomers to the labour market are essential for the economic development and future of our city, its enterprises and companies. Future-oriented urban development and successful educational policies are closely intertwined and reinforce each other.

For integrative urban planning, it is therefore highly relevant to create preconditions to ensure that a maximum number of children and young people will enjoy education and vocational training of a good standard. Every child must be given a fair start in life. For this reason, Vienna is committed to the ongoing, demand-oriented upgrading of educational services and establishments and provides space for "good learning places". Interesting and useful educational facilities are an undeniable location asset, contribute significantly to enhancing urban quality of life and render a city attractive.

A COSMOPOLITAN CITY

International mobility attracts people of varying educational attainments, different cultural and social backgrounds and multifaceted migration histories to Vienna. With the *Vienna Charter* $\rightarrow |\exists|$, the city has set itself a framework for respectful coexistence, mutual appreciation and a climate of social cohesion.

Vienna views the diversity of its population as a key development factor that will continue to render the city attractive for talented people from all over the world, international investment, pioneering research institutions and international organisations. Urban development takes account of the needs, different lifestyles and interests of newcomers. In addition to housing, though, it is also essential to provide space for ethnic economies and social networks of individual immigrant groups as well as public spaces that "work" for all and fulfil different requirements for the smooth living together of all groups.

A PROSPEROUS CITY

EU statistics classify Vienna in the 10th place among the most prosperous European regions. Economically speaking, hardly any other European region has been able over the past 25 years to benefit as much from the coalescence of Europe as the metropolitan region of Vienna. Numerous internationally active corporations have chosen Vienna as their investment target or location of supraregional headquarters. Moreover, productivity has likewise developed positively in recent years. While this still was a weak point as late as in the 1980s, the efficiency increases of individual economic sectors are now clearly above the European average. Conversely, Vienna has to a certain degree also been affected by the international financial and economic crisis (although the city's economy has proven comparatively resistant), and structural change has entailed a dramatic decrease of workplaces in the industrial sector.

Vienna wants to make use of the current transformation process to strengthen its position as an economic hub. It is a task of urban development to provide favourable conditions for a wealth of different enterprises ranging from industrial production companies to the creative industries, e.g. by fostering existing and developing new industrial and commercial areas, proposing novel mixes of office and housing estates, offering modern logistics solutions or adopting cluster strategies.

AN INTEGRATED CITY REGION

Together with the "core city" Vienna, the entire urban agglomeration is growing as well, connecting to the Slovak capital Bratislava, which is located at a distance of only 60 kilometres, ($\rightarrow \boxminus Metropolitan region, \rightarrow \boxminus Agglomeration, \rightarrow \boxminus Stadtregion +$). Both the organisation of cross-border traffic and the joint positioning in the international competition between metropolitan regions as business locations call primarily for co-operation.

→ Vienna is committed to an agglomeration policy based on partnership in co-operation with neighbouring municipalities, the Federal Provinces of Lower Austria and Burgenland, but also with the centres across national borders, above all with Bratislava and Brno. Successful management of this metropolitan region means not only the intelligent organisation of problematic issues like commuter traffic, but also calls for the development of concepts and management instruments for the viable and integrated evolution of the entire agglomeration.

AN ECOLOGICAL CITY

Growth ensures competitiveness and prosperity but normally also entails rising energy and land consumption as well as increasing traffic volumes. These challenges must be dealt with in accord with ambitious objectives of climate and environmental protection. Cities have proven the most efficient type of settlement with regard to their "ecological footprint" – if the goals of sustainable and future-oriented development are systematically pursued.

For this reason, Vienna opts for a sustainability strategy that comprises both the sparing use of natural resources and the targeted development of urban infrastructure facilities, which are essential prerequisites to allow for (and render attractive) resource-preserving lifestyles and sustainable corporate governance. Thus Vienna clearly prioritises public transport, walking and cycling over car traffic. Natural resources like land, water, air and biodiversity are treated with the utmost care. The energy demand of built structures is kept as low as possible, and renewable energy carriers and resources are put to optimum use on-site. Vienna views sustainability as an investment strategy and driver of innovation and development. (→ Smart City Wien - STEP's contribution to making the city fit for the future)

A PARTICIPATORY CITY

The demands of inhabitants to codetermine their living environment in keeping with their interests and needs find expression in a great variety of initiatives. Formats such as Local Agenda 21, Gebiets-betreuung Stadterneuerung (Urban Renewal Offices) or Stadtteilmanagements (Neighbourhood Management Offices) create the framework for close interconnections with urban planning processes. Today, urban development would be unthinkable without the transparent information and active involvement of the citizens affected.

→ Vienna views co-operation with the population as an opportunity to develop optimised and viable urbanistic solutions. The Urban Development Plan singles out participation as a special focus: binding guidelines for participatory procedures are to set out a clearcut framework for future processes of this kind for the purpose of urban development (e.g. Master Plan for Participatory Urban Development); in many areas, too, new instruments need to be formulated. The prime principles of communication between city and citizens are mutual respect, the willingness to learn and transparency of decision-making paths. (→ Governance as an opportunity for the joint development of cities)

GOVERNANCE AS AN OPPORTUNITY FOR THE JOINT DEVELOPMENT OF CITIES

STEP sketches a picture of the city of tomorrow that combines social, economic and environmental objectives and defines strategies, initiatives and measures that are conducive to gradually making this vision reality. The document formulates strategic guidelines that are to serve as an orientation and impulse for concrete implementation projects of coming years.

STEP questions time-tried processes and offers novel approaches for optimised procedures and effective instruments. Dynamic urban and location development calls for accelerated decisionmaking in many areas. At the same time, however, a maximum number of different interests is to be considered in decision-making, leading to broad-based consensus. Against this background, the concept of *governance* $\rightarrow |\exists|$ acquires vital importance. STEP defines the goals to pursue in the public interest, specifies fundamental positions and develops models of control and institutional structures to ensure the protection and active pursuit of these objectives even in novel forms of co-operation with non-public actors. Flexible procedures thus substitute rigid rules and mechanisms. More and more, the public sector assumes a co-ordinating role in urban development and manages sometimes complex processes involving different actors that follow determined rules but are flexible enough to adapt to the tasks at hand.

Smart City Wien - STEP's contribution to making the city fit for the future

Dynamic growth and social justice, location development and climate protection – the range of tasks for the metropolitan region of Vienna is wide and the set objectives often seem mutually exclusive. The system of actors involved is more complex than ever before.

With the consequences of climate change and the probable scarcity and cost increases of natural resources, two global trends are likely to manifestly impact the future design of the city as a place to live and work in. Vienna counters this challenge with its "Smart City Wien Framework Strategy" in order to define long-term goals and concrete approaches for a sustainable Smart City Wien. This strategy integrates all fields of municipal administration and policy and lays down a structuring, long-term setting in combination with existing, relevant documents, plans and programmes. The key objective lies in further increasing Vienna's quality of life while at the same time protecting resources as far as possible and promoting comprehensive innovations.

Smart City Wien

Smart City Wien defines the development of a city that assigns priority to, and interlinks, the issues of energy, mobility, buildings and infrastructure.

In this, the following premises apply:

- radical resource preservation
- high and socially balanced quality of living development and productive use of innovations/new technologies

This is to safeguard the city's ability to withstand future challenges in a comprehensive fashion. The elementary trait of Smart City Wien lies in the holistic approach pursued, which comprises novel mechanisms of action and co-ordination in politics and administration as well as a wider leeway of action assigned to citizens.

Technical infrastructure and utility services

Vienna is a city with superlative standards of water and energy supply as well as wastewater and solid waste management. Thus all households are connected to the water mains network, which is fed by mountain spring water. The urban supply systems and technical infrastructure facilities likewise contribute essentially to the high quality of life and the attractiveness of Vienna as a business hub.

The excellent overall quality of this infrastructure is the outcome of continuous public investments over decades. This gives Vienna a massive edge over many other growing cities with partly obsolete supply infrastructure, as it boasts state-of-the-art supply and disposal capacities for a city with 2 million inhabitants. The required capacities for water supply and wastewater and solid waste disposal are safequarded until 2025.

Instead of purely quantitative capacity upgrades, it is therefore possible to focus on a transformation towards high-quality, "smart" technical infrastructure. The development towards becoming a smart city calls for more efficiency, innovation, resilience $\Rightarrow |\Xi|$, flexibility, co-operation and fine-tuning as well as more financial resources. Inter alia with its Climate Protection Programme $\rightarrow |\Xi|$, the Urban Energy Efficiency Programme and the Energy Strategy currently under preparation, the Waste Avoidance Programme and the Waste Management Plan for Vienna $\rightarrow |\equiv|$, the City of Vienna has in recent years not only defined goals, but also already implemented numerous practical measures.

In this context, it is important to emphasise the role played by information and communication technologies (ICT) as the backbone of any smart city and as a key factor tor the city as a business hub. The *ICT Strategy* \Rightarrow $|\Xi|$, of the City of Vienna aims to steadily step up its services for both citizenry and business through the use of information and communication technologies. ICT are to enhance quality of Life and maintain Vienna's attractiveness for enterprises.

Finally, the City of Vienna views the further development of technical infrastructure also as an opportunity to build *urban technology* \rightarrow $|\equiv|$ know-how together with science, research and business circles and thus to foster research and technology development in the Austrian capital.

Smart City Wien integrates a great variety of key areas, e.g. health-promoting environmental and living conditions, social cohesion, education and research. Smart City Wien moreover pursues the ambitious goal of making Vienna a leading European metropolis of research – also in the field of $urban\ technologies \rightarrow |\blacksquare|$ –, endowing the economy with even greater dynamism and creating high-quality workplaces in a growing city.

The core issues – energy, infrastructure, mobility and buildings - constitute four areas of action directly linked to urban development. Hence the Urban Development Plan STEP 2025 systematically reflects the central ideas, principles and objectives of the Smart City Wien initiative and draws on their strategic orientation in formulating concrete initiatives, e.g. in the fields of multimodal mobility options, integrated energy and spatial planning, the systematic greening of condensed urban zones or new quality requirements for the energy consumption aspects of future urban development approaches. In its urban development strategies, STEP 2025 hence contributes essentially to the implementation of the Smart City Wien goals.

Most specifically, the Smart City Wien initiative is characterised by the fact that it does not only comprise new technologies that should help to reduce the "ecological footprint". Rather, it aims at networked strategies to improve the ecological and economic performance of Vienna while at the same time safeguarding social cohesion and quality of life. The challenge lies in creating prosperity, security and safety while reducing resource input and energy consumption. Seen from this angle, STEP 2025 pursues a holistic approach that combines different policy areas and fields of action as the cardinal principle of urban development. Prime goals include the ability to learn and "systemic solution skills", i.e. the ability to meet complex tasks with integrated solutions, as well as openness towards new partnerships and a constructive dialogue with the population.

Target areas of urban development – continuation of a successful model

The implementation instrument "Target Areas of Urban Development", which was introduced in the Urban Development Plan STEP 2005 and since then has been tested and applied with success, will be continued. Ten years of target area management have resulted in favourable developments in the target areas (e.g. the evolution of Danube Canal into a leisure and urban recreation zone or the rapid developments along the U2 axis in the 2nd municipal district Leopoldstadt). The target areas are areas of importance for the city as a whole, where high development potential and/or specific challenges entail complex requirements regarding co-ordination and fine-tuning between actors, and hence generate frame conditions that necessitate particularly close collaboration and consultation between private and public interest groups (municipal departments, land owners, developers, planners, etc.).

Based on the experience made in recent years, it was possible to define factors of key importance for the successful implementation of target areas. In addition to the active steering of planning processes, this includes sufficient leeway for action for the target area co-ordinators to advance the networking of various actors and e.g. facilitate the implementation of projects involving more than one municipal district. Target area co-ordinators provide information and impulses, moderate processes, form networks, formulate recommendations for action, initiate key planning documents and highlight spatial and chronological priorities.

The management input by the target area coordinators enabled the City of Vienna to increase the efficiency of its measures on behalf of urban development projects. The tasks of target area management are considered complied with as soon as a common understanding regarding the necessary measures was established between the various interest groups, thereby ensuring that the implementation of individual measures is safeguarded even without a central management body. As was already done in 2011 in the context of the first evaluation of the target areas, the Vienna City Council decides on the continuation or adaptation of individual target areas as well as on potential future target areas. Such separate decisions are independent of STEP 2025 and based on the development progress or on the needs of target areas resulting from urban development dynamics. The target area system thus requires constant monitoring and corresponding adjustment to topical situations and challenges. For example, Vienna's intense networking - in

particular of suburban zones with neighbouring municipalities – suggests the idea of testing collaborative ventures patterned after the target area concept in regional co-operation spaces with special development potentials or specific challenges – involving the municipal districts affected, the neighbouring municipalities and the Federal Province of Lower Austria (\rightarrow 3.2 Vienna is more – the metropolitan region).

Co-operation - as a catalyst of development

Cities are top-end products of socio-cultural evolution: the formation and evolution of cities have always been the outcome of significant collective achievements of human society. The active involvement of the urban society hence offers an opportunity to use the innovative force of the city as the sum total of the ideas, know-how and experience of all its actors to become the "catalyst" of development.

Towards this purpose, STEP also wants to initiate new partnerships. Vienna is aware that contemporary urban development is no longer the sole task of regulatory public authorities: rather, Vienna regards governance as a process that not only entails fine-tuned actions on the part of different political departments and administrative units. Governance also means understanding public institutions and private enterprises, land owners and investors, organised civil society and individual citizens as stakeholders who have vested interests in determining future developments and are willing to influence these developments through their own commitment. For this reason, STEP does not only address those whose daily work is urban planning but rather proposes models of designing the city by sharing responsibility between public administration and individual interests - but always for the benefit of the common good.

To enable urban development planning to act as an interface between different actors and integrate a variety of interests, it must be process-oriented. This calls for novel co-operation mechanisms and control and implementation competencies. This co-operation is systematically evolved, e.g. by means of joint agreements on objectives and project organisations. The intensified interaction between public and private actors not only demands a new understanding of what planning means, but also the development of new negotiation and financing models. In this, urban development must always aim for the ommon good but is also well-advised to take account of market logic and exploit it.

Co-operation - at city, district and local levels

Vienna's urban structure benefits from its diverse areas and traits reflected in the city's districts and neighbourhoods. This variety and different situations prevailing in urban areas are decisive for potential local developments. However, they also reveal that there can be no one-size-fits-all solutions for local developments. STEP controls the concerns of the city as a whole by defining attitudes and strategies and "gets the ball rolling" by launching pioneering initiatives. However, "on the ground", as it were, when the task lies in proposing concrete on-site solutions, local competencies by directly involved individuals count most of all. This is where Vienna's municipal districts play an important role. This calls both for the optimised involvement of municipal districts in urban planning processes and for suitable support of the districts in their own planning work with regard to the superordinate or overall municipal planning context. The target area management introduced with STEP 2005 is a milestone for the further development of urban planning instruments at the level of neighbourhood and urban quarter planning. This instrument is to be complemented by further expertises - also at short notice - at district level.

Urban Renewal Offices as well as social and cultural initiatives likewise make important contributions towards urban design at the local level. For example, neighbourhood cultural or intercultural activities (to mention just two) have proven very effective: Aktionsradius Augarten, Palais Kabelwerk, Sargfabrik or Soho Ottakring are well-known, successful projects. This great variety goes to show that shared objectives of strategic urban planning and co-operative decision-making based on these objectives are of vital importance.

Co-operation – the added value of participation

Finally, a central level of dialogue and co-operation concerns the interactions with the population and the interest groups involved in urban planning processes, in particular if these represent the economy. STEP views this participation as an evident element of co-operative urban development. Participation not only generates acceptance. Rather, participation is an instrument that, if used at an early date and in targeted fashion, can entail improved and long-term results: citizens and actors of urban development definitely dispose of expertise in all issues concerning their immediate life and work environment. While this everyday know-how may only be representative of part of the actual status quo, it is at the same time detailed and steeped in genuine experience. The variety of possible solutions proposed in the context of participation procedures can provide an important input for decision-making.

Participation requires mutual respect and the willingness to communicate and learn on the part of all actors involved. For planning processes, this often signifies an entirely novel way of understanding and management: the objective is not only just the transparent communication of projects and decisions but rather involvement from day one, the open discussion of development goals (and not only of measures) and openness towards non-foreseeable solution proposals.

Especially if viewed against the backdrop of a growing city, the challenge lies in developing guidelines and models of a dialogue that balances the articulated interests of the population involved and of local enterprises with the overall requirements of the city. In this context, it is important to also take account of the needs of less vociferous population groups, future residents as well as new companies and businesses. This means developing suitable forms of participation for different scale levels - from small-scale issues to those that extend to the city as a whole - and to professionalise this participation. The implementation of STEP can build on the 2013 publication "Praxisbuch Partizipation" → I≡I as well as on the Master Plan for Participatory Urban Development, which is currently underway and defines procedural principles along concrete examples of planning situations.

STEP engages in dialogue - Wien 2025

To ensure that this orientation towards participatory processes and new partnerships will become reality, the principle of constructive dialogue was already systematically applied during the formulation of STEP 2025: the present text is not only based on numerous studies and the expertise of urban planning specialists; rather, the individual initiatives and measures often are the outcome of intensive exchanges with representatives of municipal districts, neighbouring municipalities and the Federal Province of Lower Austria, of business circles and civil society as well as of numerous other experts, all of whom added their experience and ideas to the discussion.

Moreover, urban development policies of coming years may draw upon an even bigger pool of ideas: parallel to the genesis of STEP as a specialised planning document, the Viennese population was encouraged to formulate their ideas and visions of a city of the future in manifold ways: as principles, sketches or models in the context of workshop processes ("Future Labs" and "Future Talks"), as posts relating to the "Wien 2025" discussion process conducted on the Web and on Facebook or within the scope of several public events. The results of this broadbased dialogue process were edited for an exhibition at Planungswerkstatt and are available for the City of Vienna as suggestions and mandate for further study and analysis in coming years.

STEP AS A STARTING-POINT

Fig. 5: STEP as a strategic framework; Source: own diagram

THEMATIC CONCEPT

MANUAL

STEP

2025

URBAN DEVELOPMENT PLAN VIENNA

TARGET AREA
PROGRAMME

MASTER PLAN

The adoption of STEP 2025 on 25 June 2014 by the Vienna City Council marks the final point of a development process that, spanning over two years, has led to the formulation of a common understanding of central challenges and of corresponding strategies and initiatives. However, at the same time, it provides the starting-point for the effect that STEP will exert on Vienna's future urban development policy.

In three chapters, the Urban Development Plan 2025 sketches a picture of the city and the future generations who will live and work in Vienna:

- Vienna: building the future: the vision of a new urbanism in the city of the future
- Vienna: reaching beyond its borders: the vision of the future position of Vienna as a city of business and research, in the metropolitan region and in the European competition between locations
- Vienna: networking the city: the vision of the future of mobility, green and social networks as the backbone of the city until 2025 and beyond

STEP 2025 is the first-ever Urban Development Plan for Vienna that was not dated with its year of genesis but points towards the future. In this way, STEP 2025 wants to focus explicitly on a vision of the city of tomorrow and to address future issues. All strategies, initiatives and instruments named in the Urban Development Plan hence do not arise merely from critical stocktaking but are actually oriented towards this future scenario.

Where do we go from here?

The development will not stop in 2025. Analogously to demographic forecasts, STEP exceeds its self-imposed time horizon and points out projects that due to their drawn-out lead time – e.g. infrastructure projects – must be launched already today to set the right course for a Vienna with 2 million inhabitants.

Regarding its "internal" effect, STEP constitutes a binding guideline for urban policy and administration and a strategic orientation for municipal enterprises. It serves as the basis for all future regulations and measures concerning the spatial development of the city - from building stock management or the newly defined rehabilitation target areas of wohnfonds wien $\rightarrow |\exists|$ to the definition of future urban expansion areas, from infrastructure planning to open space design. STEP sets out the strategic framework, while detailed planning work and concrete specialisations are the tasks of subordinate thematic concepts addressing specific aspects, of urbanistic concepts and master plans as well as of land use and development plans based on the specifications of STEP. Finally, STEP also spells out Vienna's strategies underlying future programmes and subsidies, in particular if these are provided by the European Union (e.g. programme "Investitionen in Wachstum und Beschäftigung Österreich 2014-2020"; Investing in Growth and Employment in Austria 2014-2020).

However, STEP also deploys an "external" effect: numerous measures can only be implemented through co-operation with the competent departments of the city administration, the municipal districts and other actors, which may include the Federal Republic, the Federal Provinces of Lower Austria and Burgenland, neighbouring municipalities or partner cities or regions of centrope, enterprises or real-estate developers. STEP wants to provide orientation and clarity regarding the basic positions and immediate projects of the city, but also wants to highlight the steps that must be taken by others – be they administrative units or private actors - in order to attain the goals set and aims to encourage participation in implementation partnerships $\rightarrow |\exists|$ to facilitate project implementation through mutual consultation. With STEP, the city hence demonstrates leadership both in the deployment of its own resources and in the capacity of co-ordinator, manager and mediator.

Monitoring and evaluation

Central frame conditions, such as the further course of demographic or economic development, can never be predicted with total accuracy; new instruments may prove more or less efficient; initiatives may be more or less precisely oriented; partnerships may turn out more or less viable. Against this backdrop, an ongoing monitoring and reflection process will clarify to what degree the planned initiatives can be successfully implemented and in how far the aimed-for results were actually attained.

As a consequence of the evaluation outcomes, STEP will be updated, adjusted and complemented, if need be, in the spirit of a permanent learning process in order to be able to react adequately to new challenges or development opportunities: this may comprise both the revision of vital objectives (e.g. modal split objectives) or the adaptation of strategic orientations and the formulation or further development (or abandonment) of instruments, initiatives and measures.

VIENNA: BUILDING THE FUTURE

A HIGH-QUALITY URBAN STRUCTURE AND MULTIFACETED URBAN LIFE



FURTHER URBAN DEVELOPMENT OF THE BUILT CITY AND PREPARATORY MEASURES FOR URBAN EXPANSION

Favouring internal growth over external growth

Housing space development in already built-up urban zones and quality upgrading of existing structures

Strengthening of polycentric urban structure

Growth along existing infrastructure lines

Compact urban design to contain urban spread

Attractive green and open spaces to further high-quality urbanity

Urban design for a smart city of resource conservation and short distances

Population growth, novel demands of (city) utilisation and economic change will alter Vienna's spatial structure over the coming years: "blind spots" in the urban tissue that were formerly used as industrial zones and traffic surfaces such as the big plots of the former railway stations Nordbahnhof and Nordwestbahnhof - are gradually transformed into fully-fledged urban quarters. Peripheral locations are brought closer to "the city" and hence become more urban due to public and private investments in housing, industry and commerce, public space and mobility infrastructure. Through targeted urbanistic interventions, the still often monofunctional housing estates of the 1950s to 1970s will assume new tasks and develop more varied and urban qualities. In the Gründerzeit quarters of Vienna, rehabilitation and discreet new construction projects lead to further possibilities of quality upgrades and the interlacing of old and new. All this is done in full respect of the valuable architectural heritage of Vienna while leaving sufficient leeway for novel developments.

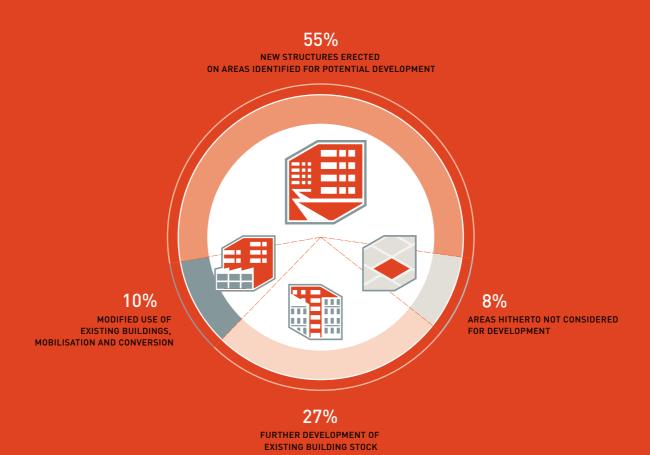
In a nutshell, the vision for Vienna can be defined as vibrant urbanity. In many parts of the city, this has already become reality. In the next few years, many – often quite small-scale – improvements and additions will create space for greater functional density. This not only means reduced land consumption for new buildings, but also short distances and plenty of facilities in the immediate environs, which favours eco-friendly transport modes.

In this context, it is essential that space for up to 120,000 housing units must be provided until 2025 to be able on the one hand to compensate for the ongoing loss of flats - caused e.g. by the combination of smaller dwellings or the demolition of badly equipped units - and on the other hand to create housing space for additional households in this growing city: the demand is generated both by changes in the lifestyles of the resident population and by the arrival of newcomers to Vienna. As in the past, part of the demand is met by existing buildings and by a wealth of small-scale new structures, additions and adaptations. However, in keeping with Vienna's long-standing tradition, the most important pillar of new housing construction will be composed of multi-storey housing estates with a high share of subsidised units. Social housing, which in Vienna is available to many different population groups, will continue to play an important role. However, other forms of affordable housing, too, are of significance here.

Furthermore, a sufficient volume of new green zones, areas for social infrastructure facilities as well as for industry, commerce and technical infrastructure must be provided. For this purpose, existing land reserves and potentials already identified shall be used. New urban quarters currently under development, e.g. Vienna Main Station, the former Nordbahnhof area and aspern Vienna's Urban Lakeside, as well as other attractive zones with high potential, such as the Nordwestbahnhof or Franz-Josefs-Bahnhof sites, plus a wealth of smaller construction projects will assume a central position for growth management. In addition, brownfield and underused sites as well as the built city are bound to change and "absorb" new inhabitants. Established urban sub-centres and neighbourhood centres requiring further development will fulfil more comprehensive supply tasks for the population in a "city of short distances". Transformation and growth will be used to realise comprehensive quality improvements in the already existing city. This sort of reshaping and reordering of the city requires the involvement and participation of citizens in order to recognise their manifold needs, eliminate concerns, make use of local know-how and attain results that take account of different perspectives and, in particular, the interests of less well-organised and vociferous groups.

Moreover, the evolution of the architectural and spatial structure of the city also focuses on energy efficiency issues – in this respect, Vienna can draw on extensive experience with lowenergy and passive house standards. Based on this experience, further technical developments (keyword: Energy-plus $building \rightarrow |\blacksquare|$) are encouraged while aiming for quarter and neighbourhood structures that contribute to reducing the ecological footprint of residents.

Fig. 6: Provision of 120,000 housing units (from 2014 to 2025) Source: Urban Planning Vienna; own diagram







2.1 THE BUILT CITY

In the past 10 years, the "core city" – i.e. excluding urban expansion zones and large-scale projects – absorbed a substantial share of Vienna's population growth. The number of inhabitants in inner-city and Gründerzeit quarters has gone up by approx. 75,000 persons as compared to 2001 – a respectable increase by 10 percent. The city has benefited from this growth – many districts and neighbourhoods today are more colourful and vibrant and offer better income possibilities than in the 1990s. Gentle urban renewal $\rightarrow |\exists|$ positively reinforced this process; at the same time, this approach largely prevented undesirable gentrification phenomena $\rightarrow |\exists|$.

In coming years, too, the Gründerzeit city, the "interwar city", but also urban structures from the 1950s to 1970s will change and evolve (→ Fig. 8: Mission Statement for Urban Development). The attractiveness of the Gründerzeit city as a place to live and work in remains unabated; for this reason, the influx of residents, the conversion of brownfields and the refurbishment of attic storeys are very likely to continue. Analogously to the recent trend in interwar municipal housing projects, the housing estates from the 1950s to 1960s are characterised by a change of generations with many more young families, while the large-scale 1970s housing developments are often confronted with new challenges due to demographic aging.

The management of these processes of change calls for different instruments and strategies and must in particular focus on three aspects:

ACCEPTANCE AND PARTICIPATION

Residents frequently view structural change ambivalently or even oppose it. Dialogue, participation and the partnership-based development of high-quality solutions therefore must become matter-of-fact elements of the transformation of the built city, as in fact demonstrated by the successful concept of gentle urban renewal.

COMPREHENSIVE QUARTER DEVELOPMENT

Gründerzeit buildings are particularly attractive for private real-estate investments. While this on the one hand engenders positive development dynamics, it may on the other hand – if not duly counteracted – entail massive rent hikes and lead to the crowding-out of lower-income groups, with undesirable consequences for neighbourhood development. Socially acceptable and comprehensive quarter development thus calls for efficient public regulation.

DEVELOPMENT STEERING THROUGH FINANCIAL INCENTIVES

Subsidised building rehabilitation – an approach characterised by long-standing success – contributes to higher housing quality and greater energy efficiency. Due to the forecasts and demands for growth with respect to the existing building stock, financial incentives need to be re-evaluated to enable further urban development.



VIENNA'S STRATEGY FOR THE BUILT CITY

DEVELOPMENT MANAGEMENT & HIGH-QUALITY URBANITY

- → Action Plan 50/60/70 | FLAGSHIP INITIATIVE |
- → Gründerzeit Action Plan

In the understanding of the City of Vienna, urban development always comprises the evolution of the city "as built". Gentle urban renewal and continuous quality improvement of interwar and postwar urban structures are expressions of this fundamental understanding. Today, Vienna will make use of its urban growth in targeted fashion to further improve the quality, stock and urbanity of the Gründerzeit city as well as of settlement structures dating from the 1950s to 1970s. In addition to this strong focus, quality and variety of use of the built stock are to be upgraded in other respects as well; e.g. with regard to easily accessible but underused locations or in obsolete commercial/industrial zones that will be developed into more vibrant urban structures. [\$\rightarrow 2.3. Vienna transforms - centres and underused areas - Initative: Urbanised!]



In the built-up parts of the city, Vienna aims to improve the availability of open spaces, social facilities and mobility offerings in targeted fashion and will have to create new space for housing, trade and recreation by converting brownfields and gaps between buildings, refurbishing attics and adding storeys. Moreover, the upgrading of ground-floor zones generates positive impulses for urban vibrancy as well as new opportunities for commercial, social, cultural and community activities.

FLAGSHIP INITIATIVE

ACTION PLAN 50/60/70



The upgrading of structures from the 1950s to 1970s calls for in-depth analyses and an evaluation of the different locations as well as, starting from this, for customised concepts for architectural and functional improvements. Based on the time-tried model of "gentle urban renewal", an action plan provides superordinate guidelines by describing urban development opportunities, growth potentials and the necessary processes and process qualities for the implementation of quality improvements. (\rightarrow Fig. 8: Mission Statement for Urban Development "Further development of areas mainly characterised by 1950s to 1970s structures")

- → The City of Vienna (Administrative Group for Housing, Housing Construction and Urban Renewal & Administrative Group for Urban Planning, Traffic & Transport, Climate Protection, Energy and Public Participation) is developing an Action Plan 50/60/70 that inter alia covers the following aspects:
- I proposals for strategic development planning that takes account of growth potentials, economic limitations and opportunities, residents' interests as well as socio-political and architectural goals (according to the *Arch4579* → |≡| evaluation method).
- I definition of participation standards for residents and abutters.
- I singling out of pilot projects that provide an exemplary overview of the added value of quality improvements and the concentration of various types of use in one site.
- → Integration of comprehensive energetic balance improvements into the further development of housing estates from the 1950s to the 1970s (\rightarrow 2.2 Vienna mobilises land space for urban growth Iniative: Integrated energy and spatial planning)

GRÜNDERZEIT ACTION PLAN



A Gründerzeit Action Plan is to create a policy frame for the further development and upgrading of Vienna's Gründerzeit neighbourhoods. The action plan specifies strategies for improving (public) open spaces (e.g. street gardens, micro open spaces, balconies and roof terraces) and ground-floor zones as well as quality-assuring permit procedures that safeguard the preservation of public interests and at the same time provide greater flexibility for investors. Affordable housing and a wealth of social and cultural forms of use are important traits of Gründerzeit neighbourhoods that must be further strengthened. Demographic monitoring ensures that trends to crowd out lower-income groups and social segregation tendencies in Gründerzeit quarters will be recognised in time. (→ Fig. 8: Mission Statement for Urban Development "Development of areas mainly characterised by Gründerzeit building stock")

- → The City of Vienna (Administrative Group for Housing, Housing Construction and Urban Renewal & Administrative Group for Urban Planning, Traffic & Transport, Climate Protection, Energy and Public Participation) is developing a Gründerzeit Action Plan that inter alia covers the following aspects and issues:
- I definition of basics and processes for quality-assuring permit procedures.
- I proposals for Gründerzeit building stock management that involves key actors, evolves existing structures, focuses the activities of different interest groups and organises participation options.
- evaluation and proposals for the reassessment and adaptation of rehabilitation subsidies to current objectives in order to ensure high social effectiveness.
- → Continuation of thermal/energetic rehabilitation measures to foster the attainment of energy and climate goals of the Smart City Wien Initiative. (→ 2.2 Vienna mobilises land space for urban growth Initiative: Integrated energy and spatial planning)





2.2 SPACE FOR URBAN GROWTH

High-quality urbanity

High-quality urbanity in urban quarters can be attained if certain qualities of development density are a given:

- tightly knit circulation network due to suitable block sizing
- functioning social infrastructure and local supply facilities
- high housing quality due to housing design geared towards everyday needs and a differentiated range of public squares, green and open spaces.

Thus high-quality urbanity means vibrant urban quarters with a wide variety of different forms of use, short distances to supply facilities, flexible open spaces and barrier-free, lively streetscapes. Participation in social, cultural, sports and educational facilities is another important aspect.

The manual "Gender Mainstreaming in Urban Planning and Urban Development" → |≡| formulates qualities and recommendations for future construction projects.

Vienna's municipal territory holds numerous areas and zones with development potential, many of which were already singled out in earlier urban development plans. They may be inner-city brownfields and former railway station sites that can be used for inner urban expansion as well as areas in outer districts and at the urban periphery. In the Mission Statement for Urban Development, the bigger ones among these areas are highlighted as "areas with development potential for housing and work" (\Rightarrow Fig.8: Mission Statement for Urban Development). The delimitation between settlement zones and open landscapes according to STEP 2005 is thus principally preserved.

In some of these areas offering development potential, the process of change has already been initiated; in others, it is under preparation; in others again, planning has just begun. In all, Vienna boasts areas that would offer space for up to 135,000 dwellings and several million square metres of potential office and centre function space. Small-scale projects such as single plots, gaps between buildings or storey additions are not included in this calculation. For comparison: 135,000 dwellings correspond to all housing units of the 12th, 13t^h and 14th municipal districts taken together. These spatial reserves provide a solid basis for urban development. If made fully use of, they permit the creation of housing, social and technical infrastructure as well as workplaces for more than 200,000 persons in sites whose location and integration into the urban fabric make them prime candidates for compact, urban and resource-efficient development.

How much land will be consumed by this urban growth will significantly depend on how compact the new developments will be. Vienna today is a city with a wide range of urban design solutions that operate with highly diverse urban configurations and generate different forms of urbanity. In upcoming years, the task will lie in developing urban quarters that combine the qualities of different urban embodiments as smoothly as possible: "centre" qualities, such as urban variety, mixed uses and architectural flexibility, attractive and vibrant public spaces, need to be blended with qualities of outlying districts, such as private and public green and open spaces, vicinity to recreation zones and, often, minimal noise pollution. This type of urbanised and resource-conserving urban development and expansion becomes possible if existing potentials can actually be realised and if projects are implemented rapidly, efficiently and closely linked to corresponding infrastructure planning. Towards this goal, the following aspects should be at the focus:

SPACE ACTIVATION

Efficient urban growth management means rendering the existing space potentials available and developing them. A key precondition for this lies in the ability to enforce public interests in land purchases while taking account of justified private interests. For this purpose, existing legal bases, procedures and instruments must be correspondingly refined.

HIGH-QUALITY URBANITY

Urban growth and the efficient use of public funds as well as affordable living expenses advocate compact urban structures that limit the costs of infrastructure and housing, conserve resources and are adapted to everyday requirements. Thus legal frame conditions and standards must be designed so that they will support the establishment and maintenance of such urban quarters with high-quality densities.

FACILITIES

Housing units required by a growing metropolis need the parallel provision of suitable social and technical infrastructure facilities and green spaces, as only this ensures high-quality urbanity \rightarrow p. 48. The mechanisms for providing these facilities in tandem with housing space development must be optimised and stepped up, as desirable projects would otherwise not get off the ground.

LONG-TERM URBAN EXPANSION

It is likely that Vienna will continue to grow even beyond 2025. For this reason, it is necessary even today to prepare for the future demand for land to develop and to identify locations suitable for long-term urban development in tandem with infrastructure and green space planning and through co-operation in the city region.

PUBLIC SPACE AND URBAN DEVELOPMENT

The demographic changes in Vienna also entail novel requirements to be met by public space. Changed lifestyles and new forms of use must be responded to. Public space is to encourage everyday movement through the city, communication and encounters and should allow for lingering and relaxation. Correspondingly high-quality, multifaceted and sufficiently dimensioned public spaces are key elements of the quality of life in new urban quarters. An example of how to strengthen the identity of public space as an attractive "living space" is provided by the projects of $K\ddot{O}R$ $GmbH \rightarrow |\exists |$, which enliven freely accessible public space of Vienna with permanent and temporary artistic ventures, thereby permitting the experience of art for everybody.

FURTHER DEVELOPMENT OF THE ENERGY SUPPLY SYSTEM

Climate protection, expected energy scarcity and price hikes call for the evolution of the energy supply system and energy planning. Maximum energy efficiency, the networked use of renewable energy resources including storage as well as the intensified application of efficient electricity-based mobility systems are the cornerstones of this change, which must also be reflected in urban structures.

URBAN DESIGN FOR A SMART CITY

The current EU energy standards for new buildings – which will be tightened in future years – call for high planning and architectural quality. The task lies in implementing maximum efficiency standards for buildings and the integrated generation and storage of renewable energy resources (e.g. solar heat, photovoltaics, heat pumps) and moreover in creating suitable frame conditions for urban design to make the smart city reality.



VIENNA'S STRATEGIES FOR URBAN GROWTH

CONSISTENT DEVELOPMENT OF LAND POTENTIAL

- → Land mobilisation for urban growth | FLAGSHIP INITIATIVE |
- → Long-term urban development perspective

HIGH-QUALITY URBANITY FOR ALL PARTS OF THE CITY

ightarrow Building the city

EFFICIENCY & SHARING OF REPONSIBILITIES BETWEEN THE PUBLIC AND PRIVATE SECTOR

→ Development zones

SMART ENERGY PLANNING & SMART RESOURCE MANAGEMENT

 Integrated energy and spatial planning Urban growth without waste of land or resources and the efficient and effective use of public funds are key objectives of the City of Vienna. This means targeted control of growth trends in order to make known potentials last for as long as possible. New urban quarters – both close to the centre and in peripheral locations – should thus offer urban quality and diversity, be affordable and comply with all sustainability aspects, e.g. with regard to energy efficiency and mobility.

Basically, urban expansion will only take place in locations with adequate public transport options (either existing or in concomitant preparation). Comprehensive mobility concepts will moreover ensure that walking, cycling and public transport will become more attractive than car use (\rightarrow 4.1 Vienna is moving-diversified mobility in 2025). To support a city of short distances, the new urban guarters are to boast central public and private supply facilities. A building culture → 🗉 that safeguards high quality of life, usability, sustainability and participation as well as high urban, architectural and functional quality ensures that urban expansion will take account of different urbanistic preconditions. This form of urban development does not define and plan every small detail top-down. Rather, there will be space for individual initiatives of diverse actors, which thus may become "co-producers" of the city (= bottom-up urban development). Citizen information and participation are additional elements of this openness and of an attitude that welcomes new ideas as positive impulses. As fundamental elements of urban design, art and culture are integrated into development processes even more strongly than before in order to activate existing potentials at the earliest possible moment and make them inspiring, identity-creating factors already during planning and construction. One example of the impulse provided by culture for urban development is e.g. art in public space (→ 🗉 "KÖR GmbH – Kunst im öffentlichen Raum"). The thus realised projects offer citizens numerous possibilities to experience their immediate living environment as attractive and to play an active role in urban design.

It is planned to develop the city within the existing urban zone as well as by utilising the remaining land potentials under STEP 2005 until 2025. However, many of the areas required for this purpose are not available for the planned forms of use. Since the existing legal framework of Vienna offers insufficient leeway for action to mobilise these land potentials, it may happen that land owners will not sell plots required for urban development or charge massively inflated prices. To change this unsatisfactory situation and improve the frame conditions for long-term urban development, Vienna will test and evolve new instruments to mobilise land reserves.

Another important vehicle for realising land potentials lies in the optimised fine-tuning of public investments in technical, social and "green" (= green space) infrastructure and housing production. The City of Vienna will advance and refine the processes necessary towards this purpose. Moreover, agreements for urban development concluded with land owners and planning beneficiaries constitute an instrument that allows for fair cost sharing regarding investments in infrastructure, green and open spaces as well as energy generation and storage facilities.

LAND MOBILISATION FOR URBAN GROWTH



With wohnfonds_wien $\rightarrow |\exists|$ and the Vienna Business Agency → | ≣ |, in combination with related enterprises, the City of Vienna disposes of reliable actors and an internationally recognised set of instruments of land provision for urban development measures. However, Vienna's dynamic development calls for supplementary land mobilisation measures regarding both land already earmarked for development and plots defined as potential building land. Improved land mobilisation instruments are above all to result in more rapid, socially acceptable and highquality urban development and to ensure that land can then be put to the use or uses stipulated in official decisions.

- \rightarrow Instruments for land mobilisation and for the improved control of urban development are systematically applied and evolved, e.g. by means of reallocation (also for grassland), the earmarking of plots as building land for only limited periods, urban development agreements, the land use category "Housing construction eligible for subsidisation" \rightarrow $|\equiv$ | and the possibility of defining access and supply structures in development areas even prior to zoning provisions or at least before a detailed planning concept is available.
- → Complementary creation and optimisation of public legal instruments for land mobilisation to provide for land and ownership structures that allow for development and the implementation of infrastructure measures in due time.
- Focusing of public investments on land that can indeed be mobilised for development (e.g. properties owned by the City of Vienna, its funds and enterprises or plots owned by partners interested in their development).
- In order to ensure the synchronisation of public investments in development areas and hence to support the accelerated realisation of the necessary development ventures, suitable mechanisms for the disbursement of the required public monies must be prepared.
- → Urban development projects are to be regarded more strongly as self-contained, economically attractive and calculable investments. Rules, rights and obligations of all actors must be duly formulated.
- → Implementation of building land monitoring in consultation with the municipal departments concerned in order to keep an eye on the availability of plots and the development and realisation status of land mobilisation.
- \rightarrow To continue ensuring efficient supply with affordable, high-quality housing, the processes related to zoning and land use planning and "two-tiered developers' competitions" $\rightarrow |\Xi|$ are to be fine-tuned even more intensively. This is to further the efficient harmonisation of the objectives and quality standards of urban design with those of subsidised housing construction.
- > Continued effect analysis of instruments and strategies applied.

LONG-TERM URBAN DEVELOPMENT PERSPECTIVE



Vienna is preparing for all necessary urban developments of the future, even going beyond 2025. Housing, business and infrastructure projects to be implemented between 2025 and 2035 must be initialised in time to allow for high-quality planning processes and resource-conserving urban development fine-tuned with infrastructure planning (e.g. in the environs of high-level public transport facilities) and the long-term objectives of grassland and agricultural space protection. Decisions regarding the necessity of developing these potentialities are taken on the basis of ongoing building land monitoring. (\rightarrow 2.2 Vienna mobilises land – space for urban growth – Flagship iniative: Land mobilisation for urban growth)

- → Use of building land monitoring for the ongoing analysis of space requirements against the backdrop of demographic and economic development.
- → If the monitoring process reveals corresponding demand:
- I definition of spatial development potentials for urban growth beyond 2025.
- I development and application of suitable instruments for creating land reserves (→ 2.2 Vienna mobilises land space for urban growth Flagship iniative: Land mobilisation for urban growth).
- I strategic land purchases by municipal institutions.
- together with partners from the environs of Vienna and the urban region: development and fine-tuning of proposals for land, settlement and infrastructure development in the urban region.

HIGH-QUALITY URBANITY FOR ALL PARTS OF THE CITY The fact that a condensed, compact city can be extremely attractive is not only evidenced by many Gründerzeit quarters and historic city centres, but also by new development projects in Vienna and other cities. For this reason, urban development areas need to present adequate structures that respond to the demands of a growing city, allow for the sparing consumption of land and resources and permit mixed-use concepts. This generates the frequency and demand needed by retailers and functioning ground-floor zones and results in comprehensive, walkable local supply in a city of short distances. Sufficiently dimensioned, high-quality green and open spaces are obviously part of these new developments. Moreover, new (urban) technologies are employed as central instruments of resource conservation.

Of course, this strategy calls for sophisticated planning procedures, respect for local specifics and the integration of new quarters into the surrounding cityscape. In addition, instruments, legal regulations and target systems are oriented towards the needs of a prospering, modern and international metropolitan region.

BUILDING THE CITY



Urban mixed-use approaches - i.e. the combination of housing with other types of use -, high-quality densities and low resource consumption are becoming key criteria for construction projects and ventures. Future urban expansion projects for development axes along high-level public transport corridors should therefore predominantly reflect densities of a minimum net floorspace ratio $(\rightarrow) | \exists | NFSR)$ of 1.5; in the environs of high-level public transport, the minimum NFSR should be 2.5. With especially positive location factors, higher densities are possible on a case-by-case basis in some areas in the context of high-rise developments (→ |≣| *High-rise Concept*). However, all projects must be assessed in context with existing local conditions (e.g. transition zones to existing, less concentrated or lower built structures with stable types of use or construction projects adjoining historic villages cores).

- Implementation of settlement types that allow for the development of compact, mixed, walkable and cycling-friendly neighbourhoods (even at the urban periphery) with well-integrated supply facilities and family-oriented housing types while taking account of the principles of gender mainstreaming.
- → "Development of requirement profiles for public space" → |≡| for all urban expansion measures (taking account of groundfloor zones).
- → Identification and adaptation of regulations and objectives that can be influenced by the City of Vienna to allow for the comprehensive implementation of high-quality densities.
- → Implementation of innovative mobility concepts together with project developers.
- → Definition of minimum ground-floor ceiling heights in suitable locations to support the development of mixed-use structures in keeping with Gründerzeit principles.
- → Intensified information and participation of citizens and abutters on the basis of the principles embodied in the participation manual "Praxisbuch Partizipation", which are in their turn condensed and concretised in the Master Plan for Participatory Urban Development.
- → Development, testing and monitoring of the effects of new technologies for buildings, energy and information networks, storage and control systems as well as smart mobility in selected pilot areas (e.g. in the context of Aspern Smart City Research GmbH – ASCR).

Fig. 7:
Net floorspace ratio of housing projects in decreasing order, from top left to bottom right.
Wohnhausanlage Katharinengasse – 2.8
Spittelberg – approx. 2.5
Autofreie Mustersiedlung (Nordmanngasse) – 2.5
Rabenhof – 2.0
Wohnen am Laaer Wald (Moselgasse) – 1.6
Hietzinger Cottage (Elsslergasse) – approx. 1.5
Hofbebauung Oberlaa (Kurt-Tichy-Gasse) – 1.5
Siedlung am Park – Kabelwerk (Thorvaldsengasse) – 1.4
Wohnhäuser am Mühlweg – 1.4



EFFICIENCY
& SHARING OF
RESPONSIBILITIES
BETWEEN THE
PUBLIC AND
PRIVATE SECTOR

Growth and structural change in the city pose novel financing challenges for planning and implementation processes, efficiency and speed. The City of Vienna remains committed to the comprehensive provision of services of general interest; however, the City Administration must adapt its procedures to these changed requirements. However, land owners and investors should make fair contributions in cases where public development measures yield substantial increases in the value of their properties. New instruments must be developed that enhance funding security and allow for more flexible action adapted to the requirements of the moment.

DEVELOPMENT ZONES



To safeguard the efficient, high-quality implementation of large-scale urban development projects, the City of Vienna will apply the principle of "one-stop urban development" in potential development zones. Inspired by successful existing models (e.g. Wien 3420 Aspern Development AG, U2 Stadtentwicklung GmbH), development management offices are set up in suitable areas for the interdepartmental realisation of projects and the formal, contractual definition of both rights and contributions of the public sector, land owners and investors. Development zones are to leave space for initiatives and ideas of different interest groups and in this way feed a new dose of creativity into development processes.

- Formulation of modalities to define development zones.
- → Setting-up of development zones, e.g. by making use of the results of target area management and other multineighbourhood planning and development processes to launch development zones.
- \rightarrow Use and development of new land mobilisation instruments. (\rightarrow 2.2 Vienna mobilises land space for urban growth Flagship iniative: Land mobilisation for urban growth)
- → Creation of an organisational and if need be legal basis for work in development zones: e.g. by means of new, more flexible zoning methods, PPP financing models, flexibility in such fields as structural engineering, building use and organisational modes as well as by establishing corresponding administrative competencies.

SMART ENERGY PLANNING & SMART RESOURCE MANAGEMENT

The vision of a smart city entails massive changes in Vienna's energy infrastructure. The time-tried model of just a few (largescale) producers and many consumers is bound to transform into a model of numerous actors that are both producers and consumers and make increased on-site use of renewable energy resources and waste heat. Combined with efficient energy use, the aim is to achieve the highest possible degree of on-site energy supply of new urban quarters or neighbourhoods. In this way, it is possible to prevent CO₂ emissions, increase supply security and safeguard energy services that are and remain affordable. This calls for the adaptation of energy systems to this decentralisation on the basis of state-of-the-art operation and control mechanisms, such as smart grid $\rightarrow |\exists|$ and decentralised heat generation networks → I≡I. To ensure that this process, adapted and adjusted to local requirements, can actually take place in different parts of the city, Vienna will develop integrated spatial and energy planning concepts in the context of its energy policy goals (economic feasibility, environmental and climate protection, supply security, social acceptance and energy efficiency). For this purpose, "energy-space typologies" are defined; on their basis, approaches and suggestions for action specially formulated for neighbourhoods and development areas with similar characteristics are implemented. In this connection, questions of land and spatial demand for upgrading the local energy infrastructure are dealt with and, if required, fine-tuned with partners from the environs of Vienna.

INTEGRATED ENERGY AND SPATIAL PLANNING



Spatial and energy planning are combined at the neighbourhood level in one joint process in order to find optimised infrastructure and energy system solutions adapted to a specific site. The objectives: avoidance of CO2 emissions, increased energy efficiency, economic viability, supply security, use of renewable energy resources on-site, intelligent and optimised use of grid-bound energy resources (e.g. decentralised heating networks, waste heat etc.) and storage of energy to optimise local potentials. Coefficients for energy efficiency, renewable energy resources and CO2 emissions are to provide a basis for defining a scope for action and planning. This integrated approach calls for interdisciplinary collaboration and the balancing of thematically specific goals and plans of the City of Vienna. Moreover, the Austrian capital is looking for partnerships with experts, enterprises, scientists and researchers in the fields of spatial and urban planning, energy, traffic and transport, supply and waste disposal, public space and green space. The City of Vienna's current goals and concepts of energy and climate protection provide the planning framework.

- → Development of a thematic concept for Integrated energy and spatial planning that includes the capturing of fundamental spatial and energetic data, coefficients for energy efficiency, renewable energy resources and CO₂, the development of energy-space typologies, the definition of planning processes, planning content, control models and a list of actors to be involved.
- → Development of energy concepts for new neighbourhoods and urban quarters. This also addresses questions of land and space requirements for the upgrading of the energy infrastructure and, if required, is fine-tuned with partners from the environs of Vienna.
- → Development of a smart city quarter manual. On the basis of coefficients for energy efficiency, renewable energy resources and CO₂ as well as of energy-space typologies, the manual is to break down requirements for networked urban quarters to an operative "quarter/plot" level.
- Integration of holistic energy and spatial planning into ongoing planning processes.
- Development of a model for the implementation of energy concepts on a contractual basis.
- Linking of the numerous initiatives to enhance energy efficiency in the urban region.





2.3 CENTRES AND UNDERUSED AREAS

Centres are those places within the urban tissue where urban life is most concentrated and condensed, where the city is itself in the truest sense. They are places of myriad functions, supply and consumption possibilities and offer occasions for encounter and exchange; they are landmarks, places of culture and urban identity. They fulfil key functions for the city as a hub of business, for urban quality of life and a city's typical image. In other words: any successful and prospering city needs successful and prospering centres.

Vienna's "centre landscape" has changed over the past years. Centres have specialised regarding their functions and become more differentiated according to various typologies (→ |≡| Centre typologies). Thus in addition to the stable and strong city centre with its international role as a corporate and administrative hub, cultural nucleus, tourism destination, shopping and leisure zone, a new central business district $\rightarrow |\exists|$ has developed in the form of Donau City; the UN Vienna International Centre and the Austria Center as a conference venue launched a development that has made this urban quarter an international meeting point of business and diplomacy. In coming years, Vienna Main Station with the Quartier Belvedere will likewise be able to position itself internationally and complement the 1st municipal district by adding new functions (\rightarrow Fig. 8: Mission Statement für Urban Development "Central Business District expansion - Priority zone for future additions to

central functions"). Established and superordinate shopping streets such as Landstrasser Hauptstrasse or Mariahilfer Strasse have evolved into supply hubs of supraregional appeal. With ongoing and planned investments, the established Kagran sub-centre will enhance its importance as a central service and retail location, as will the Stadlau sub-centre, albeit at a different level of importance. Urban expansion will lead to new, fully functional local sub-centres to generate impulses for the development of fully-fledged urban quarters. Potential is e.g. inherent in the core zone of aspern Vienna's Urban Lakeside (→ Fig. 8: Mission Statement for Urban Development "Sub-centre requiring further development"). Finally, sub-centres and historic village cores are to be strengthened and rendered more attractive by means of targeted interventions and investments. A key element of all these developments will lie in the strengthening of ground-floor zones, also in keeping with the Master Plan for a Viennese *Urbanity Campaign* → | **■** of the Vienna Economic Chamber.

Changes in the overall urban fabric will result from a reinterpretation and upgrading of urban structures that, due to their location, present strong potential that so far is not sufficiently exploited. These may on the one hand be traffic axes and arterial routes without clearcut urban appeal and on the other hand insufficiently utilised urban spaces in well-connected locations that today are characterised by e.g. a patchwork of one-storey supermarkets, single-family homes, brownfields, etc. These underused areas will evolve into more varied urban areas that are also able to fulfil central functions. This approach follows the concept of sparing natural resource use and economic efficiency: existing structures with good infrastructure are holistically used for urban expansion; hence the consumption of additional space and resources is minimal, as are the costs of infrastructure development.

This process highlights the following focuses for the city and its further development:

MULTIFUNCTIONALITY

High-quality centres need offices and retail trade as well as restaurants, public and cultural institutions, multimodal accessibility, but also housing space and related supply facilities. To allow for and preserve this variety of use, fine-tuned public interventions and investments that generate impulses for private investment are called for. This in its turn requires strategic control and interdisciplinary, cross-cutting co-operation over long periods.

LOCATION DEVELOPMENT

Existing and future city and neighbourhood centres are areas of special importance for both inhabitants and the realestate business. Successfully developed locations and real-estate projects render urban life more attractive - conversely, real-estate speculations may also impede desirable developments, e.g. if competition by shopping malls damages smallscale retail shops or speculators cause land prices to mushroom. For this reason, urban design needs centre development concepts and instruments that are customised for each location and aim for economic viability and improvement of the common good.



VIENNA'S STRATEGIES FOR CENTRES AND UNDERUSED AREAS

BALANCED, POLYCENTRIC LOCATION DEVELOPMENT

→ The polycentric city – Vienna's centre concept | FLAGSHIP INITIATIVE |

MULTIFUNCTIONALITY AS A PRINCIPLE

→ Urbanised!

Various types of centres – from sub-centres to central business districts, from knowledge hubs to trading poles – serve different functions on behalf of the city. Centre development includes all of these types. Thus it is essential to evolve not only the hotspots of business and politics, culture and city tourism, but also subcentres whose functions aim at the surrounding neighbourhoods and which ensure high supply for all population groups. After all, the small-scale availability of social infrastructure contributes significantly to quality of life and the compatibility of work and family life. Thus Vienna will strengthen the existing variety of centres and sub-centres and create impulses for both economic prosperity and quality of life. Concomitantly and following the goal of adequately utilising urban structures and strengthening their functionality and centrality, urban areas that today still are elusive in-between spaces in the urban fabric will be upgraded and evolved.

For a compact city of short distances, it is of prime importance to dispose of a close-knit network of centres where historically evolved village cores have their place in precisely the same way as the old city centre. In coming years, the strengthening and further development of established centres will therefore be a matter of focal interest alongside the elimination of functional deficits in individual spots and the targeted development of new centres in the context of urban expansion. A balanced development of centre locations offers the opportunity of effectively interlinking overall strategic as well as action-oriented, neighbourhood-related concepts. Special attention must be paid to the spatial, social, economic, architectural and historic context of the urban zone in question. A strategy of accelerated polycentric urban development is to facilitate high-quality upgrading above all of districts and neighbourhoods with high population growth.

FLAGSHIP INITIATIVE

THE POLYCENTRIC CITY – VIENNA'S CENTRE CONCEPT



Polycentric urban development requires strategic control to result in the "right" architectural structures, urban types of use and functionalities to emerge in the "right" locations. The sustainable viability of central functions is contingent on urban structures of architectural design and use that generate lively places, on the networking of sub-centres and on optimised traffic and transport connections.

- → Based on the model of Vienna's centre structure (→ Fig. 8: Mission Statement for Urban Development), the City of Vienna joins forces with the municipal districts and partners from the world of business to develop a centre concept that concretises patterns of space utilisation and intervention levels for urban development (e.g. as guidelines for locating public institutions, optimising the public transport network and design requirements for architecture and open spaces).
- → Definition of priority locations for the drafting of detailed centre development concepts. (→ Fig. 8: Mission Statement for Urban Development "Sub-centre requiring further development")

MULTI-FUNCTIONALITY AS A PRINCIPLE

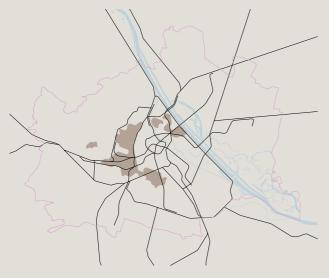
Urban spaces must be open to different forms of use; the wasteful consumption of land as a result of one-dimensional use (e.g. as traffic surface) or inadequate development structures in high-ranking locations is incompatible with sustainable land, resource and mobility policy. Multifunctionality and the enhancement of urbanisation potentials thus become fundamental principles of urban-spatial development. Over the coming years, one particular focus will be on quality improvements and compactions of locations that, while accessible by high-level public transport, so far present low densities and functional deficits. The second important field of action concerns main and arterial roads, which are to be upgraded by means of targeted urbanistic interventions.

URBANISED!

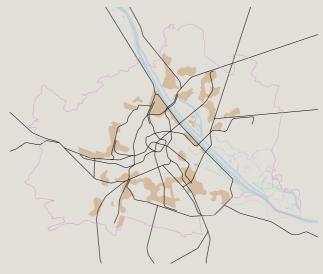


Urbanised! stands for the objective of finding the best possible use for urban structures in the entire city region. This includes well-developed areas which today serve only one single function or which are characterised by a mix of suburbs, commerce and trade, village elements and single-family homes and often fare poorly with regard to service providers and shopping options. Heavily trafficked transit and transport axes such as Brünner Strasse, Prager Strasse or Triesterstrasse come into focus here and could, if necessary, be dealt with in co-operative, cross-cutting fashion. $(\rightarrow 3.2 \ Vienna \ is \ more - the \ metropolitan \ region - Iniative:$ Regional co-operation spaces) For these locations and urban zones, the City of Vienna is developing an urbanistic perspective to enrich them with novel functions and forms of use. $(\rightarrow 2.1 \ Vienna \ renews - the$ built city - Vienna's strategy for the built city)

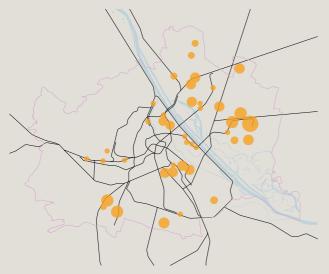
- → Analysis/identification of compaction potentials in the catchment areas of high-level public transport modes to support the development of urban-spatial structures, local centres and points of identification.
- → In case of interest on the part of actors in the environs, such projects may also be simultaneously implemented along S-Bahn (commuter train) axes (keyword: "pearl necklace" principle of urban development) or in the catchment area of Underground lines in the context of city-environs mobility partnerships (→ 3.2 Vienna is more the metropolitan region)
- \rightarrow Initiative City-environs mobility partnerships. (\rightarrow 3.2 Vienna is more the metropolitan region Iniative: City-environs mobility partnerships)
- → Formulation of strategies and pilot projects for the urbanistic and functional upgrading of no longer adequate commercial and industrial areas and for the improved use of existing single-storey commercial properties and large parking lots.
- Development of a "more than just roads" concept, which comprises strategies and measures for the urbanistic and architectural re-evaluation of transit and arterial roads.



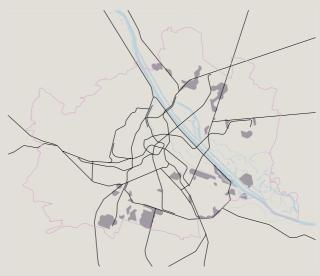
Development of areas mainly characterised by Gründerzeit building stock



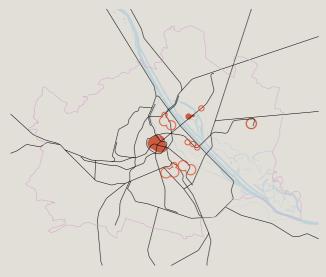
Further development of areas mainly characterised by 1950s to 1970s structures



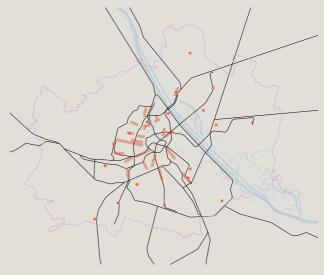
Areas with development potential for housing and workplaces



Zone for enterprises not suitable for mixed use



Central Business District Central Business District expansion



Established sub-centre
Sub-centre requiring further development
Shopping street of superordinate importance

MISSION STATEMENT FOR **URBAN DEVELOPMENT**

Fig. 8: Source: MA 18, MA 21, MA 41, Urban Atlas, Vienna Economic Chamber; Content and visualisation: MA 18

DEVELOPMENT OF SETTLEMENT STRUCTURES

Development

of areas mainly characterised by Gründerzeit building stock

Further development

of areas mainly characterised by 1950s to 1970s structures

Areas with development potential

for housing and workplaces

DEVELOPMENT OF BUSINESS STRUCTURES AND CENTRES

Central Business District

Zone with high-level office and administrative functions, universities, commerce, culture, etc.

Zone for enterprises not suitable for mixed use

(according to Viennese Analysis of Industrial and Commercial Areas

of 2008) Central Business District expansion

Priority zone for future additions

to central functions

Established sub-centre

Sub-centre requiring further development (addition of functions, upgrading)

Shopping street of 111111111 superordinate importance

SITUATION

Built-up area (2013)

Danube water bodies

City limits

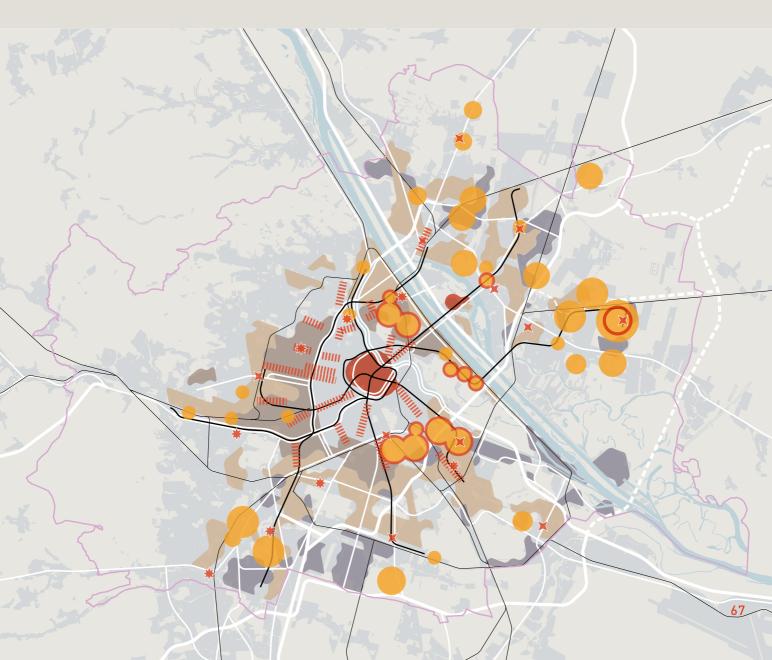
TRAFFIC AND TRANSPORT INFRASTRUCTURE

Underground/S-Bahn (commuter train) (including sections under construction)

High-level road network

Motorways/fast roads

Motorways/fast roads at planning stage



VIENNA: REACHING BEYOND ITS BORDERS

GROWTH AND THE KNOWLEDGE SOCIETY ARE TRANSFORMING THE METROPOLITAN REGION



VIENNA IS A METROPOLITAN REGION AND A HIGH-LEVEL HUB OF BUSINESS, SCIENCE AND INNOVATION

Upgrading of the Vienna Region's role as a focal European region

Bringing co-operation within the region to a new level

Provision of top-quality infrastructure and quality of life

Development of areas and urban quarters for modern business management and work

The metropolis Vienna is a service hub but likewise committed to strengthening its industry

Special support for researchoriented and innovative enterprises

Due to its geographic position and numerous political initiatives, Vienna has become a vital actor in Central Europe and even for the entire Danube region. Vienna's leading role in such initiatives as centrope and the EU Strategy for the Danube *Region* → |**E**| emphasises the city's political and economic relevance and opens up new growth opportunities. At the same time, Vienna is the hub of a dynamic and successful metropolitan region extending between St. Pölten, Brno, Bratislava, Györ and Wiener Neustadt. Substantial economic clout, relatively low unemployment rates and an intact environment are cornerstones of this success. International orientation is another: the region is today enmeshed in high-level international networks because national and international enterprises co-ordinate their European and global business from here, because the region is home and workplace to people from all over the world, because Vienna - as a headquarters of UN, OPEC and OSCE - is a meeting-point of international diplomacy of worldwide renown.

The attractiveness of the metropolitan region is most clearly gleaned from the population growth in its agglomeration. Thus more than 2.6 million people are currently living in Vienna and in the core zone of the metropolitan region (= Stadt-region + \rightarrow I \equiv I). For the coming years, a population increase by approx. 400,000 persons is predicted. There is a saying: "People vote with their feet". For regional development, this means that people move to places with high quality of life and good opportunities for themselves and their families. The strong inflow into the region is therefore a positive sign.

The ongoing development of the city region towards a service and knowledge society (→|≡| Knowledge economy) is facilitated and supported by population growth. Growth triggers new market opportunities and products; more demand, job possibilities and value added are generated; and the pool of innovative clout and creativity is enlarged. At the same time, however, there exists the fundamental task of ensuring skill-building for residents to enable them to meet the employment requirements emerging in the region.

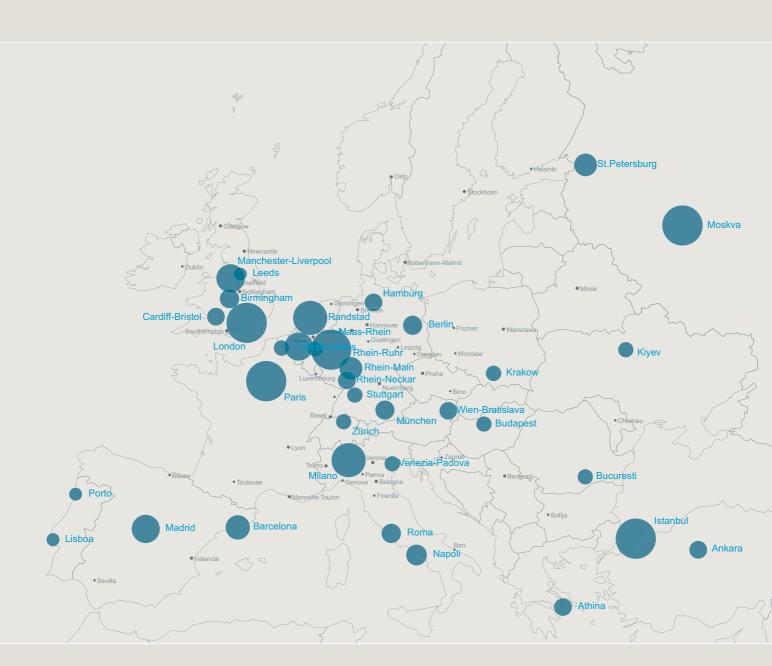
As the centre of business, education, research and culture of the entire metropolitan region, Vienna shoulders a special responsibility to develop the knowledge region. The innovative dimension of the Smart City Wien initiative thus provides a key impulse and driving force to blend economic dynamism and resource efficiency. Seen against this backdrop, "Vienna: reaching beyond its borders" means on the one hand to create even better preconditions for a successful, knowledge-based service metropolis here in Vienna.

The Austrian capital's urban developers will contribute towards this goal by means of foresighted planning, the networking of business locations, efficient land development and intelligent urbanistic solutions. On the other hand, the slogan means that the city region must be treated as a functional whole through partnerships with Lower Austria, Burgenland and the adjacent municipalities and furthered and supported by means of close supraregional fine-tuning, co-ordination and co-operation. For this reason, STEP 2025 deliberately assumes the perspective of the entire agglomeration and wants to provide impulses for the partnership-based evolution of the region as a whole.

Fig. 9: Source: German Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR) 2010; visualisation: MA 18

METROPOLITAN REGIONS IN EUROPE

Metropolitan regions with a minimum population of 3 million; size of circle reflects size of population







3.1 A BUSINESS, SCIENCE AND RESEARCH HUB

Around two thirds of the demographic growth in the metropolitan region will occur in Vienna. In total, Vienna's population will grow by about 250,000 inhabitants over the next two decades. This also means that (starting from the assumption that roughly half of the population will continue to be economically active) the space provided for economic activities and the number of workplaces will have to keep pace with this growth. Obviously, the idea is to avoid dead-end jobs by instead offering fairly paid workplaces that allow for upward mobility and the compatibility of work and family life.

All together, these frame conditions signify that Vienna will step up its dominant position as a hub of employment in the eastern region of Austria and in Central Europe in general. The most important basis for this development lies in protecting and further strengthening Vienna's position as an outstanding science and research location. This task will become even more important in the future and assigns a decisive role for the future of the city to public and private research institutions and innovation actors. It is vital for Vienna to ensure high-quality training and research at its universities since education is decisive for the future of the city and the federal province. Vienna is committed to largely open access to educational facilities. The Federal Province of Vienna advocates the creation of the necessary financial and legal frame conditions at the federal level.

Over recent years, the development of Vienna as a hub of business, science and research has laid a solid basis for employment and economic growth. Today, Vienna is home to nine public universities of highly diverse character, four big universities of applied sciences as well as a number of private universities and numerous renowned extra-university research institutions, such as the Austrian Academy of Sciences (ÖAW) or the Austrian Institute of Technology (AIT). At the moment, more than 185,000 students are matriculated at Vienna's universities – a number that makes Vienna the biggest university city in the German-speaking region. In particular, the share of foreign students is constantly on the rise, which emphasises Vienna's attractiveness as a centre of education and research. Speaking of research: almost 35 percent of all Austrian expenditure for research and development is invested in Vienna. The city's strong role is highlighted even more clearly in the field of basic research, which is essential for innovation, as nearly 47 percent of Austrian spending again goes to Vienna. The same applies for EU excellence funding: between 2007 and 2013, researchers at Viennese institutions were able to score 67 percent of the grants allocated in Austria.

As a biotechnology and ICT location, Vienna has become a member of Europe's elite locations; since 1991, the level of employment in the field of knowledge-intensive business and financial services - so essential for urban agglomerations has increased by 66 percent. As a result, Vienna has established itself among the top ten of European metropolises in this sector. For many years, the city has been a top player among worldwide conference destinations; Vienna's office market offers one of the best price/value ratios in Europe; and Vienna is an interesting investment target for international enterprises. In addition, Vienna is a smart city that scores with its high level of urban technologies and investment options for research- and technology-driven companies. While the number of enterprises and employees in the production sector has been declining, the economic value added has remained unaltered. At the same time, a successful internationalisation push as the result of high productivity and innovative skills can be observed. The export orientation of Vienna's industrial enterprises is continuously increasing and performs outstandingly compared to other parts of the country. Moreover, Vienna is the economic centre of a prospering urban region; public services and administrative institutions play a correspondingly important role. In brief: structural change towards a knowledge and service society is in full swing.

Technology and export-oriented production enterprises and companies of the knowledge and service sector present specific requirements regarding their home city and location within it. Networking and cluster formation are of key importance for technology-intensive and value creation-oriented industries; universities, universities of applied sciences and research institutions become incubators for spin-offs of corresponding spatial demand. Due to minimal noise and pollutant emissions, modern production enterprises may also be suitable for urban locations; however, goods production equally needs large, contiguous tracts of land with excellent transport connections. Offices and commercial enterprises necessitate both inner-city and peripheral locations (the latter obviously with excellent transport links); in addition, commerce requires sufficiently dimensioned logistics sites. The creative industries and small companies are interested in affordable premises close to home, good public transport connections and a creative urban environment.

City tourism is a growth market the world over. At the moment, tourism contributes roughly 5 percent to Vienna's gross regional product, with the number of overnight stays strongly on the rise. With over 1,000 national and international conferences annually, Vienna is one of the three

leading congress cities on a global scale. However, tourism not only means customers and turnover for the food service industry, retail trade and high-quality hotel projects, but also contributes significantly to the authentic positioning of Vienna as an international metropolis, helps to preserve Vienna's impressive cultural heritage and further develops contemporary culture.

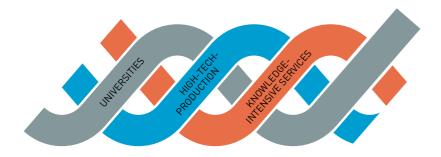
Agriculture plays a special role in this context -Vienna is the only worldwide metropolis with an agricultural sector of noteworthy dimensions. While the number of workers in the sector is relatively small (4,000 persons), the areas under cultivation is sizable. Some crops, such as wine, fruit and vegetables or organic farming, not only turn a profit but at the same time fulfil other important functions like identity creation, supply with fresh produce, provision with urban leisure opportunities and ecological aspects. A binding basis for agricultural development perspectives is provided by the Agricultural-structural Development $Plan \rightarrow |\exists|$. The plan contains a delimitation of all areas reserved for agriculture and proposes measures to ensure the continued cultivation of these zones.

The needs and marked dynamism of modern urban economies create a volatile environment for urban planning and development, in which the interests of enterprises, research and university institutions, businesses and land owners must be negotiated and balanced as smoothly as possible. However, the variety and competitive dynamics of a modern economy also widen the leeway for action and the possibilities to exert influence. Cities and their planners today can join forces with enterprises and universities to develop or evolve attractive new venues for business and research. Vienna has shown the way in recent years. Neu Marx in the 3rd municipal district constitutes an attractive new venue for companies and research facilities: Campus Vienna Biocenter focuses internationally renowned research institutions and companies active in life sciences; close by, on the premises of the former slaughterhouse, a media and ICT cluster is taking shape. Around Muthgasse in the 19th municipal district, a public initiative provided the launching pad for one of Europe's biggest biotechnology clusters. Close fine-tuning and scheduling of the time horizons for the construction of the new Vienna University of Economics and Business complex, the completion of Viertel Zwei and the development along the trajectory of the U2 Underground line between Praterstern and Donaumarina allowed for synchronised expansion that has proved of benefit both for the surrounding area and the university and business location per se. Finally, the Siemens-Allissen urban development zone has produced a political flagship investment, with

the Siemens City project completed in 2010. Outstanding development perspectives are moreover offered by aspern Vienna's Urban Lakeside as a smart city lab, the former Novartis site in Liesing and the upcoming industrial site near the new Vienna North Hospital.

Tying in with these approaches and successes, Vienna can forge ahead to become an even more advanced knowledge-based service hub. New and modern industrial sites as well as attractive venues for science and research, office and retail locations well-connected to the public transport network and space for the creative industries are all to be developed. Existing sites are safeguarded; potential functional deficits are eliminated, and new locations are planned as integral parts of urban expansion; in the built city, the possibilities for housing, work, research, production and commerce to exist side by side are improved as well. In this process, the following aspects in particular are at the focus:

Fig. 10: The three strands of the knowledge economy \Rightarrow | \equiv | Source: based on Thierstein et. al. 2006; own diagram



LAND RESERVES FOR INDUSTRY AND GOODS PRODUCTION

Despite a decline in the number of employees of the production sector triggered by structural change, the manufacturing industry with its affiliated services remains an important element of the city's value creation activities and essential for keeping the level of innovation and research high. Industry and modern city regions are not mutually exclusive, and there remains the possibility that high-tech, research-intensive industries may increasingly return to urban regions. To safeguard that the Vienna Region will continue to be successful as an attractive industrial site in Central Europe, industry and commerce must find sufficient space to expand. This calls for novel instruments to create land reserves as well as models for close fine-tuning and co-operation with the environs.

CONCENTRATING LOCATIONS FOR TOP-END RESEARCH

To safeguard and step up Vienna's position as home to excellent and profitable research, the effort to concentrate suitable locations physically must be sustained. The interaction of a great number of talented researchers in one place generates additional value - based on networking and interdisciplinarity of decisive importance for the specific location. A high concentration of excellent scientists is a vital factor to render a location attractive and hence able to lure further top-end researchers. Urban development can provide crucial impulses for successful research activities by employing land-use provisions to concentrate top-end research in given locations, thereby creating space for quantitative and qualitative growth as well as for scientific and related economic activities.

TOURISM & URBAN DEVELOPMENT

Urban quality and the urban fabric are fundamental for success in the tourism sector. Yet this fabric is not solely composed of buildings, but also comprises high-quality public and open spaces. For this reason, it is imperative to concentrate urban planning on the city "as built" in order to make urban quarters more attractive for both residents and visitors. High-quality new developments, e.g. the new campus of the University of Economics and Business or the new Main Station, likewise become tourist magnets due to their urbanistic and architectural qualities. The improvement and enlargement of important infrastructure facilities for long-distance transport - e.g. Vienna International Airport or big railway stations and rail links - is additionally very significant.

ATTRACTIVE UNIVERSITY AND RESEARCH LOCATIONS FOR THE KNOWLEDGE TRANSFER BETWEEN SCIENCE AND RUSINESS

University and research institutions need locations that offer good architecture, an exciting environment, meeting points, interesting spots, sufficient space for leisure and relaxation and smooth public transport connections. And they need spatial reserves to be able to house potential additions and spin-offs. In close consultation with the universities (based on the existing University Location *Vienna Concept* \rightarrow | \equiv |), Vienna's urban development departments can make a decisive contribution towards this goal by securing suitable plots, thereby bringing science and business closely together and enabling flexible forms of use for new enterprises.

COMMERCIAL TRANSPORT AS A SUPPLY BACKBONE

Goods transport faces different challenges and demands depending on the different zones of the city. In the city centre, logistics will function differently than at the urban periphery. This calls for flexibility and customised solutions. Big logistics centres as well as concepts for small-scale goods distribution have both a role to play in this context.

CO-OPERATIVE RESEARCH INFRASTRUCTURE FOR SCIENCE AND INDUSTRY

Research infrastructure facilities are moving to the focus of RTI-related location policies and increasingly provide a cost factor of public budgets - this is caused by the growing complexity of infrastructure facilities and shorter utilisation cycles as well as by the resulting need for reinvestments. However, without marked investments in infrastructure, any research location will fall behind. To remain scientifically and technologically competitive, co-operative structures are more and more called for, as their successful location is decisive for success. Vienna's universities have already begun to establish shared facilities both internally and in cooperation with other institutions. Urban development can support them in this and contribute essentially to developing prominent locations that boast highquality appointments and are also easily accessible for the institutions concerned.

FRAME CONDITIONS OFFERED BY URBAN SPACE FOR URBAN ENTREPRENEURS

A vibrant and multifaceted urban economy needs spaces for small enterprises, small retail shops and the creative industries. Small-scale industrial/commercial co-operation centres, existing industrial premises and co-working spaces as well as attractive groundfloor zones that offer sufficient room and space for development and are embedded in an urban fabric that supports communication and encounter and fosters lingering and atmospheric quality are particularly well-suited for this purpose.

HIGH-QUALITY LOCATIONS FOR OFFICES AND LARGE-SCALE RETAILERS

Cities benefit most from investments in offices and retail space if these are located in suitable spots that are smoothly integrated into the urban structure and well-connected to public transport, and if attractive, spatially appropriate urbanistic solutions are found that simultaneously support the variety of different enterprise types and industries.



VIENNA'S STRATEGIES FOR ITS POSITIONING AS A BUSINESS, SCIENCE AND RESEARCH HUB

PRODUCTION CITY KNOWLEDGE CITY RESEARCH CITY

- → Safeguarding and managing land reserves for industrial enterprises | FLAGSHIP INITIATIVE |
- → Co-operative business location development in the urban region
- City of innovations –
 Innovations for the city

HIGH-QUALITY OFFICE AND RETAIL SHOPPING LOCATIONS

- → Priority zones for office sites
- → Shopping centre –
 Shopping in the centre

SPACE FOR SMALL-SCALE BUSINESSES

 Urban spaces for entrepreneurial visions

EFFICIENT COMMERCIAL TRANSPORT

→ Clean, silent, reliable

Vienna is a commercial metropolis and a research capital, a centre of tourism and a transport hub, a location for the creative industries and manufacturing. This width and depth provide the basis for durable success and resilience, i.e. the ability to cope with unexpected developments and crises. As a smart city, Vienna will embark on a path towards growth that combines quality of life, prosperity, safety and security with low resource consumption and energy use. The Research, Technology and Innovation Strategy of Vienna adopted in 2007 initiated measures for Vienna as an RTI location that are evolved by means of the process "Vienna Looks to the Future – Innovative Vienna 2020".

It is the task of urban development to create spatial preconditions for this fundamental strategic orientation. The core aspects of this process are: location availability, co-operation and resource preservation – this means that locations for enterprises from all industries are reserved and further developed according to demand. In co-operation with business and research, marketable strategies are worked out; "cross-border" solutions involving Lower Austria, Burgenland and the adjoining municipalities are to be found; the necessary investments in the supraregional traffic and transport structure are to be safeguarded through joint lobbying efforts. Finally, resource conservation, i.e. modern technologies and clever urbanistic and architectural solutions, are to ensure maximum multifunctionality and mixed-use options.

PRODUCTION CITY KNOWLEDGE CITY RESEARCH CITY

The concentration of research, science, development and hightech production in shared or well-networked locations facilitates the building of innovation networks, in whose context research and application mutually inspire and advance each other. To further the emergence of such innovation networks, the specific location requirements of different industries must be taken account of.

To be able to offer the best spaces and locations for manifold needs, close co-operation between public institutions, universities, universities of applied sciences, research institutions and enterprises as well as suitable instruments and competencies of the city administration are inter alia called for. For this reason, Vienna wants to encourage co-operation ventures and to develop as well as fine-tune sets of instruments that create optimised spatial preconditions for Vienna as a hub of business and science.

FLAGSHIP INITIATIVE

SAFEGUARDING AND MANAGING LAND RESERVES FOR INDUSTRIAL ENTERPRISES



To protect Vienna's economic position in the long run, it is necessary to reserve both existing industrial zones and set new areas aside for industrial production (for example by means of the *Viennese* Analysis of Industrial and Commer*cial Areas* → |**E**|). Currently, the pressure to reclassify plots suited for production and industrial purposes as housing and office land is massive; the City of Vienna decidedly opposes this pressure. (→ Fig.8: Mission Statement for Urban Development "Zone for enterprises not suitable for mixed use")

- → To ensure that there will be suitable locations and adequate conditions for all economic sectors, to promote industries with special future viability and to make use of potentials for synergy as well as to support targeted location and incentive strategies, appropriate industrial zones are to be reserved by means of provisions in the land use and zoning plan and/or agreements under private law. Types of use that would hamper corresponding uses of such sites will be prevented.
- → Identification and development of adequate, additional plots to be used at short notice for industrial and commercial locations in close consultation between the Administrative Group for Urban Planning, Traffic & Transport, Climate Protection, Energy and Public Participation and the Vienna Business Agency.
- → Assessment of the practicability of compensation measures in case of changed use of industrial and commercial areas e.g. by means of a fee or the creation/provision of substitute plots.
- Development and application of an objective and transparent evaluation procedure regarding the reclassification of existing industrial and commercial areas.
- → Establishment of active quarter management offices based on the "Standpunkt Liesing" model in order to tap potentials for co-operation between enterprises and to actively promote and market locations.

CO-OPERATIVE BUSINESS LOCATION DEVELOPMENT IN THE URBAN REGION



The international competition between locations is a competition between metropolitan regions. Regions can e.g. sharpen their profile by providing attractive and well-developed plots for production, commerce, logistics, etc. for enterprises, quite independently of administrative boundaries. Against this backdrop, Vienna is intensifying its efforts to implement a harmonised system of commercial and industrial property development in co-operation with the Federal Provinces of Lower Austria and Burgenland and the adjoining municipalities.

- → Updating of Viennese Analysis of Industrial and Commercial Areas → |≡|, taking account of the city region in co-operation with the Federal Province of Lower Austria.
- → In close consultation with Lower Austria and the adjoining municipalities, Vienna is developing an intermunicipal cooperation strategy for the future-oriented provision of industrial and commercial sites in the urban region that inter alia addresses the issue of potential compensation mechanisms and the fair distribution of costs and benefits.
- \rightarrow Creation of a joint pool of competitive areas that are sufficiently large, well-positioned and relatively affordable regarding their provision with infrastructure facilities (\rightarrow 3.2 Vienna is more the metropolitan region)

CITY OF INNOVATIONS – INNOVATIONS FOR THE CITY



Top-end research locations, such as Campus Vienna Biocenter or Muthgasse, are well-known and ensure international fame for Vienna as a city of research. Vienna has the potential to set up further research flagship projects - for example in disciplines such as physics, computer science or inter- and transdisciplinary urban development research (keyword: Smart City Wien) - that can be conceived and handled as collaborative ventures of universities, research institutions, companies and the City of Vienna. Concrete potentials and location requirements derived from them are thus discussed in a broadly organised process and in due course crystallised in a concrete action plan as part of the research and innovation strategy "Vienna Looks to the Future - Innovative Vienna 2020". Moreover, Vienna is improving the (urban-) spatial preconditions to make innovation and research an integral part of a mixeduse city.

- → Implementation of a broadly organised development process as part of the "Vienna Looks to the Future Innovative Vienna 2020" process: involvement of science, research and enterprises with the aim of concretising potentially suitable zones and defining location requirements from there.
- → Crystallisation of the proposals and strategies developed in an Action Plan for Flagship Research Projects.
- → Based on the recommendations of the Action Plan for Flagship Research Projects: definition and provision of areas well-suited for larger facilities and institutions, always well-integrated into the network of science and research locations (e.g. Tech Campus).
- Concomitantly: provision of smaller plots (in urban expansion areas and, if possible, also in the built city) to enable the development of micro locations as part of a mixed-use city.

HIGH-QUALITY
OFFICE AND
RETAIL SHOPPING
LOCATIONS

Modern service providers – they account for the biggest sector of Vienna's economy – often are very demanding regarding office locations, in particular with respect to accessibility by public transport, availability of amenities such as restaurants, personal services and shops, location in an established office zone and state-of-the-art building appointments. Meeting these demands is not only in the interests of the enterprises themselves, but also in those of the city: offices and retail shopping in suitable locations with good infrastructure save resources and allow employees and customers to avail themselves of cost-efficient and comfortable trips to and from work and for shopping by means of public transport, bike or walking. For this reason, new, largescale office projects and big municipal facilities are directed to locations that can be reached by efficient public transport and are key development zones of the city. As a result, existing urban structures and infrastructure facilities are used effectively, while locations are in their turn upgraded. This is of particular benefit for existing shopping streets, whose clientele will be enlarged and whose range of services or goods will be positively complemented.

PRIORITY ZONES FOR OFFICE SITES



Vienna disposes of specially earmarked zones (\Rightarrow Fig.8: Mission Statement for Urban Development "Central Business District – Zone with high-level office and administrative functions, universities, commerce, culture, etc."), that are ideally suited for large-scale office projects, but also for other central functions, such as university institutions, which offer space, are well-connected to high-level public transport, to each other, to important passenger transport nodes (railway stations, airport) and to other university locations. Where possible, offices – but also high-level educational and research facilities – should be developed in such areas and thus become part and parcel of Vienna's "knowledge centres". Moreover, mixed-use concepts (e.g. with housing, restaurants, cultural activities) are to ensure that offices will be structurally and functionally closely linked to existing urban structures and support the emergence of neighbourhood identities.

- Analysis of existing land reserves for offices with regard to necessary qualities and requirements for further development.
- → Optimised mutual networking of office sites and safeguarding of excellent accessibility for residents of Vienna and of the region.
- Critical assessment of development projects in other locations, especially if these are difficult to reach by public transport.

SHOPPING CENTRE – SHOPPING IN THE CENTRE



Large-scale centres for retail trade can emerge only where they strengthen other retail shops and service structures and hubs. To keep land consumption for new projects as low as possible and ensure attractive urbanistic solutions, appealing façade and streetscape design and the implementation of compact sales and parking spaces integrated into the buildings are stipulated as basic requirements.

- → Systematic application and evolution of the catalogue of criteria for impact assessments and zoning provisions for general and speciality shopping malls including suitable product lists and tolerance thresholds (or evaluation of possibilities to differentiate the threshold values for retail shopping projects by product range and location).
- \rightarrow Evaluation of intensified use of the "shopping street" land use category to facilitate the implementation of shopping malls integrated into inner districts, above all in excellent positions of neighbourhood centres according to Vienna's centre concept. (\rightarrow 2.3 Vienna transforms centres and underused areas Flagship initiative: The polycentric city Vienna's centre concept)
- → Development and implementation of measures to advance the integration of commercial properties into mixed-used structures (e.g. by introducing a general maximum threshold for parking slots and by evaluating, further developing and concretising the land use category "Mixed building land, suitable for construction of industrial and commercial facilities" to prevent the construction of one-storey commercial properties in industrial/commercial zones).



Small-scale enterprises – from "traditional" sectors" to new businesses in knowledge-intensive service segments and creative industries – are an important part of Vienna's entrepreneurial landscape and often the home of product and service innovations. They revive ground-floor zones and public space, strengthen neighbourhoods and are part and parcel of a city of short distances. The safeguarding of attractive ground-floor zones for enterprises, a mix of housing and workplaces in both existing and new buildings and the preservation and strengthening of commercial and industrial structures in densely built-up urban areas are thus key priorities for the coming years.

URBAN SPACES FOR ENTREPRENEURIAL VISIONS



"Urban spaces for entrepreneurial visions" is a slogan that embodies a group of measures that aim to ameliorate the frame conditions for the commercial use of ground-floor zones, storefronts, former shop premises or backyard buildings. This improves the preconditions for mixed-use approaches e.g. in new buildings by stipulating additional ceiling heights for groundfloor zones. In suitable areas and fine-tuned with public space design, a certain ratio of areas is reserved for trade, production/commerce, services, etc. in order to generate incentives for the construction, rehabilitation or adaptation of rooms and shops for businesses that tie in well with the housing environment. Moreover, Vienna wants to adapt the requirements for mandatory parking slot provision incumbent on enterprises in order to prevent that a business will be unable to open because it cannot provide the legally mandatory minimum number of parking slots for customers. This is to create a palpable easing of the financial burden especially for smaller enterprises.

- Identification of zones suitable for mixed-use concepts.

 Definition of minimum ground-floor ceiling heights in suitable locations.
- → Widening of legal possibilities to revitalise ground-floor zones in urban development areas, e.g. in the context of development agreements, housing construction promotion or other legal procedures.
- Development of new procedures to protect existing smallscale trades and backyard premises.
- → Evaluation of potential simplifications of space utilisation regulations for existing buildings (e.g. for offices or groundfloor spaces).
- → Adaptation of the Garage Act basic objective: smaller shops should be exempted from the mandatory requirement to provide parking slots.

EFFICIENT COMMERCIAL TRANSPORT

For economic and ecological reasons, the establishment and strengthening of efficient transport and logistics systems is a central concern for Vienna. Good preconditions for necessary commercial transport volumes are of benefit for individual enterprises and customers, who receive goods within short timeframes and at low cost, as well as for the competitiveness of the location per se. Moreover, low-noise and low-emission logistics constitute a main prerequisite for high quality of life and the environment. With its focus of environmentally and city-friendly logistics, Vienna is in harmony with current EU goals and targets (EU White Paper on Transport → 🗉). In addition, there are several good reasons (keyword: peak oil) to assume that transport costs will increase in the future. These frame conditions significantly impact existing logistics infrastructure and networks. Therefore the City of Vienna wants to develop strategies and solutions for lowcost, efficient and resource-preserving commercial transport in collaboration with enterprises and the logistics industry.

CLEAN, SILENT, RELIABLE



A continuous and open dialogue between city and logistics industry will enable Vienna to advance the change towards low-emission and efficient logistics on the basis of technological novelties, process innovations and improved frame conditions with regard to urban design. In addition to targeted subsidies for electric and natural gas vehicles, the City of Vienna will support enterprises in the concentration of cargo flows.

- Promotion of e-mobility in commercial transport based on suitable instruments.
- → Support in the implementation of micro transhipment points (e.g. by means of parcel machines, drop boxes, etc. in ground-floor premises).
- → Implementation of efficient loading zone management: as a rule, several enterprises (not just one) should be able to use the same loading zones; this encourages co-operation between enterprises and tradespersons in delivery traffic.
- → Establishment of a platform to inter alia develop together with representatives of the logistics industry and interest groups – a ready-for-implementation concept for e-mobility-based inner-city logistics.





3.2 THE METROPOLITAN REGION

Vienna has never before been as closely networked with its environs. Administrative boundaries play a dwindling role in the everyday lives of people and enterprises. The population makes use of the entire region to work and live in, for leisure activities and shopping. This networking within the region is further intensified as a result of demographic growth, e.g. by triggering stronger migration trends within the metropolitan region. At the same time, housing and industrial zones are extending across provincial and municipal boundaries. Landscapes, natural and green space networks, such as Lobau, Vienna Woods or Marchfeld, have never stopped at administrative borders. The metropolitan region is a reality - physically, morphologically and functionally.

The centres in the *centrope* → |≡| region, too, will cohere much more strongly in the future and result in a functional, polycentric network. Thus the time required to travel from Vienna to St. Pölten has been cut to 25 minutes since the trains along the Western Railway Line are travelling at a speed of up to 230 km/h. Living in the capital of Lower Austria and working in Vienna or vice versa or mutual visits to leisure, cultural or shopping facilities have duly become much easier and more attractive. The capacity use of trains and increasing commuter flows also indicate that Vienna is "growing closer" to the Slovak capital Bratislava.

One outcome of this development is that the region is becoming more diversified, but also stronger. Many municipalities have evolved into competitive locations, in the process boosting and complementing the metropolitan function of the Vienna Region. Wiener Neustadt and Tulln today dispose of widely recognised tertiary-education facilities and research institutes that serve as magnets for attracting technology-oriented enterprises. In the larger metropolitan region, the same is true of Krems and St. Pölten. Hardly any goods or services today are available in the core city only.

For Vienna and the metropolitan region, this development opens up economic possibilities and investment options for Austrian and international enterprises, creates attractive, easily accessible workplaces and hence greater prosperity. Urban, municipal and regional development can all achieve more if they are given a wider leeway for action – for example with regard to the provision of infrastructure and public services.

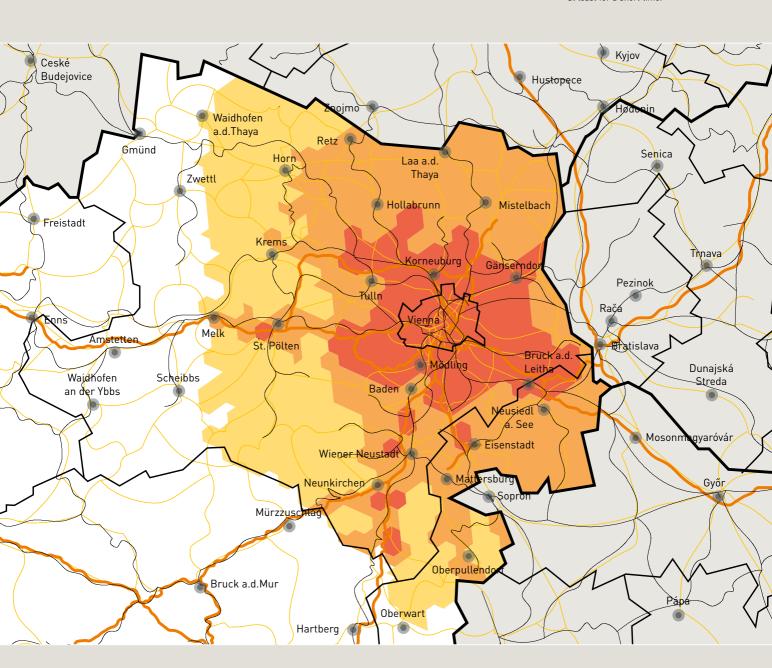
Fig. 11: Source: AIT/A1 (Urban API project) Illustration: MA 18



0-10%
10-33%
over 33% and Vienna

This map is based on an evaluation of the movements of users of the A1 mobile telephone network in Austria on 24, 25 and 26 January 2012.

*The degree of interlinkage reflects the share of users who have spent the night (midnight to 6 a.m.) in a municipality in the environs but have visited Vienna during the day at least for a short time.



This generates the possibility of developing a prospering and networked region into an integrated metropolitan space, where different location assets are used optimally for the overall benefit of the region, where co-ordinated regional planning harmonises population growth and resource conservation, where increasing traffic flows are directed at environmentally friendly means of transport, and where the hub function of Vienna International Airport is strengthened by optimum links to the traffic and transport network.

In this process, Vienna and its partners in the city region can now test and implement novel methods and strategies for regional co-operation. Towards this goal, it is possible to build on existing achievements; however, instruments and processes must be accelerated, intensified and evolved at the same time as well. This intensification above all focuses on the following aspects:

SUSTAINABLE CO-OPERATION

Co-operation within the city region enhances the positive image vis-à-vis the world outside and strengthens the region's position in the international competition between locations. At the same time, it helps to alleviate negative effects, e.g. in the field of environment and transport as well as regarding infrastructure costs, by means of tapped synergies and fine-tuned measures. For this reason, a task of the hour lies in making use of the existing experience with co-operation (e.g. in the context of the spatial planning board Planungsgemeinschaft Ost (PGO→|≣I), Vienna Region → | ≡ |, City-Environs Management (SUM→|≣|) and Verkehrsverbund Ost-Region ($VOR \rightarrow |\exists |)$), to better exploit collaboration potentials in many areas, for instance in regional planning, transport planning and location development, but also in resource management or open space systems.

GOVERNANCE STRUCTURES FOR THE CITY REGION

The reality of the metropolitan region calls for governance structures that add aspects of city-region interests to the historically evolved administrative structures of merely locally oriented authorities. It must be possible to link the interests of the individual municipalities within the region with those of the metropolitan region as a whole and to emphasise the assets that will result from this co-operation. Collaboration taps advantages, but these will only become tangible through binding, robust and fair mechanisms.

SAFEGUARD & CONCENTRATE

The Vienna metropolitan area is the Austrian region with the biggest population and the greatest economic clout by far. For this reason, the City of Vienna is convinced that regional, national and European funds must be used in targeted fashion for the development above all of infrastructure. This requires finetuning, co-ordination and proactive joint lobbying efforts at the national and European levels by Vienna, Lower Austria and Burgenland.



VIENNA'S STRATEGIES FOR THE METROPOLITAN REGION

In coming years, urban and regional planning can serve a central task to further develop the metropolitan region as an economic hub, workplace and place of living. (\rightarrow Fig.13: Fundamental principles of spatial development, Stadtregion+) Key elements of this task include close consultation on all issues of regional planning (e.g. co-ordinated development along public transport axes, fine-tuned active land management policies), the development and application of strategies for the organised planning and implementation of industrial, commercial and large-scale retail trade locations and the improvement of accessibility within and from outside the region. Moreover, Vienna will continue to work towards the integration of the transnational centrope region.

GOOD GOVERNANCE FOR THE CITY REGION

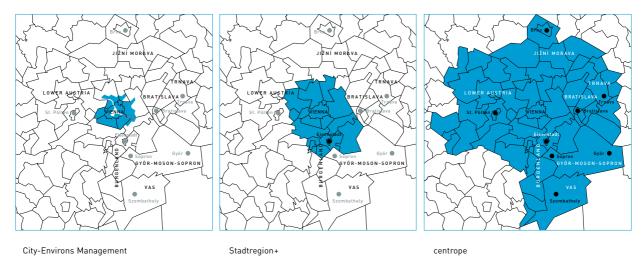
- → Further development of regional and international co-operation structures | FLAGSHIP INITIATIVE |
- → Regional co-operation spaces
- → City-environs mobility partnerships

FURTHER DEVELOPMENT OF THE CENTROPE REGION

ightarrow centrope mobility management

Vienna and its neighbouring municipalities have grown very close together – functionally and often geographically as well. Intensified co-operation within the city region and in individual sub-regions can release development potentials, reduce obstacles to development or avoid developments that are undesirable and might entail disadvantages for the region as a whole. For this reason, the City of Vienna is setting initiatives for the collaborative and focused development of suitable co-operation spaces together with the Federal Province of Lower Austria, municipal districts and neighbouring municipalities and is formulating proposals for the upgrading of existing instruments of governance, such as PGO and SUM.

Fig. 12: Area of co-operation: City-Environs Management, Stadtregion+ and centrope; own diagram



FLAGSHIP INITIATIVE

FURTHER DEVELOPMENT OF REGIONAL AND INTERNATIONAL CO-OPERATION STRUCTURES



Together with time-tried and new partners from the entire city region (Federal Provinces of Lower Austria and Burgenland, neighbouring municipalities, actors from administration, politics, business circles, science and civil society), the City of Vienna wants to evolve structures for co-operation on issues regarding the metropolitan region in order to facilitate futureand implementation-oriented collaboration. With centrope, PGO and SUM, there exist reliable instruments and platforms to build on for further developments.

- → Establishment of action- and decision-facilitating structures for regional cooperation, in particular due to the evolution of existing organisations and taking account of the different regional levels (metropolitan region, city region, city with environs)
- Clearcut definition of tasks and working areas: in the context of co-operation structures, it should definitely be possible to develop joint future visions and define common spatial and thematic concerns.
- Setting up of a common platform for implementation partnerships covering the city region (e.g. regional co-operation spaces, city-environs mobility partnerships).
- → Networking of administration and politics with regional interest groups, such as enterprises and institutions, scientific facilities and private initiatives.

REGIONAL CO-OPERATION SPACES



Together with the Federal Province of Lower Austria as well as a wide variety of different interest groups, Vienna wants to define regional co-operation spaces with massive development potential and great importance for the environs of Vienna and the metropolitan region with regard to location and green space development or the mobility system.

- → Definition of regional co-operation spaces in the context of a broad-based dialogue process: a sub-region that should certainly be at the focus of this process is the Simmering/Schwechat/Vienna International Airport area with its outstanding importance for Vienna as a business hub and tourism destination and its potential as a company location.
- → Definition of development goals: for jointly defined co-operation spaces, quality and development goals as well as a roadmap for the concrete implementation of measures and strategies should be formulated.
- → Co-operation towards the realisation of superordinate development goals in the regional context can and should be advanced by viable processes and actors. Examples include the Viennese model of target areas of urban development, the procedures adopted by Lower Austrian municipalities for spatial development (e.g. regional guiding plans) or international examples.
- \rightarrow The co-operative and fine-tuned planning and development of locations for industrial and commercial properties and retail facilities can and should be part and parcel of this co-operation instrument (\rightarrow 3.1 Vienna generats prosperity a business, science and research hub Initiative: Co-operative business location development in the urban region)
- \rightarrow Project-based planning development of a competition-based subsidy system to provide incentives for the development of projects taking up regional planning ideas; e.g. implementation in the form of a *REGIONALE* \rightarrow | \equiv |.

CITY-ENVIRONS MOBILITY PARTNERSHIPS



Based on a jointly compiled regional transport concept and in tandem with urban development, Vienna aims to establish mobility partnerships along key traffic corridors in the environs of the city. In addition to VOR, Vienna wants to win over the Federal Province of Lower Austria and the municipalities affected as partners.

- → Co-operative development (Vienna, Lower Austria, Burgenland) of a strategy for the region as a whole to cover public transport in the metropolitan region (including a comprehensive park-and-ride concept and long-distance cycling routes).
- → Co-operative definition of regions/sub-regions to implement mobility partnerships – potentials for collaboration exist in particular along the S-Bahn axes, which are of paramount importance for everyday commuter traffic and regarding which Vienna and Lower Austria share great common interest in improving the intervals and comfort of public transport.
- → Development of cross-border mobility concepts in the context of the partner-ships; a special focus is on the development of transboundary mobility concepts in the catchment area of new (U2-North aspern Vienna's Urban Lakeside, U1-South Oberlaa) and existing Underground terminals. This especially concerns the definition of common goals and responsibilities between Vienna, Lower Austria and the neighbouring municipalities as well as service standards and the planning and implementation of corresponding measures.

The creation of new transport links for cross-border mobility and the shortening of travel times are no mere side-products of co-operation in centrope but rather a precondition for a networked and integrated transboundary region. The improvement of mutual accessibility in the centrope region due to substantial upgrading of the cross-border traffic and transport infrastructure is thus a key objective of the City of Vienna, the core of the further development of this four-country region and the fundamental precondition for long-term international competitiveness. A special focus must be on the optimisation of regional traffic and transport links to and from Vienna International Airport in order to strengthen its role as a Central European hub.

CENTROPE MOBILITY MANAGEMENT



Starting from the findings of co-operation within centrope since 2003, Vienna wants to evolve the concept of transnational mobility management together with its partners. The core task lies in sustained and close fine-tuning between the key public transport carriers in centrope in order to analyse the development of traffic flows and transport demand and, based on this outcome, to develop suitable cross-border offerings.

- → Establishment of a platform as the core of the ongoing dialogue and exchange of information between key actors in the field of mobility.
- → Co-operative implementation of improvements in crossborder public transport and development of a transnational mobility system (e.g. with a cross-border multimodal traffic and transport information system and intensified co-operation with integrated transport associations).
- → Formulation of joint positions on cross-border transport infrastructure as a basis for national and European lobbying efforts (e.g. with a view to Trans-European Transport Networks).

Fig. 13: Source: Stadtregion+, interim report, PGO 2011

FUNDAMENTAL PRINCIPLES OF SPATIAL DEVELOPMENT, STADTREGION+

City-environs co-operation Supplementary location zone Zone "in-between axes" with Development focus special importance for future Places with special central regional development location function Especially sensitive space Part of the region of outstanding importance for landscape ecology Target areas of urban development acc. to STEP 2005 Urban Development Plan Vienna Water bodies Development axis National border Spaces along high-level transport Ш infrastructure between several development focuses Polycentric location zone Functionally closely interlinked

space between several develop-

ment focuses



VIENNA: NETWORKING THE CITY

FARSIGHTED, ROBUST AND VIABLE FOR SEVERAL GENERATIONS



STEPPING-UP OF THE MOBILITY SYSTEM AND SAFEGUARDING OF GREEN AND SOCIAL INFRASTRUCTURE

Further strengthening of ecofriendly means of transport

Stepping-up of public transport services

Proactive push to offer more multimodal services by means of innovative technologies

Long-term protection and development of superordinate open spaces

New open spaces for future development zones

Participation and multiple use as modern guiding principles

Space for education and education infrastructure to enable upward mobility

Already more than a century ago, Vienna opted for the construction of the Mountain Spring Mains, upgraded its municipal supply systems and established an efficient public transport system to lay the basis for its rise to a metropolis with over 2 million inhabitants. With constant renewal and substantial enlargement and modernisation of its networks in the 20th century, Vienna has transformed its "urban backbone" into a high-quality and internationally competitive location asset.

Today and in coming years, this system as well as Vienna's ability to engage in renewal, innovation and clever investments will be put to a test. The growth of the city and the necessity of evolving Vienna into a resource-conserving smart city call for focused efforts of the public and private sector and also for farsighted investments. Vienna will grow in a "successful" manner if the infrastructure backbone of the city is significantly strengthened and the individual areas are closely networked. This concerns the optimisation of the mobility system as well as the enlargement of green and open space networks, the smart use of public open spaces, the further improvement of energy efficiency, comprehensive supply with educational and healthcare institutions and creative, participatory urban management.

Modernisation and the stepping-up of infrastructure facilities that exert a defining influence on the city for years and make it fit for further development are certainly no trivial matters. Vienna regards it as its responsibility to safeguard vital infrastructure investments in the long term, comprehensively and with high quality. The city will take all necessary steps to convince leading private and public interest groups as well as the population of the necessary investments in the future, to modernise the necessary legal frame conditions and to widen the leeway for development, use and co-operation.

The requirements vary across the city. While the Gründerzeit neighbourhoods mainly call for adaptation, modernisation and change management, those parts of Vienna which over the coming decades will be primarily characterised by urban expansion and population growth require the launching of more fundamental, structure-providing development and transformation processes.

In brief: over the next few years, Vienna will intensify its networking and strengthen its "backbone" to permit growth and at the same time safeguard and optimise high quality of life and the environment





4.1 DIVERSIFIED MOBILITY IN 2025

Urban mobility patterns and needs are constantly changing and becoming more and more varied. The demand for transport services is increasing also outside standard peak hours because working hours are flexibilised and traditional employment relationships are on the decline. The mobility of persons aged 60 and over is increasing, the rising participation of women in the labour force is changing their mobility behaviour; commuter flows are growing as regional interactions are intensifying. Young people's attitudes towards the car as a status symbol are changing; new technologies that allow for real-time information and reduce waiting times are impacting traffic and transport systems. Especially in urban regions, these developments render e.g. everyday cycling and the combined use of different means of transport more and more important, which calls for optimised interaction of different transport modes.

In Vienna, too, the linkage of all these factors and changes demands corresponding adjustments of the transport and traffic system. The expected population and traffic volume increases additionally come into play as key drivers of change. An example: if the *modal split* $\rightarrow |\exists|$ share of motorised individual traffic remained the same, the number of trips made by car would increase by 12 percent until 2025.

In recent years, Vienna presented a clear trend in favour of public transport: today already 39 percent of all trips are made by public transport, which places Vienna at the top internationally. Cycling, too, is continuously on the rise, albeit starting from a much lower level. At the moment, 6 percent of all trips in Vienna are made by bike. The share of walking remains stable at a remarkable 28 percent. Correspondingly, the traffic loads of important arteries in densely built-up zones have decreased.

These positive trends are juxtaposed with several challenges that – due to the predicted growth – are likely to intensify over the next few years and hence place the following aspects squarely at the focus:

Thematic concept "Mobility"

A detailed mobility concept is being developed on the basis of the attitudes and strategies formulated in STEP. The concept concretises the goals and measures listed in STEP, which permits a more comprehensive and detailed overview of the mobility issue. The thematic concept "Mobility" is to be adopted within the scope of the strategic framework of STEP 2025.

MOBILITY IN THE GROWING CITY

The growing city results in heavier traffic loads. While car traffic in the central districts is stagnating, public transport networks as well as cycling infrastructure facilities are sometimes already used to capacity and beyond. Permanent overload looms unless proactive measures are taken. If the currently positive trend in mobility behaviour continues, further investments in eco-friendly means of trans $port \rightarrow |\exists|$ (public transport, walking and cycling), are called for. In addition to the stepping-up of the infrastructure system, it is also important to preserve and improve existing qualities.

MODAL SPLIT IN

As a prospering economic hub, Vienna is an attractive place to study and work for hundreds of thousands of people from the entire eastern part of Austria and beyond; at the same time, more and more Viennese are working in the metropolitan region, beyond Vienna's city limits. At the moment, traffic across municipal boundaries between Vienna and its environs is still dominated by cars with a mode share of 79 percent. In this respect, the situation is especially problematic along Vienna's southern boundary, which is crossed by 220,000 vehicles in both directions, day after day.

MULTIMODALITY

To support everyday multimodality → |≡| corresponding infrastructure must be provided. In particular, high-level public transport nodes are currently not well prepared for intermodal traffic (→ |≡| Intermodality). Rendering the possibilities to switch between walking, (rental) bikes, e-mobility, car sharing, (e-) taxis and public transport more attractive provides a key stimulus for increasing the share of eco-friendly means of transport in the total number of trips taken in the city.

ATTAINMENT OF ENVIRONMENTAL AND CLIMATE PROTECTION GOALS

Despite measurable changes in mobility behaviour, significant pollutant loads still do occur. Often the reasons for this cannot be directly influenced or eliminated by the City of Vienna. Despite this, municipal mobility policies must also be conceived of as a key element of the city's climate protection strategy.

STREETSCAPE DESIGN

At the moment, streetscape design reflects changes in mobility behaviour and the manifold types of use of public space only insufficiently: approx. 65 percent of the road surface is still taken up by stationary and moving traffic. The prioritisation of eco-friendly means of transport is not yet adequately expressed in streetscape design.



VIENNA'S STRATEGIES FOR MOBILITY

PRIORITY FOR ECO-FRIENDLY MEANS OF TRANSPORT

- → Optimisation and upgrade of public transport | FLAGSHIP INITIATIVE |
- → Integration and networking of eco-friendly means of transport
- → Walking and cycling strong partners for eco-friendly urban transport

SPACE FOR PEOPLE

From street space to public space

NEW INSTRUMENTS OF MOBILITY MANAGEMENT

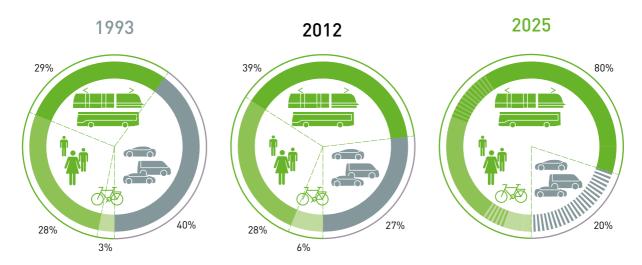
 Mobility management for residential quarters and company locations Vienna also embodies a future-oriented urban mobility policy that is not only ecologically, but also economically and socially acceptable and hence sustainable. It is economically sustainable because it is based on long-term investment that pays off for the city and location. It is socially sustainable because its declared goal is to ensure mobility for all citizens irrespective of their income, social position and life situation. It is ecologically sustainable because it helps to conserve natural resources and contributes to realising the Smart City Wien objective.

A key factor for the success of Vienna's traffic and transport policy lies in close consultation and co-operation on traffic and regional planning issues with Lower Austria and Burgenland as well as with Vienna's neighbouring municipalities. For this reason, Vienna will encourage this consultation process and advance the development of a public transport strategy for the entire region. (\rightarrow 3.2 Vienna is more – the metropolitan region – Iniative: City-environs mobility partnerships)

PRIORITY FOR ECO-FRIENDLY MEANS OF TRANSPORT In coming years as in the past, Vienna's traffic and transport policy will systematically promote *eco-friendly means of transport* → ■ (public transport, walking and cycling). Translated into modal split figures, the goal is "80-20". This means that, by 2025, Vienna's population should travel 80 percent of all trips with public transport, by bicycle or on foot, while the share of motorised individual traffic is to be reduced to 20 percent. The modal split as control parameter is backed up by a mobility strategy that views ecofriendly means of transport as an integrated system with optimised interfaces between individual means of transport and complementary, city-friendly mobility offerings (e.g. mobility card, bike and car sharing systems, etc.). Conversely, any further upgrading of the road traffic infrastructure is not given priority. If high-capacity roads are needed in the future, they will be planned with sustainability in mind – sufficient space for pedestrians, cyclists and public transport and appealing design to ensure high atmospheric quality. Enabling "car-free mobility" is a vital objective of traffic and transport policy. Over the past decade, car ownership has decreased. While in 2003 1,000 inhabitants still owned 410 passenger cars, this number has dropped to 390 today, indicating that a flexible combination of transport modes constitutes an attractive alternative even today, depending on a person's situation in life and his or her concrete mobility needs. Supporting this development in a dialogue with the population is viewed as a central task of Vienna's traffic and transport policy.

This is in any case contingent on the further development of the already highly efficient public transport infrastructure in order to meet in particular the needs of the growing metropolitan region. While service improvements of the S-Bahn (suburban commuter train) and Underground networks remain a key pillar, it is likewise important to ensure capillary tram and bus networks and to improve the quality of links both within the city and between the city and its environs.

Fig. 14: Modal split (public transport, walking, cycling, car) Source: Wiener Linien; own diagram



FLAGSHIP INITIATIVE

OPTIMISATION AND UPGRADE OF PUBLIC TRANSPORT



Public transport is the backbone of Vienna's mobility. The public transport system within the city and in the metropolitan region must be enlarged and improved to cope with short- and mediumterm increases in the passenger volume. The services of Wiener Linien and the S-Bahn network of ÖBB (Austrian Federal Railways) are conceived as an integrated system for this purpose. In the passengers' perception, the S-Bahn network will gradually (shorter intervals, faster service, new rolling stock, higher customer friendliness) come to reflect the traits of the Underground system.

- → Upgrading of the S-Bahn network. An S-Bahn package that combines shorter intervals, new rolling stock and improved routes will make a fundamental contribution to ease the pressure on Vienna's high-level public transport network. This may concern both inner-city connections and improvements for the urban periphery and the immediate environs. Details of this package will be concretised in the wake of STEP.
- \rightarrow Systematic acceleration of public transport in particular for tram and bus routes of prime importance for the system as a whole.
- → Upgrading of the design and environment of transport stops and big interchange hubs. The experience of waiting has a strong bearing on customer satisfaction with public transport. Well-situated, safe and secure transport stops can render waiting more pleasant at least as subjectively perceived, in particular for women, who make up the majority of public transport users.
- Scheduling of new, tangential tram and bus links in line with the requirements of urban development. This is especially necessary in the south and northeast of Vienna
- → At the same time, the City of Vienna is preparing for the necessary infrastructure modernisation measures to ensure long-term network operation quality.
- → In the medium to long term, urban growth calls for a capacity increase of the high-level, inner-city public transport network. Due to the long time horizons involved, planning must be intensified and continued.

INTEGRATION AND NETWORKING OF ECO-FRIENDLY MEANS OF TRANSPORT



User-friendly possibilities to combine public transport, cycling and walking facilitate independence of motorised individual traffic. One very important factor is the option of switching comfortably between different modes. Incentives are formulated to support the caseby-case multimodal choice of means of transport. In the interests of customers, the eco-friendly transport system is optimised as one homogeneous whole. This includes the systematic upgrading of public transport stops into multimodal nodes (including parkand-ride facilities, bike garages, City Bike terminals, e-mobility and car sharing services) as well as the targeted use of information and communication technologies or the development of integrated services that support multimodality (e.g. mobility card, multimodal information systems, smart ticketing). In keeping with the motto "from car ownership to car use", special attention is paid to qualitative and quantitative improvements of car sharing services to enable the maximum possible number of inhabitants to use a car without actually owning one.

- → Based on the project "Public Transport Stops of the Future", a package of measures for multimodal public transport nodes is being implemented to further facilitate switching between transport modes.
- → Introduction of a "Vienna Mobility Card" that combines public transport tickets with access to City Bikes, car sharing and other mobility services.
- → Upgrading of car and bike sharing services in Vienna by means of active co-operation of the City of Vienna and Wiener Linien with potential operators, in particular with respect to marketing and the setting-up of service points in public space. The City Bike system will be improved by means of additional locations, easier accessibility, new bikes and expansion to new urban quarters.

WALKING AND CYCLING – STRONG PARTNERS FOR ECO-FRIENDLY URBAN TRANSPORT



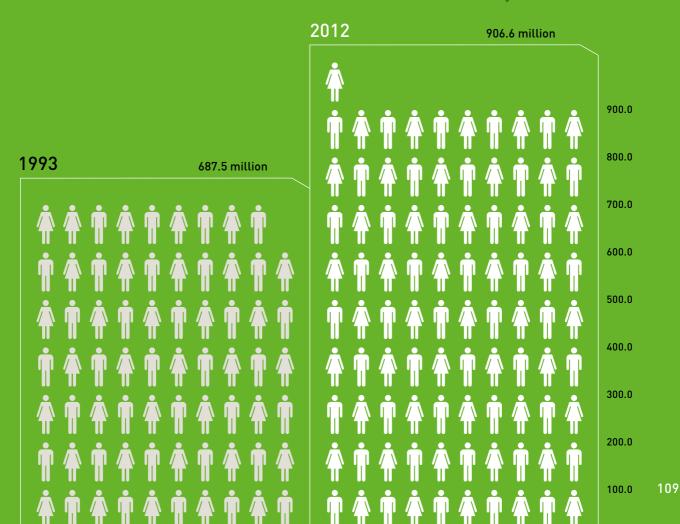
The city of short distances is a city that renders walking and cycling attractive and creates optimised conditions for a combination with public transport. Urban quarters are thus designed to ensure that all inhabitants and in particular children, older persons and persons with special needs will be able to move and navigate independently and safely through the neighbourhood. A good concrete example is provided by the findings of the project "Gender Mainstreaming Pilot District Mariahilf". Moreover, safe and tightly knit cycleway networks will widen non-motorised mobility options.

- → Development and implementation of a tightly knit network of Viennese walking routes in close co-operation with the municipal districts. This walking route network allows for safe and pleasant walking, e.g. due to attractive seating, plants and shade-givers or pedestrian-friendly traffic-light phasing, and is in particular networked with Underground stations and prime shopping streets. (→ 4.2 Vienna revives open space: green & urban Flagship Initative: Vienna's open space network)
- Upgrading of important streets of supra-local importance into pleasant boulevards for walking to render the qualities of urban spaces more palpable.
- → Planning, development and implementation of high-level, long-distance urban cycleways – also across city limits – with even better infrastructure.
- → Evolution of Vienna's cycleway network to improve capacities and meet different user demands (e.g. by means of bike boxes for cyclists at traffic lights/crossings, increased installation of bike garages, wider cycleways/cycle lanes, taking account of differentiated speeds).

Fig. 15: Car ownership – number of passenger cars per 1,000 inhabitants in selected cities Source: provincial statistics of MA 23 and VCÖ; own diagram



Fig. 16:
Development of Wiener Linien passenger (figures in million)
Source: Wiener Linien;
own diagram





The systematic prioritisation of eco-friendly means of transport also opens up new possibilities for a more equitable distribution and more attractive design of streetscapes. Vienna will avail itself of this possibility for the gradual refurbishment of public space in order to permit novel and multifaceted forms of use. In the future and in particular in densely inhabited (residential) quarters, priority will not only be given to traffic management or the availability of parking slots, but to atmospheric quality, so that public space can be recovered for other forms of use, such as communication, business, leisure, play and culture.

FROM STREET SPACE TO PUBLIC SPACE



The recovery of public space calls for a profound change of paradigms in the planning and organisation of traffic: parking space management already constituted an important step to reduce the number of cars parked on the streets and hence to make room for other, non-commercial forms of use. Atmospheric quality, aesthetic appeal and functionality of the recovered space are enhanced e.g. by high-quality design and art in public space, by creating encounter zones → | ≡ |, by redesigning now obsolete parking lanes as temporary and permanent street gardens and sitting areas or cycle lanes, by reducing traffic surfaces or by setting up and upgrading multimodal traffic infrastructure facilities (bike parking spaces, spaces for all types of sharing systems, etc.). The activities proposed are developed and conducted in co-operation with the municipal districts.

New Car Park Programme

The New Car Park Programme for Vienna promotes garage construction above all in locations where despite control measures of traffic policy, such as parking space management, the demand for parking slots is still massive. The subsidised construction of collective garages in residential quarters will focus above all on Gründerzeit quarters and densely built-up urban zones with a clear need for more parking slots. The construction of additional parking slots is to create a shift towards more permanent parking slots in garages and significantly more room to move in public space for people (cycling, walking, lingering) and public transport.

- → Further development and implementation of an overall strategy (including an evaluation of measures taken so far) for parking space management in Vienna.
- \rightarrow Recovery of street space by means of the targeted reduction of street-level parking slots accompanied by the construction of subsidised underground car parks (\rightarrow see below: New Car Park Programme).
- Promotion of the smooth coexistence of road users by means of instruments such as encounter zones.
- → Decommissioning of selected road sections streets no longer needed for motorised individual traffic are to be put at the service of walking, cycling and public transport or redesigned to improve their atmospheric quality.
- \rightarrow Implementation of local, temporary or permanent pilot measures to recover public space, mainly in areas with a dearth of public parks and playgrounds (\rightarrow 4.2 Vienna revives open spaces: green & urban Flagship initiative: Vienna's open space network).
- → Implementation of standard cross-sections for newly built roads in urban development zones, as this approach takes more account of the great importance of eco-friendly means of transport than was usual in the past, offers sufficient space for walking, cycling and public transport and meets exacting design requirements.
- → Concentration of traffic in main streets and large-scale traffic calming in residential zones, inter alia by means of 30 km/h (20 mph) zones, encounter zones, etc.

NEW
INSTRUMENTS
OF MOBILITY
MANAGEMENT

Sustainable mobility does not merely result from infrastructure but requires effective organisational models, networks, dialogue processes and co-operative ventures. In particular, success is contingent on the development and implementation of mobility concepts customised for different spatial and functional requirement profiles (residential quarters, business headquarters, industrial locations, etc.). In coming years, Vienna will increasingly opt for these co-operative instruments in order to join forces with partners for the formulation of traffic solutions that will prove of benefit for the urban society and the metropolitan region as a whole.

MOBILITY MANAGEMENT FOR RESIDENTIAL QUARTERS AND COMPANY LOCATIONS



Unattractive, long distances to reach the nearest public transport stop, a convenient garage slot close by and a lack of alternative mobility services result in undesirable competitive advantages for cars in residential quarters, at company locations and in shopping malls. In the future, Vienna will therefore demand mobility concepts that highlight how car trips triggered by new projects can be made as short and eco-friendly as possible. Moreover, the negative traffic effects of new, large-scale office sites and shopping malls will be significantly reduced by imposing the mandatory provision of efficient public transport links. (\rightarrow 3.1 Vienna generates prosperity – a business, science and research hub – Initiative: Priority zones for office sites)

- → Active softening of the mandatory legal provision to create a certain number of parking slots for any new construction project under the Vienna Garage Act (→ |≡| Parking slot regulation) in order to implement innovative mobility concepts and mobility management measures together with project developers (based on the pilot project for the Vienna Main Station quarter). Such mobility management concepts may e.g. provide for attractive car sharing and e-bike offerings, for continuous information and sensitisation of residents/employees regarding eco-friendly mobility or the upgrading of walking routes to and from public transport stops.
- \rightarrow To safeguard that mobility concepts for large-scale urban development projects with numerous housing units and for large corporate sites and shopping malls will actually be implemented, suitable approaches and measures must be developed and carried through. (\rightarrow 3.1 Vienna generates prosperity a business, science and research hub Initative: High-quality office and retail shopping locations)





4.2 OPEN SPACES: GREEN & URBAN

Squares and streets, urban parks and large-scale leisure areas are places of encounter and interaction, but also for winding down and relaxing. The design and functioning of open spaces and the way in which they meet the manifold needs of city dwellers significantly impact the quality and atmosphere of urban living and coexistence. They offer structure and identity, they enable vitality and exchange, and they shape the image of an urban quarter and of the city as a whole.

Vienna is a green city, whose character is strongly influenced by woods, fields and meadows. Cultivated land – in particular vineyards – is part and parcel of these typical landscapes and serves an important leisure function. Numerous large-scale recreation zones extend around the city limits in the form of the Vienna Green Belt or, like Prater and Danube Island, form a "green lung" at the heart of the city. An extraordinary asset of Vienna lies in the fact that this metropolis hosts both a national park (Lobau - Danube Floodplains National Park) and a biosphere park (Vienna Woods). In total, Vienna's municipal territory boasts more than 50 percent of green spaces (→ |≡| *Green space* monitoring). This high share of green spaces is to be preserved for the future.

Today, green spaces are used much more intensively and in more varied ways than in the past. People take walks, exercise and relax, play, enjoy gardening and celebrate. Life on Vienna's streets, too, has become more vibrant and diverse. This enhanced importance is also exemplified by the great variety of commercial forms of use, events and attractions. Lively ground-floor zones endow public space with renewed character. In coming years, the demographic development of different parts of the city will entail different demands for

green spaces and urban public spaces: in Gründerzeit Vienna, the focus will be on adapting public space to a great variety of different forms of use as well on the creation of small-scale areas that offer possibilities for everyday encounters and short "breathers" ("micro open spaces", e.g. formed by seating islands in the streetscape or sometimes by widened sidewalks). Both in centrally located newer urban quarters, such as the Nordbahnhof grounds, Vienna Main Station and in the future also the Nordwestbahnhof grounds, and in urban expansion zones like aspern Vienna's Urban Lakeside, one task - alongside the provision of adequate open spaces – is to generate the vitality and urban quality that is a trait of fully-fledged urban neighbourhoods. Robust open spaces and attractive parks not only create a good range of green spaces for the local residential and working population, but also improve the situation for the denizens of adjoining, densely populated city quarters.

To be able to adequately assess future developments and requirements, it is essential to not only look at demographic growth in general, but above all at that of population groups who, due to their situation in life, tend to use open spaces more than others. In 2025, there will be an increase in Viennese residents aged over 75 years by approx. 50,000 and in children and teens under 15 years by around 30,000 as compared to today. Viewed from the healthcare angle, too, both groups are dependent on public space design that takes account of their everyday needs as well as on the provision with high-quality green zones near their homes.

Against this backdrop, the planning and design of squares and streets, parks and leisure zones calls for a high degree of sensitivity for the multifaceted needs as well as for differentiated understanding of the conditions and dynamics of the many diverse urban spaces.

QUALITY

Planning and managing open spaces is a complex task. Green and leisure spaces are to a large degree defined by their quality, which is determined by large, contiguous surfaces, the identity of landscape elements and their suitability for different forms of use. The sensitive treatment of natural resources is essential not only regarding aspects where nature conservation is paramount. Both ecological functioning and practical usability require high-quality networking. Urban public spaces should be qualitatively excellent, barrier-free, robust and suitable for everyday and flexible use; they should offer options for different user groups without excluding others. They should take account of gender-specific needs and the different play and role behaviours of girls and boys. Where appropriate, they should offer space for sidewalk café gardens, kiosks and food stalls as well as for zones without commercial activities, plus facilities for sports and leisure in public space. Participation is becoming increasingly important to meet the great variety of demands.

QUANTITY

Vienna is growing and needs new open spaces to be able to offer all citizens excellent options even with a total population of 2 million. For this reason, what is needed is a clear idea of how to preserve and evolve the green grid of the city as well as adequate instruments of land mobilisation and provision and more public spaces that are suitable for a great variety of uses. These joint challenges for the city as a whole must be addressed by the growing city to safeguard and further develop its protection zones and green spaces on the basis of efficient management.

ADAPTATION TO CLIMATE CHANGE

In the future, the function of open spaces for the urban climate will become more and more important alongside their recreational value. They must be designed in a manner that allows them to withstand the effects of climate change and to support the city in adapting to climate change as well. For the latter, the conservation of fresh air corridors → |≣| and cold air source areas plays a central role. Small-scale measures, e.g. minimal soil sealing, planting of trees, shading, rainwater management, a high degree of urban greening, greened roofscapes and façades, are equally significant.



VIENNA'S STRATEGIES FOR OPEN SPACE

STRENGTHENING AND FURTHER DEVELOPING NETWORKS
OF GREEN AND OPEN SPACES

- → Vienna's open space network
- → Recreation zones "Vienna Woods NorthEast" and "Lobau Environs"
- Urban greenery instead of air conditioning

HIGH OPEN SPACE QUALITY IN ALL PARTS OF THE CITY

- → Quantitative and qualitative open space parameters
- → Fair shares in, and intelligent use of, the city
- ightarrow Reviving urban spaces together

Population growth leads to rising demands to be met by urban open spaces. Landscape and open space planning therefore must provide for a sufficient degree of space for leisure and exercise and for the development of a functioning network of green and open spaces for city dwellers.

Open spaces must not be a rare commodity – rather, they must be available and usable in adequate quality and quantity and in all parts of the city. In this spirit, the City of Vienna is committed to conserving the existing protection zones, to safeguarding the superordinate green corridors, to completing the Green Belt and, last but not least, to networking inner-city open spaces with superordinate green spaces.

In keeping with these strategic approaches, the development of new urban quarters must provide a sufficient amount of new, high-quality leisure areas and urban spaces. In already developed zones, identified deficits must be compensated. With diversified design, open spaces allow for different forms of use; suitable illumination and visibility should boost the subjective sense of safety and security and allow to balance interaction, fun and play with recreation, rest and relaxation – but this requires adequately dimensioned spaces. Moreover, open spaces must also be understood in their ecological function and as a key resource for strategies to facilitate the adjustment to climate change.

For the City of Vienna, participation is a central and valuable asset in the process of designing and evolving the city's open spaces. Participation provides insight into different requirements and ways of using open spaces and allows taking account of them. Participatory planning and use enhance the identification of local residents and can help to prevent conflicts between different forms of use. The instruments and participatory mechanisms defined in the manual "Praxisbuch Partizipation" if are therefore used wherever appropriate. Moreover, the City of Vienna will assign even more leeway than in the past to civil society engagement for the design and preservation of public spaces.

The Mission Statement for Vienna's Public Space of 2009 already formulated the first quality standards and defined processes of how to attain them.

STRENGTHENING AND FURTHER DEVELOPING NET-WORKS OF GREEN AND OPEN SPACES

Thematic concept "Green and Open Spaces"

More than 50 percent of the total surface of Vienna is taken up by green and leisure areas $[\rightarrow]$ \equiv [Green space monitoring], and this situation is to remain unchanged. To further evolve green and open spaces, the strategic framework of STEP 2025 will lead to the elaboration of a detailed green and open space concept that visualises and structures the existing green and open spaces and pinpoints further development options.

In a planning concept aiming for sustainability, the protection and enlargement of landscapes provides the basis for the long-term preservation of quality of life and recreation. For this reason, the City of Vienna is committed to directing its urban development activities towards existing building land reserves and potentials and refrains from realising them at the detriment of green spaces. The principles of the Mission Statement for Green Spaces of the Urban Development Plan of 2005 (STEP05) thus remain unchanged. The types of agricultural use so emblematic and characteristic of Vienna's landscape will be preserved, in particular the identity-creating vineyards and meadows with scattered fruit trees. Moreover, the City of Vienna will continue to ensure the sustainable preservation of existing protection zones $\rightarrow |\equiv|$ and superordinate green corridors $\rightarrow |\equiv|$.

In addition to safeguarding green spaces, another task lies in strengthening the "green grid" of the city and in positively impacting the urban climate through additional greening. The further creation of green and leisure spaces and the qualities of open space networks and public spaces in the city not only generate new, attractive leisure and recreation options; they also ensure that the Viennese will find appealing and easily usable public spaces "around the corner" from their homes and that the urban climate will be positively influenced by additional greenery. Moreover, it is safeguarded that existing leisure zones, such as Prater, Lobau, Bisamberg or Danube Island, will not lose part of their recreational value and ecological quality as a result of too intense exploitation.

FLAGSHIP INITIATIVE

VIENNA'S OPEN SPACE NETWORK



"Vienna's open space network" → | ≡| stands for the intentions of the City of Vienna to offer all Viennese more open space qualities. Targeted interventions (afforestation, planting of trees in the streetscape and other greening measures, temporary and permanent (micro) gardens or small parks, possibilities to sit down or play, water elements, *multiple use* $\rightarrow |\exists|$ of municipal infrastructure facilities such as swimming pools and schools, etc.) not only create leisure options close to home, but also generate an attractive network of routes that links green and leisure spaces and provides access and the emotional experience of enjoying water bodies like Danube, Danube Canal, Wien River and Liesing Brook. In addition to greater recreational value, the open space network will also make an important contribution to greater environmental quality by improving the micro climate of neighbourhoods, by strengthening the fresh air corridors so important for urban air quality and by protecting the habitats of animals and plants.

- ⇒ Fine-tuning of the spatial structure of Vienna's open space network and of priority measures by gradually establishing the network in its entirety. The objective lies in enabling all residents of Vienna to reach the nearest part of the open space network from their homes within a radius of not more than about 250 metres. Sections of the open space network present at least one of the following four main functions of urban open and green spaces: everyday function, structuring of the urban fabric, function for the urban ecology, nature conservation function (→|≡| Vienna's open space network).
- → Fine-tuning with neighbouring municipalities and the Federal Province of Lower Austria to connect Vienna's open space network to leisure areas in the city region/metropolitan region.

RECREATION ZONES "VIENNA WOODS NORTHEAST" AND "LOBAU ENVIRONS"



Vienna is chiefly growing north of the Danube. In addition to new dwellings, this part of the city thus also needs new recreation zones extending over several hundred hectares. The initiative "Vienna Woods NorthEast" creates a leisure and recreation zone at the supra-district level. Gradual transformation will engender a quasi natural leisure area as part of Vienna's Green Belt that will offer relaxation options for people and a habitat for wild animals and plants. At the same time, land for city-compatible agriculture $\rightarrow |\exists|$ will be protected. Moreover, the environs of the Lobau wetlands will be transformed into a leisure landscape that meets the growing demand for leisure and recreation options and in this way alleviates the pressure generated by the excessive use of ecologically sensitive areas such as the Danube Wetlands National Park. (\rightarrow Fig.17: Mission Statement for Green Spaces "Leisure zone upgrading")

- Development of a "Vienna Woods NorthEast" master plan to serve as a basis for creating a recreation zone in the north-eastern part of Vienna.
- Development of a "Lobau Environs" strategic plan to serve as a basis for its gradual implementation.
- Gradual securing of land for this purpose and definition of priority measures.

URBAN GREENERY INSTEAD OF AIR CONDITIONING



Due to their massive infrastructure density and high degree of soil sealing $\rightarrow |\exists|$ which in its turn engenders warming effects, cities are particularly affected by climate change. This must be taken account of when designing urban and open spaces. For this reason, the City of Vienna views the aspects of climate protection and adaptation to climate change as integral elements of the planning, implementation and further development of urban quarters and open spaces.

- → Improvement of the comfort afforded by public spaces by providing protection against excessive heat in the summer months (e.g. by ensuring sufficient greenery, shading and air passage and selecting adequate materials) and greening built structures (façades, roof greening, roof gardens).
- → Improvement of the urban climate and enhancement of atmospheric quality as key inputs for planning and designing public space. Wherever possible, "swathes of green" extending to the heart of the city are to be completed and rendered continuous. The outcomes of the project "Urban Heat Islands" should be drawn on to identify these phenomena (→|≡| heat island register).
- → Use of rainwater management → |=| on the one hand to make efficient and targeted use of precipitated rainwater and on the other hand to ensure that rainwater can both evaporate or percolate on-site, if possible.



Open space qualities vary from neighbourhood to neighbourhood. The inner districts with their Gründerzeit buildings offer multifaceted and interesting squares and streets, which are rare in peripheral locations and newly built quarters. Conversely, the latter boast large green and leisure zones of great attractiveness (e.g. Vienna Woods, Lobau).

The availability of high-quality green and open spaces determines the quality of life. Strengthening the natural landscape character and providing sufficiently large leisure zones within walking distance are therefore key objectives of open space planning so as to offer all persons in all parts of the city places for rest, play and sport, social encounters and possibilities to experience nature.

Good-neighbourly relations in the city are highly dependent on places for encounter and communication close to home. On the basis of this realisation, intensified efforts were undertaken in recent years to strengthen public space when developing new city quarters. Examples include the "Palais Kabelwerk" project in the 12th municipal district Meidling and aspern Vienna's Urban Lakeside. Right from the beginning, the development of neighbourhood structures for aspern Vienna's Urban Lakeside was determined by the definition of a network of streets, footpaths and squares (see Werkstattbericht No. 103 "The Score for Public Space", the planning manual for aspern Vienna's Urban Lakeside). The "Palais Kabelwerk" project is a good example of a place of encounter, communication and participation. Based on these initiatives and experiences, the City of Vienna will strive to improve the quality and availability of open spaces in all parts of the city, from densely built-up Gründerzeit quarters to newly developed urban zones (\rightarrow) | freespaceviennapublicspace).

Vienna's high quality of life also derives from the paucity of conflicts and a pronounced subjective feeling of safety and security in public space. In addition to planning aspects, socio-cultural projects, which as a rule are bottom-up processes and implemented by local actors (e.g. Brunnenpassage in the 16th municipal district Ottakring), make an important contribution towards this goal. Conversely, social work in public space often plays a central role in this matter as well, as it shapes social and communicative processes, accompanies, counsels and mediates in case of conflicts. Targeted community and education work as well as a broad-based dialogue strengthen and activate social cohesion and personal responsibility. Social and youth work provide on-site support and nurture the ability of clients to assume personal responsibility. These processes are to be further strengthened and networked (→ ■ Mission Statement "Social Work in (Semi-)Public Space").

Thematic concept "Public Space"

By evolving and detailing the Mission Statement for Vienna's Public Space, the strategic framework of STEP 2025 serves for the development of a detailed public space concept. This thematic concept adds spatial aspects to the strategy sketched in STEP 2025 and complements it by means of implementation-oriented goals and

QUANTITATIVE AND QUALITATIVE OPEN SPACE PARAMETERS



STEP 05 defined quantitative parameters for Vienna's supply with green and open spaces. These parameters ensure quality of life and are thus applied in new urtan development zones and in case of retroactive densification. The City of Vienna will make use of these important quantitative parameters as a guideline and basis for the development of a manual that takes account of varying preconditions in urban quarters. In this context, qualitative aspects are added as well, since they are of paramount significance for the quality of use afforded by green and open spaces.

- → Adaptation of existing parameters and addition of quality criteria (inter alia, qualities such as the accessibility of open spaces by public transport and on foot are to be defined; various types of zones for this purpose are to be discussed as well].
- → Development of qualitative demand and requirement profiles for public spaces in urban expansion zones and integration into development processes.

FAIR SHARES IN, AND INTELLIGENT USE OF, THE CITY



The open space potentials of cities are limited; in a growing city and an era of tight public budgets, existing potentials must be made intelligent use of to enable all citizens with their different needs and requirements to enjoy access to high-quality open spaces. The motto "Fair shares in, and intelligent use of, the city" will thus be employed by the City of Vienna to implement a set of measures that contribute to more quality, less resource consumption and efficient use of public funds today and tomorrow. The plans will be backed up by the findings of pilot projects for gender-sensitive park and open space design. Local residents will be involved even more than in the past in redesign and quality improvement measures. Participation processes are in particular to reflect an adequate female quota.

- → Implementation of nature-inspired green space design concepts for cost-efficient yet high-quality solutions (e.g. also green spaces designed as "urban wilderness") - these still unusual forms of green space design require a novel understanding of their purpose and character.
- \rightarrow Concentration of compensation and balancing measures in strategically important points of the green space network (e.g. setting-up of a "landscape account" platform ($\rightarrow |\equiv |$ Landscape account).
- → In the context of sewer and road construction or maintenance works, etc., it is assessed whether improvements of public space or street design can be implemented simultaneously (as was done in 2013 in Ottakringer Strasse).
- → Installations and additions to the streetscape as well as urban furniture must be arranged in a way that ensures that they will enhance public space quality without impeding the fluidity of traffic and pedestrian movement.
- \rightarrow Implementation of pilot projects for the (temporary) conversion, reuse and redesign of streetscapes (\rightarrow 4.1 Vienna is moving diversified mobility in 2025 Initiative: From street space to public space)
- → Development of modalities and models that enable the intensified multiple use of open spaces in public institutions, such as schools, kindergartens, swimming pools and sports grounds.

REVIVING URBAN SPACES TOGETHER



In the future as in the past, Vienna will assume responsibility for the quality of public space as well as of green and leisure zones. Co-operation ventures with private actors thus presuppose clearcut and legally grounded agreements on the use and maintenance of such facilities, which must ensure long-term public usability and accessibility. Citizens are increasingly invited to join in discussions as well as in developing, working on, and taking responsibility for public space use and open space design.

- → Implementation and support of projects for the (non-commercial) use and maintenance of public spaces by citizens (e.g. sidewalks, former parking lots, tree grids or larger surfaces for urban gardening).
- → Development of strategies for an improved equilibrium between commercial and non-commercial forms of use (including simplified procedures for permits for non-commercial forms of use) in public space and obligatory management concepts.
- → Development of guidelines describing desirable qualities of public, green and leisure spaces (e.g. with a view to spaces for recreation and social interaction, good-neighbourly contacts) – in case of negotiations or agreements with project developers or contractors (co-operative procedures, urban development agreements, official permits), these guidelines can serve as a starting-point.

MISSION STATEMENT FOR GREEN SPACES

Fig. 17: Source: MA 21, MA 22 (map "Wien Umweltgut"), MA 41, ZAMG, Urban Atlas; Content and visualisation: MA 18

PLANNED MEASURES

Leisure zone upgrading New parks (2-10 hectares) Planned open space networking, partly already implemented Open space networking (characteristic of landscape), mainly improvement of current situation Open space networking (urban), mainly improvement of current situation

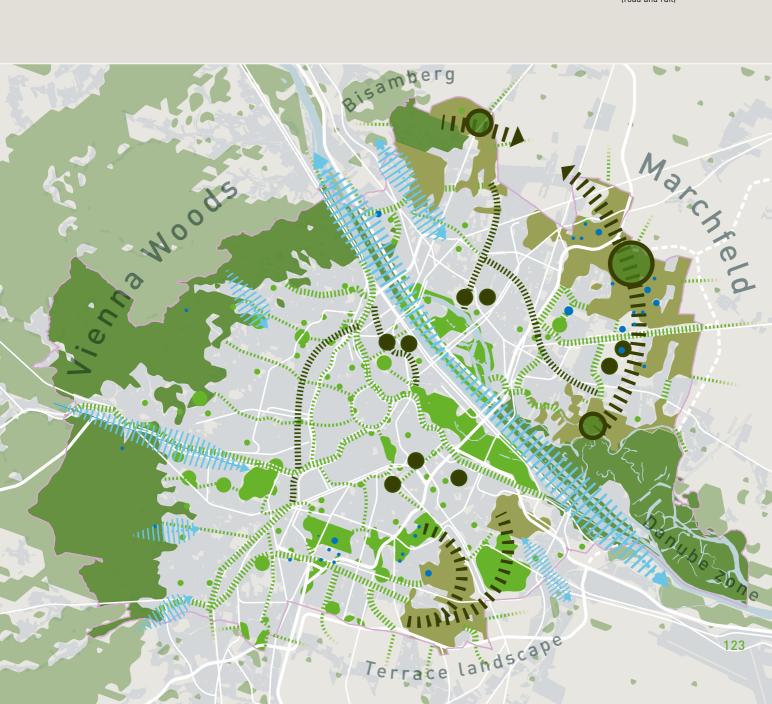
Networking with the environs

CURRENT STATUS



SITUATION









4.3 SOCIAL INFRASTRUCTURE

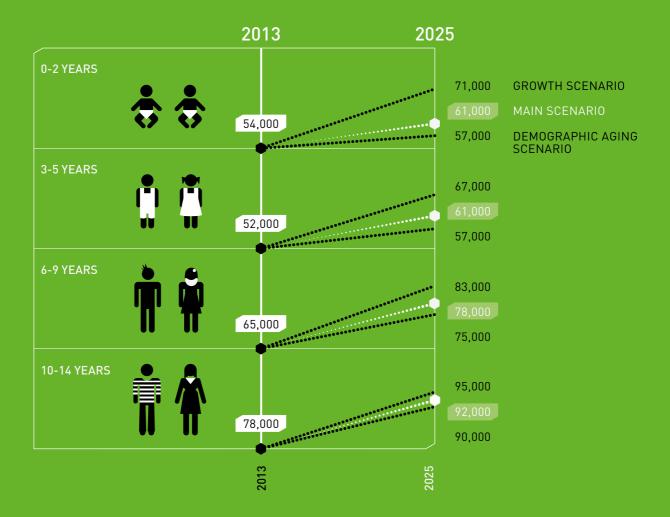
Social infrastructure facilities like schools, kindergartens, youth centres, sports grounds, hospitals, geriatric care centres or libraries that are publicly funded and serve the community are a cornerstone of the European city model and elements that fundamentally define the vision the Austrian capital has created for itself.

These infrastructure facilities must be constantly evolved in all parts of the city to keep up with the changes in society and to offer quantitatively sufficient, high-quality services for a growing population - a task that obviously acquires a political dimension on behalf of society, social affairs and education - but also embody a spatial and urban development role. The Vienna Hospital Concept 2030, the Vienna Geriatric Care Concept, the Vienna Campus+ Model of school construction and the ongoing school enlargement push represent already implemented strategies that substantially improve supply quality and sustainably change the city in a spatial sense as well. In the field of geriatric care, smaller-scale structures that are structurally and functionally better integrated into the urban fabric are now predominating, while Vienna's hospital reform is, conversely, creating bigger units to cluster specialist competencies. Well-developed and now vacated areas can thus be evolved into high-quality urban quarters.

By the same token, sports grounds and affiliated infrastructure must be provided in particular from the angle of health policy aspects. The high quality and number of sports grounds available in Vienna must thus be preserved, also in view of the expected population growth. The promotion of sports and exercise in everyday life is of paramount importance, above all for children and young people. In the field of education, the expected demographic developments call for special efforts. More children also mean a greater demand for kindergartens and classrooms. Investments in education infrastructure and as well as work with children and young people are always investments in equal opportunities for employment and career options and thus a fundamental precondition for avoiding social disadvantages in the city and the consequent menace of sociospatial polarisation.

The present quantitative requirements allow for targeted qualitative improvements of the education infrastructure as well as of the work with children and young people. It is possible to construct schools whose architectural and spatial qualities meet all demands to be fulfilled by modern places of study and all-day schools. An extensive programme for school refurbishment and the implementation of the *Vienna Campus*

Fig. 18: Predicted growth of children and young people, by scenario Source: Statistics Austria; own diagram



 $Model \rightarrow |\exists|$ as an ambitious programme for the construction of integrated schools-cum-kindergartens already charts the course for the necessary further development of Vienna's education infrastructure. The dynamic population growth now calls for an intensification of these efforts. Above all urban expansion zones are directly dependent on new facilities. After all, the urban expansion push is largely made possible by subsidised housing construction, which in its turn is particularly attractive for families with children. Falling back on existing education infrastructure in older parts of the city is possible only to a limited degree. The spatial restrictions that come into play here call for innovative additions of existing facilities - especially in inner districts as well as for the use of such potentials as vacant ground-floor zones.

Alongside infrastructure, the strengthening of $informal \rightarrow |\exists| \text{ and } non-formal learning} \rightarrow |\exists| \text{ in the}$ context of working with children and young people in youth centres, kindergartens, daycare facilities and other social institutions to further social inclusion in urban development is of paramount significance. In this connection, social inclusion means promoting participation of the urban population in all social processes and in particular in education- and labour market-policy offerings, which are vital for upward mobility. In this, attention should be firmly directed at identifying mechanisms that might exclude some social groups and therefore need to be eliminated to advance social justice and equality. The dynamically evolving urban society as a whole is to come into focus with a strong emphasis on inclusiveness and diversity irrespective of origin, sex, sexual orientation, gender identity, religious beliefs, worldviews, health, ability or disability, age or economic status. An anti-discriminatory and potential-oriented attitude towards urban development is hence of the utmost importance and ensures that upward mobility and personal realisation become an option for all inhabitants of Vienna. This equally requires the further provision of non-commercialised, high-quality public spaces as places of dialogue and social learning (→ | i | Vienna Charter) as well as of a tightly knit network of low-threshold education offerings and the development of housing and living spaces that foster and intensify exchange and communication between different social groups. Against this backdrop, the focus is on the following aspects:

SAFEGUARDING LAND FOR EDUCATIONAL FACILITIES

By 2025, all parts of the city must be provided with new classrooms and kindergarten groups to meet the demand. Moreover, stepping up the availability of all-day care generates new challenges for schools. Part of the demand will have to be safeguarded by enlarging existing facilities; at the same time, however, urban expansion areas will have to reserve and develop additional spaces of sufficient size and good quality.

INTERLINKING HOUSING CONSTRUCTION AND INFRASTRUCTURE

The small-scale demand for education infrastructure is difficult to predict on the basis of population dynamics alone. Ongoing monitoring can contribute to planning infrastructure investments both for new urban developments and projects involving the existing stock in keeping with actual demand.

EDUCATIONAL FACILITIES AS A CONTRIBUTION TO A GOOD SOCIAL MIX IN THE CITY

A good social mix is a priority objective of urban development and housing policy and can inter alia be attained by means of the targeted positioning of educational facilities in specific locations. Innovative strategies are called for in the future as in the past to ensure that social housing and in particular municipal housing will continue to provide conditions for successful upward mobility so as to massively counteract segregation trends affecting socially disadvantaged population strata. The upgrading of Gründerzeit quarters that in the past were regarded as cheap housing options further enhances the importance of this aspect. Concepts to maintain a good social mix for all housing segments are accordingly gaining in importance, as do interventions supporting upward mobility in certain residential areas. Educational facilities can and should make an elementary contribution to these tasks.



VIENNA'S STRATEGIES FOR SOCIAL INFRASTRUCTURE

The City of Vienna sees one of its main tasks in providing the population of the Austrian capital with access to social infrastructure and in particular to education, as education improves career and income possibilities and upward mobility, but also strengthens the ability to engage in democratic processes, discussion and criticism. Vienna's urban planning supports this goal by not only reserving sufficient land for educational facilities, but also creating "good learning spaces" in schools, kindergartens and libraries – spaces that are easily accessible, can be used in multiple ways, are open to all and attractively designed for their users.

AREA MANAGEMENT & MONITORING FOR EDUCATION INFRASTRUCTURE

→ Space for education | FLAGSHIP INITIATIVE |

INCLUSIVE URBAN DEVELOPMENT

 Education infrastructure for upward mobility processes AREA
MANAGEMENT
& MONITORING
FOR EDUCATION
INFRASTRUCTURE

In coming years, reserving high-quality areas for educational facilities will be a central priority for the City of Vienna. For this reason, Vienna will on the one hand define frame conditions for infrastructure development by means of a time-tried instrument – the *Infrastructure Commission* $\rightarrow \square$ – in newly created zones with subsidised housing. Moreover, criteria for privately financed housing construction are developed; clearcut priorities for land use in already built-up zones are set; uniform quality standards are laid down for the entire municipal territory (with regard to e.g. vacant plots, emission loads, public transport connections); and actual demand is constantly analysed and evaluated.

FLAGSHIP INITIATIVE

SPACE FOR EDUCATION



To further improve the coherence of housing and infrastructure investments and in particular to reserve high-quality plots in time, Vienna will conduct accurate analyses of space demand for education infrastructure for the entire city as well as for individual urban quarters and will in addition extend its education monitoring activities. On this basis, spatial priorities will be defined and strategies for land mobilisation and reserves will be drafted while expansion potentials of existing locations will be explored.

- → Application of the education monitoring system (Administrative Group for Urban Planning, Traffic & Transport, Climate Protection, Energy and Public Participation and Chief Administrative Office Executive Group for Construction and Technology, Infrastructure Section), which inter alia prepares information regarding the following aspects:
- I annual comparison of predicted small-scale changes in population figures at the individual urban quarter level for children aged 0-14 years with actual developments;
- I comparison of foreseeable demand curves with agreed development plans.
- identification of spatial potentials of both already built and newly developed zones and possibilities of activating currently unused spaces.
- evaluation of possibilities for the intensified linkage of social infrastructure and other forms of use.

INCLUSIVE URBAN <u>DEVELOPME</u>NT

Vienna is a city where social status is not automatically tied to a "good" address. This is an asset that must be preserved. For this reason, the City of Vienna is conducting targeted investments in school and educational facilities (in particular stepping up the number of all-day schools) in neighbourhoods characterised by a trend towards socio-spatial polarisation and with a high share of persons affected by poverty or at risk of poverty. This is to facilitate upward mobility and strengthen the socioeconomic structure of these neighbourhoods. Now this strategy is being intensified by increasingly including available educational facilities (e.g. libraries, learning cafés, adult education establishments) in the overall strategy.

EDUCATION INFRASTRUCTURE FOR UPWARD MOBILITY PROCESSES



In coming years, Vienna will identify urban quarters with particularly massive demand for facilities that foster upward mobility and will apply a networked approach to the institutions and offerings available in these parts of the city. This could e.g. be attained by abandoning traditional organisational structures to achieve greater effectiveness through a more strongly fine-tuned and integrated approach by the respective facilities.

- → Identification of urban quarters with particularly massive demand for additional educational facilities close to residents' homes.
- → Evaluation of urbanistic preconditions and identification of possibilities for architectural interventions in these quarters as well as of possible synergies with new developments in the direct vicinity.

GLOSSARY



Agglomeration

The word "agglomeration" defines a conurbation that comprises a core city and its densely populated environs - including zones outside the administrative city limits – and is viewed by its residents as one connected urban space. The boundaries between "agglomeration" and "city region" are blurred; as a rule, "city region" tends to describe the larger catchment area of the core city including more rural areas. The term "agglomeration economies " (vis-à-vis peripheral zones) refers to high density and variety of enterprises, educational and research facilities as well as skilled workers, since these factors foster innovative clout and the development of new products and services based on the division of labour and thus score advantages for the individual agglomeration in the global competition between locations

Agricultural-structural Development Plan - AgSTEP

AgSTEP is a plan formulated by the Vienna City Administration and the Vienna Chamber of Agriculture for the further development of agriculture within the city boundaries. AgSTEP delimits areas that are to serve agricultural purposes in the long term, harmonises them with the programme for the protection of Vienna's Green Belt and spells out proposals for measures to contribute to the long-term safeguarding and preservation of cultivation in these areas.

Arch4579

Arch4579 is an initiative of the centrope cities Vienna and Brno with the objective of systematising the evaluation of buildings erected between 1945 and 1979 on the basis of prototypical edifices of different categories and period-specific particularities, documenting these structures and developing a manual for dealing with built objects from this period.

Building culture

For the city of Vienna, the concept of "building culture" refers to architectural

quality in the very broadest sense: from technical functionality to usability, from the culture of discussion, planning, contract awarding and competition to the physical outlook of the city. Hence the concept does not only embrace built structures, but also open spaces, infrastructure facilities and temporary buildings. The objective lies in contributing to high quality of life for all by safeguarding a holistic building culture.

Central Business District

The term "Central Business District" (CBD) defines major centres dominated by such types of use as offices, shops, hotels, public buildings, traffic installations, etc. In the case of historic city centres, their former residential use has been largely abandoned.

Centre typologies

The model for Vienna's centre structure looks at different typologies of urban centres. "City zones" are those urban areas that feature a concentration of top-level institutions and enterprises of the city region. "Neighbourhood centres" or "sub-centres" mainly supply the surrounding urban quarters. The centre concept focuses on strengthening the urban quality of existing and planned neighbourhood centres and sub-centres.

centrope - Central European Region

centrope is a co-operation initiative of the Federal Provinces of Vienna, Lower Austria and Burgenland with adjoining regions in the Czech Republic, Slovakia and Hungary. Since 2003, the partners have been agreeing on political and technical strategies for the intensified integration of the centrope region and initiating strategic co-operation projects.

City-compatible agriculture

City-compatible agriculture comprises condensed forms of horticulture, the sustainable cultivation of crops, wine and fruit as well as new forms of agriculture, e.g. fields for self-harvesting and community gardens, which focus increasingly on the experience of nature and a closer understanding of food production. As a carrier of the cultivated landscape, this form of agriculture plays a key role in shaping the cityscape. Direct produce marketing helps to cut down on resource consumption, strengthens the regional economy and contributes positively to the city's climate protection goals.

Climate Protection Programme (KliP Vienna)

The current Climate Protection Programme (KliP II) of the City of Vienna, which was adopted by the City Council in 2009, defines climate protection targets to be attained by 2020 and stipulates a corresponding package of measures. The update of KliP I (1990) comprises a total of 385 individual measures in various fields of action: energy supply, energy use, mobility and urban structure, procurement, waste management, agriculture and forestry, nature conservation and public relations.

Decentralised heat generation networks

It is the objective of decentralised heat generation networks to reduce primary resource consumption, to increase energy efficiency in heat provision and to cut down on the cost of heat provision and hence of consumer prices. Decentralised heat generation networks must be able to interlink buildings and to use, manage and store the decentralised available renewable potential.

Degree of soil sealing

The degree of soil sealing is a nature and soil preservation (land consumption) indicator that reflects the extent of the soil surface mainly sealed by buildings and traffic installations; as a result, these surfaces are not available as either plant habitats or for rainwater infiltration.

Development of requirement profiles for public space

It is planned to develop requirement profiles corresponding to the spatial and social frame conditions of planning areas for a differentiated and adequately dimensioned range of public squares and streets with atmospheric quality for urban expansion zones. Functional and social space analyses, too, will be employed in this context. A functional and social space analysis serves to combine sociological and planning findings in a methodological setting compiled of quantitative and qualitative approaches. This helps to understand the architectural and infrastructure-related characteristics of a planned object and the social components that go with it. As a result of the analysis, planning criteria that provide pointers for the further planning process, e.g. design and urban development competitions, are formulated.

Eco-friendly means of transport

This refers to all means of transport whose pollutant and noise emissions and land consumption do not damage the environment and to the networking of these transport modes: walking, cycling (including public bike rental such as the City Bike system), public transport (suburban trains, metros, trams, buses) and, in the wider sense, taxis, car sharing or car pools.

Encounter zone

Encounter zones are streets whose traffic lanes serve joint use by vehicles and pedestrians and are accordingly marked as such. This form of traffic calming was introduced in Austria in 2013. In general, the maximum permitted speed in encounter zones is 20 km/h (12.5 mph). All road users are equal and must show a high degree of consideration for each other.

Energy-plus building

The term "energy-plus building" is not clearly defined. STEP 2025 uses the term "energy-plus building" for structures that generate more energy over one year than they consume. In this, a positive annual balance is contingent on extremely efficient building envelopes and building utilities as well as on the use of renewable energy resources. The individual energy balance of a building should state

whether the calculations refer merely to the building's heat demand or also take account of its electricity requirements.

EU Strategy for the Danube Region

The EU Strategy for the Danube Region (EUSDR) is a strategy of the European Commission that aims at closer cooperation between the Danube countries. The main focuses are infrastructure, environmental protection, the fostering of prosperity and good governance. It is the superordinate goal of the Strategy for the Danube Region to provide, by 2020, better opportunities for higher education, employment and prosperity in their home region for all citizens of the Danube countries. The EUSDR was initiated as the second macro regional strategy. On 8 December 2010, a Communication on the EUSDR was published by the European Commission and adopted on 24 June 2011 by the European Council after confirmation by the General Affairs Council. Implementation was initiated in the second semester of 2011.

EU White Paper on Transport

White Papers published by the European Commission contain proposals for common action in a given area. In part, they tie in with Green Papers, which initiate a consultation process at the European level. A White Paper can only evolve into a concrete action programme if it meets with a positive response by the Council. The White Paper "Roadmap to a Single European Transport Area - Towards a competitive and resource efficient transport system" (White Paper on Transport) was submitted in 2011. Against the background of the EU climate and energy efficiency targets, one of its main objectives is the reduction of greenhouse gas emissions caused by traffic and transport by approx. 60 percent by 2050 (compared to 1990 values).

Existing protection zones

Vienna boasts a wide variety of protection zones: a national park, nature reserves, protected landscapes and landscape elements, ecological development zones, protected biotopes, the protection zone of the Vienna Green Belt and protected parkland. Moreover, parts of Vienna's westernmost districts were declared the Biosphere Park Vienna Woods. The land-scape of the Vienna Woods has been under protection since 1905 on the basis of the Vienna Green Belt Decision as well as due to a protection zone category assigned to it under the Building Code for Vienna (Sww category), which practically equals a total construction ban, and the Nature Conservation Act.

Flagship initiatives

Flagship initiatives are initiatives that are given special weight since they are of great importance for the implementation of STEP 2025.

free space vienna public space

This is Vienna's Mission Statement for Public Space. The mission statement was compiled as the result of a dialogue between the Vienna City Administration, external specialists and municipal district politicians and completed in 2009. It formulates strategic approaches for the planning, design and management of public spaces in Vienna in order to provide guidelines for measures taken by public bodies and private actors.

Fresh air corridors

The size, type of vegetation and networking of open spaces are factors that can have a positive impact on the urban climate, since the cooling effects generated by open spaces are also translated to adjacent developed zones. Another important role is played by fresh air corridors with regard to fresh air generation and ventilation in the city. In inner-city densification processes and development projects for the urban periphery, it must be made sure that fresh air corridors are kept unaffected by construction measures.

"Gender Mainstreaming in Urban Planning and Urban Development"

The manual formulates objectives and

quality criteria for the implementation of gender-sensitive planning and comprises a set of transferable methods and instruments for different planning levels: master plan, land use and development plan and individual projects. It is to serve as a practical work tool and comprehensive reference document in the everyday activities of planners and administrators ("Werkstattberichte der Stadtentwicklung Wien" (No. 130)).

Gentle urban renewal

Gentle urban renewal is a successful Viennese model. The primary aspects of gentle urban renewal, which was introduced in Vienna nearly 40 years ago, have always been affordable housing based on financial incentives, social sustainability and a comprehensive renewal strategy for the "core city". The positive trends of the architectural, social and economic development of Vienna's urban renewal areas are evident. Targeted rehabilitation and new construction measures upgrade and rejuvenate neighbourhoods and quarters. The experts of "Gebietsbetreuung Stadterneuerung" (Area Management Office, GB*) serve as the hub for all renewal processes, but also for all questions relating to housing, the housing environment and good-neighbourly relations within neighbourhoods. As of today, 320,000 dwellings have been rehabilitated through gentle urban renewal.

Gentrification phenomena

Gentrification trends occur when neighbourhood milieus of city quarters are changed by the inflow of affluent population strata or when long-time residents are gradually driven away. Gentrification phenomena may be triggered by investments in public infrastructure, building rehabilitation projects or cultural initiatives of creative milieus that improve the image of an urban quarter.

Governance

Today, traditional forms of government are no longer sufficient to make optimum use of the great diversity of available information as well as of the creativity of society. As a result, administrations are opening up and complementing hierarchic forms of control with co-operation ventures that include other groups of social actors, e.g. citizens, business circles or other local authorities.

Green space monitoring

In this regular, comprehensive overview of the extension, development and status of Vienna's green spaces by Municipal Department 22 (MA 22 – Environmental Protection), more than 60,000 individual surfaces are classified as various green space types; their composition is roughly assessed, and changes vis-à-vis previous assessments are evaluated. This monitoring not only constitutes the most important instrument of green space surveillance and habitat research, but also serves as an essential information basis for urban planning.

Heat island register

Urban densification and a low ratio of green spaces intensify heat effects in urban areas, triggering the development of heat islands. Thermal imaging (heat island register) makes it possible to identify overheated spots and thus permits the implementation of targeted steps, such as infrastructure measures (shaded seats, drinking fountains, spray mist installations, etc.), urban, spatial and landscape planning measures (e.g. soil desealing, ventilation of the city) and architectural measures (choice of materials, greened roofscapes and façades, shading elements, etc.).

High-rise Concept

The construction of high-rises in particular requires the prior consideration of urban-structural and urban design aspects. This inter alia refers to the individual edifice's effects on the environs, location quality and degree of accessibility by public transport, the social and public benefits of such buildings and their sustainability. Moreover, flexible types of use and the accommodation of housing

units in high-rises are increasingly discussed as well. The existing guidelines for the construction of high-rises are being correspondingly updated and continued.

ICT Strategy

The ICT Strategy of 2007 is aligned alongside the Business Strategy of the City of Vienna and wants to optimise the economic value added of ICT services and products for the implementation of the overall strategy. The ICT Strategy describes the key objectives, measures and processes to effectively and efficiently support the attainment of business goals on the part of the City of Vienna by means of ICT. It is the strategic guideline for ICT use and diversification by all municipal departments.

Implementation partnerships

An implementation partnership is the structured, continuous and target-oriented co-operation of relevant actors regarding specific issues. These partnerships require political legitimacy of the representatives involved and strive for processoriented approaches in implementation, target and outcome orientation in project development and in the dissemination of results.

Informal learning

Informal learning is learning in everyday life, at the workplace, in a family setting or during a person's spare time. It is unorganised and unstructured with regard to learning goals, learning support or the time spent with learning. In most cases, informal learning is not expressly planned on the part of the learner. While the results of informal learning do not normally entail certification of any sort, they may be validated and ultimately certified if linked to the recognition of knowledge previously acquired through other learning programmes. Informal learning is also referred to as "experiential learning".

Infrastructure Commission

In 1994, the Vienna Infrastructure Commission was set up as part of the Execu-

tive Group for Construction and Technology. Its task lies in developing a basis for political decision-making regarding the installation of technical and social infrastructure in connection with urban development projects.

Intermodality

Intermodality is the use of several means of conveyance for the transport of persons or goods when involving trip chains. One example might be the use of a car or bicycle to reach a train station in order to continue a journey from there. In goods transport, intermodality embodies the transport of standardised units (e.g. containers) and their shipping via different means of transport, e.g. rail and lorry.

Knowledge economy

The term "knowledge economy" defines those economic activities that are particularly dependent on a knowledge base, from which they develop new knowledge or innovative high-tech products in turn. The knowledge economy is composed of three interlinked pillars – universities, high-tech production and knowledge-intensive services. The importance of knowledge-oriented economic activities is growing, which makes them a key driver of the economic and spatial development of metropolitan regions.

KÖR GmbH – Kunst im öffentlichen Raum

In 2004, the establishment of the Fund for Art in Public Space set the course for high-quality artistic design of public space. Since then, KÖR, which today is organised as a public limited liability company, has evolved into an interdepartmental model instrument involving the Administrative Groups for Housing, Housing Construction and Urban Renewal and for Cultural Affairs and Science. Over the past decade, KÖR GmbH has implemented around 140 projects in Vienna's public space.

Landscape account

A selection of priority areas is proposed by the City of Vienna and the Federal Province of Lower Austria as a basic structure for compensation measures in environmental impact assessments.

Areas from this landscape account can then be immediately used for non-site-specific compensation and balancing measures. Controlling, evaluation and further development are carried out by the competent municipal departments and their designated experts.

Land use category "Housing construction eligible for subsidisation"

In areas thus classified, it is permitted to erect only buildings that meet certain structural specifications based on the housing subsidy system, e.g. thermal insulation or maximum useful floorspace per housing unit. This is to ensure that a sufficient volume of affordable dwellings can be constructed in the future as well.

Master Plan for a Viennese Urbanity Campaign

The Vienna Economic Chamber has developed a catalogue of measures to preserve ground-floor zones. The catalogue contains proposals for upgrading ground-floor zones and is to provide suggestions for preserving the diversity of Vienna's small- and medium-scale economy, which is considered a major contributor to urban appeal.

Metropolitan region

A metropolitan region is an area comprising at least one big city of international importance, serving a variety of high-level centralised functions, and the region surrounding it. As a rule, such a region encompasses, in addition to the urban agglomeration, further core settlements as well as rural zones that are closely linked to the regional centre, e.g. by commuter traffic flows. As central nuclei of co-operation and competition, metropolitan regions are hubs of international networking. Metropolitan regions may have up to 20 million inhabitants, may be transboundary, are politically defined in a variety of ways and usually lack institutions of their own.

Mission Statement "Social Work in (Semi-) Public Space"

The Mission Statement "Social Work in (Semi-) Public Space" expresses the stance of the City of Vienna regarding social work in public and semi-public space. Vienna thus defines itself as a pluralistic metropolis that is characterised by internationality and diversity and pursues a policy of tolerance, integration, inclusion and prevention. The tasks of social work comprise the targeted promotion of community and educational work, social cohesion as well as the strengthening of personal responsibility and the ability for self-organisation on the part of the actors involved.

Modal split

Distribution of traffic volumes across several means of transport (modes). As a rule, the modal split refers to trips and indicates which means of transport are used for a certain percentage of trips.

Multimodality

In simple words, multimodality applies if more than one means of transport is or can be used to cover a distance or to transport goods; for travelling from and to work, a person may e.g. use either a bicycle or a car, or merchandise may be brought to its destination by a combination of navigation and railway.

Multiple use

Multiple use of available open spaces in the city is a reaction to the scarcity of urban open spaces as well as to current and local demands and moreover complements existing open space programmes. It is the main objective of multiple use to open potentials of municipally owned plots to other interested parties, e.g. the use of schoolyards and school sports grounds in the afternoon, during weekends or in the holidays.

NFSR - net floorspace ratio

The floorspace ratio (FSR) embodies the ratio of a building's total floor area to the size of the piece of land upon which it is

built. It is calculated by dividing the sum total of all areas of a building on a given plot of land by the size of the plot. The net floorspace ratio (NFSR) is applied if only the area of the actual building land is used as divider without taking account of public roads or open areas that are also part of the plot. An NGFZ of 2.0 thus would indicate that the total floor area of a building is two times the area of the plot on which it is constructed.

Non-formal learning

Non-formal learning is learning embedded in planned activities but not explicitly referred to as such (with regard to learning goals, learning support or the time spent with learning) yet including a distinct "learning element". From the viewpoint of the learner, non-formal learning is intentional, and its results can be validated and certified. Non-formal learning is also referred to as "semi-structured learning".

Parking slot regulation

The parking slot regulation is an instrument embedded in the Building Code for Vienna. In the context of land use and development plan drafting, it is thus possible to reduce the number of legally mandatory parking slots if an area is easily reachable by public transport. This reduced number of mandatory parking slots supports the traffic policy goal of strengthening eco-friendly means of transport (public transport, cycling and walking).

PGO - Planungsgemeinschaft Ost

This is a joint organisation of the Federal Provinces of Vienna, Lower Austria and Burgenland to consult and agree on relevant spatial planning issues. Its scope of work comprises the development of joint spatial planning objectives, the thematic co-ordination and scheduling of plans impacting regional space, the representation of joint interests and the implementation of research projects of importance for regional planning in the three federal provinces. In addition

to a political decision-making body and the co-ordination body of the three provincial administrations, PGO also operates a joint office to implement its work programme.

Praxisbuch Partizipation

This practical manual published in 2012 by Municipal Department 18 supports staff members of the Vienna City Administration working in the field of urban development or related areas such as public space design in their professional design, planning and implementation of public participation processes ("Werkstattberichte der Stadtentwicklung Wien" [No. 127]]

Rainwater management

Rainwater management offers the possibility of retaining water precipitated on built-up and sealed areas within the natural water cycle and thus relieving sewers. This can have a positive effect on temperature, air quality and climate.

REGIONALE

REGIONALE was introduced in North Rhine-Westphalia as a structural support measure. The Land of North Rhine-Westphalia thus offers regions ways and means to strengthen their regional profile. The aim lies in finding a common position in the context of international and national competition and thus to render the region competitive as an attractive place to live and do business in. Based on this model, a similar REGIONALE initiative could promote and strengthen competitions for joint projects in the Vienna city region.

Resilience

This word describes the ability of a system to deal with change. Resilience strategies may be inter alia preventive (resistance developed providently to withstand negative external influences), adaptive (ability to return quickly to the original situation) or innovative (active use of advantages resulting from changing environmental conditions).

Services of general interest

The term "services of general interest" stands for the comprehensive and reliable provision of public goods and services entailing a special responsibility for the community at large. This e.g. includes the provision of energy, (drinking) water, solid waste and wastewater disposal, education, culture, medical services and public transport. Services of general interest are characterised by the fact that all citizens have equal access to vital institutions and services as well as by the reliability and continuity of these institutions and services and, in case of public ownership of the bodies supplying them, by democratic control and public responsibility for them. In Austria, the definition and type of service performance are normally associated with a high degree of municipal autonomy.

Smart grid

Smart power grids are networks that link and control various components – electricity generator, storage unit, energy distribution and transmission networks – as well as consumers on the basis of sophisticated, fine-tuned management. In addition to the optimisation and monitoring of the individual components, the objective lies in ensuring efficient and reliable energy supply in the future.

Stadtregion+

The term "Stadtregion+" defines eastern Lower Austria, northern Burgenland and Vienna and in addition to the "core city" Vienna comprises 205 Lower Austrian and 63 Burgenland municipalities. Inter alia, commuter flows, accessibility conditions and demographic forecasts were used to delimit the space covered by this extended agglomeration. Under the title "Stadtregion+", PGO analysed various possible scenarios of future settlement development and formulated a spatial development strategy.

SUM – City-Environs Management

SUM (Stadt-Umland-Management, City-Environs Management) is an initiative of the Federal Provinces of Vienna and Lower Austria for intensified co-operation across provincial borders to improve the exploitation of development potentials of the urban region. City-Environs Management is embedded in the association "Niederösterreich/Wien – gemeinsame Entwicklungsräume" and is concerned with planning and management tasks that affect both Vienna and the neighbouring municipalities in Lower Austria. This on the one hand involves issues of joint strategic regional development and on the other hand touches on concrete joint projects.

Superordinate green corridors

Superordinate green corridors are contiguous open spaces that can serve social, ecological and climatological functions. They provide the local population with open spaces near their homes, create and safeguard habitats for animals and plants and network these, foster traffic avoidance by means of good accessibility and moreover benefit the generation and transport of fresh air.

Two-tiered developers' competitions

Developers' competitions are a time-tried instrument of subsidised housing construction in Vienna. They play a key role in safeguarding high quality in housing construction and ensure efficient and cost-effective solutions. Two-tiered developers' competitions further evolve this successful instrument. They allow for the gradual development of optimised urbanistic, architectural and functional solutions while involving municipal experts, teams of architects and project developers.

University Location Vienna Concept

The University Location Vienna Concept analysed the interactions between university sites and urban development. The analysis showed that Vienna disposes of a sufficient number of locations suitable for universities.

Urban technologies

This term covers products and services in such thematic areas as telecommunica-

tions, transport and mobility, energy and environment, supply and disposal, construction and housing as well as conservation. They are one focal point of Vienna's urban research activities and of the Technology Agency of the City of Vienna.

Vienna Business Agency

The Vienna Business Agency is the central point of the City of Vienna for both Austrian and foreign enterprises, company founders and investors. The task and objective of this institution lie in strengthening Vienna's enterprises and their innovative clout as well as in sustainably modernising Vienna as a business location. Together with its subsidiaries, the Vienna Business Agency supports the implementation of innovative growth projects by offering financial incentives, customised counselling and business infrastructure.

Vienna Campus Model and Vienna Campus plus Model/campus sites

The Vienna Campus Model and its successor, the Vienna Campus plus Model, concentrate kindergartens, schools and leisure education in one location. Campus plus sites opt increasingly for the networking of individual educational institutions as well as for the integration of further partners within the education sector, e.g. Music Schools of the City of Vienna, mass sports, youth centres and other neighbourhood service providers. Multiple use is aimed for in as many areas as possible. Thus Campus plus is an all-inclusive educational facility for children aged 0 to 10 years that is steeped in a comprehensive and holistic concept of education.

Vienna Charter

The Vienna Charter was launched in March 2012 and constituted a hitherto unique citizen participation project in Europe. Pursuing the objective of jointly shaping good-neighbourly relations in Vienna, a total of 8,500 Viennese conducted discussions in 651 groups to voice their ideas. The Charter process was initi-

ated by the City of Vienna and implemented together with over 325 partner organisations. The preamble to the Charter reads, "Vienna is home: for women and men, for young and old, for those who were born here and for those who moved to the city, for people with different worldviews, beliefs and needs. To get along well, we need to respect each other. Respect means accepting other people the way they are – as we ourselves wish to be accepted and respected. Human rights are our common basis."

Vienna Region

VIENNA REGION Marketing GmbH is a public company established in 2008 and owned by the Federal Provinces of Vienna, Lower Austria and Burgenland. It is the purpose of this enterprise to internationally position and market the Vienna Region as a business and technology location. The supraregional platform "VIENNA REGION Wirtschaft.Raum. Entwicklung GmbH" serves as an instrument to co-ordinate co-operation and facilitate knowledge transfer between the federal provinces.

Vienna's open space network

Vienna's open space network comprises the city's main network of priority green and open space corridors that are of importance for the city as a whole and hence must be sustainably protected and adequately designed. The open space network was defined by taking account of four main functions of urban open and green spaces: everyday functions (significance of open and green spaces as key axes and spaces of movement on foot or by bike, as central places of social contacts and as spaces of experience, leisure and relaxation), structuring of the urban fabric (significance of open and green spaces for the structuring of the urban fabric, orientation and identity creation), functions for urban ecology (significance of open and green spaces for the urban climate, air quality and groundwater recharge), nature conservation functions (significance of open and green spaces as habitats of animals and plants, the biotope network and ecosystem protection). As a rule, these four main functions overlap and complement each other in the defined open and green space corridors, although the weighting of the respective criteria obviously varies.

Viennese Analysis of Industrial and Commercial Areas

Good-quality industrial and commercial areas are essential for a city's standing as a business hub, the preservation of industrial production on-site and its supply with logistics and trade functions. In 2008, the City of Vienna joined forces with the Vienna Economic Chamber and the Vienna Business Agency to conduct an analysis of industrial and commercial areas to obtain an overview of industrial and commercial production in the Austrian capital, to classify these areas and, in due course, to designate zones for these purposes.

VOR - Verkehrsverbund Ost-Region (Transport Association for the Eastern Region of Austria)

Verkehrsverbund Ost-Region is the oldest and biggest transport association of Austria. VOR provides co-ordinated services and management of public transport in Vienna, Lower Austria and Burgenland. It defines itself as a mobility provider evolving comprehensive regional transport offerings at the interface between passengers and transport companies, politics and administration. VOR co-ordinates the public transport services of more than 40 transport companies operating over 900 bus and rail-bound lines in the eastern region of Austria.

Waste Management Plan for Vienna

Whenever required and in any case every six years, Municipal Department 48 develops the Waste Management Plan for the City of Vienna on behalf of the Vienna Provincial Government. This document inter alia comprises: 1) status quo of waste management, in particular with regard to the types and quantities of waste produced in Vienna; 2) waste management;

agement forecasts and related necessary measures; 3] demand, status quo and operation of waste treatment plants and landfills; and 4] the required number of persons or facilities for waste disposal consultancy services. The current Waste Management Plan for Vienna covers the period from 2013 to 2018.

wohnfonds wien

wohnfonds_wien was established in 1984 as the then Vienna Land Provision and Urban Renewal Fund. Its tasks comprise on the one hand the preparation and implementation of urban renewal measures in the context of gentle urban renewal and on the other hand the provision of real restate for social housing construction in Vienna and quality assurance in the field of building construction with the aid of two instruments: developers' competitions and the Land Advisory Board.

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