



city, transformed

Why

VIENNA

gets high marks

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 European
Investment
Bank *The EIB bank* 

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Austria's capital transformed from a peripheral, declining outpost of the Cold War to a city that consistently ranks top of global quality of life surveys. Here's how Vienna turned a series of major economic and geopolitical challenges to its advantage.

Introduction

In the mid-1980s, when Vienna presented its first urban development plan, the city government expected the population to decline and foresaw serious challenges for its urban economy. However, geopolitical transformations prompted a fresh wave of immigration to Vienna, so the city needed to adapt fast and develop new initiatives. A new spirit of urban development emerged.

Vienna's remarkable migration-driven growth took place in three phases:

- first, the population grew rapidly between 1989 and 1993
- then it grew again between 2000 and 2006
- and finally from 2010 until today the population has been growing steadily and swiftly, by on average around 22,000 people per year
- This means an addition of nearly 350,000 inhabitants since 1989.

After these 30 years of increased population, Vienna is a growing, dynamic and successful global city in Central and South Eastern Europe. Due to consistent long-term oriented improvements, Vienna is well-placed to continue its success as an attractive, prosperous and inclusive metropolis. Mercer's "Quality of Living Survey 2018" ranks Vienna highest for quality of living in the world for the ninth year in a row. This award acknowledges the professional and integrated management of the city. It also reflects the development of creative, innovative and sustainable municipal policies and initiatives. Many of the impulses for the successful



recovery of the city were realised by means of projects and urban programmes that received key investments from the European Investment Bank.

This essay reviews the political circumstances and strategic orientations of Vienna's comprehensive urban development policy, and how the EIB's investments facilitated key projects and supported Vienna's process of urban modernisation. Urban development in Vienna took place in four cycles, which are characterised by distinctive internal and external conditions and opportunities. Each prompted different levels of EIB engagement:

The **first cycle** is shaped profoundly by the collapse of the communist system and a total change in the geopolitical

conditions affecting Vienna's development. Vienna evolved from a declining city at the periphery of Western Europe to a growing city in the heart of a renewed Europe, facing fundamental challenges in economic and urban development.

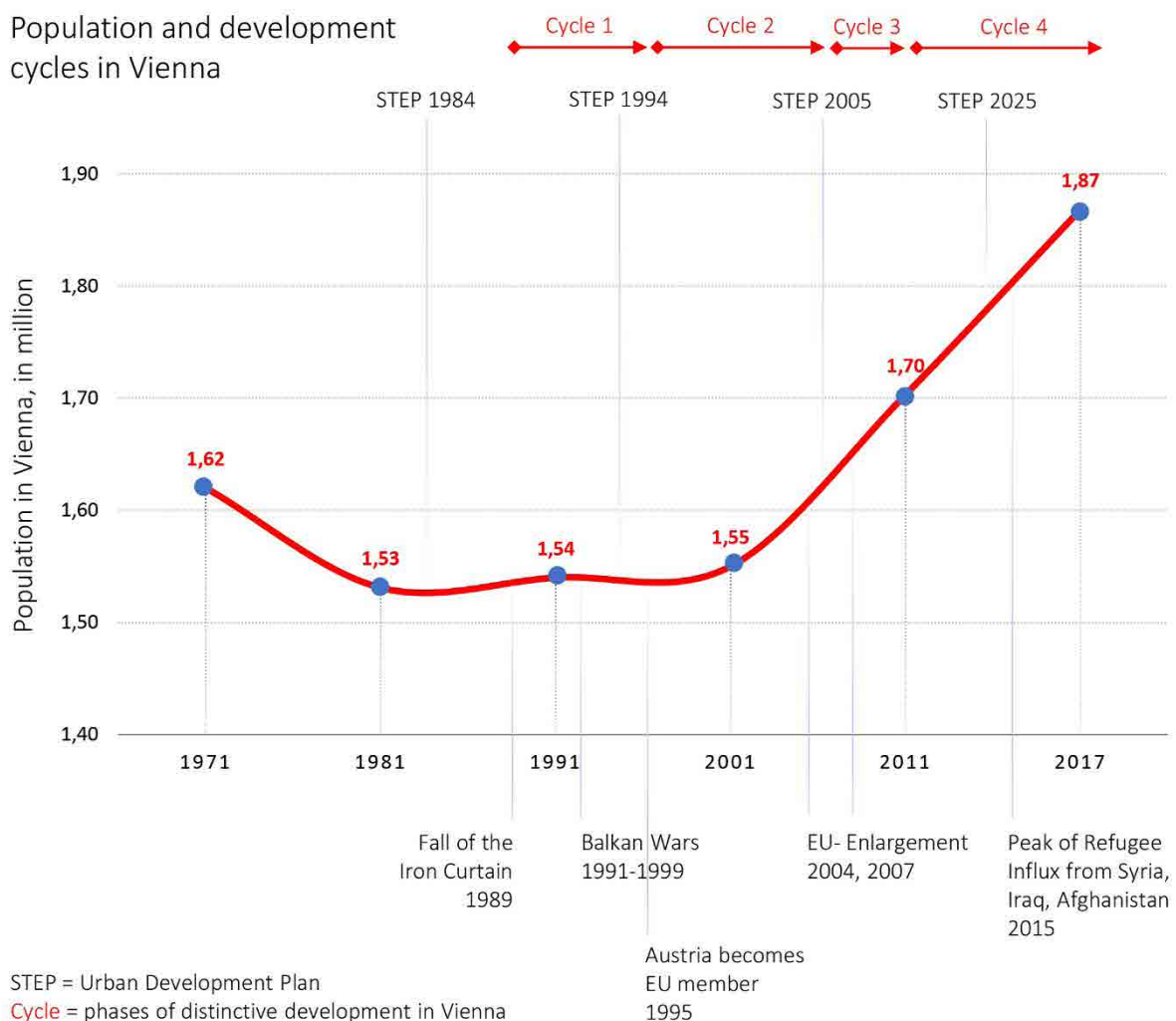
In the **second cycle** Vienna was a city in transition, as it sought to define its new position in the European Union on the one hand and its role as a city bordering the EU's Central and Eastern European neighbours on the other. In this period, the city government made strategic decisions for long-term urban development in this new environment: the issue of sustainability gained importance and the city carried out comprehensive action for affordable housing and urban renewal.

In the **third cycle** Vienna coped with the challenges of a rapidly growing city and the implementation of large-scale projects to promote Vienna on an international level and enhance the attractiveness of the city as a knowledge hub and as an integrated inclusive city. This is the period where the EIB provided the majority of its focused investments.

The **fourth cycle** stands for enhancing the international and economic competitiveness of the city on the one hand and for implementing a full smart city strategy that cuts across all areas of urban policy, on the other. The city government and its citizens are faced with the challenge of the large influx of refugees and the shift in the political debate against "open cities".

Timeline of developments (population, political incidents, urban planning, performance cycles)

Population and development cycles in Vienna



Timeline of EIB investment in Vienna and the metropolitan region (mentioned years: dates of signature)

Environment, Energy	Housing, Urban Development	Year	Transport, Mobility	Education, Science, Research
Effluent discharge reduction, EBS sewage plant, 1995		1995		
Hydroelectric power station Freudenuau, 1996/97/98/99		1996		
Extension district heating network, 1997/99		1997		
		1998		
		1999		
	Gasometer urban renewal, 2000	2000		
Extension EBS sewage plant 2001/02/03/04		2001		Refurbishment of universities, Austria/Vienna, 2001/02/09
	Upgrading & urban renewal social housing, 2002/03	2002		
	Upgrading & urban renewal social housing, 2003/04	2003		
		2004		
		2005	PPP east region highway-package, 2006	
	Thermal insulation of social housing, 2006	2006	Extension of Vienna Airport VIE, 2006	
	Social housing quarter development, 2007/08/09	2007	Priority TEN-T project ÖBB western railway, 2007/08	
		2008	Construction Vienna main railway-station, 2008/09	University of applied sciences campus Vienna, 2009
		2009		ISTA Institute of science and technology, 2009/13
		2010		University of economics and business, 2010
	Social housing energy efficiency program, 2011/13/17	2011		
		2012		
Waste to energy, incineration plant Spittelau, 2013		2013		
		2014		
Energy optimisation sludge treatment EBS, 2015		2015		
		2016		
		2017		Vienna school PPP campus Berresgasse, 2017/18
		2018		

Cycle 1: 1989-1995

Vienna at a crossroads

The year of the fall of the Iron Curtain was of fundamental historical importance for Europe and the geopolitical system. It was also the beginning of a completely new era of development opportunities for Vienna. In 1989, Vienna was a declining metropolis. It retained its exceptional cultural and architectural heritage, but it also had to contend with a rapidly ageing population, economic stagnation and a certain degree of “progress aversion”. Vienna tended to view itself above all as a vulnerable outpost of the West, in close proximity to the menace of the “Eastern Bloc”. After 1989, the city found itself suddenly in a completely different situation. The Austrian capital became a logical “gateway to the East” for numerous international enterprises and the first point of contact for people from the Eastern and South Eastern European transition countries.

Although the Iron Curtain was entrenched in people’s minds – and today we know that it took a very long time to overcome most of these mental barriers – its collapse unlocked unexpected power and ideas. By the summer of 1989, the City of Vienna had already commissioned a study on the effects and impacts of open borders for the development of Vienna. Beyond that, the study discussed a “growing city” for the first time. From this moment onwards, “growth” became a key term of political and planning debates for the decades to come, representing a fundamental paradigm shift.

The Urban Development Plan for Vienna of the year 1984 (STEP 1984) predicted an ongoing decline in population, a very weak economic performance and a reduction of available public finances coinciding with growing demands on those public finances. The plan focused on a shrinking city, infrastructural and environmental improvement, and “soft urban renewal” for a better quality of life. This included a publicly financed refurbishment programme to preserve Vienna’s historical housing.

The urban development plan 1994 responds to a fundamental change

All subsequent strategy documents, in particular the Urban Development Guidelines 1991 and the Urban Development Plan 1994 (STEP 1994), were dominated by the core questions of

- how to cope with population growth
- how to use it to develop Vienna into an open minded and economically competitive metropolis in the heart of Europe
- how to prepare the city for the 21st century in a sustainable and environmentally friendly way.

The STEP 1994 notably integrated several important concepts and ideas into Vienna’s development plans for the first time: The concept of the international competitiveness of cities, the importance of economy in the context of urban development, the vision of a “second city centre” for Vienna, the cooperation in the metropolitan and cross-border area. The STEP 1994 also called for new instruments of participative urban planning, introduced the principle of environmentally friendly mobility and parking management, continued the city’s emphasis on social housing and integration, and discussed the functional advantage of skyscrapers for Vienna. This strategic and binding document opened a new dimension of urban planning in Vienna and identified spatial and operative hotspots and principles for Vienna’s development in the coming decades.

The strategy was accompanied by two operational decisions, which were extremely relevant for the future development of affordable housing: The city created “public property development competitions” and a “land advisory board” in 1995, which set the rules for the evaluation of all subsidised projects in accordance with the criteria of ecology, quality and economy. Both activities are operated by Wohnfonds Wien, a city-owned, limited-profit organisation. Represented by the city councillor responsible for living, housing and urban renewal, Wohnfonds Wien is one of the key players in the implementation of Vienna’s social housing policy.

Key players implementing social housing policy in Vienna



Additional to the urban development principles of 1994, the city adopted a Green Belt Declaration concerning the preservation and extension of green areas of Vienna (“1,000-hectare programme”) in 1995. This rule guarantees the high quality of life in Vienna, but also challenges the city in times of expansion

The transformations in Vienna induced by the fall of the Iron Curtain were manifold and created a window of opportunity for a few years (1990-1995). Vienna took up the various challenges and, in this period, the city established the core framework and definitive decisions that have been at the heart of Vienna’s urban development until today. Three crucial factors substantially shaped Vienna and its urban development (and still do so today):

- Immigration to Austria and Vienna

The collapse of the Eastern Bloc and Yugoslavia as well as the earlier crises in these countries were the main reasons for the increase of immigration to Vienna from 1989 onwards. While immigration from Hungary, Slovakia and the Czech Republic was not as high as expected at the time, the influx of refugees from the collapse of Yugoslavia – wars in Slovenia 1991, Croatia and Bosnia 1992 – proved significant. The net migration to Vienna was around 19,000 in 1989. It grew to 31,000 in 1991, and continued to be high in subsequent years¹. The share of foreigners in the population of Vienna grew rapidly from 12% to 18%². Against this background the right wing Freedom Party of Austria became a growing political factor, launching a petition for an “Austria first” referendum in 1993 that utilised the growing ambivalence in the population against migrants.

- Austria’s accession to the EU

From the 1980s onwards there was serious discussion in Austria regarding European Union membership. The debate was heavily influenced by the geopolitical transition, the crisis in the former Yugoslavia and the population’s desire for a safe haven. The referendum in 1994 delivered a clear vote in favour of accession, provided politicians and citizens with a new political perspective and widened the field of opportunities in business, education, travel, etc. Early in 1995, Austria became a member of the EU. EU-accession helped mitigate all these surrounding challenges at an eventful time of change in the early 1990s.

- Rise and fall of the EXPO 1995

During the cold war Austria and Vienna always made efforts to develop good relations with their eastern neighbours, and so Austria and Hungary decided in 1987 to jointly bid for a Twin-City EXPO Vienna-Budapest for the year 1995. The idea was to demonstrate what an impact cross-border cooperation on an international large-scale project could have on liberalisation, democratisation and “growing together”. The mission statement for the planned EXPO, therefore, was “bridges for the future”. From the perspective of urban planners, such a catalysing large-scale project presented an opportunity for the modernisation and urban improvement of Vienna.

These factors created an atmosphere of optimism and openness on the one hand and of uncertainty about the future and excessive demands on the other. In this atmosphere of ambivalence, the city government decided to hold a public opinion poll about the execution of the EXPO, because the government itself had become uncertain about the purpose of this mega-project. They added another project as an alternative option in the poll, namely the construction of a Danube river power station within the city. By offering these two competing alternatives and upgrading the poll to a binding result for the government, the politicians skilfully included the population’s burgeoning interest in ecology and sustainability and gave an official voice to the scepticism about large-scale projects. The citizens voted for the river power plant and rejected the EXPO.

With this vote in 1991, Vienna set the course for two strategic developments:

Creating a second centre for Vienna, to boost the city as a modern business location

The re-utilization and sustainable urban development of the EXPO area had been planned for after 1996. Now the planning of this development started immediately. An international contest created Vienna Danube City (Vienna DC)³, the masterplan architecture concept for various towers on this plot. It also included the construction of transport infrastructure in this new urban quarter. The result was a first milestone for a “second city centre” of Vienna in the form of a new business and housing district. The entire development is run by WED Danube City Company, which is owned by UniCredit Bank Austria AG. This initial step raised Vienna’s international visibility as an attractive modern business location, and numerous local and international investments followed. Most importantly, it was a highly catalytic project that caused urban developers to rethink the structure and future of the city and to pursue the question of how to redefine public-private responsibility to ensure the progress of the city.

Together with the neighbouring Vienna International Centre (UNO-City, built in the 1970s) and the Austria Centre Vienna (ACV Vienna’s biggest conference centre, built in the 1980s) the Vienna Danube City turns this urban area into a highly attractive mixed-use quarter. This new second centre is characterised by the presence of tech companies and research units in the Tech Gate, offices, event locations, hotels, restaurants and business headquarters in various towers, such as Andromeda, Saturn and DC-Tower (at a height of 60 stories this skyscraper, designed by Dominique Perrault, is the highest in Austria). The new centre also incorporates 1,800 flats to rent and condominiums directly beside the Danube, with a sizeable park in the “backyard”. The volume of the already realised real estate developments is €2 billion. Today around 8,500 people live and work here. When development is completed, the number is projected to rise to 15,000.

Vienna becomes a city of smart urban energy production and environmental protection

Following the vote in favour of the Danube river power station, the City of Vienna followed up on its big flood protection project New Danube and Danube Island. The project had been completed in 1988 and, besides its technical function, it created about 42 kilometres of beach and nature reserve in the city. From the perspective of leisure and mobility, this was a huge contribution to sustainable urban life. The so called Freudenu River Power Station was built between 1992 and 1998 as an integrated part of this flood protection system. **It currently**

enables Vienna to supply one third of all households in the city with electricity generated by hydropower. It became the first large-scale river power station in any metropolis worldwide and an international benchmark for renewable energy production within a city.

The construction of the hydroelectric power station on the Danube necessitated a comprehensive rehabilitation of the river area downstream of Vienna. The projects were planned and implemented through the Verbund-Austrian Hydro Power AG (Vienna's energy company Wien Energie holds 12.5% of the electricity purchase rights in Freudenu). Both building projects were so large that after Austria's accession to the EU the Verbund-company asked the EIB to support the projects with investment loans. EIB financing for the years 1996 to 1999 amounted to €388.25 million. This ensured Vienna's ability to meet a significant amount of electricity capacity needs sustainably. This investment was Vienna's first really big project with the EIB.

Some months earlier, at the end of 1995, Vienna had obtained an investment loan from the EIB for the first time as a new Member State. The loan was for a smaller wastewater treatment project. According to a law from 1991, Vienna was obliged to improve its wastewater treatment plant. The project comprised the modernisation and extension of Vienna's main wastewater treatment facilities to reduce the volume of effluent discharged into the Danube. It was implemented from 1995 onwards with the support of the EIB, which provided an investment loan of €39.38 million.

Cycle 2: 1996-2005

Positioning Vienna in a changing Europe

Austria was a new member of the EU. Along with the forthcoming eastward enlargement of the EU, this created various opportunities for Vienna as a business location and as a hub for Eastern European headquarters of international companies. It was not only the single market that provided opportunities for Vienna's economy. It was also important that numerous companies were founded in the Central and Eastern European countries. Between 1990 and 1998 alone, the number of Austrian and Viennese companies in Central and Eastern Europe rose from 900 to 15,000⁴.

Planning for large-scale urban improvement

Thus, at the economic and business level, the fact of open borders and EU membership led rapidly to success. Overcoming established thought patterns and behaviours at the political and administrative level proved to be more difficult. The report "Preparity – ready to enlarge," published in 2001, pointed out very clearly the valuable opportunities for Vienna and its region. It also stressed the necessity of investing in business location development and intermodal logistic infrastructure, and strengthening international accessibility in the context of the Trans-European Transport Networks. These insights prompted the public authorities to accelerate the planning of important supraregional, large-scale projects, such as for example the extension of Vienna Airport or the construction of the northern sections of the outer ring motorway around Vienna in this phase. Some years later these projects were realised with much support from the EIB, and they subsequently raised Vienna's international profile. **If the first half of the 1990s was the period of big changes in which Vienna started to develop concepts, answers and plans to come to terms with these transformative processes, the time between 1996 and 2005 became the phase in which Vienna enhanced strategic options and prepared long-term urban development.** On the planning level the "Strategy Plan 2000", a more integrated and business-oriented guideline for Vienna than the "urban development plan", was a result of this shift and of the new political constellation in the government of the City of Vienna, a coalition of social democrats and conservatives in the years 1996 to 2001.

Immigration creates affordable housing challenges for the city

It was also the period in which the high level of immigration of the early 1990s and from 2000 onwards (as a consequence of the Dayton peace agreement and the crisis in the successor states of the former Yugoslavia) put increasing pressure on the housing market in Vienna. In the eighties and early nineties Vienna focused heavily on

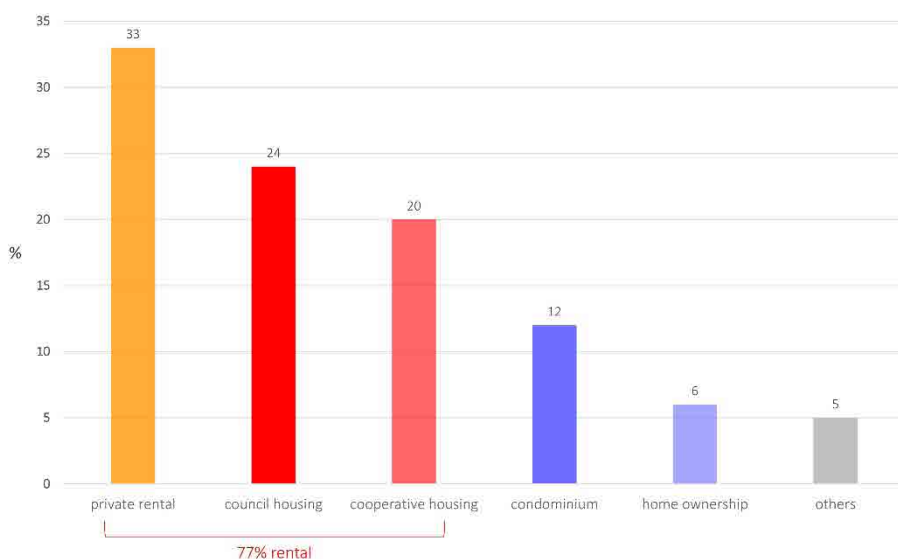
a strategy of systematic soft urban renewal by subsidising the refurbishment of the private housing stock to avoid the demolition of historical buildings. The increase of single households, the reduction of the number of flats as a result of the consolidation of flats in the course of refurbishment programmes, the trend of bigger flats and the rapid population growth meant that the 4,000 to 6,000 subsidised flats which the city built each year were nowhere near enough. **The City of Vienna decided to extend the programme for the construction of affordable housing up to 8,000 to 10,000 units per year.**

The costs for the construction of affordable housing on the one hand and for the continuation of the renewal programme on the other put an enormous strain on the public budget of Vienna. The city therefore explored new financing options. In 2000, Vienna started to make systematic use of the support options offered by the EIB via the integrated urban development programmes, which include housing renewal and urban regeneration as a hot spot of investment.

One particular outstanding project was the refurbishment of four one-hundred-year old storage buildings – the “Gasometers” – and their conversion into residential, retail and leisure developments. The constraints of monument conservation regulations meant that developers would have to invest in preservation. Neither public nor private investors could afford an investment for preservation under normal capital market conditions alone. The urban planning decision was taken to convert the Gasometers and to use them as incubators for a long-term urban development on their brownfield site. With an investment loan of €44 million (the total cost of the project amounted to about €174 million) the EIB contributed to this architecturally unique and internationally esteemed urban intervention. The development around the Gasometers is still ongoing and is helping to urbanise the area.

A factor of great importance for Vienna’s urban development is the long-term engagement of the EIB regarding social/affordable housing in Vienna, which started in 2002 and continues until today. The promoter and financial intermediary of such projects has been Wiener Wohnen (Vienna Housing), a city-owned company responsible for the management of the municipal housing stock (council housing). The City of Vienna owns about 220,000 flats which are rented out to low- and medium-income citizens. Vienna furthermore subsidises cooperative housing, which is provided mainly by limited-profit housing construction associations. Over the years the City of Vienna has subsidised the construction of around 200,000 cooperative dwelling units in the city. The subsidy goes directly to the housing associations; tenants who want to rent in these dwellings have to stay within a defined income limit. It is Vienna’s social policy concept to support low-income as well as medium-income citizens via municipal and cooperative housing to avoid segregation.

Vienna housing stock 2016: tenure status of dwellings in %



Source: Statistic Austria, Micro Census 2016. Total number of dwellings: ca. 880,000 main residences / overall around 990,000 units

During this period of 15 years, the city's demands and strategies changed the focus of social housing. Between 2002 and 2004 measures were implemented for upgrading rundown social housing and for neighbourhood-related urban regeneration via a continuous investment programme. The EIB supported this comprehensive rehabilitation by providing investment in two tranches with a total of €200 million. The cost for the whole programme was approximately €450 million. The core intention behind the project was to improve the quality of life for low-income residents and to preserve the municipal housing stock in a good physical condition.

Environment grows in importance



An associated aspect of housing of central importance for the City of Vienna is the issue of sustainable energy. In this context Vienna massively extended its network for district heating from 1990 to 2000. Currently the district heating network is 1,200 kilometres long and serves more than 380,000 dwelling units (a third of the housing stock) and 6,800 key accounts with heat for heating and warm water⁵. Two thirds of the energy comes from combined heat and power plants and industry, the rest from waste incineration. For the extension and renewal of older sections of the network Wien Netze GmbH (Vienna Net Company) received support from the EIB in the form of €109 million for the years 1997 to 1999.

Hand in hand with the population growth, the demand for more capacity of the main wastewater treatment plant increased. The growing demand, together with a second European amendment from 1996, meant that the City of Vienna had to plan a new extension of its wastewater treatment facilities on a higher level of quality. The incorporation of the existing plant into the newly extended facility presented a major difficulty. A team of experienced scientists and wastewater engineers mastered the challenge with a customised solution that is attuned to Vienna's specific needs. As a result, upon leaving Vienna, the waters of the Danube River are of the same quality as they are upstream of the city area. The construction costs for this complex eco-building project were about €225 million⁶ and the realisation until 2005 was made possible by an EIB investment loan of €177.5 million. A unique asset of this plant is that all the sewage sludge is thermally recovered. This process is facilitated by the Pfaffenau sludge incineration plant, which lies opposite.

Urban metropolitan management, not only planning

When re-examining the strategic level of urban planning during this phase, it becomes evident that urban development was now seen more as a task of strategic management than classical spatial planning. This progress was possible, because of the new practice laid out in the Strategy Plan 2000 and because most of the relevant spatial decisions on new urban development areas – be they inner-city or peripheral – had already been taken in the STEP 1994. A pluralistic approach began to drive the discussion of the new character of the urban development plan 2005 (STEP 2005).

Whether they concerned the question of transport, housing, working, region, energy, etc. aspects of resource protection and sustainability gained more and more attention in urban policy. Multidimensional and network-oriented thinking profoundly changed the urban development debate. In particular the challenges in the Twin-City-Region "Vienna Bratislava" (two capitals which are only 60 kilometres apart) underlined the importance of including internationalisation and cooperation in an increasingly competitive system of cities into the vision of Vienna's future. So it came as no surprise that, parallel to work on the STEP 2005, a lot of large-scale projects of international importance were underway – as will be shown in the next cycle – and defined the content and methodology of this strategy. In the STEP 2005, Vienna identified 13 target areas defined by indicators such as "urgency of demand and change", "high local development potential", "long-term metropolitan relevance" and others. In this way, long-established administrative and political hurdles in the area of urban planning could be softened; engagement and new forms of cooperation could be unlocked.

Cycle 3: 2006-2010

Large-scale investment boosts Vienna's competitiveness

This third development cycle is characterised by three main incidents and factors that had a great influence and impact on Vienna:

Implementation of large-scale investments

2006 to 2010 was the period where a bundle of large-scale infrastructure projects was carried out more or less simultaneously. This effectively upgraded Vienna and the Vienna Region as an internationally attractive location for business, research, tourism and living. These investments placed Vienna among the top ten in a ranking of large European cities regarding accessibility⁷. Most of the relevant investments concerned transport and research infrastructure, as well as new urban district development. This consisted of the construction of two additional tracks on the western main railway to Vienna and the new main railway station of Vienna, the expansion of Vienna Airport, and the construction of main northern and eastern sections of the outer-ring motor-highway, new science institutions and a new university, and several new urban districts.

Internationally attractive business location

From 2009 onwards, the international financial crisis had an impact on the economic development of Vienna by slowing down the city's already moderate economic growth and by increasing unemployment in the context of Vienna's still ongoing population growth. Between 2004 and 2014 economic growth in Vienna amounted to 1.4% per year on average compared to 0.7% in the Eurozone⁸. Overall, Vienna proved a robust business location because of its high labour productivity and its supply of innovative human capital. Due to the city's advantages of highly skilled labour and a very high quality of life Vienna remained an attractive business location for international headquarters. Between 2009 and 2014 the number of international headquarters rose from 158 to 204⁹.

Changing political constellations

After four years of coalition between the Social Democrats and Conservatives (1996-2000), Vienna was governed from 2001 to 2010 by only one party, the Social Democrats. To some degree, this majority allowed for more speedy and efficient decision-making on strategies, planning and the implementation of crucial projects. While the period between 2001 and 2005 was characterised by comprehensive planning, the period between 2006 and 2010 was an intense phase of implementation. In the city's local elections in 2010, the Social Democrats lost their majority and set up a coalition with the Green Party, the first coalition of this kind in Austria at a city level. The coalition with the Green Party (which continued after the elections in 2015 until now) caused a shift towards a more environmentally friendly and sustainable approach to (and understanding of) matters of urban development.

Upgrading transport infrastructure for international access

With the fall of the Iron Curtain, it became very evident that Vienna had been at the periphery of Western Europe and that some of its infrastructure for international travel fell short of European standards or was simply not available. A motor-highway and fast railway connections to the north (Brno) and east (Bratislava) did not exist. The accessibility of Vienna by train from the east and south was weak. From the west accessibility was better, but it was far from a high-speed connection. Vienna Airport did not have the capacity to cope with a rapid increase in air traffic.

Step by step motor-highways in the metropolitan region

Investment in transport infrastructure was an urgent objective, but this did not prompt action in all sectors immediately, so that many projects only started after the turn of the millennium. For example, arriving at the decision to close a section of 22 kilometres on the motor-highway between Vienna and Bratislava took more than a decade on the Austrian side. The construction itself then took only three years and by 2007 there was a complete motorway (A6)

between the two capitals which facilitated business and tourist development in the region. Another important motor-highway package for better supra-regional accessibility to Vienna started in 2003. The project concerned the planning, construction, financing and operation of a new southern section of the Northern Motorway (A5), sections east-west on the Vienna Outer Ring Expressway S1 and section S2 on the Vienna Northern Perimeter Expressway. This project seeks to ease the congestion on arterial commuter routes into Vienna and enhance road links between Vienna and the Czech Republic. It forms moreover part of a wider strategy to complete a ring road around Vienna. The project was run as a public-private partnership of ASFINAG with the company Bonaventura. The implementation of the project, which received an estimated total investment volume of €825 million, was supported in 2006 by the EIB with a loan of €350 million. The construction was completed in 2010. In spring 2018 a positive decision for tunnelling the Danube as the centrepiece of this ring was taken. This opens the opportunity to close the outer ring during the next few years, although the project has been heavily contested because of environmental concerns. For urban development in the east and south of Vienna and the development of the metropolitan region, it will be of high importance.

VIE Vienna Airport extension increases international accessibility

One of the most important projects regarding international accessibility – which was also extremely important for the development of tourism and international business in Vienna – was the extension of Vienna Airport. As Austria was a neutral country during the Cold War, Vienna Airport in particular played a crucial role in the transit between east and west. In 1990 around 5 million passengers used Vienna Airport. Already two years earlier the airport company had expected growth and had planned an extension of the airport, which was completed in 1996. Nonetheless, passenger and cargo traffic increased steadily. The number of passengers had already reached 11 million in 1999. Observing the trends very carefully, the Vienna Airport company published the “Masterplan 2015”¹⁰ in 1998, to prepare for the upcoming challenges and opportunities. Part of the masterplan was a proposal for the construction of a third runway and a terminal extension, Skylink, which would increase the airport’s capacity to 24 million passengers a year. The design and planning of the Skylink terminal and associated facilities started in 2001, and the terminal opened in 2012. The design, construction and commissioning of the terminal and associated facilities was supported by the EIB with two loans in 2006 with a volume of €400 million. The total cost of the investment amounted to about €800 million. In 2017, a record 24.4 million passengers were processed and further extensions are being discussed. In contrast the preparation of the third runway was a more complicated undertaking. After a five-year mediation process, construction is still on hold due to opposition and legal action from citizens’ groups, which has not yet been resolved. A final decision is expected in 2018.

Modernisation of the Austrian railway system in Vienna boosts urban development

Austrian Federal Railways, ÖBB, led the reorganisation of the country’s rail traffic so that it would be in line with EU regulations and TEN-T projects and to meet the new economic and logistic demands in the transport and cargo business. This became a topic of high importance in the 1990s and induced a lot of investment. This was the case in Vienna in particular, because the entire railway infrastructure, especially the decentralised railway stations and the areas for cargo handling, was outdated.

Two main decisions were taken by ÖBB very early on: First, the decision to overhaul the function and review the number of decentralised terminal stations. This included the construction of a new main railway station in the form of a transit station for international travel with regional connectivity. In 2003 the City of Vienna and ÖBB signed a memorandum of understanding for joint planning of this infrastructure development. The new main station was also required to have a direct link to Vienna Airport for international trains.

The second decision – taken earlier – was to concentrate the cargo handling areas in a new location in the metropolitan area of Vienna. Most of the old cargo areas had been in very central locations in the city. After lengthy negotiations between the City of Vienna and the real estate management agency of the ÖBB a solution with high urban development value for Vienna and high functionality for ÖBB was found. In the end, three large brownfields (former cargo areas)

became the most important areas for new inner city urban developments in the first and second decade of the 21st century. These are the areas of the former North and North-West railway station and big parts of the former South-East railway station.

The new main railway station is located more or less on the former site of the South-East railway station. The first phase of construction began in 2010 and was finished in 2012, and the full operation of the station started in 2014. In 2007 to 2009 the EIB approved an investment loan of a total €400 million to support ÖBB in realising this big infrastructure project; the overall costs were projected at €1 billion.

A new urban quarter with a business district, big park, housing and educational infrastructure began to develop on a brownfield site of 109 hectares near the main railway station. From 2020 onwards, more than 30,000 people are projected to live and work in this neighbourhood (Sonwendviertel, Quartier Belvedere)¹¹. It is constructed with the intention of connecting to the neighbouring areas of the 10th Vienna district and bringing new life into this older urban area.

Improving international and inner-urban high-performance rail-bound transport

To unlock the full capacity and attractiveness of a modern railway system and new railway station in terms of shortening travel times, thus gaining full added value for the project, it was also necessary to modernise the “Westbahn” rail mainline heading to Vienna. With an investment loan of €400 million in 2007 to 2008 the EIB contributed to the construction of two additional tracks on the Priority TEN-T Railway section between Vienna and St. Pölten, which attracted a total investment volume of around €1.45 billion.

In addition to these three big transport infrastructure investments, which were of high importance for Vienna and Austria, the City of Vienna also invested heavily in the extension of the Vienna underground system. The two underground lines U1 and U2 were extended between 2001 and 2008. The U2 underground was extended in particular to connect to the Vienna football stadium in time for the European Championships in 2008. The investment volume for both extensions was around €758 million. It was financed 50:50 by the City of Vienna and the federal state¹².

Science and research as incubators for urban development

In line with the increased discussions about the internationalisation of Vienna and improving its standing worldwide, the city paid more and more attention to the science and research sector. As the biggest university city in German-speaking Europe with nearly 186,000 students¹³, Vienna emphasised science and research. This was seen as an important incubator for urban development and economic growth. The paradox for Vienna is that universities are under the responsibility of the federal state and therefore the direct influence of the city in this area is weak. But the municipal government contributes to the development of Vienna as an attractive science and research hub in other ways, for example by financing R&D infrastructure, providing advisory services for research companies and research programmes for individuals, and supporting institutes and R&D focused companies. Between 2002 and 2011 the number of R&D units in the city increased from 1,032 to 1,487. The number of employees grew from 16,551 to 20,717 and the expenses for R&D facilities located in Vienna increased from €2 billion to €2.9 billion, of which the public sector financed between 40% and 50%¹⁴.

Two big investments in university and research institutions in Vienna and the Vienna Region raised the international visibility of Austria’s capital significantly.

First, the construction of **the new campus of the Vienna University of Economics and Business (WU)**. After just four years of construction (2009-2013), WU’s new, modern campus with approximately 90,000 m² of net floor area was completed in an area between the Messe Wien exhibition grounds and the Prater Park in 2013 and is directly accessible by the underground line U2. It is Vienna’s first “campus university,” consisting of six building complexes designed by famous international architects: Zaha Hadid, Peter Cook, Hitoshe Abe, NO.MAD architects, BUS architecture and Estudio Carme Pinós S.L. As the university moved into its new location in the second district,



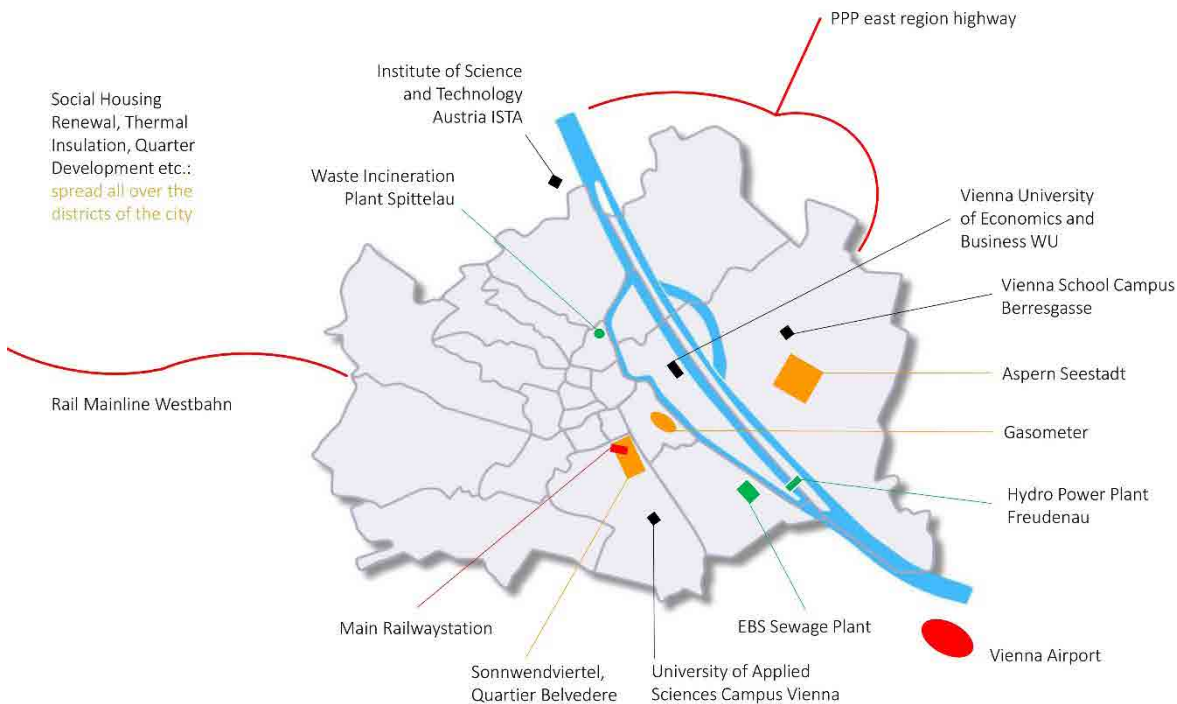
it led to a transformation of this former “red light” and “workers district.” The university still generates a lot of new investments in this part of the district today. The former location of the WU in the ninth district has now been turned into a new inner-city development area, for which the planning started in recent years. The construction of the new university campus with a total investment of around €500 million was supported by two EIB investment loans of €250 million in 2010.

A second significant project for the knowledge economy in the Vienna region to receive EIB financing was **the construction of the newly founded Institute of Science and Technology Austria (ISTA)**, which began in 2009 and was completed in 2015. The project’s construction costs amounted to €112 million, with the EIB investing €56 million and, later, an additional €42 million for an extension (total extension costs €84 million). ISTA carries out fundamental research in natural sciences, mathematics and computing and benefits from its proximity to Vienna and its science and research institutions. (ISTA is located in Klosterneuburg, a municipality with around 30,000 inhabitants that borders Vienna directly.)

Besides these big projects, the EIB contributed to the education infrastructure and knowledge economy of Vienna and Austria several times during the first decade of the 21st century. In 2009 it invested €35 million in the new construction of the University of Applied Sciences Campus Vienna (4,000 students). Between 2001 and 2010 the EIB supported BIG (Bundesimmobiliengesellschaft), the Austrian real estate company for federally owned institutions, with loans for the refurbishment and construction of primary and secondary schools and universities, many of them located in Vienna. The total amount of EIB loans in this period was €450 million.

Affordable housing: an ongoing refurbishment and new build challenge

In this cycle, the construction of a lot of new housing subsidised by the City of Vienna started to take place. Nonetheless, the city also continued its urban renewal and social housing rehabilitation offensive. The main objective was to upgrade the rental social housing stock so that it could meet contemporary housing quality standards by improving basic sanitation, increasing thermal insulation and significantly reducing energy consumption. With loans amounting to €315 million, the EIB contributed substantially to this very important housing investment by the City of Vienna between 2007 and 2008. Again, Wiener Wohnen (Vienna Housing) was the promoter and financial intermediary as well as the operator of the programme. Nearly 15,000 dwellings were able to be renovated between 2008 and 2010. A special rehabilitation programme for thermal insulation in social housing was also supported by the EIB with a framework loan of €100 million in 2006.



Cycle 4: 2011-present Balancing growth, the influx of refugees and smart urban development

In the mid-term evaluation of STEP 2005 in 2010, it turned out that population growth forecasts had been too moderate. Instead of growing by 30,000 more residents, the city grew by 55,000 new residents in four years (2005-2009)¹⁵. Immigration from other EU Member States had been underestimated, in particular from the new members of the first and second round of EU enlargement (2004, 2007) and from Germany. This trend became stronger after 2011, when the last restrictions on equal access to the European labour market for Romanians and Bulgarians fell away.

The new strategic environmental assessment implemented by the EU for large-scale urban development created new conditions for urban development in Vienna. More time was needed for planning procedures. For Vienna this was already relevant for the construction of the main railway station and for the planning of one of the biggest urban quarter developments in Vienna, Aspern Seestadt, a 240-hectare site in the 22nd district.

Smart large-scale urban developments and strategies raise the profile of the growing Vienna

The planning for this area started in 2005 with an international two-stage competition for the masterplan. The winner, Johannes Tovatt from Sweden, explained his approach: "Our ambition has been to provide a masterplan that creates streets and public spaces that are fundamentally public, human, lively, intimate and secure." In 2007 the city parliament adopted the masterplan for Aspern Seestadt and a new era of urban development in Vienna – the so-called "smart city" era – began.

This new philosophy was exemplified in Aspern Seestadt by the decision to make heavy-duty public transport available before building a motor-highway for this quarter. The extension of the U2 underground line by two stops (2010 and 2013) into the heart of this new quarter meant that the first housing offered to residents had a high quality of public transport already at the commissioning stage.

This investment could be seen as a symbol and landmark of intensified engagement for sustainable, smart urban mobility and it was closely connected with the new red-green coalition in Vienna in 2010. The Green Party took on responsibility for urban planning, transport, energy, climate protection and participation. This portfolio provided an opportunity to mainstream urban development in line with criteria of smartness and sustainability. One of the coalition's first joint decisions in this regard was to reduce the price of the annual ticket for public transport (for all underground, tram and bus lines) to €365 – just €1 per day. This shifted the modal split in Vienna significantly. Today more residents own an annual public transport ticket than a car.

Vienna's Smart City framework strategy 2050 and the urban development plan 2025

With the start of the coalition and building on substantial improvements in the quality of Vienna residents' life during the previous years, the municipal government decided to integrate all individual sectoral strategies and concepts under one Smart City Framework Strategy. In parallel the Vienna City Council commissioned the city administration to revise the city's urban development plan STEP 2005, including all relevant traffic and transport issues in 2011, to be submitted for decision by 2014. This created a unique situation. As the urban development plan was traditionally in the competence of the planning department, a portfolio-crossing output was difficult to reach. By contrast, the Smart City Strategy was portrayed from the beginning as an interdepartmental task. It was announced and promoted jointly by the city's coalition partners, the mayor and his deputy mayor, who was also responsible for the new urban development plan 2025. It comes as no surprise that this sparked a new dynamic of interaction and debate that enhanced public awareness of sustainability and smart cities. On the other hand, it also comes as no surprise that this caused conflicts of interest to surface.

Both documents were adopted in 2014 by the city parliament. As Roland Berger Company pointed out in its 2017 statement, explaining why Vienna ranked first in a comparison of smart city strategies from 87 cities across the globe, the comprehensive and inclusive approach was decisive. Vienna's smart city framework strategy 2050 is based on three objectives: radical resource preservation, development and productive use of innovations and new technologies, and – most importantly – high and socially balanced quality of living.

The starting point for the development of STEP 2025 were recent forecasts predicting that the city's population will continue to grow as has been the case in the past ten years and is likely to reach 2 million before 2030. To overcome the accompanying challenges regarding mobility, settlement development, urban technologies and the economy, and to secure continued success, STEP 2025 follows the objectives of a livable, sustainable, affordable and prosperous city. STEP 2025 defines the areas and principles of action for the urban development of the next 10 years in three sections:

Vienna: building the future I Vienna renews – the built city I Vienna mobilises land – space for urban growth I Vienna transforms – centres and underused areas

Vienna: reaching beyond its borders | Vienna generates prosperity – a business, science and research hub | Vienna is more – the metropolitan region

Vienna: networking the city | Vienna revives – open spaces: green & urban | Vienna is moving – diversified mobility in 2025 | Vienna makes provisions for the future – social infrastructure

The impact of the multifaceted dialogue-driven development process of these two strategies on the ongoing and new large-scale developments of this time was profound. The measures for planning and implementation in the areas of public space, mobility, affordable housing and mixed use housing were adapted for the development of the urban quarters Nordbahnhof, Nordwestbahnhof and Sonnwendviertel near the main railway station, Aspern Seestadt and others. Most of these developments started around 2010 and will be completed in the 2020s. By contrast the transformation of Mariahilfer Street, the longest shopping street in Vienna, into a shared space and pedestrian zone in 2014/2015 was a conflict-ridden undertaking. Nevertheless, it was a catalytic project in developing a new understanding of public space and smart urban mobility. Today it is perceived as a success.

The ongoing rise in demand for affordable and social housing

Affordable housing also remains a core topic of urban development throughout this period. Fast-track solutions have become more urgent due to the massive refugee influx in 2015 and 2016, which was the consequence of conflicts in Syria, Iraq, Afghanistan and Ukraine. Within Austria, Vienna became the primary destination for refugees and asylum seekers. By cooperating effectively with big NPOs and smaller NGOs, the City of Vienna was able to handle this challenge professionally and without any serious societal tensions. It became clear that because of the city's new residents the demand for affordable housing would increase in the long run. In 2002, Vienna had halted its construction programme for municipal housing. In 2012 a new strand of public subsidies for small and smart affordable housing was created and in 2015 Vienna decided to start building municipality-owned social housing once again. In 2019, the first 120 units in the construction programme will be completed. By 2020 about 4,000 new dwellings on 28 sites will be handed over to residents¹⁶.

Urban development and social housing rehabilitation in the face of climate change

Adaption to climate change became the second main pillar of the planning for urban development, transport and energy production and efficiency. Adopted in 2017, the Energy Framework Strategy 2030 provides the basis for the implementation of the City of Vienna's energy and climate targets. Equally, it serves as the basis for detailed implementation programmes in the energy sector. It builds the bridge between the target areas of the Smart City Vienna Framework Strategy with its long-term decarbonisation scheme and the operational short-term concepts and action plans of the departments and city-related companies.

The City of Vienna promotes the construction of new residential buildings, as well as school and kindergarten buildings, which use renewable energy and a low-tech approach as a priority. In line with the city's energy policy Wiener Wohnen extended its rehabilitation and retrofitting programme for social housing by implementing energy efficiency measures. This investment programme will lead to a CO₂ reduction of 46,000 tonnes per year. The cost of the project amounts to €550 million. The EIB supported this important new programme with a loan of €270 million between 2011 and 2014. In 2017 the EIB supported Wiener Wohnen with another loan of €150 million for further energy efficiency measures in social housing (the total investment for this will be €370 million). From 2011 to 2016 nearly 100 municipal residential neighbourhoods with about 17,000 dwelling units benefited from such programmes.

Supplying sustainable urban energy is another lighthouse action the City of Vienna implements through various projects. The Citizen Solar Power Plant "Wien Mitte", which opened in 2012 is the biggest inner city solar power plant in Vienna. On the rooftop of the new railway station and shopping mall, more than 1,400 photo-voltaic panels produce at peak green electricity of 356 kilowatt-hours. That is enough energy for around 130 households. Offices and shops at Wien Mitte benefit directly from this energy source. 10,000 citizens invested €35 million in this project and helped to reduce CO₂ emissions by 17,000 tonnes.



Another smart source is the use of energy from waste incineration, which Vienna has been operating for decades. For the revamp of one of Vienna's oldest incineration plants (Spittelau), between 2012 and 2015, the EIB contributed an investment of €70 million (the total cost of the project was €144 million).

EBS, Vienna's wastewater treatment plant, was the first company to benefit from an EIB contribution in Vienna (see cycle 1). 20 years later in 2015, EBS received support from the EIB once again. The bank contributed €150 million to an investment of €300 million for a project to be carried out in 2015-2020. It will be the first municipal project for energy independence in all of Europe. The objective of this new project is to ensure the energy independence of Vienna's wastewater treatment plant by using sewage sludge as an energy resource for in-house energy needs. 20 million m³ of methane is expected to be extracted annually from sewage sludge and converted into electricity and heat. This will allow Vienna's wastewater treatment plant to cover 100% of its own electricity needs from renewable sources by 2020 and to reduce its energy costs at the same time.

Due to financial challenges facing the public sector, the City of Vienna is looking for new public-private

partnerships in sectors that have traditionally been the sole responsibility of the municipality. A first attempt with the support of the EIB is the construction of the Vienna school campus "Berresgasse" for 1,100 children under 14 years old. The campus will contain a kindergarten with 12 groups, a primary school with 17 classes, a middle school with 12 classes, as well as four special education classes. The campus will be completed in 2019. The EIB is contributing to this PPP (promoter and financial intermediary is PORR AG) with €22 million. In 2015 another PPP concept for educational facilities in the context of the Vienna "Campus plus" programme has been approved by the EIB. The city plans to complete this new project by 2023. The proposed EIB financing amounts to €300 million. The individual projects will be procured under "Design-Build-Finance-Operate-Maintain" PPP contracts.

Future challenges Staying metropolitan, inclusive and innovative

The four development cycles of Vienna show that **citizens, migrants, politicians and experts in business, science and administration are capable of turning a declining city at the eastern edge of Western Europe into a vibrant, global and inclusive city in Central Europe.** These three decades show as well that Vienna has consequently pursued a high public investment model in transport, housing, energy and education, and the EIB has supported that by providing both financial capacity and coherent project support and planning. The projects and programmes which Vienna has realised with the support of the EIB demonstrate that the EIB has developed tools appropriate for different aspects of urban development and that the city has learned to synchronise its programmes and projects with the EIB's innovative tools.



How to continue the success story?

The success of the city also has a lot to do with Vienna's DNA as a city of social responsibility and integrative power, which builds on the legacy of the so-called "Red Vienna" of the interwar period. Its status as an independent federal province, which was introduced in 1922, enabled the City of Vienna to engage in autonomous legislation and financial management, which was necessary for implementing an ambitious, standard-setting municipal reform programme. This ranged from social housing to health and education policies and was driven by the principle of social justice. With this programme Vienna got the chance to overcome its loss of position as metropolitan centre of the Habsburg Monarchy – in 1910 Vienna was the sixth-biggest city in the world – and to establish a new progressive self-image.

The success of the city also has to do with its position as a city of international dialogue. The perception of Vienna as a place of mediation builds on the United Nations Office in Vienna and the headquarters of OPEC and OSCE, as well as the self-confident foreign policy of Federal Chancellor Bruno Kreisky, who was able to establish Vienna as a logical hub of international diplomacy during the Cold War.

The modern interpretation of these parts of Vienna's DNA are still a guiding principle for the city's policymakers. Mayor and Governor Michael Häupl, who retired in May 2018 after 23 years at the head of Vienna's government, is well-known for his stance against nationalism, racism and xenophobia and his actions to promote openness, solidarity, competitiveness and innovation.

Keeping this spirit alive and putting it into effect through new urban initiatives, policies and actions will be one of the core future challenges for Vienna in the upcoming decade. To follow this spirit and Vienna's Smart City Framework Strategy and to achieve the UN Sustainable Development Goals, Vienna will have to focus considerably on three topics in the next few years:

Reaching out for sustainable inclusion of migrants of every status

The recent political backlash against migration – be it forced migration or labour movement – greatly increases the problems of integration. Integration is undoubtedly a challenging task for both sides. Migration causes a disruption of habits and leads to struggles for the distribution of prosperity and opportunity. It makes the future uncertain, does the question of how to cope with it. Although Vienna has managed all the various migrant influxes of the last three decades quite successfully, it is also evident that tensions and problems have been rising in the labour market and in particular in education and schools. Adults and children who came here won't leave, that seems sure, and so public and private efforts to create new forms of support for inclusion have to be made and undertaken to leverage economic benefits and minimise burdens both for the host society and for individual migrants.

Putting affordable housing on the agenda for society and private investment

Affordable and social housing is still perceived as an exclusively public matter and remains in the realm of public responsibility. But this approach does not correspond well with decreasing public budgets and with the call for the retreat of the state from interventions in the property and housing market. Under the heading "New social housing," Vienna is preparing an International Housing Construction Exhibition for 2022 to develop and test new forms, qualities and pilots of affordable housing. Building on international exchanges of best practice – for example, about new ways of how to enable and unlock private investment capital for societal social responsibility by building affordable, purpose-built rental housing – will be one of the issues.

Smart adaptation of urban development in the context of economic and climate changes

Disruptive business models, technological innovations and global political and economic failures and developments. All of these make it challenging to predict the future of the urban economy and its effects on urban development. In terms of resilience and sustainability, digitalisation offers opportunities as well as threats. More effective intermodal urban mobility will have a significant impact on the city, for example, but autonomous self-driving vehicles will require expensive new urban technical infrastructure that would need to be built during an uncertain transitional period. New materials and production processes will increase environmental benefits via circular economy production and trade. Full-time jobs will be substituted by automation. Moreover, part-time jobs and precarious, low-wage employment will increase.

Another aspect: High urban density in Vienna already is – and will increasingly become – a necessity in smart urban planning. However, it also causes problems for the environment and for the city's commitment to environmentally friendly urban settlement, because of the emergence of more and more heat islands. This issue demands new urban development approaches.

All of this and more will affect urban development in Vienna in different ways. To reach climate goals in such a context, a massive transformation of planning, construction, mobility, energy supply, etc. will be necessary. This will consequently give rise to new investments and smart city investment programmes.

Annex

EIB loans in Vienna and the metropolitan area

Environment & Energy

ABWASSER WIEN I	Water, sewerage	22/12/1995	39 376 638	
KLARANLAGE SIMMERING	Water, sewerage	04/10/2001	16 000 000	
KLARANLAGE SIMMERING	Water, sewerage	05/04/2002	46 455 000	
KLARANLAGE SIMMERING	Water, sewerage	26/11/2003	50 000 000	
KLARANLAGE SIMMERING	Water, sewerage	06/09/2004	65 000 000	
EBS ENERGY OPTIMISATION SLUDGE TREATMENT	Water, sewerage	28/04/2014	150 000 000	
				366 831 638
DONAUKRAFT HYDRO POWER (AUSTRIA)	Energy	25/06/1996	26 418 596	
DONAUKRAFT HYDRO POWER (AUSTRIA)	Energy	22/04/1997	25 613 473	
DONAUKRAFT HYDRO POWER (AUSTRIA)	Energy	19/06/1997	102 214 006	
DONAUKRAFT HYDRO POWER (AUSTRIA)	Energy	25/11/1998	40 000 000	
DONAUKRAFT HYDRO POWER (AUSTRIA)	Energy	08/11/1999	97 000 000	
WIEN FERNWÄRME	Energy	27/05/1997	76 857 014	
WIEN FERNWÄRME	Energy	09/06/1999	32 000 000	
WIEN ENERGIE WASTE TO ENERGY	Energy	19/12/2013	70 000 000	
				470 103 090

Housing & Urban Development

GASOMETER WIEN URBAN RENEWAL	Urban development	26/05/2000	29 747 149	
GASOMETER WIEN URBAN RENEWAL	Urban development	04/07/2000	14 252 851	
WIENER WOHNEN	Urban development	26/04/2002	50 000 000	
WIENER WOHNEN	Urban development	09/09/2002	25 000 000	
WIENER WOHNEN	Urban development	14/01/2003	25 000 000	
STADTERNEUERUNG WIEN	Urban development	15/05/2003	25 000 000	
STADTERNEUERUNG WIEN	Urban development	09/01/2004	50 000 000	
STADTERNEUERUNG WIEN	Urban development	01/09/2004	25 000 000	
WÄRMEDÄMMUNG WIENER WOHNEN	Urban development	10/01/2006	100 000 000	
WIENER WOHNEN STADTVIERTELVERBESSERUNG	Urban development	16/02/2007	105 000 000	
WIENER WOHNEN STADTTEILSANIERUNG	Urban development	17/06/2008	105 000 000	
WIENER WOHNEN STADTTEILSANIERUNG	Urban development	28/10/2009	105 000 000	
WIENER WOHNEN ENERGIEEFFIZIENZ	Urban development	15/12/2011	150 000 000	
WIENER WOHNEN ENERGIEEFFIZIENZ	Urban development	09/09/2013	120 000 000	
WIENER WOHNEN REVITALISIERUNG	Urban development	16/05/2017	150 000 000	
				1 079 000 000

Transport & Mobility

OEBB PRIORITY TEN WESTBAHN	Transport	06/09/2007	200 000 000	
OEBB PRIORITY TEN WESTBAHN	Transport	02/06/2008	200 000 000	
OEBB WIEN HAUPTBAHNHOF TEN	Transport	10/12/2008	200 000 000	
OEBB WIEN HAUPTBAHNHOF TEN	Transport	27/03/2009	200 000 000	
				800 000 000
AUSBAU FLUGHAFEN WIEN	Transport	09/06/2006	300 000 000	
AUSBAU FLUGHAFEN WIEN	Transport	22/12/2006	100 000 000	
				400 000 000
PPP OSTREGION AUTOBAHN - PAKET 1	Transport	21/12/2006	350 000 000	
				350 000 000

Education & Universities

INSTITUTE OF SCIENCE AND TECHNOLOGY AT	Education	24/06/2009	56 000 000	
INSTITUTE OF SCIENCE AND TECHNOLOGY AT	Education	12/12/2013	42 000 000	
FACHHOCHSCHULE CAMPUS WIEN	Education	10/12/2009	35 000 000	
WIRTSCHAFTSUNIVERSITÄT WIEN	Services	07/05/2010	85 000 000	
WIRTSCHAFTSUNIVERSITÄT WIEN	Education	07/05/2010	165 000 000	
VIENNA SCHOOL PPP CAMPUS BERRESGASSE	Education	05/10/2017	21 305 976	
VIENNA SCHOOL PPP CAMPUS BERRESGASSE	Education	08/03/2018	652 054	
				404 958 030
BIG BILDUNG/UNIVERSITÄT INFRASTRUKTUR	Services	07/09/2001	100 000 000	
BIG BILDUNG/UNIVERSITÄT INFRASTRUKTUR	Education	08/05/2002	150 000 000	
BIG BILDUNG/UNIVERSITÄT INFRASTRUKTUR	Services	16/06/2009	60 000 000	
BIG BILDUNG/UNIVERSITÄT INFRASTRUKTUR	Education	16/06/2009	140 000 000	
				450 000 000

In Total

4 320 892 757

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- 11 <http://infrastruktur.oebb.at/de/projekte-fuer-oesterreich/bahnstrecken/grossraum-wien/wien-hauptbahnhof>
- 12 http://www.rechnungshof.gv.at/fileadmin/downloads/2009/berichte/teilberichte/wien/wien_2009_07/wien_2009_07_1.pdf
- 13 https://oravm13.noc-science.at/apex/f?p=103:6:0::NO::P6_OPEN:N
- 14 <https://www.wien.gv.at/statistik/bildung/tabellen/f-und-e-w-zr.html>
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