



The Governance of Land Use in the Czech Republic

THE CASE OF PRAGUE

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Foreword

How land is used affects a wide range of factors – from day to day quality-of-life factors, such as the availability of food and clean water and the length of daily commutes, to the long-term sustainability of urban and rural communities, including the possibility for climate change adaptation and mitigation. How governments regulate land use and address public and private investment, how competencies are allocated across levels of government, and how land use is taxed, are critical for all of these things and more.

This study examines land-use trends, policies and practices in the city of Prague. Prague is a central city and the capital of the Czech Republic. It is a successful city that is in a period of population growth and investment. This creates new land-use demands – Prague needs room for new homes, businesses, infrastructure and services for its growing population. Large brownfield sites will form the city’s new growth centres and their development will require careful management to ensure that these new areas are successfully integrated into the city as a whole and offer high quality of life for residents. Like many metropolitan areas in the OECD, Prague faces the challenge of coherently managing spatial development across administrative boundaries. New institutional mechanisms and incentives for municipal co-ordination are needed to manage the consequences of rapid peri-urbanisation.

This study takes place in the midst of an important time in Prague. After a long delay, Prague is in the midst of adopting a new land-use plan for the city. The new plan is grounded in a compact city approach. It seeks to help the city meet its potential by providing less regulatory direction in the parts of the city that are stable and more guidance in rapidly changing areas where there is greater potential for land-use conflict due to changing uses. This will be a critical tool to guide the city’s future development. But it alone cannot guarantee that the desired changes that are regulated and proposed in the plan will come about. It is important that other incentives and policies are aligned with the goals of spatial development for the city, such as fiscal incentives for brownfield development or transit-oriented development.

This report is part of the OECD’s Regional Development Policy Committee’s programme of research on the governance of land use. It is the fifth of several land use studies that the OECD has undertaken. This report, together with other governance of land use case studies, have in turn informed *The Governance of Land Use in OECD Countries: Policy Analysis and Recommendations* (2017), which provides policy analysis and a synthesis of the main recommendations from OECD work on land use. The OECD has also produced a companion volume to this report – *Land-Use Planning Systems in the OECD: Country Fact Sheets* (2017) – which provides a descriptive overview of land-use planning systems across OECD countries.

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Table of contents

Acronyms and abbreviations	11
Executive summary	13
Assessment and recommendations	17
Chapter 1. Spatial planning in the Czech Republic	29
Levels of government and their responsibilities	30
Subnational government finance and land use	35
The spatial planning system – laws, institutions and practices	37
Key spatial planning issues in the Czech Republic	44
Notes	47
References	48
Chapter 2. Land-use trends, opportunities and challenges in Prague	51
Geography and land use	52
Prague’s economic development	59
Socio-economic and demographic profile	64
Housing and real estate trends	72
Transportation infrastructure and transit networks	77
Greatest pressures for land development and protection	80
Notes	84
References	86
Chapter 3. The governance of land use in Prague	93
The city of Prague’s multi-level governance	94
Strategic and land-use plans in Prague	98
Prague’s building regulations and approvals process	107
The fiscal environment, tools and instruments	111
Key issues and directions for reform	122
Notes	128
References	129
Chapter 4. The need for a co-ordinated metropolitan spatial development strategy	135
Metropolitan governance for integrated spatial planning	136
Prague’s spatial boundary and managing urban expansion	139
Managing inter-jurisdictional land-use conflicts	143
Rural-urban partnerships for co-ordinated spatial development	148
Implications for the Prague metropolitan area	152
References	159

Tables

Table 1.1.	Key subnational legislation post-1989	31
Table 1.2.	Division of responsibilities between regions and municipalities, Czech Republic	32
Table 1.3.	Municipal size, Czech Republic, OECD, EU	33
Table 1.4.	Subnational government revenue, 2016	36
Table 2.1.	Land-use change, European functional urban areas	57
Table 2.2.	Key population data, Prague, 1993-2015	65
Table 2.3.	Land cover at the national level in the Czech Republic	67
Table 2.4.	Land cover in functional urban areas	68
Table 2.5.	Office market indicators, Prague, Brno and Ostrava, 2015	76
Table 3.1.	Division of responsibilities: Prague, districts and boroughs	97
Table 3.2.	Main statutory spatial planning documents in Prague	99
Table 3.3.	Land value-capture tools	120
Table 3.4.	Core compact city indicators	127
Table 4.1.	The United Kingdom's duty to co-operate	146

Figures

Figure 1.1.	Organisation of spatial and land-use planning in Czech Republic	41
Figure 1.2.	The building permit process, Czech Republic	43
Figure 2.1.	Czech Republic functional urban areas	53
Figure 2.2.	Prague and the Central Bohemian region	54
Figure 2.3.	Prague's population by district, 2015	54
Figure 2.4.	Land use in the city of Prague, hectares, 2015	55
Figure 2.5.	Developed land per capita, commuting zone, European functional urban areas, 2012	57
Figure 2.6.	Percentage change in developed land, commuting zone, European functional urban areas, 2000-12	58
Figure 2.7.	Percentage change in developed land per capita, commuting zone, European functional urban areas, 2000-12	58
Figure 2.8.	Economic indicators, Prague and OECD functional urban areas	60
Figure 2.9.	Gross value added by industry, 2013	61
Figure 2.10.	Population growth, Prague, 1919-2015	65
Figure 2.11.	Prague population forecasts, 3 scenarios	68
Figure 2.12.	Middle range population forecast, by age grouping	69
Figure 2.13.	Unemployment rate, OECD, Czech Republic, Prague, 2001-14	69
Figure 2.14.	Share of population by net monthly income, by region, 2015	70
Figure 2.15.	Inequality and poverty, OECD, Prague and Czech regions	71
Figure 2.16.	Number of people living in socially excluded areas, TL2 regions, Czech Republic	71
Figure 2.17.	Ring of housing estates, Prague	73
Figure 2.18.	Construction and building permits, Prague, 2007-15	74
Figure 2.19.	The construction of new dwellings, Prague and Central Bohemia, 2007-15	75
Figure 2.20.	New dwellings completed, Prague districts, 2015	76
Figure 2.21.	Urban passenger transport, Prague, 2007-15	78
Figure 2.22.	Change in traffic by area, 2000-15	79
Figure 3.1.	Organisational structure, city of Prague	96
Figure 3.2.	Strategic plan within the city's management	100

Figure 3.3.	Prague's 2016 Strategic Plan: Key themes.....	103
Figure 3.4.	The ten elements of the Metropolitan Plan	105
Figure 3.5.	Total revenue per capita, Prague and regions, 2015.....	112
Figure 3.6.	Revenue sources by region, 2015.....	113
Figure 3.7.	Prague, revenue by type, 2015	114
Figure 3.8.	Prague, expenditure by type, 2015.....	114
Figure 4.1.	Four broad categories of metropolitan governance bodies in OECD metropolitan areas	139
Figure 4.2.	Urban-rural relationships within functional regions.....	149

Boxes

Box 1.1.	Other OECD countries' experience in overcoming territorial fragmentation	34
Box 1.2.	Czech spatial development policy and the Principles of Urban Policy	38
Box 1.3.	A note on terms: Spatial and land-use planning	40
Box 1.4.	The building permit process in the Czech Republic.....	42
Box 2.1.	Data on land cover.....	59
Box 2.2.	The growth of hotels in the unregulated tourism sector	62
Box 2.3.	Land-use trends in the Czech Republic: Growing suburbanisation	67
Box 2.4.	How's life in Prague?.....	77
Box 2.5.	Brownfield redevelopment projects in Prague	81
Box 3.1.	Prague's development: From conurbation to unicity to the two-/three-tier district model.....	98
Box 3.2.	Towards a more flexible and responsive spatial planning system in the Netherlands: The new Dutch Environmental and Planning Act	106
Box 3.3.	Prague's Public Space Design Manual.....	108
Box 3.4.	The use of neighbourhood plans in the United Kingdom.....	109
Box 3.5.	Designing property taxes for sustainable land use	116
Box 3.6.	Fiscal instruments to manage development.....	118
Box 3.7.	Transforming brownfields: Temporary uses and a phased approach in Amsterdam	125
Box 4.1.	Metro Vancouver's Regional Growth Strategy	138
Box 4.2.	Defining metropolitan governance.....	140
Box 4.3.	The importance of historical path dependency to Prague's spatial boundary	142
Box 4.4.	The United Kingdom and the "duty to co-operate"	145
Box 4.5.	The EU's integrated territorial investments	147
Box 4.6.	Strategic spatial planning: France's territorial coherence plans.....	151
Box 4.7.	Regional governance in the Lübeck metropolitan area	154
Box 4.8.	Nuremberg Metropolitan Region	155
Box 4.9.	Mechanisms for vertical co-ordination on spatial planning	158

Acronyms and abbreviations

CZK	Czech koruna (currency)
EU	European Union
FDI	Foreign direct investment
FUA	Functional urban area
GDP	Gross domestic product
Ha	Hectare
Habitat	United Nations Human Settlements Programme
ICT	Information and communications technologies
IPR Prague	Prague Institute of Planning and Development
ITI	Integrated territorial investment
NGO	Non-governmental organisation
SDP	Spatial Development Policy
TDR	Transfer of development rights
UNESCO	United Nations Educational, Scientific and Cultural Organization
VAM	Voluntary Association of Municipalities

Executive summary

The central city of Prague faces many pressures for land use and development

Prague is the economic, cultural and political centre of the Czech Republic and the largest city in the country. Its economy contributes a quarter of the national gross domestic product (GDP) and it is home to 12% of the 10.5 million population of the country. Prague's population is estimated to increase by 20%, from today's 1.26 million to 1.49 million, by 2050, which will create demand for new housing and commercial spaces, public services, parks and greenspaces, and infrastructure.

There are many pressures on land use. Land management in Prague's historic urban core, which is a UNESCO World Heritage Site, requires careful balance between the needs of residents, workers, tourists and commuters. The many brownfield sites in the city offer the potential to develop entirely new neighbourhoods. Meanwhile, developments along the river Vltava, which runs through Prague, demand compatibility between land and water management.

Prague is experiencing rapid peri-urban growth

Prague's functional urban area (FUA) spans 435 municipalities. The communities just outside of Prague's administrative boundary in the region of Central Bohemia are growing rapidly, despite ample available land within the city itself. Between 2000 and 2012, developed land in Prague's commuting zone grew by 1.0% per annum; this is over twice the average for the commuting zone of European FUAs (0.5% per annum) and more than three times that of Prague's urban core (0.3% per annum). Peri-urbanisation has put pressure on Prague's transportation infrastructure as the number of commuters grows annually, and it challenges the city to find compact and sustainable development solutions.

The shift from a communist regime towards a market democracy has presented a challenging environment for land-use planning

In the early days of the new parliamentary republic – the so-called “wild 1990s” – there was a massive privatisation of formerly public lands and foreign investment flooded into Prague, particularly into its historic core. Incidences of corruption and opaque processes led to a low level of trust between public officials, developers and residents, which have coloured relations to this day. There are ongoing efforts to improve relations within the planning process. This is a critical issue since Prague is in a period of growth and investment, which requires co-operation between these groups.

The city's new strategic plan and soon-to-be adopted land-use plan are grounded in compact development and urbanism principles

Prague's 2016 strategic plan prioritises the need to reduce pressure on the urban core and improve the quality of the urban environment and architecture. Complementing this, the city's new land-use plan, the Metropolitan Plan, aims to concentrate and intensify the use of existing areas and to develop brownfields, while designating almost no new greenfield areas to be developed. Despite its name, the Metropolitan Plan does not cover the metropolitan area – just the city of Prague. The plan aims to increase ecological stability in the existing open areas, which allows establishment of new forests or reforestation or conversion of agricultural fields to meadows. After years of outdated strategic and regulatory documents that received limited public and political support, efforts have been made to develop more inclusionary planning processes that offer a strong assessment of the major issues facing the city and directions for reform.

Key recommendations

Fiscal incentives and/or regulatory frameworks should be established by the national government in order to encourage metropolitan spatial planning. The 2016 EU-funded Integrated Territorial Investment (ITI) Strategy for the Prague metropolitan area promotes a co-ordinated metropolitan approach in transportation, education and flood prevention. Incentives need to be in place to encourage ongoing partnership for spatial development strategies and the national government has a critical role to play in this regard. At present there is no instrument that provides this beyond ITIs. In peri-urban areas, nodal developments linked to transportation investments should be encouraged.

Use fiscal tools and incentives to complement spatial development objectives. For example, the property tax is spatially neutral and does not capture increases in the value of properties due to public investments in infrastructure; a shift to an *ad valorem* tax on property is warranted. Other options include: spatially differentiated parking rates to manage congestion; fiscal instruments to encourage density, such as transfer of development rights (TDR); or brownfield redevelopment incentives. Prague has low fiscal autonomy and is significantly constrained by national laws. Matters such as the shift to *ad valorem* property tax fall to national jurisdiction and would require changes to revenue-sharing arrangements among levels of government.

Improve integrated spatial planning by aligning sectoral and borough-level plans with the strategic plan. The effectiveness of the city's strategic plan is undermined by the fact that other municipal strategies and frameworks, programmes or sectoral concepts prepared by the city administration as well as borough-level strategic plans are not obliged to confirm to its objectives. This fundamentally undermines the co-ordinative purpose of such a strategy. A systematised process to implement and evaluate the strategic plan based on cross-department project management is needed.

Establish clear guidelines for the negotiations between developers and planning authorities. Developer contracts (agreements between municipal authorities and developers) are legally complicated and rarely used in Prague. This is a missed opportunity. Beyond this, the limitation of developer contributions to technical and transport infrastructure only should be reconsidered; this is the purview of the national government.

Improve the relationship between residents, developers and local government. There are a number of potential actions on this front. Key spatial development indicators should be developed and communicated to the public regularly, dialogue on projects should be opened at the conceptual stage of the planning approvals process and non-governmental

organisations should be involved in a regularised way. The rules around public appeals should be revisited, including their time frames.

Reduce the regulatory burden facing developers in the building approvals process.

The city should lessen the regulatory burden on developers by, for example, establishing a one-stop process for building permits so that it is not on the onus of the developer to obtain multiple approvals from individual departments. At present, the process is long, complex and administratively complicated, requiring up to 45 different approvals from municipal and state authorities in Prague.

Enhance the monitoring and evaluation of spatial trends – for both Prague and its FUA. This action will help Prague assess the impacts of the new Metropolitan Plan, once it has been adopted, and determine whether the city is on track to meet its spatial development goals. Beyond this, there is a need to improve the monitoring of peri-urban spatial trends and assess the policy implications for, for example, service delivery and transportation provision. Such evidence-based assessments will help establish priority areas for collaboration across Prague's FUA.

Assessment and recommendations

Spatial trends in Prague

A historical, central city facing many land-use demands

Prague (*Praha*) is a vibrant and growing city. It is the economic, cultural and political centre of the Czech Republic and the largest city in the country. Prague covers 49 613 hectares (ha) and has a population of 1.26 million inhabitants – representing 12% of the population of the country. A further 300 000 individuals commute or visit Prague daily. Prague's economy forms 25% of the national gross domestic product (GDP) and is dominated by the services sector, which accounts for approximately 80% of its economic base.

As a central city, Prague faces many pressures for land use and development. It has a historic urban core dating from the 10th-18th centuries that is a UNESCO World Heritage Site. This area is a magnet for tourists. Land uses must balance the needs of residents, visitors, workers and commuters in this area while maintaining monuments and heritage buildings. The city also needs to manage occasional flooding from the river Vltava which runs through it and land uses need to be compatible with water management. The city's industrial heritage has left a large number of brownfield sites, which require conversion into new uses. There is a need to balance the interests of heritage conservation and environmental protection with urban and local economic development.

Prague is seeing rapid sub- and peri-urban growth, which puts growing pressure on transportation infrastructure as the number of commuters grows. It further challenges the city to ensure compact and sustainable development practices. These issues, together with the need for affordable housing and quality public amenities, are among the most important land-use issues the city faces today.

Prague's territory and governance presents unique co-ordination challenges

While the city of Prague has a population of approximately 1.26 million, its functional urban area (FUA, the area across which people live, work and commute) is larger, at approximately 1.9 million. Prague's FUA spans 435 municipalities and includes larger municipalities, such as Kladno which lies northwest of Prague and has a population of approximately 68 000, along with a large number of small municipalities, such as Krhanice, which lies to the south of Prague and has a population of under 1 000. The interconnectedness of municipalities large and small across this urban system has obvious implications for spatial planning and land use – it raises the importance of a co-ordinated approach across the functional territory. Prague stands as the tenth most fragmented FUA in the OECD, with approximately 23 municipalities per 100 000 inhabitants.

Prague is both a city and a region. It is surrounded entirely by the region of Central Bohemia. The city of Prague has a single elected self-government as well as 57 self-governing municipal boroughs, of very unbalanced size (from 300 to 130 000 citizens), which have been further grouped into 22 numbered administrative districts. As such, one can say that

the city/region of Prague has either three or two layers of government, depending on whether one counts an administrative district or borough. Boroughs have an elected council with a mayor, as does the city of Prague (city-region).

Prague co-operates with the region of Central Bohemia as well as the municipalities in its FUA on transportation issues. There are also nascent projects to pursue co-ordinated development in a few other areas as well. However, there is no metropolitan governance body and there is no legal or regulatory mechanism to co-ordinate on spatial development.

Land use in Prague has changed rapidly over the past several decades

Prague has seen the most intensive urbanisation and suburbanisation of any municipality in the Czech Republic. Between 1985 and 2000, built-up areas increased from 1.1% of the territory to approximately 8.1%. However, Prague continues to have a very large share of agricultural and natural lands in its territories. Around a quarter of the city's land is open countryside and almost a quarter is agricultural land. Large areas of suburban woods are integrated with residential areas. Forested areas in Prague have increased by almost a third over the past century. Housing covers 12% of Prague's area while 5.5% is reserved for public services and amenities.

Flood water management along the river is critical. Prague sits in the heart of the Bohemian Basin and is bisected by the Vltava River, which is prone to occasional flooding. Erosion along the river's banks and flood protection are a critical element of land-use planning for the city.

Despite available land in Prague, surrounding areas have experienced rapid peri-urbanisation

Prague is experiencing rapid peri-urban growth. Between 2000 and 2012, developed land across Prague's FUA increased by 0.7% per year, which is higher than the European FUA average, at 0.40%. By far the greatest increases in developed land were seen in Prague's commuting zone, which grew by 1.03% per annum over this period. This is almost twice the European average for the same period (0.52% per annum).

It is important to also consider how these changes in the amount of developed land relate to population growth or decline. In the core, the percentage change in developed land per capita was just -0.15, indicating that growth in developed land is only slightly lower than population growth. Meanwhile, developed land per capita in Prague's commuting zone declined by -0.62% per annum between 2000 and 2012. This indicates that while Prague has seen growth in developed land in the commuting zone, this growth has been slower than population growth and more than in the core over the same time period.

Prague's 1999 land-use plan (currently in force) assigned land for the development of single-family homes within its outer areas. However, for the most part, such developments have skipped this zone, moving instead to nearby communities in Central Bohemia. This peri-urbanisation is driven by a number of factors: there are cultural preferences for home and car ownership; land is in many cases cheaper in the peripheral areas; and finally, the building permission process in peripheral areas can be less onerous than in Prague itself due to differences in zoning and administration.

This peri-urbanisation has important environmental implications. High-quality agricultural soil is being lost as a result of urbanisation. Between 2006 and 2012, a total of 2 816 ha of agricultural land were converted into built-up areas in Prague. A study by Spilková and Šefrna notes that this urbanisation of high-quality agricultural land is occurring despite the existence of Czech legislation to protect the highest quality soils (2010).

Prague is a major contributor to national economic growth with a strong service-based economy

Among OECD FUAs, Prague stands in the top quartile in terms of GDP growth (2000-13), labour productivity growth (2000-13) and GDP as a share of national value (2013). In terms of the levels of GDP per capita (2013), Prague FUA is ranked slightly lower than its OECD FUA counterparts, falling in the second quartile. In light of the fact that Prague substantially exceeds the economic indicators of the other parts of the Czech Republic, it is only eligible for limited support from EU Cohesion Funds.

The city's strong tourism sector impacts land use in the historical core

Tourism in Prague has been growing steadily – from approximately 16 million overnight stays in 2012 to approximately 17.5 million in 2014. The number of visitors reached 6.1 million in 2014 and the vast majority of this tourism is concentrated in Prague's historic city centre, which spans just 8.6 km². The number of residents in this area has decreased, from 170 000 in 1900 to 53 000 in 2001. Much of the existing population has been displaced due to a steep rise in property prices in the core. Today there are debates about how the central area can retain touristic functions while also being a place that local residents can enjoy.

The city's many cultural heritage sites, historical zones and natural zones require preservation. There are over 2 000 protected heritage monuments in Prague and its centre is a UNESCO World Heritage Site. The UNESCO World Heritage Site covers 898 ha (its buffer zones spans another 9 016 ha) and is the site of 20% of all places of employment in the city. Further, Prague has 12 nature parks that comprise 20% of the city's territory which hold special protection status.

Continued population growth is anticipated to 2050 – and a growing share of the young and the elderly

Population projections for Prague anticipate growth to 2050. According to most probable (middle) scenario, Prague's population is anticipated to increase by 20%, to 1.49 million by 2050 (this scenario has been used for the new land-use plan – the Metropolitan Plan Prague). An increase in life expectancy is also anticipated such that that Prague will have an ageing population. For example, under the middle range population scenario, the percentage of the population aged 65 and over is anticipated to increase by 36% between 2016 and 2050, while for those under 25 it is anticipated to increase by 21% and for those aged 26-64, by 12%.

This has important implications for how land is used. A growing population will require new housing, public amenities and infrastructure. Further, different age cohorts will have additional specific needs. For instance, Prague's growing senior population will create demand for accessible and affordable housing and good public transportation in order to ensure that they are able to successfully age in place. It is also anticipated that there will be an increase in the share of children. This will increase demand for schools, recreation facilities, parks and other public amenities.

Housing prices in Prague are higher than that of the rest of the Czech Republic, reflecting higher demand

In 2016, the average price per square metre of an apartment in Prague was 30% greater than that of the next largest city in the country, Brno. Prices also vary considerably across the city. In 2016, the average price per square metre of an apartment in the Prague 9 district was almost 2.5 times higher in the central historical district. There is a growing

demand in Prague for low-cost homes on the one hand and luxury homes on the other – demand for mid-range housing is fulfilled in large measure by the satellite communities surrounding Prague. There are growing concerns about housing affordability in Prague given rapidly rising purchase prices over the past year.

Prague's brownfield sites of today are forming the new growth centres of tomorrow

The largest development opportunities in Prague – those with the potential to transform entire neighbourhoods and districts – are located in central brownfield sites. It is a major local government priority to work with developers/investors and local residents to make the most of these sites – to develop them into new and dynamic mixed-use spaces.

While Prague has a low degree of social-spatial segregation, gentrification and a growth in gated communities present a risk for the future

Prague, like cities across the Czech Republic, has generally low levels of poverty and socio-economic inequality. However, at the neighbourhood level, there is growing gentrification in some parts of the city. Over the longer term this could lead to new areas of spatially concentrated poverty as lower income residents are induced to move to seek more affordable housing options. There are also a growing number of gated communities that, by their very nature, have low social mixity. Further, the overall high price of housing has restricted in-migration of lower income residents to the city, which leads to lower levels of social mixity overall. It is also important to note that there are marginalised residents – mainly elderly people, single parents (mostly women), persons with disabilities, homeless persons and Roma – who face disproportionately high costs for housing and who concentrate in substandard housing, often dormitories with short-term and insecure leases.

Prague has a strong public transportation network, but its suburban/outer areas are car-dependant

Prague has an integrated transport system that includes all forms of public transport in the city. Between 2007 and 2015, regional passenger transport increased significantly (by over 50%) while total urban passenger transport remained static. This demonstrates growing demand for public transportation in the city's surrounding locales. Like Prague, the Central Bohemian region also has an integrated transport system. Part of Prague's transport system extends beyond its borders into five external zones in Central Bohemia that are funded by the Central Bohemian region. The regional transport systems of Prague and Central Bohemia have co-ordinated since 2015, and are discussing further integration to create a single transport system.

Growing sub- and peri-urbanisation has led to increasing pressure on the roadways and an increase in car ownership. The number of passenger cars (and vans) in Prague as a proportion of the population increased between 2009 and 2015 by 8.4% overall. It also increased in Central Bohemia over the same period, though by a smaller amount – approximately 5%. Traffic has increased in Prague's outer area far more than in its inner one, particularly in the case of car traffic, which increased between 2000 and 2015 by around 59%. Traffic intensity in Prague is often at a road's full capacity and this congestion has attendant negative environmental consequences, such as air pollution, and economic consequences, such as increased commuting time. Ongoing peri-urbanisation processes require new transport solutions and efforts to manage dispersed developments. Public

transportation infrastructure does not extend to many of the “bedroom” communities where residents commute to the city of Prague on a daily basis.

The governance of land use in Prague

The Czech Republic has a hierarchical system of plans; lower level plans generally must comply with higher level plans

The National Spatial Development Policy sits at the top of this hierarchy. It contains general guidelines for planning, specific requirements for sustainable development, and outlines the key spatial relations within the country and the objectives of the national government related to them (e.g. areas important to the development of technical and transport infrastructure). At the regional level, development principles play a similar role as the Spatial Development Policy at the national level. However, they provide more details for specific policy areas (such as roads) or for zones of particular importance. At the municipal level there are three types of plans: 1) a land-use plan that shows permitted land uses for the entire municipality; 2) regulatory plans for specific areas, such as redevelopment zones; 3) non-statutory and non-legally binding planning studies.

Prague’s governance is unique. It has some of its own legislation, such as its own municipal act and building code. It has the powers of a region and the powers of a municipality, but some of these powers have been delegated to the city districts and boroughs. There is an interplay among these levels that makes planning processes more complex.

Prague’s 2016 strategic plan – embracing flexibility, adaptability and participatory processes

Prague’s 2016 strategic plan contains three strategic directions for the city around the themes of: 1) cohesive and healthy metropolis; 2) a thriving and creative metropolis; and 3) a well-governed metropolis. There are numerous action items under each of these themes that are operationalised through the implementation programme for the strategic plan which extends to the year 2030 and proceeds in three consecutive four-year phases starting in 2019. Annual implementation plans detail the preparation of individual projects across the city and its boroughs and the implementation of these projects will be a priority in the allocation of the city budget. Some of the key recommendations within the strategy open up the potential for important reforms. For example, under the theme “good and smart city governance”, the need to reconsider the alignment of the division of competencies between the city and its boroughs and districts is raised.

A new land-use plan (Metropolitan Plan) is under preparation

Prague’s current (in force) land-use plan was prepared in the late 1990s (1996-98) after the transformation of the country’s economy and political system. The plan takes a regulatory approach to the management of land – it seeks to protect the environment and attempts to define very precisely what can be developed and where according to specific uses. Given Prague’s fast-paced investment in the early 1990s, the 1999 land-use plan responded to a need for more predictability around what can be developed and where. However, since its inception it has been continuously modified through thousands of amendments brought forward by the city, local boroughs or investors/developers. The creation of a new land-use plan for the city is overdue.

Prague's new land-use plan – the Metropolitan Plan – is presently under preparation. However, it bears noting that, name aside, the new plan does not cover any areas beyond Prague's border which are seeing some of the largest sub-/peri-urban growth. It governs only the territory of the municipality, like the land-use plans before it. In general terms, the new land-use plan aims to concentrate and intensify the use of existing areas and to develop brownfields, while designating almost no new greenfield areas to be developed. It is grounded in a compact city approach. The plan further aims to reforest existing open areas as much as possible so as to increase ecological stability.

The new land-use plan seeks to help the city meet its potential by providing less regulatory direction in the parts of the city that are stable and more guidance in rapidly changing areas where there is greater potential for land-use conflict due to changing uses. The plan focuses on encouraging development in built-up areas and protecting unbuilt ones (open landscape, agricultural fields) from development. Critically, the new plan aims to stop the uncontrolled expansion of developments into greenfields by defining clear borders between the city and the countryside (within the city of Prague).

The new land-use plan is just that, a plan. It alone cannot guarantee that the desired changes that are regulated and proposed in the plan will come about. These actions are the purview of the city, developers, landowners, other levels of government and so on. As such, it is important that other incentives and policies are aligned with the goals of spatial development for the city, such as fiscal incentives for brownfield development or transit-oriented development. Beyond this, it is important that the plan's implementation is regularly evaluated and that adjustments are made as conditions may change.

Prague's new building regulations are grounded in urbanism principles – aiming to create walkable, attractive neighbourhoods with high-quality public and green spaces

Prague's land-use plan is in part operationalised by the city's building regulations, which determine the technical standards regarding the height of the buildings, their placement on a lot, the distance between buildings, the height of individual rooms inside the buildings, the amount of parking places per building, and so on. Prague's new building regulations also contain traditional urban planning instruments, such as street or building lines.

Prague has a lengthy two-step building approvals process

While the administrative costs related to building approvals in Prague are relatively low compared to other European cities, the length of time that it takes to receive a permit is much longer and the process is more complex. For example, the World Bank's "Doing Business" report finds that it takes on average 247 days to obtain a planning permit to construct a warehouse in the Czech Republic. The Czech Republic ranked 183rd out of 213 countries surveyed by this measure. For more complicated projects, the Czech building permit process can take between three to seven years.

With the two-step approval process there is more space for objections, which the regional planning authorities must address. If any of the involved bodies do not agree with the result, it is possible to request an opinion or decision of the Ministry for Regional Development on the matter. Afterwards, there is also the possibility to appeal to the regular court. Further, the process is administratively onerous, requiring the binding opinions of 23 authorities for both steps. In some cases, opinions are also required by state authorities. In total, up to 45 different approvals may be required by state and municipal authorities.

In some cases, the approvals of different levels of government or different departments can be contradictory, which presents further obstacles and delay.

In acknowledgement of the need to streamline this complicated approvals process, an amendment to the Building Act has been proposed. The amendment would permit municipal authorities to issue a joint ruling for a town and country planning (zoning) procedure, and for a building procedure. To date, these two procedures are separate. Under the proposed amendment, a binding assessment of the environmental impact of construction would form the basis of permission to build and this decision-making process would be integrated into a joint permit. These are important amendments that could reduce regulatory burden and streamline the building approvals process without reducing environmental diligence.

Prague has limited fiscal autonomy and few fiscal tools to shape spatial development

Prague has low fiscal autonomy and limited financial instruments at its disposal. This means that, on the one hand, it does not face strong expansionary pressure in order to raise revenues; nor does it face inherent competition with surrounding municipalities for the location of residents on fiscal terms (though it does on environmental and other terms). However, at the same time the city does not see strong benefits from economic growth. Fiscal planning and urban planning are poorly co-ordinated. For example, the fiscal implications of land-use plans are not considered.

The vast majority of Prague's revenue comes from either taxes or, to a lesser extent, transfers. The taxes Prague receives are non-direct – they are collected by the national government and transferred back to the city. Therefore, while Prague fiscally gains from, for instance, new residents, businesses and the tourism economy, it does not see a direct link from these gains. Overall, the taxes and fees for which Prague has local discretion are low, such as the property tax and other taxes. Prague's real estate taxes are approximately 1% of total revenue.

Recommendations

This is an important time for spatial and land-use planning in Prague. The city's updated strategic plan sets a course of action which will be complemented and reinforced by the new Metropolitan Plan and the updated set of building regulations. After years of outdated and not respected strategic and regulatory spatial planning documents that had limited public and political support behind them, efforts have been made to develop more inclusionary processes that offer a strong assessment of the major issues facing the city and directions for reform.

In the coming years the focus will turn to implementation. Will Prague be able to meet its spatial development goals? Will it be able to, for instance, transform existing brownfield sites into new residential and commercial areas that are well linked to transportation networks and services; will the city be able to improve the quality of its public spaces and parks; will the desire for dynamic and mixed-use neighbourhoods come to fruition; can the expansion into greenfields, which has characterised so much of the metropolitan area's development over the past two decades, be halted in favour of more sustainable forms of development; and, critically, how can Prague work with other municipalities and the region of Central Bohemia to better co-ordinate on spatial development? The tools and instruments that the city has at its disposal to shape these changes will greatly impact its ability to meet these ambitions. The following recommendations offer priority areas for action.

The national government should establish fiscal incentives and/or regulatory frameworks to encourage metropolitan spatial planning

Prague cannot enforce its vision of development on nearby local governments. It instead needs to adopt a collaborative approach to jointly manage development with proximate municipalities and Central Bohemia. The European Union's Integrated Territorial Investment (ITI) funds create an important new incentive for such collaboration. The 2016 Integrated Territorial Investment Strategy for the Prague metropolitan area, which involves joint projects with Central Bohemia and other partners, promotes co-ordinated metropolitan approaches in a number of areas. While the ITI will address aspects of transportation planning, it does not as yet include projects for co-ordinated spatial development more broadly. It will be critical to translate this programme into longer term partnerships that address those issues that are not just mutually beneficial, but also potentially contentious.

Incentives need to be in place to encourage ongoing partnership – and the national government has a critical role to play in this regard by either establishing ongoing fiscal incentives for such collaboration and/or regulatory frameworks that can overcome the inherent co-ordination challenges. There are many options in this regard. On the regulatory side, the national government could establish a new type of spatial strategy to govern functional areas in the territory, much as France has done with its plans of territorial coherence. Such plans help to overcome France's territorial fragmentation and large number of communes – a feature which is pertinent in the Czech Republic as well. In terms of funding, the national government could create a specific funding stream that is linked to co-operative spatial development projects and/or plans. One objective in this regard should be to enhance the co-ordinated spatial planning capacities of sub- and peri-urban communities that are seeing the greatest population growth and/or commercial and industrial expansion. Prague's FUA by the OECD definition encompasses 435 municipalities, with the city of Prague and the municipality of Kladno forming its core. Given the large number of municipal actors involved, partnerships should be prioritised based on the greatest need.

Use of fiscal tools, instruments and incentives to complement spatial development objectives

Fiscal instruments can provide powerful incentives for how land is used. Properly structured, they can create incentives (or disincentives) that shape individual behaviour in terms of how space is used and land is managed. There are a wide variety of fiscal instruments that the city could draw on to more effectively meet its spatial objectives. For example, the property tax does not capture market value; it is spatially neutral and does not capture, for instance, increases in the value of properties due to public investments in infrastructure. A shift to an *ad valorem* tax on property is warranted – i.e. a tax that takes the actual market value of the property into account. Effective tax rates should be raised to increase the share of revenues that municipalities directly control and their calculation should be based on property value rather than property size, with these values updated regularly, as in most OECD countries. This should be combined with land-use planning instruments at the municipal and regional level to avoid unintended consequences such as urban sprawl.

Properly structured, property taxes can act as a land value-capture tool – an instrument that has great potential and is not being presently used in Prague. Such tools capture the changes in land use that are occurring as a result of public investments in, for example, green spaces, amenities and new transportation linkages. Rather than allowing private individuals and businesses to retain the market value benefit from increased property

values attributable to public spending and investment, the city should take steps to “capture” a portion of the increases in value. Beyond a value-based property tax, other “value-capture” mechanisms linked to specific public infrastructure projects can be used, such as betterment levies (sometimes called special assessments).

Other potential fiscal instruments include parking rates, which could be used to manage congestion with rates set highest in the historical core and lower farther out with discounted rates provided for residents (as is done in Amsterdam). At present, national legislation places limits on the amount that can be raised in parking fees or new tolls. Further, the city does not currently employ any fiscal instruments to encourage density, despite this being a critical spatial objective. The city could use, for example, transfer of development rights (TDR), which preserve open space and limit density in underserved/peripheral areas and increase density in well-served ones (i.e. limit sprawl and preserve open space). Another critical tool for the city could be brownfield redevelopment incentives that could offer subsidies or grants as an inducement to develop; these could be attached to other criteria – e.g. making high-quality public spaces part of the project. Another possibility is to introduce a differentiated hotel tax with higher rates in the urban core, which could encourage visitors to stay in areas outside of the city centre, thus lessening the environmental impacts in this high-use zone.

Prague is significantly constrained by national laws but it may be able to find specific charges or subsidies it can adopt and certain fiscal tools it could use. However, matters such as the shift to an *ad valorem* property tax fall to national jurisdiction and would require changes to revenue-sharing arrangements among levels of government.

Improve integrated spatial planning by aligning sectoral and borough-level plans with the strategic plan

Prague’s strategic plan is the critical framework document that forwards an integrated approach to spatial and land-use policy. It sets the city’s strategic objectives across a number of policy areas. However, the strategy’s effectiveness is undermined by the fact that borough-level strategic plans are not obliged to confirm to its objectives. Moreover, other municipal strategies and frameworks, programmes or sectoral concepts prepared by the city administration are also not obliged to confirm to the strategic plan. This fundamentally undermines the co-ordinative purpose of such a strategy and its ability to be implemented. The persistence of sectoral divisions undermines the city’s ability to solve complex challenges.

The city’s strategic plan should be the guiding document for investment for both the city and its boroughs. It is both a political document, signalling investments for the future, and a public document that was elaborated through a process of public dialogue and engagement. The implementation of the strategic plan should be monitored and reported on regularly in a way that holds both government actors and elected officials to account. This will, in turn, serve to build trust with residents, which is a priority for the city, particularly when it comes to spatial planning.

Improve the relationship between residents, developers and local government

Monitor and report on strategic spatial goals

Improving the relationship between residents, developers, and the city and boroughs is a high priority; it is mentioned in both the city’s strategic and metropolitan plans. This critical work should continue and should be expanded to include reporting on the progress

on spatial strategies and monitoring neighbourhood change. Key indicators should be developed and communicated to the public annually; these could include subjective indicators that ask residents about how they experience their environment.

Enhance the public engagement function and review appeals regulations

Objections and appeals for building approvals and other plans and documents within the Czech planning system are common. Such appeals are relatively easy and low cost to submit. The system has evolved in a confrontational and litigious manner. A number of actions need to be put into place in order to improve relations and reduce the recourse to the formal appeals process. Dialogue on projects should be opened at the conceptual stage of the planning approvals process, particularly on large projects. Non-governmental organisations (NGOs) should be involved in a regularised way and efforts should be made to provide information in a clear and transparent manner in order to facilitate public input. In the case of larger projects, it may be useful to support an intermediary NGO between the city and developer to work with residents. This is a practice that has been adopted for example in Amsterdam, with positive effects.

Beyond this, the rules around public appeals and engagement should be revisited, including their time frame. For example, there should be limits on nuisance appellants, which is a common practice in many OECD countries. Beyond appeals for building/planning permission, at present there is a three-year time frame during which individuals can appeal at court against approved and accepted plans – at all levels, for any reason. This can create a litigation chill with planning authorities becoming risk adverse and potentially adopting less effective (and innovative) solutions as a result.

Establish clear guidelines for the negotiations between developers and planning authorities

According to Czech building law, a development contract can be created between the municipality and developer to co-finance transport and technical infrastructure. However, this is not a common practice among Czech municipalities; it is a legally complicated process that is rarely used in Prague. Prague and its boroughs should develop a clear framework to support developer contributions for infrastructure. There should be a transparent framework for such negotiations that is uniformly applied; this would improve negotiations and the trust between the investor and the public bodies. In the case of large-scale projects, developer contributions should be negotiated upfront and the resulting agreements should be subject to public input and scrutiny.

Beyond this, limiting developer contributions to only technical and transport infrastructure should be reconsidered. It could, for instance, be expanded to include contributions to public spaces, schools and amenities, which are critical investments to support dynamic neighbourhoods. Boroughs have a right to discuss with investors whether they are prepared to participate in changes in the public space prior to the building permit process and recent experience has shown that such negotiations can be positive for all, with developers benefiting from self-promotion and improved neighbourhood relations. However, there is no legal instrument that supports this type of negotiation and city districts cannot sign planning agreements.

Reduce the regulatory burden facing developers in the building approvals process

The city should work to lessen the regulatory burden on developers by, for example, establishing a one-stop process for building permits so that it is not on the onus of the developer to obtain multiple approvals from individual departments. At present, the process is long, complex and administratively complicated. As a consequence, developers may choose to take their projects outside of Prague's administrative borders, thus going against the city's objective to be an attractive area for investment and to promote more compact development. This need not entail a lessening of regulatory requirements, but rather improved administrative processes among the various municipal and district departments involved.

Enhance the monitoring and evaluation of spatial trends – for both Prague and its functional urban area

In Prague, improved monitoring and evaluation of spatial trends (social-spatial, economic, physical/environmental) will help assess the impacts of the new Metropolitan Plan, once it has been adopted, and determine whether the city is on track to meet its spatial development goals. It will help monitor and respond to change and communicate this to citizens. It will further help the city monitor and respond to risks, such as growing social segregation, or to respond to demographic trends, such as a growing elderly population. In particular, the city has placed compact development at the forefront of its spatial strategy. Special attention should be paid to monitoring compact city indicators.

The national government – e.g. the Czech Republic's National Institute for Spatial Development – could support the elaboration of spatial development strategies in peri-urban areas by convening a thematic research project that will both monitor peri-urban spatial trends and assess the policy implications for, for example, service delivery and transportation provision. This should also be a prerogative for regional governments to support coherent rural-urban spatial strategies. Such evidence-based assessments will help establish priority areas for collaboration.

Chapter 1.

Spatial planning in the Czech Republic

This chapter provides the national context for the case study of Prague that follows. It offers an overview of the institutional frameworks that govern the spatial planning system in the Czech Republic. These include the major pieces of legislation that structure the planning system and their evolution over time along with a discussion of how fiscal relations create incentives for land use in Czech municipalities and finally, the key issues facing the planning system and the major land-use challenges in the country.

Since 1989, the Czech planning system has been pressed to adapt to a new political context, with often nascent municipal institutions at the same time as there was strong development pressure in many locales, especially Prague, and growing responsibilities to manage them. Like many former socialist states, the structure and institutions of spatial and land-use planning in the Czech Republic have evolved significantly over the past three decades. During the communist period, regional planning was *de facto* economic planning, while land-use planning was centralised and top-down. Post-communist period, these institutions evolved to a new context – one where there was a strong impetus for decentralisation and democratisation along with a need to deal with rapid new developments and investments, particularly in the largest cities. At the same time, a liberal law for municipal division led to a proliferation of new (and often very small) municipalities. A vast amount of land was transferred from the central government to municipalities and there was a large sell-off of formerly public lands and assets to the private sector.

Today, the spatial planning system in the Czech Republic looks like many others across the OECD in structure. There is a nested hierarchy of plans – national to local – with higher order plans demanding conformity from lower order ones. Directives and agreements from the European Union in such areas as environmental protection have also influenced the planning system. But beyond this general structure, there are many specificities which make the spatial and land-use planning system in the Czech Republic unique, such as the large number of very small municipalities, which leads to administrative fragmentation and, often, a lack of effective planning across functional territories.

This chapter provides an overview of the spatial and land-use planning system in the Czech Republic as a whole, while succeeding chapters delve into the specific conditions and practices in Prague. The chapter proceeds with a description of subnational government roles and functions and fiscal relations. This is followed by an overview of the Czech Republic's spatial and land-use planning system and how it has changed over time. The purpose and scope of various spatial plans at the different levels of government are elaborated, including the raft of other legislation that impacts spatial development in the territory. Finally, the major challenges facing the planning system are discussed.

Levels of government and their responsibilities

The structure and composition of subnational governments, along with the roles and responsibilities between them, have important implications for the function of spatial and land-use planning. These institutional and multi-level governance dynamics are shaped by historical trajectories, cultural practices and socio-economic conditions, among other factors. In the case of the Czech Republic, the legacy of the communist era looms large and subnational governments have gone through quite rapid democratising and decentralising reforms in recent decades.

The Czech Republic is a unitary state with three levels of government

The change in the political regime in 1989 ushered in a new era for local self-government from one of highly centralised regulation towards a decentralised approach embedded in local democracy. The old three-tier system of regions, districts and municipalities that had existed in the communist era were seen as arbitrary and throughout the 1990s there were discussions about how to reform the subnational territorial organisation – including the number of units, their names, powers, relations with the central authorities, and how to structure regional competencies. These reforms took part in stages.

In 1989, the Constitution once again recognised the right to self-government of the local communities and defined municipalities as the basic structure of the new local self-government.¹ Some state powers were slowly delegated to municipalities and the first municipal elections were held in 1990. In 1997, 14 self-governing regions were established in law; however, the *de facto* establishment of regions as autonomous occurred only in 2000 with the adoption of other legal norms governing the position of regional governments (see Table 1.1 for a list of the key subnational government legislation). Regions were established in part in order to have regional institutions that could implement EU policy (the Czech Republic applied for EU membership in 1996) (Marek and Baun, 2010). In 2002, the district level ceased to exist and its former competencies were delegated to regions and municipalities. The capacity of regions and local governments to act meaningfully in the early days of these territorial reforms was limited by their lack of fiscal autonomy.

Since 2000, local and regional elections are held every four years in the Czech Republic. The heads of local councils are elected by councillors, as opposed to being directly elected by citizens (mayors are referred to as *starosta* for smaller municipalities or towns and *primátor* in the case of larger towns or cities). Each region has a unicameral regional assembly with directly elected representatives. The city of Prague is a special case. It is divided into 22 districts and 57 boroughs (some boroughs are also districts), each composed of its own elected local council and also has a city-wide of directly elected representatives. Council members elect both the mayor and the municipal committee (the city's executive body). The regional governor (*hejtman*) is elected by the Assembly.

Table 1.1. **Key subnational legislation post-1989**

1993	Constitutional law: Constitution of the Czech Republic
1997	Constitutional law on Establishing of Higher Level Self-administering Territorial Units
1999	Law on Free Access to Information
2000	Law on Municipalities (the municipal system)
2000	Law on Regions (the regional system)
2000	Law on Elections to Regional Councils
2000	Law on the Capital of Prague
2000	Law on Information Systems of Public Administration
2001	Law on Elections to Municipal Assemblies
2002	Law on Officials of the Territorial Self-administering Units
2002	Law on Municipalities with Commissioned Municipal Offices and of Municipalities with Extended Powers
2004	Law on Local Referendums

Allocation of responsibilities between levels of subnational government

The 1993 Constitution introduced the integrated system of subnational government where the same local bodies are entrusted with the execution of both local self-administration and state administrative tasks. Territorial self-government is not vertically hierarchical – the self-governing authorities are not subordinated to the state nor are municipal authorities subordinated to the regional ones. The state can intervene in territorial self-government only in cases provided by law and for reasons of upholding the law.

Regions hold responsibility for several functions related to planning and spatial development – they approve planning and zoning documents and are responsible for regional economic development and environmental protection. Regional governments can issue binding ordinances or decrees for their areas of independent or delegated competence. But they, like municipalities, are not a legislative body.

Municipalities are responsible for local land-use planning, public transportation and the management of local roads, housing, the environment and infrastructure (water management and treatment, urban heating, waste processing, environmental protection), and local development in general (see Table 1.2 for a complete list of local and regional government responsibilities). While each level of government has clearly delineated functions related to spatial planning, there are considerable complementarities between their respective roles. Prague, as a special case, holds the powers of a region as well as those of a municipality. However, some of these powers have been allocated or devolved to city districts. The division of responsibilities for Prague is discussed in Chapter 3.

In some instances, regions and municipalities bear responsibilities for the same policy areas; however, their competencies are divided between the funding of programmes and overarching policy in the case of regions, and the delivery of services in the case of municipalities. For example, regions fund sports activities but municipalities deliver those services.

Table 1.2. **Division of responsibilities between regions and municipalities, Czech Republic**

Regional responsibilities	Municipal responsibilities
– Cohesion (regional boards on cohesion) – Education (secondary education and funding) – Environment (protection of fauna and flora) – Fire safety – Healthcare, including drug prevention – Inter-regional and international co-operation with foreign territorial authorities – Matters delegated by the state – Matters of regional interest – Planning (approval of planning and zoning documents at the regional level) – Prevention of criminality – Regional economic development – Social services – Sport (funding) – Tourism (development plans in the field of tourism, implementation and monitoring of their performance) – Transport (road network, regional public transport) – Youth (funding)	– Culture – Environment (water management and treatment, urban heating, waste processing, environmental protection) – Fire-fighting and prevention – Health services – Housing – Local development – Local planning (management and maintenance of open spaces, cemeteries) – Municipal police – Primary education – Social welfare (social assistance and youth policy) – Sport – Transport (public transport, management of local roads)

Source: Council of Regions (2016), “Division of powers: Czech Republic”, <https://portal.cor.europa.eu/divisionpowers/countries/MembersNLP/CR/Pages/default.aspx>.

The territorial division of the country is highly fragmented

Successive OECD reports have remarked on the fact that the territorial divisions in the Czech Republic are highly fragmented (OECD, 2016a; 2016b; 2014). Prague stands as the tenth most fragmented functional urban area (FUA) in the OECD, with approximately 23 municipalities per 100 000 inhabitants. The OECD has developed FUAs as a means of comparing metropolitan areas across countries. FUAs are characterised by a densely inhabited city, and a commuting zone whose labour market is highly integrated with the cores. FUAs represent the area across which people live, work and commute and as such give a better picture of the how the city relates to its broader environs and the labour market connections between core and peripheries than administrative boundaries do.

The average municipal size in the Czech Republic (in terms of the number of inhabitants) is the smallest in the OECD, at 1 640 residents in 2016 (Table 1.3). Further, three-quarters of all municipalities in the Czech Republic have fewer than 1 000 residents; one-quarter

have less than 200; and 7% have less than 100 (OECD, 2016b). This administrative fragmentation extends across the FUAs. The three largest cities in the Czech Republic (Prague, Brno and Ostrava) are among the most fragmented in the OECD.

Table 1.3. **Municipal size, Czech Republic, OECD, EU**

	Average municipal size (number of inhabitants)	Average number of municipalities per 100 000 inhabitants	Median municipal size (number of inhabitants)	Average municipal area (km ²)
Czech Republic	1 640	61.0	420	12
OECD 34 countries	9 570	10.5	x	251
EU 28 countries	5 800	17.2	x	49

Source: OECD (2016d), “Subnational governments in OECD countries: Key data”, www.oecd.org/regional/regional-policy/Subnational-governments-in-OECD-Countries-Key-Data-2016.pdf.

The large number of municipalities, often with very small populations, is not the consequence of long-established patterns of development. For example, in the 1960s there were forced municipal amalgamations across the territory which significantly reduced the number of municipalities. Rather, today’s municipal fragmentation is due to a law in the early 1990s that enabled municipalities to separate easily. As evidence of this, the number of municipalities increased by 50% in the Czech Republic between 1990 and 1992 (OECD, 2001). While there has been a trend towards municipal consolidation in many OECD countries, the number of municipalities in the Czech Republic has remained relatively stable since the late 1990s.

Municipalities in the Czech Republic have few incentives to merge and form larger units across a functional territory. This has important implications for spatial and land-use planning. It means that, in many cases, territories that are functionally connected are not co-ordinating on joint spatial strategies. It can also lead to municipal competition, which may benefit one community but detract from others; or from the collective public good, such as the protection of forests, agricultural lands and natural amenities. It also means that municipalities are losing economies of scale in the delivery of public service and infrastructure (see, for example, Matějová et al. [2014] for an estimate).

The delegation of powers by some municipalities to others is one way in which some aspects of co-ordination across functional territories and economies of scale are maintained. Administratively, there are two types of municipalities in the Czech Republic: those with extended powers and those without. Municipalities with extended powers fulfil several administrative functions for those without extended powers, such as maintaining a civic register (record of births, deaths and marriages).

The vast majority of municipalities in the Czech Republic (over 90%) have delegated some functions to other municipalities. Municipalities with extended powers procure local territorial plans, regulatory plans and planning studies for their own territory and for that of adjunct municipalities without extended powers. However, these plans must be approved by the local council of the affected municipality (no matter whether the municipality has extended powers or not). The local councils can also comment and object to regional development principles and to the plans of neighbouring municipalities. Building offices located in larger municipalities issue planning permissions.

The more functionally integrated cities within an urban agglomeration are, the better the economic performance of the whole. The OECD has noted that while the mechanisms of extended power and groups such as the Union of Towns and Municipalities try to promote co-operation, it is ultimately often ad hoc and does not necessarily occur where fragmentation

is worst (OECD, 2016a: 45). The OECD has recommended municipal mergers as a first-best solution to achieve more concentrated service provision, though it is recognised that this can be politically difficult to do (OECD, 2016a: 45). Lessons from other OECD countries indicate the importance of incentives and performance indicators to overcoming territorial fragmentation as well offering a second potential policy solution to this issue (Box 1.1).

Box 1.1. Other OECD countries' experience in overcoming territorial fragmentation

Incentivising or mandating mergers

- In Denmark, mergers scaled up each level of government. Realigned responsibilities and financing changes drove a bottom-up process of amalgamation after a lower size limit of 20 000 had been imposed. The number of municipalities fell from 271 to 98 in 2007. At the same time, 13 counties were replaced by 5 regions.
- In Greece, the number of municipalities was reduced from 1 033 to 325 in 2011. The new municipalities received more competencies and resources. Concurrently, 54 departments were replaced by 13 regions, including 2 metropolitan regions.
- France is undertaking major territorial reforms. Incentives are available to small municipalities which merge and shift their powers to “communities of municipalities”. The minimum size of communities will increase. Inter-municipal co-operation is mandatory in some cases, but grants also provide incentives. Compulsory mergers were imposed on regions. “Urban communities” were imposed on three metropolitan areas.
- The Styria region contained one-third of Austria's small municipalities with under 1 000 inhabitants until reforms in 2010 that almost halved the number of municipalities. Aims included synergies in service provision, better spatial planning and future stability. Around 80% of municipalities merged voluntarily. The region also established a fund for voluntary mergers, in addition to existing national financial incentives.

Assistance from other parts of government

- In Switzerland, cantons encourage mergers with financial incentives and some cantons with grants for evaluating a potential merger. Cantons also provide technical assistance, including free evaluations of the financial implications of mergers. The number of municipalities has declined by 263 since 2000. Cantons also provide financial incentives for co-operation in investment projects.
- In the Netherlands, provincial governments have a role as moderators in mergers of municipalities. They evaluate merger proposals before formally sending them to the central government to enact. There is also a temporary merger grant for municipalities' “friction costs” paid over five years.

Mandating joint service provision

- In Italy, municipalities with less than 5 000 inhabitants must provide basic functions using municipal unions and need to share resources using group purchasing.
- In Hungary, joint delivery through micro-regions was compulsory for some public services, including education, social services and healthcare. However, some municipalities chose to merge rather than form an association. Reforms implemented since 2010 have changed the territorial organisation, transferred some responsibilities (e.g. in education and health) to the central government and required that municipalities with less than 2 000 residents share their administrative offices (while maintaining their own mayor).

Source: OECD (2016a), *OECD Economic Surveys: Czech Republic 2016*, http://dx.doi.org/10.1787/eco_surveys-cze-2016-en.

Subnational government finance and land use

The fiscal frameworks and the system of subnational government within which local governments operate create various incentives for the government actors involved. Fiscal systems can be designed to induce cities and communities to co-operate or to compete with one another, depending on how revenues are structured. They may make new developments an important source of revenues or a costly proposition for local governments. In turn, this can lead local governments to either pursue restrictive land-use policies or to favour expansive ones – this, in turn, impacts the cost of housing. The structure of fiscal incentives can also lead local governments to prefer one kind of development over another – e.g. commercial over residential – depending on their relative fiscal benefits.

In more centralised systems, where local governments are funded predominantly by state transfers, there can be fewer incentives for local governments to pursue urban expansion than fiscal systems where local governments rely to a large degree on own-source revenue (most notably, property taxes). If state transfers to local governments are proportional to the costs that are created by new developments and an increase in the population, then local governments will neither benefit from such increased development and population growth, nor will they suffer negative fiscal consequences. In such a case, a municipality does not have incentives to pursue strongly expansionary land-use policies.

Much depends on the details of how subventions are structured and the costs associated with municipal service and infrastructure provision. Municipalities in the Czech Republic have low fiscal autonomy, but they tend to compete with one another for population in order to increase the size of government transfers. Where land-use policies are highly permissive, the impetus towards municipal competition leads to expansionary and often sprawling developments.

Subnational governments have little autonomy over revenues in the Czech Republic

Fiscal decentralisation reforms have accompanied political decentralisation in the Czech Republic. While fiscal autonomy has increased in the past decades, central government funds are often allocated in a way that *de facto* constrains local independence and policy making – e.g. the central government regulates tariffs on public utilities, and it determines local government employees' salaries (Bryson, 2010: 158). Therefore, in practice, local governments have limits on their tax and spending autonomy and are in many respects centrally regulated in this regard.

Subnational governments in the Czech Republic are financed mostly through a mix of shared taxes (personal income taxes, corporate income taxes and value-added taxes) and grants and transfers from the central government for which spending on education is a major component. The majority of municipal revenues come from taxes (around 60%), while for regions, the majority of revenue comes from grants and transfers (around 60%). However, within this it is important to note that very little of municipal tax revenue is directly raised; directly raised tax revenue is just 1.2%, which is the smallest share in the OECD (OECD, 2016a). Thus, municipalities are heavily reliant on the central government to deliver programmes, services and infrastructure to their residents.

Shared taxes are distributed according to a formula that has been a subject of ongoing debate and contention. The share of subnational revenues is annually determined; in 2016 these were set at approximately one-tenth and one-fifth, for regions and municipalities respectively (OECD, 2016a). In the case of municipalities, the size of the population is

the main determinant of the formula. Given the need for more inter-municipal co-operation, several OECD reports have noted that this formula could be better structured to acknowledge the differences in revenue-raising capacity among municipalities in order to enhance horizontal equity (OECD, 2015).

Table 1.4. **Subnational government revenue, 2016**

	Regions (excluding Prague)	Municipalities (excluding Prague)	Prague
Tax revenue (%)	34	62	66
Shared taxes (income tax and value-added tax) ¹	34	48	58
Recurrent tax on immovable property	0	5	1
Income tax from own companies	0	2	2
User fees and charges	0	7	4
Non-tax revenue (%)	66	38	35
Transfers and grants	63	23	27
Of which:			
– Investment	6	12	2
– Non-investment	57	10	25
Other revenue (including asset sales)	3	16	9
Total revenue (CZK billion)²	146	203	70

1. Shared taxes are: personal income tax; personal income tax withheld; corporate income tax; tax on self-employed income; and value-added tax.

2. Based on national budgetary definitions.

Source: OECD (2016a), *OECD Economic Surveys: Czech Republic 2016*,
http://dx.doi.org/10.1787/eco_surveys-cze-2016-en.

Under the current structure, municipalities compete for population in order to increase their revenue base, which can lead to suboptimal land uses such as the promotion of sprawling developments for which it is costly to provide services and deliver and maintain infrastructure. However, it bears noting that tax revenues are indirect (collected by the national government and then transferred via subventions). Therefore, municipal competition is lower than in systems where own-source revenue is larger and directly collected, such as Switzerland, where local public good provision is financed by levying progressive income taxes and municipalities can choose tax rate levels. The Swiss fiscal system provides strong incentives to local municipalities to allocate land for new residential development (particularly for projects that attract high-income earners); but at the same time, strict zoning regulations often dampen this effect by making it hard to, for instance, convert agricultural lands to residential or commercial zones.

In general, there is little relationship between the cost of service provision and the transfers being made for municipal services in the Czech Republic (OECD, 2016a). Almost all grants and transfers to subnational governments are earmarked, which leads to lower efficiency and limits governments' ability to adjust service provision to local needs (OECD, 2016a). In the critical area of education, transfers for direct costs are made on a per student basis but do not adequately reflect costs and do not encourage efficiency (Shewbridge et al., 2016; OECD, 2016a). As will be discussed in Chapter 3, this has particularly important consequences for land use in neighbourhoods which are rapidly developing. It can impede neighbourhood development and residential mobility by limiting the availability of schools.

Finally, the OECD has long found that municipalities in the Czech Republic are not making adequate use of the property tax. The recurrent tax on immovable property is low compared to OECD averages: it stands at 0.7% of general government tax revenue, compared to the OECD average of 3.3%. In 2013 it accounted for only 2% of consolidated subnational government revenue in the Czech Republic, as opposed to an average of 9% in the OECD. The national government determines a minimum level for the property tax and municipalities in the Czech Republic tend to set them at this low level – even though they can legally increase them up to five times the minimum threshold amount. Only 8% of municipalities in the Czech Republic have used the possibility to increase the tax rates through the so-called “local coefficient” (Sedmihradská and Bakos, 2016).² As it is presently used and structured, the property tax is a small share of local government revenue and is poorly differentiated. Therefore, as a fiscal incentive for how land is used, the property tax is of marginal importance in the Czech Republic.

The spatial planning system – laws, institutions and practices

Key government institutions

The national government, through its Ministry for Regional Development, is responsible for the legislative framework that defines the spatial planning system, including planning permission proceedings, spatial planning, and building rules and other legal regulations. The Ministry for Regional Development supervises the spatial planning of other levels of government and keeps records of their activities. It is responsible for the preparation of the Spatial Development Policy (*Politika územního rozvoje*) which guides lower level planning. The national government also prepares regulatory plans in areas under military control. Other ministries also have responsibilities for elements of spatial development, for example, the Ministry for Environment (nature protection, environmental impact assessments), the Ministry for Industry (technical norms, mining, natural resources protection), the Ministry for Transportation (traffic infrastructure), the Ministry for Agriculture (state forests, subsidies for rural areas, agricultural land management), the Ministry for Culture (protection of monuments). The Union of Czech Towns and Municipalities and the Association of Regions represent local and regional governments to the national government.

Regional offices of the national government (i.e. decentralised state administration) procure the regional development principles and also some regulatory plans for areas of supra local importance within their territory. They also issue planning permissions for developments that affect several municipalities with extended powers or that are planned under special regulations. Regional councils (i.e. elected regional assemblies) approve the regional development principles as well as the regulatory plans prepared by regional offices. In addition, they exercise control of the activity and handle the claims for damages caused by unlawful decisions or maladministration of administrative bodies within the scope of application given by the Building Act.

Another institution for spatial planning at the national level is the Institute for Spatial Development. Established in 1994, it offers expertise and professional assistance in fields of spatial planning, regional policy, housing and housing policy, development programmes of regions and municipalities. For example, the institute offers consultation services to support municipalities’ spatial planning competencies and implementation of the building code, particularly for small and medium-sized cities. It also provides advisory services for public administration and offers consultation and expert opinions on specific issues related to spatial development. The institute acts as a contact point for the European

Observation Network for Territorial Development and Cohesion and is mandated to carry out the activities of the UN-Habitat Agenda (National Urban Observatory), and monitors and evaluates spatial developments and trends in the country. Such centres of expertise on spatial issues are increasingly common across the OECD. For example, in France, they are a long-established tradition; urban planning agencies were established in 1967 in order to provide advice and expert assessment on urban planning and land management issues. There are currently 51 of these operating in France, with the largest one covering the Paris region (Ile-de-France).³

Vertical co-ordination between levels of government occurs primarily through the hierarchical nature of the planning system. Local governments must follow the guidelines of higher level plans. It also occurs through national policy documents such as the Spatial Development Policy and the Principles of Urban Policy (Box 1.2). In practice, local governments are not tightly constrained by higher level plans, since higher level plans lack the specificity to be strictly enforced. Formal horizontal co-ordination between municipalities occurs through the involvement of neighbouring municipalities in the planning process and through the possibility to provide comments and raise formal objections. Co-ordination across policy fields is ensured through a system that requires sectoral authorities (mostly regional agencies of relevant ministries) to provide an assessment of all new plans before their approval.

Box 1.2. Czech spatial development policy and the Principles of Urban Policy

The **Spatial Development Policy** (SDP) of the Czech Republic is a document drafted by the Ministry for Regional Development based on the Act on Town and Country Planning and Building Code (183/2006 Coll.). The SDP seeks to co-ordinate other policy tools influencing spatial development, such as the Regional Development Programme of particular self-governing regions (*kraj*) and the Development Programme of Municipalities. The SDP intends to foster regional development and impacts on national land use via policies, strategies, concepts, programmes, development plans and reports on the state of the environment. It deals with national priorities determined with respect to EU documents, the Regional Development Strategy and other documents relating to spatial development. As in the Regional Development Strategy, it specifies development axes, poles of growth and other specific areas such as lagging areas, corridors and areas of transport infrastructure, corridors of technical infrastructure related to development plans (electricity, gas industry, water management, waste management, and long haul land lines).

The **Principle of Urban Policy** is a general document pronouncing views of state and state administration bodies on the standing and importance of cities for economic and regional development in the Czech Republic. It defines the state administration's approach to the programme support of the economic and social development of cities. The policy focuses on economic development and sustainability; it provides direct support to small and medium-sized enterprises and investments in urban transportation and infrastructure. The Principles of Urban Policy are expected to be updated with the new Urban Agenda.

Source: OECD (2010), "Czech Republic", <http://dx.doi.org/10.1787/9789264087255-8-en>; OECD (2016b), "Czech Republic", <http://dx.doi.org/10.1787/9789264260245-20-en>.

The legal framework for spatial and land-use planning

Following the transition to democracy and a market economy, several reforms were made to strengthen property rights and manage land. A new Building Act that defined the spatial planning system (e.g. standards and building codes and processes for building

approval) was introduced in 2007, replacing the old act from 1976 that had been amended many times. The 2007 Building Act introduced “development principles” as a new instrument of planning documentation at the regional level. The development principles determine the basic requirements for purposeful and economic arrangement of the region’s territory, delimit the areas or corridors of the supra local importance and determine the requirements for their use, especially the areas or corridors for the public works, public benefit measures. The hierarchy of planning documents was “roofed” by the National Spatial Development Policy⁴ and a new instrument was introduced (planning analytical materials) to collect and analyse the data relevant for territorial planning at the regional and local levels.⁵ Along with these revisions to the Building Act, new procedures and institutions were also introduced: planning consent (simplified alternative to planning permission), contract on planning (participation of private developers and stakeholders on the costs of infrastructures), agreement on the land subdivision and compensation for an alteration within an area. Further, the procedures of public proceedings were clarified and the role of public engagement was established and defined. The Building Act has since been amended, in 2012 (350/2012), with another amendment anticipated in 2017.

Beyond the Building Act, which outlines the spatial planning system in the Czech Republic, several other laws have an important impact on the planning system. Four different environmental laws serve to protect air, water, landscapes and other environmental aspects. There are acts that address road construction and management and railways and laws relating to the protection of heritage sites. At the state level, the Act on Urban Planning and Construction regulates and specifies all land-use activities. It includes sections dedicated to urban planning (processes and instruments) and building processes (e.g. rules and duties for individual builders and public administration). Further, in 2001, environmental assessment regulations were introduced in the planning process. Other plans and regulations that pertain to all territories are the Spatial Development Policy (*Politika územního rozvoje*), which was last revised in 2015. There are also a large number of other acts and decrees that impact spatial planning and land use, such as the Act for the Preservation of Nature and Countryside, which sets conservation principles, and the National Framework of Sustainable Development.⁶

The city of Prague is a unique case. It has its own building regulations (*Pražské stavební předpisy*) that regulate building and urban development. This exception of the capital city is not new – Prague has historically had its own building standards, unlike other cities in the Czech Republic. The regulations set rules for buildings distances in the city that encourage compact development, they introduce height limits and return some traditional planning instruments to the city level – i.e. street, parks and building lines. The regulations also provide rules and quality standards for public spaces.

By law, expropriation is possible for developments in the public interest if attempts to acquire the required land amicably have failed. Reasons for expropriation include infrastructure construction, public utility developments, urban renewal projects, flood protection, national defence and nature reserves. For private purposes, land may only be expropriated in order to provide access to a plot. In practice, land is rarely expropriated because the threat of expropriation suffices to make landowners sell their land voluntarily.

Box 1.3. A note on terms: Spatial and land-use planning

The term spatial planning is used in this report to connote more general strategic plans while the term land-use planning is used in this report to describe the more detailed process by which lands are evaluated and assessed to become a basis for decisions involving land disposition and utilisation. This includes studies on the environmental effects of land use and its impact on the community. Thus, spatial planning sets strategic directions for how land is used while land-use plans provide the details for specific plots of land.

The concept of spatial planning originates from Europe and is as a generic term used to describe systems for managing spatial development. Healey (1997) defines spatial planning as a set of governance practices for developing and implementing strategies, plans, policies and projects, and for regulating the location, timing and form of development. *The EU Compendium of Spatial Planning Systems and Policies* defines the term simply as the “methods used largely by the public sector to influence the future distribution of activities in space” (Commission of the European Communities, 1997: 18). Over the past two and a half decades, spatial planning has come to represent a neutral and unifying terminology used globally to refer to different practices and systems, with little common understanding of what it means in practice. The ambiguous nature and malleability of the term, however, has allowed for easy transferability and widespread acceptance in different contexts (Allmendinger and Haughton, 2009).

There appears to be a general consensus on the objectives that spatial planning seeks to achieve, despite the different terminologies used across countries and the lack of agreement on the definition and meaning of the term in practice. Key objectives of spatial planning include: co-ordinating the spatial dimensions and impacts of other sectoral policies; establishing the integrated and functional organisation of land uses and their regulation; and balancing the demand for socio-economic development with the need to protect the environment (Albrechts, 2004; Allmendinger and Haughton, 2009; Commission of the European Communities, 1997; Larsson, 2006; Owens and Cowell, 2011; Shaw, Nadin and Westlake, 1995).

Adapted from: Silva, E.A. and R.A. Acheampong (2015), “Developing an inventory and typology of land-use planning systems and policy instruments in OECD countries”, <http://dx.doi.org/10.1787/5jrp6wgxp09s-en>.

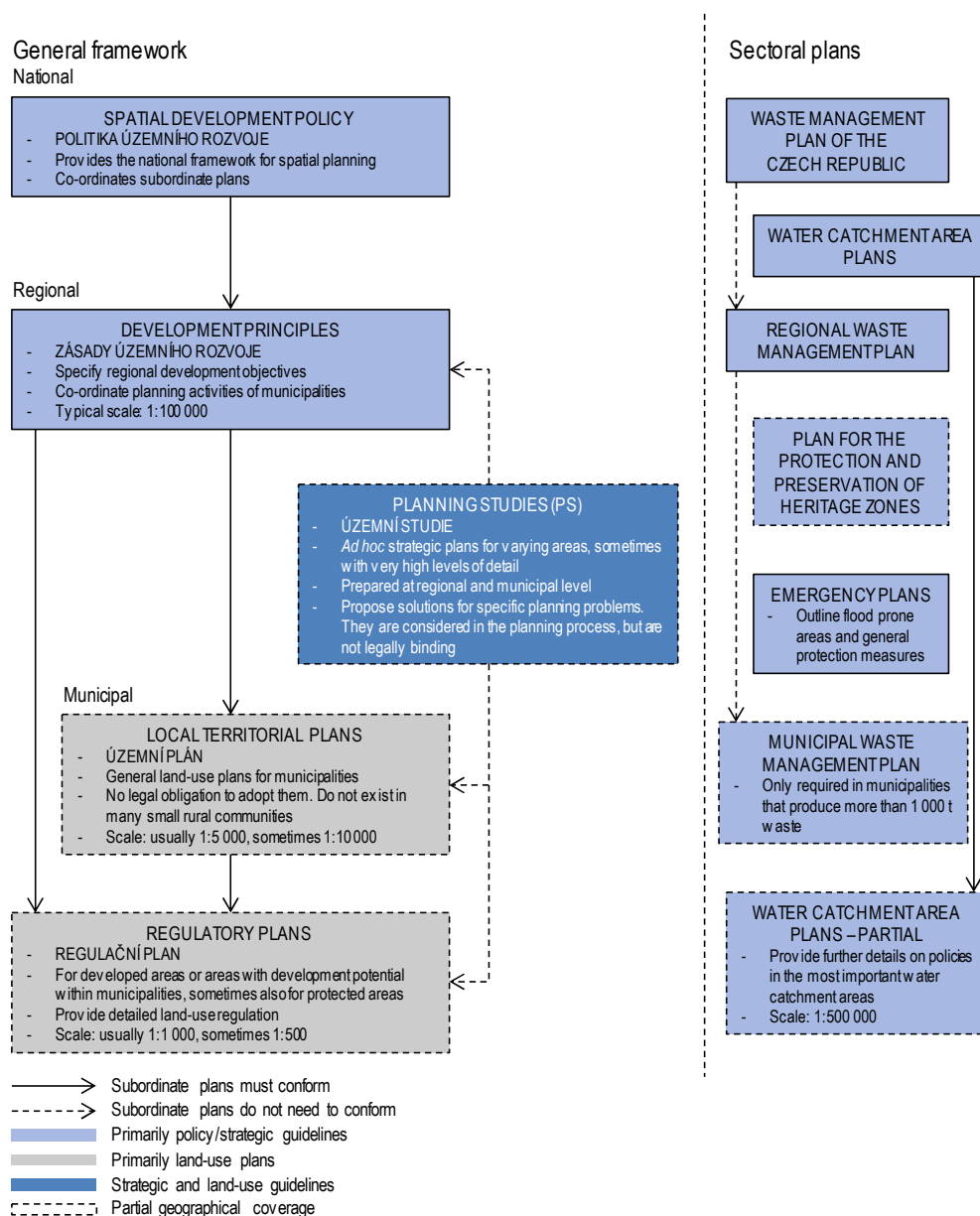
Sources: Healey, P. (1997), *Making Strategic Spatial Plans: Innovation in Europe*; Commission of the European Communities (1997), *The EU Compendium of Spatial Planning Systems and Policies*, http://commin.org/upload/Glossaries/European_Glossary/EU_compendium_No_28_of_1997.pdf; Allmendinger, P. and G. Haughton (2009), “Critical reflections on spatial planning”, <http://dx.doi.org/10.1068/a42227>; Albrechts, L. (2004), “Strategic (spatial) planning reexamined”; Larsson, G. (2006), *Spatial Planning Systems in Western Europe: An Overview*; Owens, S. and R. Cowell (2011), *Land and Limits: Interpreting Sustainability in the Planning Process*; Shaw, D., V. Nadin and T. Westlake (1995), “The compendium of European spatial planning systems”, <http://dx.doi.org/10.1080/09654319508720313>.

The hierarchy of spatial plans

The Czech Republic has a hierarchical system of plans and lower level plans generally need to comply with higher level ones (see Figure 1.1). The National Spatial Development Policy sits at the top of this hierarchy. It contains general guidelines for planning, specific requirements for sustainable development, and outlines the key spatial relations within the country and the objectives of the national government related to them (e.g. areas important to the development of technical and transport infrastructure). In comparison to other western European strategies (e.g. Austrian, Dutch or English), the Spatial Development Policy does not outline a vision for future spatial development. Rather, it is mostly focused on identifying key areas and corridors for development and protection and in some cases does so at a very detailed scale. The National Spatial

Development Policy is enacted by regulatory decision and is updated or replaced every four years. From the supranational level, the NATURA 2000, monuments listed by UNESCO and the corridors for TEN infrastructures have been incorporated in the national system of territorial planning and, consequently, set the limits for land use into the praxis of development.

Figure 1.1. **Organisation of spatial and land-use planning in Czech Republic**



Source: OECD (2016c), *The Governance of Land Use Part II*.

At the regional level, development principles play a similar role to the Spatial Development Policy at the national level. However, they provide more details for specific policy areas (such as roads) or for territories of particular importance. Development

principles express the spatial development priorities of regions and co-ordinate the planning activities of municipalities. For Prague, which is a region and a municipality, this co-ordinative function is less important.

At the municipal level there are three types of plans, two of which provide legally binding legislation for landowners. First, the Local Territorial Plan is a land-use plan that shows permitted land uses at a scale of 1:10 000 to 1:5 000 and covers the entire territory of a municipality. It is usually reviewed every four years, but only updated or replaced when a need arises. While local territorial plans are strictly enforced, they are frequently updated to fit the need of developers. In many instances, they also leave scope for discretion by the building office responsible for issuing planning permission (see Box 1.4 for a description of the building permit process).

Box 1.4. The building permit process in the Czech Republic

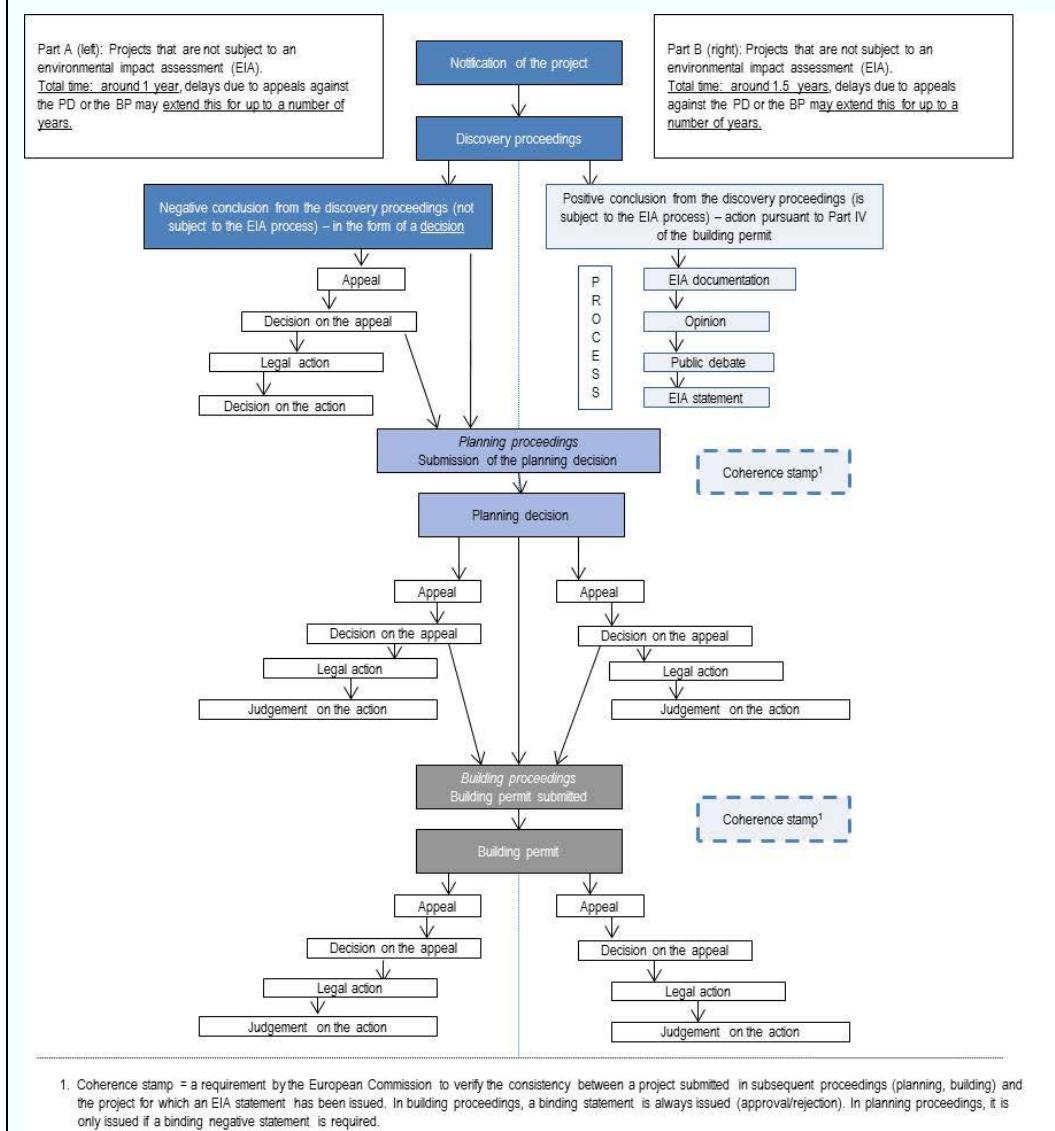
Building permits are granted by municipalities and are considered a formal permission for the construction, demolition or alteration of a building. Building permits ensure that any changes or additions to built form correspond to the broader planning requirements in an area and ensure that they meet the necessary safety, environmental, and heritage conservation rules and regulations (among others). They also serve as a vehicle through which parties which may be impacted by the construction, such as neighbours, can learn about the proposed project and provide their input. The process also allows recourse to appeals where it is deemed that the proposed project does not meet certain standards or negatively impacts on surrounding properties and the lives of residents.

The building permit process serves a very important regulatory function. However, it is equally important that there is a balance between regulatory requirements and processes and the amount of time that it takes to receive a permit. Protracted building permit processes can greatly increase the total costs of a project – costs which are ultimately born by consumers (home owners or renters). The World Bank's "Doing Business" report finds that it takes on average 247 days to obtain a planning permit to construct a warehouse in the Czech Republic (World Bank, 2017). The Czech Republic ranked at 183rd out of 213 countries surveyed by this measure. For more complicated projects, the Czech building permit process can take three to seven years. A recent analysis of the planning permission process in Prague indicates the variable length of time it can take to both obtain the correct permissions and realise the final project. Mladek (2017) finds that in 2007, planning permission for a residential project in Prague was obtained within 9 months; in 2012, a similar residential project took 2 years to obtain planning permission; while in 2017 it took 4.5 years. While the Czech Republic can have a prolonged approvals process, it fairs well on the indicator for building quality control and the cost of the planning approval procedure is relatively low, at 0.3% of total warehouse cost (World Bank, 2017).

Figure 1.2 outlines the building permit process in the Czech Republic. The process of obtaining a building permit in the Czech Republic has two steps: 1) a permit confirming that the proposed project conforms with the municipal land-use plan is required; 2) a building permit is required to approve the technical details of the project. While this is the general process to receive a building permit, there are many separate decisions and many opportunities for appeals and legal action on the judgement such that the total time it can take to obtain a building permit can extend from months to even years. There is a distinct process to follow for projects which do not require an environmental impact assessment (the left side of the figure), versus those that do (the right side of the figure). Further, there are legal stipulations for each step which outline the deadlines for filing appeals and issuing judgements on appeals.

Box 1.4. The building permit process in the Czech Republic (*continued*)

Figure 1.2. The building permit process, Czech Republic



Note: PD refers to Planning Decision, BP refers to Building Permit

Source: Adapted from figure provided by IPR Prague; Diagram of the approval process for projects in the Czech Republic – situation as at 1.4.2015.

Note: The World Bank “Doing Business” survey collects global data on the procedures, time and cost to build a warehouse, including obtaining necessary the licenses and permits, submitting all required notifications, requesting and receiving all necessary inspections and obtaining utility connections. In addition, the “Dealing with construction permits” indicator measures the building quality control index, evaluating the quality of building regulations, the strength of quality control and safety mechanisms, liability and insurance regimes, and professional certification requirements.

Source: Costa Branco De Oliveira Pedro, J.A., F.M. Meijer and H.J. Visscher (2011), “Comparison of building permit procedures in European Union countries”, <https://repository.tudelft.nl/islandora/object/uuid%3Ab391c687-3ecb-4017-abba-06f1539017e6>; Mladek, M. (2017), Real Estate Market – Spring 2017 Invicta, www.invicta-law.cz.

The second type, regulatory plans, are only prepared for specific areas, such as redevelopment zones, and only small parts of municipalities are covered by them. They provide further regulations regarding the details of permitted developments, such as architectural specifications, and have scales of 1:1 000 to 1:500. Public authorities can ask for a regulatory plan and put that request into the land-use plans (when being prepared). Investors may also ask a municipality to obtain a regulatory plan on their behalf. In such cases, the costs of preparing the regulatory plan are covered by the investors. The regulatory plans procured privately are valid for three years, but must be revised if the local territorial plan on which they are based is changed. Third, planning studies are *ad hoc* documents that can be procured by regional and local authorities to develop solutions to particular planning problems. They are non-statutory and have no legally binding consequences on either landowners or public authorities. Planning studies do not have clearly defined contents and can range from broad strategic documents to precise land-use plans. But they are, in the case of specific conditions and procedure, listed as a non-binding, but unforgettable background document, in which planning permissions must be in line. If planning permissions are not in line with the planning study, then clear and deep justification of a different solution must be provided.

Key spatial planning issues in the Czech Republic

The disconnect between regional policy and spatial planning

Czech spatial management runs under the institutional duality of regional (economic) policy and spatial planning. Despite certain efforts to co-ordinate both parts of the system, there are overlaps and in some instances, missing links. Organisationally, the separation of regional policy and strategic planning from territorial planning limits the scope of intervention by particular planning institutions and weakens its effectiveness. Spatial and land-use planning thus lack immediate connection to the financial planning of the state, regions and municipalities, which often make statutory plans without clearly anchoring them in public budgets. In essence, there can be a mismatch between resources and ambitions.

Lack of political awareness about the importance of spatial planning

The spatial planning system in the Czech Republic is legally robust; planning instruments are clearly defined, regularly updated and have a clear multi-level structure. Specific public interests are represented in the planning process through legally protected areas. However, the actual position and power of planning is weakened by limited political awareness of the importance of planning (von Radecki et al., 2016). Basically, the inherent doctrine of planning is missing. For example, though sustainable development principles have been legally enshrined, the everyday practical application of planning has evolved as a tool to promote development, often to the detriment of environmental protection and heritage conservation. Further, the public engagement function in the planning process is often underdeveloped.

In many respects, the approach to planning in the country is focused on technical aspects as opposed to the important deliberative and participatory role of planning that creates democratic legitimacy to pursue spatial development. The current model of spatial planning serves the state and municipal politicians, and through them the powerful actors, namely investors and developers. In a polarized society that has difficulties in communication, planning serves the winning side of the power game.

Conflicts between sectoral and spatial plans

The system of territorial planning is strongly impacted by sectoral policies and particular interest that can be difficult to reconcile and accommodate. Conflicts frequently emerge between monument and nature preservation and projects for transportation infrastructure. Conflicts also occur between the desire to protect good agricultural land and the desire for new residential and other forms of development. Conflicts may also emerge between adjoining municipalities in the case of new infrastructure investments (e.g. roads, bike paths, bio-corridors); however, such conflicts are often proactively identified in the analyses for the planning analytical materials or during the negotiation process of the local territorial plan. Overall, sectoral divisions have led to a fragmented approach to sustainable land management in the Czech Republic (Petrik, Fanta and Petryl, 2015).

Fiscal policies can be misaligned with spatial planning objectives

Apart from the distribution of tax revenue, some subsidies are provided without consideration of the territorial impact of the supported activity. For example, the subsidies for improved insulation of homes support the construction and improvement of houses in areas outside of access to utilities and public transport; this contributes to urban sprawl. As another example, the Czech Republic has among the highest fossil fuel subsidies in the European Union, which detracts from the spatial planning aim of compact developments in cities (IMF, 2015).

Fiscal instruments can provide powerful incentives for how land is used. Brownfield redevelopment incentives can create an inducement for private developers to take on such projects, which tend to be more complicated and costly. Betterment levies can be charged to capture the increase in property values due to a public action such as the rezoning of land or the provision of infrastructure. A differentiated property tax can be used to steer desired developments – e.g. reduce greenfield development and increase urban density. These types of instruments are underused by Czech municipalities and this is a missed opportunity. In particular, the property tax does not capture changes in market value. Rather than allowing private individuals and businesses to retain the entire market value benefit from increased property values attributable to public spending and investment, municipalities in the Czech Republic could take steps to “capture” a portion of the increases in value. A shift to a value-based property tax, and/or by various “value-capture” mechanisms linked to specific public infrastructure projects, would achieve such an objective.

Peri-urbanisation imposes higher infrastructure and service costs and leads to the fragmentation of the natural and agricultural lands

In commuting zones of Czech cities adjacent to existing villages, new residential developments have mushroomed. It is estimated that arable land is converted to urban uses (soil sealing) at a rate equal to 40 football pitches a day in the Czech Republic (Janků et al., 2016).⁷ While the peak for suburban housing growth was reached between 2004 and 2009, demand remains high. The councillors of the affected communities and small municipalities, who are the key decision-making actors on local development, are often positive to the growth which attracts new, young and well-to-do residents (and their accompanying tax revenues for the local budget). Moreover, selling the hitherto agricultural land as developable multiplies the yield for the (local) landowners.

Regions and/or the state government have virtually no control over these decisions, except for the legal protection of most valuable agricultural land. But even in this case, requirements of environmental impact assessments can be waived by local councils, and often are (Hnutí-Nesehnutí and Koželuh, 2008).

Commercial and industrial developments often occur on greenspace

Warehousing, logistics, and shopping, manufacturing and business parks are most often developed in open landscape adjacent to motorways and major roads, on flat terrain, on lands that often have high agricultural potential/good soil. For example, a study of large-scale retail construction in Prague's periphery between 1995 and 2007 found that 79 hectares of the highest grade of soil were used for this type of development (Spilková and Šefrna, 2010). Promises made by developers to contribute to the construction of deteriorating or inadequate local infrastructures (sewerage, improved roads) often motivate local councils to approve these developments.

Brownfield sites require remediation

There are many legacies of central economic and physical planning that persist to this day in the Czech Republic. One of these is the large number of brownfield (old industrial) sites – particularly in urban environments (Yaakov and Jackson, 2006). Often these industrial sites were developed in proximity to large and very dense residential estates within a city. There are many types of brownfield sites – e.g. industrial, agricultural (for example, former co-operative farms), military (for example, barracks, depots) and strip mining sites. These sites can be very difficult to redevelop into new uses. For example, industrial brownfields often have fragmented ownership and/or leasing rights; agricultural brownfields are often in remote locations; and military lands often contain contaminated soil.

Limited inter-municipal co-ordination on spatial and land-use planning

The centrepiece of decision making on land use rests in the hands of municipal councils. The pattern of municipalities is extremely fragmented: some may be as small as several tens of inhabitants. They often compete with each other and can be reluctant to co-operate (Nemec, Soukopova and Merickova, 2016). Further, the co-ordinating role of regions to overcome this fragmentation and lack of co-ordination is limited. Such a mismatch is evident in Prague, where jurisdictional boundaries do not correspond to the functional urban area. This issue, and associated recommendations, is further discussed in Chapters 3 and 4.

Notes

1. This was done under the Constitution the Czechoslovak Federation dissolved in late 1992.
2. The local coefficient is determined by a generally binding ordinance which adjusts for a municipality's population, and municipal and local coefficients (Janoušková and Sobotovičová, 2016).
3. In France, urban planning agencies hold the legal status of non-profit body, with the exception of the Île-de-France Urban Planning and Development Agency, which is a public interest foundation. In general these bodies are created through the agreement of subnational authorities (municipalities, inter-municipal communities, departments, regions), with the support and approval of state authorities. They may also involve collaborations with other organisations, such as universities and chambers of commerce. Their role is to provide advice and expert assessment on urban planning and land management issues.
4. The 2008 version of the National Spatial Development Policy is available in English at: www.mmr.cz/getmedia/e3aedb3a-9276-4773-b3a3-57c25af2f61e/politika-rozvoje_cr_2008_web_anglicky.pdf?ext=.pdf. The 2015 update is only available in Czech, at: www.mmr.cz/getmedia/514b9dcb-4cf3-4ebc-9ef5-c9f5230c089c/2015_VI_26_Brozura_PUR_CR_ve_zneni_Aktualizace_c_1.pdf?ext=.pdf, accessed 2 January 2017).
5. The regional offices act as procurers of regional planning analytical materials and (regional) development principles. The offices with extended powers act as procurers of local planning analytical materials and (local territorial) plans.
6. Other examples include the following Acts: on the Professional Practice of Certified Architects and on the Professional Practice of Certified Engineers and Technicians in Construction (360/199); on State Monument Preservation (20/1987); on the Withdrawal or Restriction of Ownership Rights to the Land or Buildings (Expropriation Act, 184/2006). The National Framework on Sustainable Development does not influence development directly and it is not an obligatory document.
7. This is equivalent to soil loss of approximately 9 100 ha per year, or approximately 25 ha per day (Janků et al., 2016).

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Chapter 2.

Land-use trends, opportunities and challenges in Prague

This chapter provides an overview of the trends and conditions that shape how land is used in the city of Prague and its broader metropolitan area. The chapter begins with a description of Prague's geography and its connections to the broader region. Following this, the city's economic development, socio-economic and demographic trends, housing stock and housing demand are discussed. The chapter ends with a discussion of the major pressures for land development and protection facing the city.

Prague (*Praha*) is a vibrant and growing city. It is the economic, cultural and political centre of the Czech Republic and the largest city in the country. Prague covers 49 613 hectares (ha) and has a population of 1.26 million inhabitants – representing 12% of the population of the country (OECD, 2016c). A further 300 000 individuals commute or visit Prague daily. Prague's economy forms 25% of the national gross domestic product (GDP) and is dominated by the services sector, which accounts for approximately 80% of its economic base.

As a central city, Prague faces many pressures for land use and development. It has a historic urban core dating from the 10th-18th centuries that is a UNESCO World Heritage Site. This area is a magnet for tourists and land uses need to balance the needs of residents, visitors, workers and commuters in this area while maintaining monuments and heritage buildings. The city also needs to manage occasional flooding from the river Vltava which bisects it; land uses need to be compatible with water management. The city's industrial heritage has left a large number of brownfield sites, which require conversion into new uses. Critically, Prague is seeing rapid sub- and peri-urban growth, which puts growing pressure on transportation infrastructure as the number of commuters grows. It further challenges the city to ensure compact and sustainable development practices. This has been a rapid change from the socialist period when almost no development was allowed in the communities surrounding Prague. These issues, together with the need for affordable housing and quality public amenities, are among the most important land-use issues the city faces today.

This chapter outlines the major land-use trends, opportunities and challenges in Prague. It proceeds in five parts. It begins with a discussion Prague's geography and land use followed by the city's economic development, socio-economic and demographic trends, housing and real estate trends, and a description of its transportation networks. The chapter ends with a discussion of the major pressures for land development and protection in the city.

Geography and land use

The city and its functional urban area

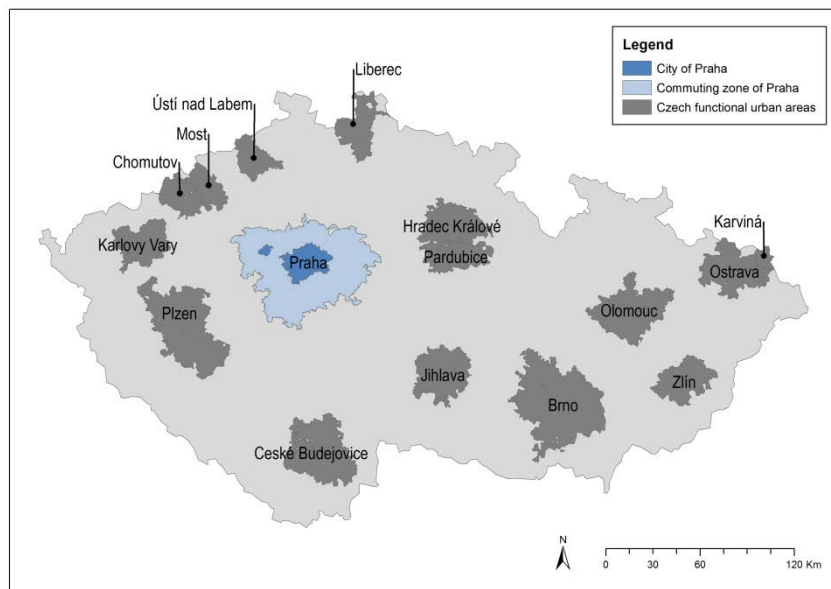
Prague is unique in that it is a capital city, a region and a NUTS II level cohesion region.¹ For the sake of simplicity Prague will be referred to as a city throughout this report. The functional urban area (FUA) of the city – the area across which people live, work and commute – extends much beyond the Prague's administrative boundaries (Figure 2.1).² While the city of Prague has a population of approximately 1.26 million, its FUA is larger, at approximately 1.9 million.

Prague's FUA includes larger municipalities, such as Kladno which lies northwest of Prague and has a population of approximately 68 000, along with a large number of small municipalities, such as Krhanice, which lies to the south of Prague and has a population of under 1 000. In total, the FUA of Prague encompasses 435 municipalities (these units are depicted in Figure 2.1, Prague metropolitan area). The interconnectedness of municipalities large and small across this urban system has obvious implications for spatial planning and land use – it raises the importance of a co-ordinated approach across the functional territory – a point that will be returned to at length in Chapter 4.

Prague is by far the largest FUA in the Czech Republic – the second largest FUA is Brno (population 646 421) and the third largest is Ostrava (561 242). The large FUAs in the Czech Republic (Prague, Brno, Ostrava) are among the most polycentric in the OECD – they all stand in the top quartile by this measure. By way of international comparison, the

Prague FUA is similar in size to that of Birmingham (United Kingdom), Austin (United States) and Lyon (France).

Figure 2.1. **Czech Republic functional urban areas**



Prague is surrounded by the region of Central Bohemia

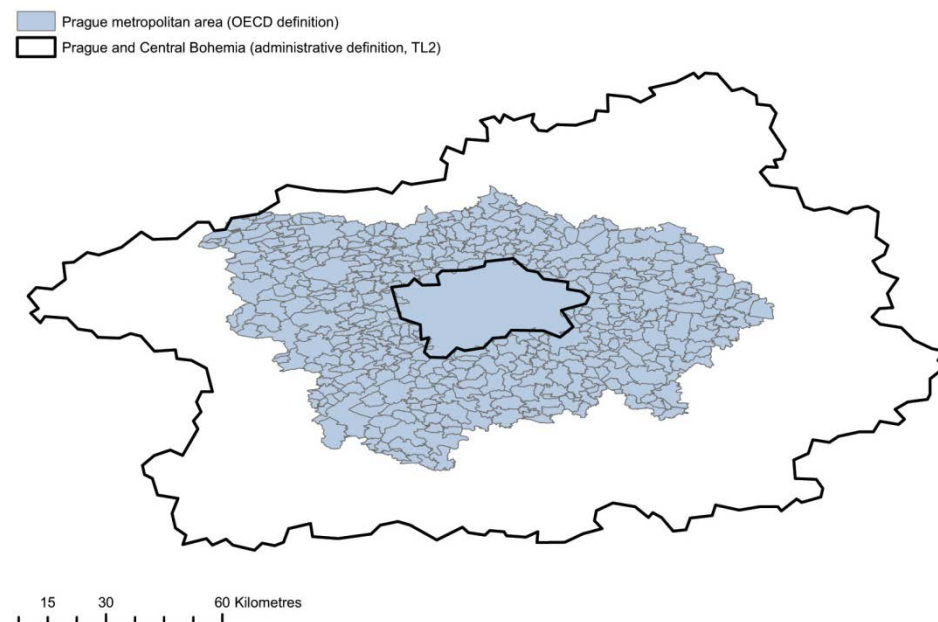
The region of Central Bohemia, which has a population of 1.29 million, accounts for approximately 12.3% of the national population (Figure 2.2). Together, Prague and Central Bohemia account for almost one-quarter of the population of the Czech Republic and 36% of national GDP. The majority of the population and economic activity in Central Bohemia is strongly coupled to Prague (OECD, 2013).

The city of Prague has of 57 self-governing municipal boroughs

Prague is divided into municipal and administrative districts, boroughs and cadastral areas. The city is covered by 122 cadastral areas for the purposes of registering property. Presently, there are 57 self-governing municipal boroughs which have been further grouped into 22 numbered administrative districts.³ Within an administrative district, one municipality is chosen to provide certain services to the others and it is this district that holds the numbered district title – e.g. Prague 1 (Figure 2.3). Typically, it is the larger municipality that fulfils this role. As such, one can say that the city/region of Prague has either three or two layers of government, depending on whether one counts an administrative district or borough. Districts have an elected council with a mayor, as does the city of Prague (city-region).

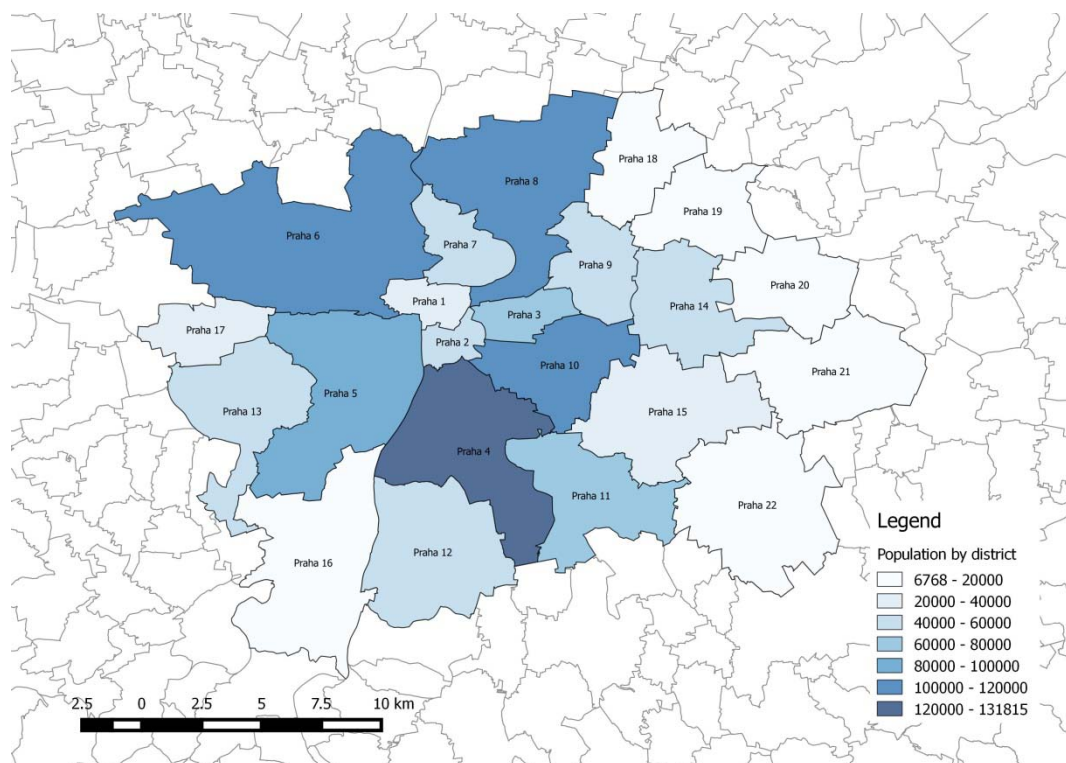
The population and size of these districts can vary considerably. For example, Prague 4 has a population of approximately 132 000 while Prague 19 has a population of approximately 6 800 (2015) (Czech Statistical Office, 2016a). They differ in the level of urbanisation, population density, quality of technical infrastructure and socio-economic conditions of their inhabitants. The districts are variously urban and centrally located or otherwise primarily residential with houses dating back to the 1920s and 1930s, industrial in nature, in neighbourhoods of high-rise houses or suburban.

Figure 2.2. Prague and the Central Bohemian region



Source: OECD (2013), *Rural-Urban Partnerships: An Integrated Approach to Economic Development*, <http://dx.doi.org/10.1787/9789264204812-en>.

Figure 2.3. Prague's population by district, 2015

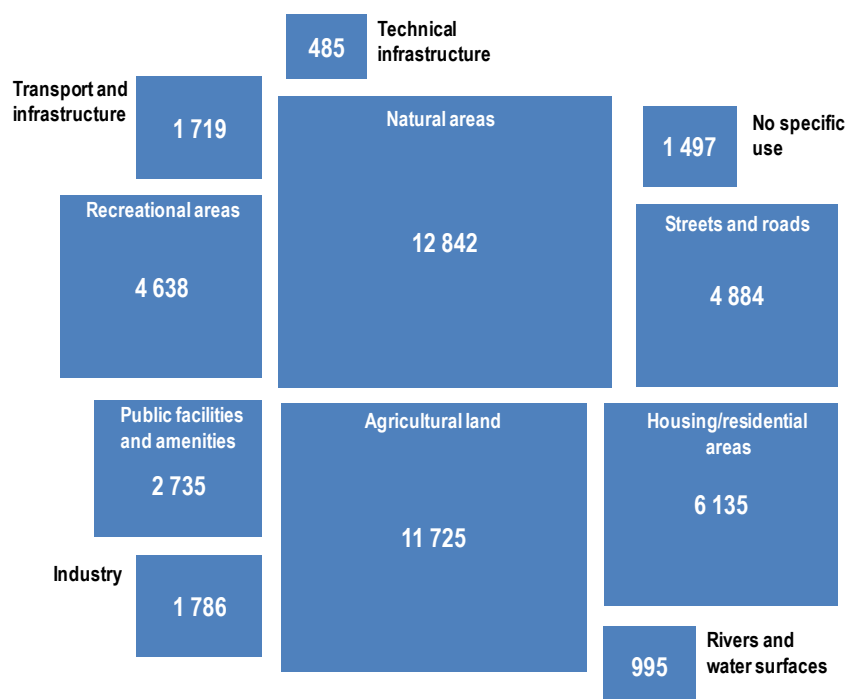


Land use in Prague

Prague's total area is 49 000 ha and the city has a population density of 25 persons per hectare (IPR Prague, 2015a).⁴ The individual districts that compose Prague have greatly varying densities – as high as 200 persons per hectare in the case of Vinohrady and as little as 10 per hectare in Kreslice. In general, the buildings in Prague are low-rise – the majority (56%) of houses in Prague are less than 10 metres high (IPR Prague, 2015a). Land uses have changed rapidly and Prague has seen the most intensive urbanisation and suburbanisation of any municipality in the Czech Republic. For example, between 1985 and 2000, built-up areas increased from 1.1% of the territory to approximately 8.1% (Bičík and Kupakova, 2006).

Prague has a very large share of agricultural and natural lands in its territory. Around a quarter of the city's land is open countryside and almost a quarter is agricultural land (out of total) (Figure 2.4). There is a large area of suburban woods that are integrated with residential areas. Forested areas in Prague have actually increased by almost a third over the past century (City of Prague, 2016). These were part of state-organised projects to forest land (sometimes agricultural land) with acacia, pine and red oak. On private lands, this reforestation was encouraged by tax relief policies. The height of this reforestation effort took place between 1948 and 1990 when over 800 hectares of land were forested in Prague (City of Prague, 2016). In past decades, the idea of establishing a greenbelt was proposed, but this was subsequently abandoned due to the resistance of private landowners. Housing covers 12% of Prague's area while 5.5% is reserved for public services and amenities. Given the amount of available land in Prague, it is perhaps all the more surprising that there has been such rapid peri-urbanisation.

Figure 2.4. Land use in the city of Prague, hectares, 2015



Source: Based on IPR Prague (2015a), "Do you know Prague? The city in maps, graphs and figures", www.iprpraha.cz/uploads/assets/dokumenty/obecne/do_you_know_prague.pdf (accessed 2 March 2017).

Cities that recognise the importance of public spaces (with proper layouts) and that have allocated land to ensure that streets are accessible and safe tend to have higher productivity and higher quality of life (UN Habitat, 2013). A study by UN Habitat (2013) argues that public space, including streets and roads, should ideally constitute approximately 45-50% of a city's land area. In Prague, the public space ration is in fact much higher than this. The ratio of recreation areas and streets and roads to that of housing technical infrastructure and industrial areas is around 113%; if one includes natural areas, the ratio of public space increases to 260%. Prague is rich in public spaces, however, a key issue for the city is to ensure that these spaces are well linked, accessible and of a high quality.

Land use in Prague's functional urban area

Prague's urban core has a share of developed land per person slightly below the European average, but its commuting zone is characterised by dispersed developments compared to European averages. Developed land per capita in Prague is above the European average but below the average of FUAs in Visegrad countries (the Czech Republic, Hungary, Poland and the Slovak Republic) (Table 2.1, year 2012). This provides an indication of density and compactness; it can be said that across the Prague FUA, there is less built up land per person than the average for European FUAs.

There are major differences in terms of developed land per person when it comes to Prague's core and commuting zones. Developed land per capita in Prague's core is slightly lower than the average for both European and Visegrad FUAs – indicating that Prague's core is denser. Note that Prague's core according to the OECD definition covers the entire area of the city of Prague as well as the nearby municipality of Kladno. In contrast, developed land per capita in Prague's commuting zone is much higher than the European FUA average and somewhat higher than the average for Visegrad FUAs (Table 2.1 and Figure 2.5). This indicates that when it comes to the commuting zone, land use per person is much less efficient. In Prague's case, the large share of developed land per capita may be in part explained by the preference of commercial and industrial firms to locate their operations outside of the city of Prague's administrative boundary in order to qualify for EU funds in the Central Bohemian region. However, it is also explained by other factors, such as a cultural preference for large suburban homes.

Prague is experiencing rapid peri-urban growth. Between 2000 and 2012, developed land across Prague's FUA increased by 0.7% per year, which is higher than both the European and Visegrad FUA averages, at 0.40% and 0.49% respectively (Table 2.1). By far, the greatest increases were seen in Prague's commuting zone, which grew by 1.03% per annum over this period (Figure 2.6). This is more than twice the European average for the same period (0.52% per annum) and much above the average for Visegrad FUAs (at 0.65% per annum).

It is important to also consider how these changes in the amount of developed land relate to population growth or decline. Developed land per capita in Prague declined slightly over the 2000-12 period for the FUA as a whole – by -0.9% per year (Table 2.1). This figure stood slightly higher for European FUAs overall (at -0.02% per annum) and higher still for Visegrad FUAs (at 0.35% per annum). This indicates that population growth is slightly higher than the rate of land consumption in Prague. Further, per capita change in developed land in Prague shows a marked difference between the core and commuting zones. In the core, the percentage change in developed land per capita was just -0.15, indicating that growth in developed land is only slightly lower than population growth; for the average across European FUAs, this figure was slightly higher, at 0.04%

per annum, while the average for the Visegrad group was much higher than both over this time period, at 0.43% per annum (Table 2.1). In the core of Visegrad FUAs, the amount of developed land per capita is outpacing population growth on average while in Prague's core, it is not.

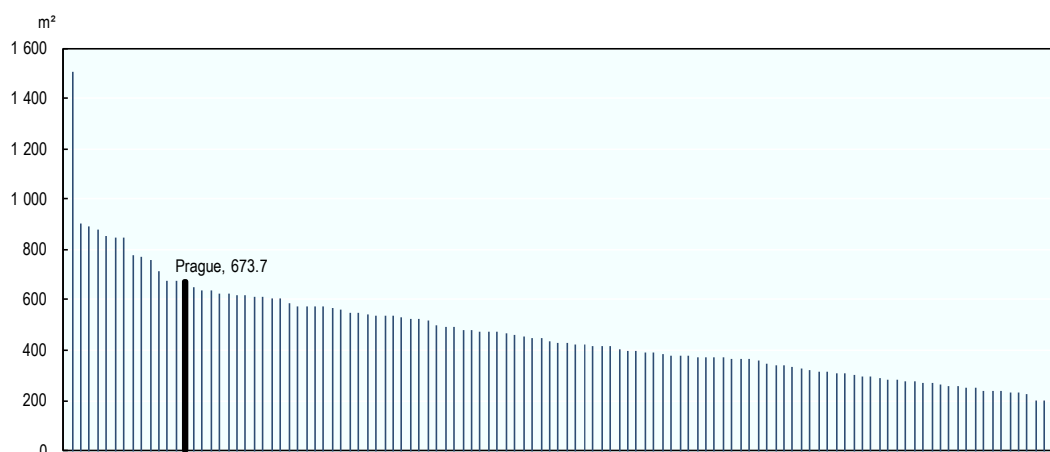
Table 2.1. **Land-use change, European functional urban areas**

	European metropolitan areas	Visegrad metropolitan areas	Prague metropolitan area
Developed land per capita in m ² , 2012	322	368	352
Developed land per capita in m ² (core), 2012	240	239	221
Developed land per capita in m ² (commuting zone), 2012	466	611	673
Percentage change in developed land, annualised, 2000-12	0.40%	0.49%	0.70%
Percentage change in developed land (core), annualised, 2000-12	0.27%	0.27%	0.31%
Percentage change in developed land (commuting zone), annualised, 2000-12	0.52%	0.65%	1.03%
Percentage change in developed land per capita, annualised, 2000-12	-0.02%	0.35%	-0.09%
Percentage change in developed land per capita (core), annualised, 2000-12	-0.04%	0.43%	-0.15%
Percentage change in developed land per capita (commuting zone), annualised, 2000-12	-0.14%	-0.09%	-0.62%
Number of observations	114	13	1

Notes: All averages are unweighted. For the purposes of comparability, these data are based on European functional urban areas (FUAs) only; this includes all FUAs with a population of 50 000 or greater. The last two columns provide data for large FUAs only; those with a population of 500 000 or greater. The Visegrad group includes the Czech Republic, Hungary, Poland and the Slovak Republic.

Source: Calculations based on OECD (2017), *Land-use Planning Systems in the OECD: Country Fact Sheets*, <http://dx.doi.org/10.1787/9789264268579-en>.

Figure 2.5. **Developed land per capita, commuting zone, European functional urban areas, 2012**

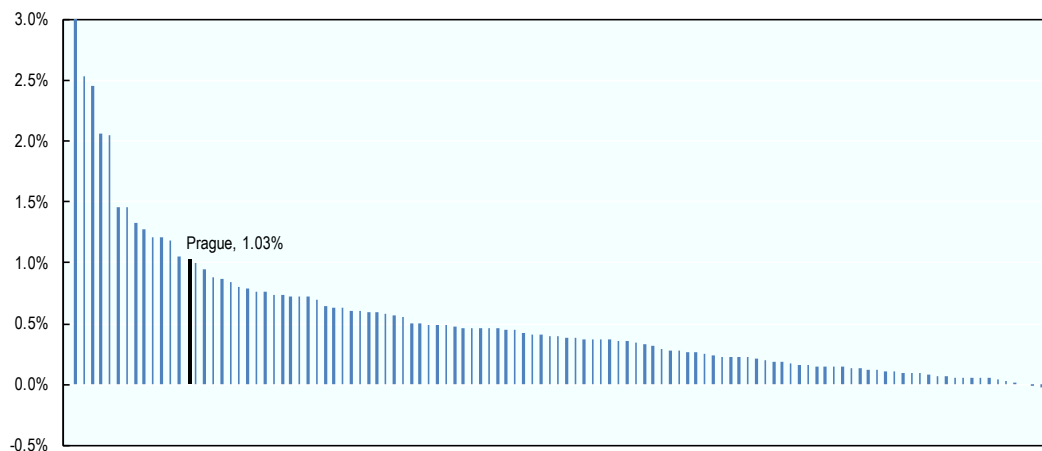


Source: Own elaboration based on *Corine Land Cover*.

Land-use change per capita in Prague's commuting zone tells an important story. Developed land per capita declined by -0.62% per annum between 2000 and 2012; this does not imply that developed land in Prague's commuting zone has shrunk. In contrast,

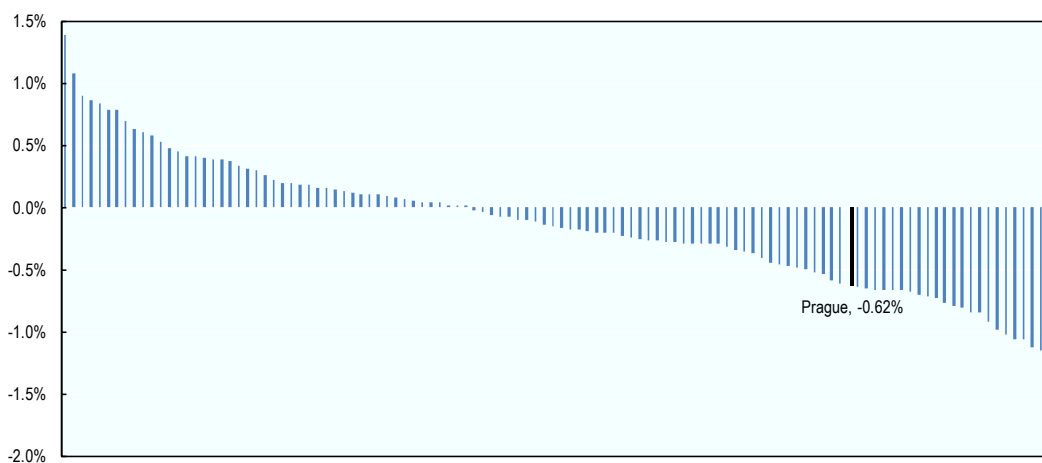
it indicates that while Prague has seen growth in developed land in the commuting zone, this growth has under-paced population changes, and more so than in the core over the same time period. There are a number of factors that could explain these changes. It could, for example, indicate that the consumption of developed land per person is becoming more efficient, with higher population densities in the commuting zone. This could be driven by population dynamics, such as individuals with families supplanting two- or single person households within the existing housing stock.

Figure 2.6. **Percentage change in developed land, commuting zone, European functional urban areas, 2000-12**



Source: Own elaboration based on *Corine Land Cover*.

Figure 2.7. **Percentage change in developed land per capita, commuting zone, European functional urban areas, 2000-12**



Source: Own elaboration based on *Corine Land Cover*.

Box 2.1. Data on land cover

The preceding analysis of land cover by functional urban area (FUA) in Europe is based on the *Corine Land Cover database* (see European Environment Agency, 2015a). The European *Corine Land Cover* data are based on satellite images that have been analysed by humans and with areas classified using auxiliary datasets such as detailed maps and ground photography. In *Corine Land Cover* data, areas must be at least 100 metres wide and cover at least 5 hectares to be shown. Areas that are smaller than these thresholds are not visible. The resolution limits the precision of the data. The European Environment Agency (2016) argues, for example, that *Corine Land Cover* data tend to overestimate the extent of urban areas because they do not show undeveloped land between scattered areas of developed land. However, in other areas, the extent of developed land may be underestimated because features such as small and mid-sized roads and isolated buildings are too small to appear in images with a resolution that can be provided by satellite data. Furthermore, some errors may be introduced through misclassification of land, either by human interpreters of satellite images or by automatic algorithms.

Land cover data are produced only infrequently due to the complex process of collecting and processing it. For Europe, data are available for 2000, 2006 and 2012. This report uses European data from 2000 and 2012. For the United States, the two most recent datasets refer to 2001 and 2011. In all land cover datasets, land cover is categorised into different classes. These classes have been aggregated into three major classes: developed land, agricultural land and forests. The first class contains all artificial surfaces as well as urban green spaces. The second category includes all forms of land used for agriculture, covering for example cropland and pastures. The third class covers all forms of forests.

This chapter uses “developed land per capita” as a central unit of measurement. It is defined as the total area of developed land in a country (or region) divided by the number of inhabitants. Developed land per capita is the inverse of the population density of developed land (i.e. the number of inhabitants of a country divided by the area of developed land). Thus, an increase in developed land per capita is the equivalent of a decrease of the population density of developed land and vice versa. As both units of measurement measure the same concept, both could have been used in this report. Developed land per capita was chosen to avoid confusion concerning the term “population density”, which refers normally the average number of inhabitants in a given area of an administrative territory, irrespective of whether or not the land is developed.

It is important to keep in mind that a change in developed land per capita can be caused by a change in the area of developed land (the numerator) or by a change in the number of inhabitants (the denominator). This matters particularly when developed land per capita is declining. In the vast majority of cases, it does not imply that the area of developed land decreases. Rather, the number of inhabitants that live on the developed land (the denominator) increases faster than the area of developed land (the denominator), which causes a decline in developed land per capita. This would be equivalent to an increase in the population density of developed land.

Source: OECD (2017), *Land-use Planning Systems in the OECD: Country Fact Sheets*, <http://dx.doi.org/10.1787/9789264268579-en>.

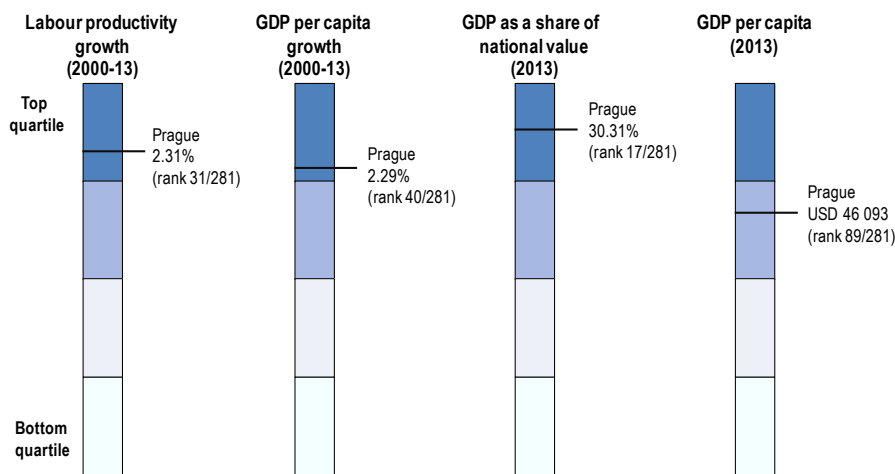
Prague’s economic development

Prague is a major contributor to national economic growth with a strong services-based economy

Economic conditions have a major impact on how land is used, particularly the pace of new developments. Among OECD FUAs, Prague stands in the top quartile in terms of GDP growth (2000-13), labour productivity growth (2000-13) and GDP as a share of

national value (2013) (Figure 2.8).⁵ In terms of the levels of GDP per capita (2013), Prague FUA is ranked slight lower than its OECD FUA counterparts, falling in the second quartile. However, it is important to note that the level of GDP per inhabitant in Prague is about twice as high as in the region with the second highest level in the country (South Moravian) (Czech Statistical Office, 2016e).⁶ In light of the fact that Prague substantially exceeds the economic indicators of the other parts of the Czech Republic, it only receives limited support from EU Cohesion Funds.

Figure 2.8. Economic indicators, Prague and OECD functional urban areas



Source: OECD Metro Explorer, <http://measuringurban.oecd.org/#>.

Prague's economy has changed significantly in the past few decades. Post-1989, the services sector in Prague greatly expanded while manufacturing and industry decreased. The services sector now represents more than 80% of gross value added in Prague and accounts for the largest share of employment.⁷ This economic transition has led to a large number of brownfield sites in the city – some of which have been successfully transformed into new residential and commercial functions.

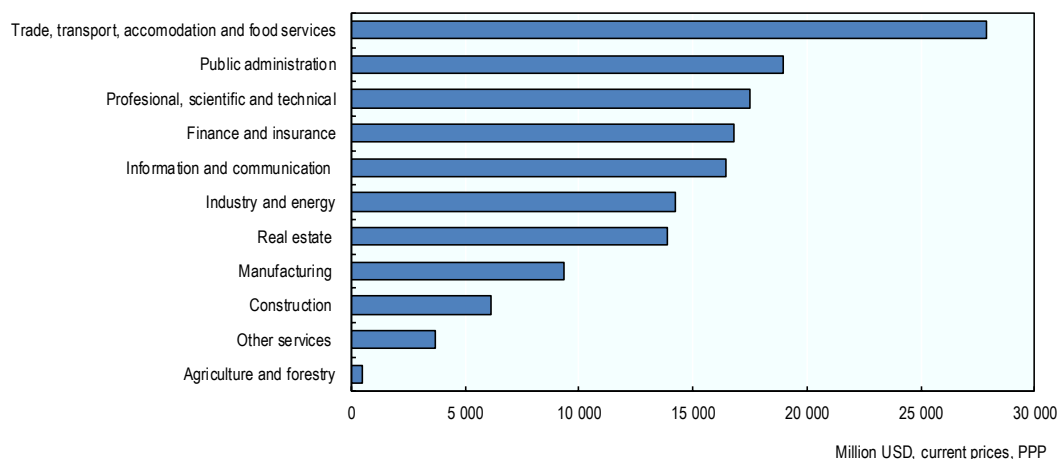
In terms of gross value added, the trade, transport, accommodation and food services sector is by far the largest contributor (at USD 28 billion in 2013); followed by public administration, including education and healthcare (USD 17 billion); and professional, scientific and technical industries (USD 17 billion) (Figure 2.9).

Prague is host to a marked concentration of political, economic, educational and research institutions, many of which are of national or international significance. The city is also host to a large number of headquarters of multinational companies which contribute significantly to Prague's economic performance. Specialised services and other professional, academic and technical activities also have a relatively strong representation compared to other regions. Further, the fields of media, ICT, management consulting, and research activities and other specialised knowledge-intensive services are highly active in Prague and are widely used by entities and manufacturing groups outside the region, thus representing an important source of economic competitiveness.

The city is one of the most attractive destinations for foreign direct investment (FDI) among cities in Central and Eastern Europe. FDI in Prague increased 200% between 2001 and 2011 (Ferry, 2014). However, the city's competitiveness is diminished by limited investor

care and the ambiguous stance of Prague's local government to FDI (e.g. insufficient communication with investors and an unclear vision) (Parsa et al., 2000; Deloitte, 2016). The city has acknowledged this issue in its strategic plans, stating that there are “uncoordinated and unclear relationships between city authorities and the business sector (i.e. potential investors)” (Maier, 2003: 225).

Figure 2.9. **Gross value added by industry, 2013**



Source: OECD (2016c), “Regional economy”, *OECD Regional Statistics* (database), <http://dx.doi.org/10.1787/6b288ab8-en> (accessed on 20 December 2016).

The construction industry was significantly impacted by the 2008 economic crisis, as was common across the OECD. Fewer construction permits have been granted in the city in recent years and the number of completed dwellings is decreasing. For example, the intensity of dwelling construction is lower in Prague than in the Central Bohemian region, where the inhabitants of Prague often move. In 2014, Prague gave out a total of 5 273 building permits, while the Central Bohemian region issued 15 098 (Czech Statistical Office, 2016c).⁸ However, it bears noting that the value of the construction projects in Prague was proportionally higher than that of the Central Bohemian region over this time.⁹

The city's strong tourism sector impacts land use in the historical core

Tourism in Prague has been growing steadily – from approximately 16 million overnight stays in 2012 to approximately 17.5 million in 2014 (Czech Statistical Office, 2016b). Around 90% of tourism is from international destinations and this is increasing, while domestic tourism has stayed roughly the same. The number of visitors reached 6.1 million in 2014 and the vast majority of this tourism is concentrated in Prague's historic city centre, which spans just 8.6 km². Beyond the formal hotel sector, Prague, like cities across Europe, has seen a growth of hotels in the unregulated tourism sectors, which has importance consequences for land use (Box 2.2).

The central and historical Prague 1 District accounts for one-third of all tourist accommodations in the city. The district transformed rapidly in the 1990s when deregulation, together with privatisation auctions, changed the function of the area away from its residential uses towards serving tourists and high-income groups (Sýkora, 1996; 1999). As evidence of this transformation, the number of residents in this area has decreased, from 170 000 in 1900 to 53 000 in 2001 (Polívková, 2001). Much of the existing population

has been displaced due to a steep rise in property prices in the core. Today there are debates about how the central area can retain both touristic functions but also be a place that local residents can enjoy (Pixova and Sládek, 2016). Prague has a tight network of tourist attractions – in comparison to, for example Vienna, where they are more dispersed – and as a consequence, congestion in the historic centre can detract from the usage of the space for all (Kádár, 2013).

Box 2.2. The growth of hotels in the unregulated tourism sector

The rise of the unregulated tourism sector – where people are connected through a variety of web platforms to share and sell goods and services – has had wide-ranging effects on local economies, firms and communities. The sector (with companies such as Airbnb, homeaway or VRBO) has brought in extra income for individuals willing to rent their rooms or homes, and has led to boon in relatively affordable room rentals for short- or long-term stays. By lowering transaction costs, these companies can present a real threat to established industries. For example, a recent study by Zervas, Proserpio and Byers (2016) estimates that hotel revenues declined by 8-10% in Austin, Texas as a result of Airbnb's operations. Facing tighter market competition, incumbent firms are forced to respond, often by lowering their prices and improving the quality of their services in order to remain competitive – two very favourable conditions for consumers (OECD, 2016c: 13).

These types of decentralised peer-to-peer markets do not face the same kinds of regulatory burdens that established businesses face. A recent study by the Financial Times has found that about a third of the savings from booking an Airbnb room in London is due to the tax advantages of their business model (2017). These types of services also tend to circumnavigate health and safety regulations, labour laws, and zoning rules. In the case of the latter, this can lead to a concentration of economic activities in certain neighbourhoods and communities which are not zoned for such activities, leading to conflict between neighbours. In cities with particularly high demand for such services, such as Prague, this can result in apartments being permanently dedicated to these temporary uses (often purchased by investors for these purposes), resulting in permanent housing being taken off the market. These dynamics can increase rental and housing prices. A recent study of these effects in New York City found that for each of the top 20 neighbourhoods for Airbnb listings in Manhattan and Brooklyn, average rent increases were nearly double the citywide average from 2011 to 2015 (BJH Advisors LLC, 2016). In 2015, the report estimates the city also lost more than 8 000 housing units to Airbnb, reducing access to affordable housing in the affected neighbourhoods by 10%. The impact of this phenomenon is thus not inconsequential.

Presently there are an estimated 10 300 active Airbnb flat rentals on the market in Prague (Airdna, 2017). Between 2015 and 2016 the number of listings on the service increased by 5 000. There is evidence that some residences being rented through such platforms are not in fact homes, but apartments purchased for that investment purpose. As one indication of this, approximately 1 500 of the Airbnb listings on the market are for hosts with multiple listings. The business association representing the European hospitality industry, HOTREC (2014), estimates that the unregulated hotel sector is more than twice the size of traditional tourism accommodation sector in Europe, based on listings on the main platforms.

The sheer scale with which the sharing economy has flourished has left policy makers scrambling to understand and address its consequences and craft regulatory responses that can be meaningfully applied – a challenging undertaking given the peer-to-peer nature of the service. Policy makers face serious data limitations in trying to quantify the scale and impact of these services given that the companies involved do not share their data. Available data are largely composed of estimates based on listings and information from the main sharing economy platforms.

Box 2.2. The growth of hotels in the unregulated tourism sector (*continued*)

Airbnb regulations: Comparative examples

In **Prague**, hosts are meant to register guests and collect a fee of CZK 15 per person under the rules of hosting in regular apartments (*Místní poplatek za lázeňský nebo rekreační pobyt*). The information and fees are submitted to individual districts. However, there is no method to ensure host compliance. There are a number of other approaches to the regulation of the sector which may be worth considering in Prague:

- In 2014, **Amsterdam** created a new category of housing of private vacation rentals that allows short-term rentals under certain conditions: properties must be rented by the main (registered) occupant of the property; the person renting the property must also be the owner of the property (as opposed to the tenant); a property can be rented for no more than two months a year; no more than four people can rent a property at a time. Amsterdam has an agreement with Airbnb to collect the local tax on accommodation, which is set at 5% (est. January 2015).
- **London** has established a 90-day annual limit on Airbnb hosts; planning permission is required for those wishing to rent for longer.
- **Paris** has recently adopted rules that anyone who wishes to rent their home out for longer than four weeks, or who rents a property that they do not themselves live in, must apply for a change of use permit and register it as a commercial property. Non-compliance can result in a fine of up to EUR 25 000 per unit and a penalty of EUR 1 000 per day. The city of Paris has strengthened enforcement actions and leads daily checks by sworn officers to identify and punish abuses.
- **San Francisco** has a similar system; rentals are effectively capped at 90 days a year and short-term rental operators must obtain a valid business registration certificate and hosts must register with the city (paying a fee of USD 50) and abide by a number of requirements (e.g. hold liability insurance).
- **Japan**, which has the fastest growing Airbnb market in the world, recently introduced national guidelines to limit the market to week-long rentals only. It is left to each municipality to ratify the rules, bringing them into legal force. The rules are now in force in **Osaka** for instance.
- In **New York**, it has been illegal since 2010 to rent out a whole apartment for fewer than 30 days.
- In **Berlin**, rentals are only allowed if they constitute less than 50% of their apartment on a short-term basis; those who contravene this policy risk a fine of EUR 100 000. The purpose of this regulation was to preserve affordable housing in the city.

Priority actions for policy makers

There are two critical issues for policy makers to address when it comes to these types of private rentals. The first is that municipalities need to **monitor and assess** the impacts of such services on residential buildings and neighbourhoods. It is important to understand the consequences of these new activities in order to determine the kinds of regulations that will be needed to address any negative consequences. At present, there is very limited research on these issues. Municipalities could, for instance, set up a hotline for complaints.

Box 2.2. The growth of hotels in the unregulated tourism sector (*continued*)

Second, rentals through Airbnb and other similar platforms need to **respect laws and regulations**. They need to declare income and other services such as cleaners and pay hotel taxes and all other relevant taxes. They also need to also comply with obligations on the registration of visitor identity (i.e. Schengen convention requirements). Compliance with fiscal obligations requires that short-term rental companies agree to levy charges at source – as Airbnb currently does for Amsterdam and a large number of other cities. Companies like Airbnb should be pressed to provide data in order to ensure compliance with local regulations.

The integration of short-term private accommodation rentals in legislation is a mandate for national and/or regional governments. Presently, municipalities have developed their own regulations and have negotiated on a one-on-one basis with these firms. The growth of hotels in the unregulated tourism sector presents an opportunity to review the overall regulatory framework for tourism, to ensure it is fit for purpose.

Sources: BJH Advisors LLC (2016), “Short changing New York City: The impact of Airbnb on New York City’s housing market”, www.sharebetter.org/wp-content/uploads/2016/06/NYCHousingReport_Final.pdf; Zervas, G., D. Proserpio and J. Byers (2016), “The rise of the sharing economy: Estimating the impact of Airbnb on the hotel industry”, <http://dx.doi.org/10.2139/ssrn.2366898>; HOTREC (2015), “Levelling the playing field: Policy paper on the sharing economy”, www.hotrec.eu/cust/documentrequest.aspx?UID=f61dafd3-2b31-4183-a0c4-86ddf174344b; HOTREC (2014), “HOTREC position vis-à-vis the emerging shadow hospitality economy in Europe”; OECD (2016f), *OECD Tourism Trends and Policies 2016*, <http://dx.doi.org/10.1787/tour-2016-en>; Inside Airbnb (2016), “Inside Airbnb: Adding data to the debate”, <http://insideairbnb.com>; Financial Times (2017), “Airbnb’s edge on room prices depends on tax advantages”, <https://www.ft.com/content/73102c20-c60e-11e6-9043-7e34c07b46ef>; Airdna (2017), “Prague, Czech Republic Airbnb data and analytics: February 2017”, <https://www.airdna.co/city/cz/prague>.

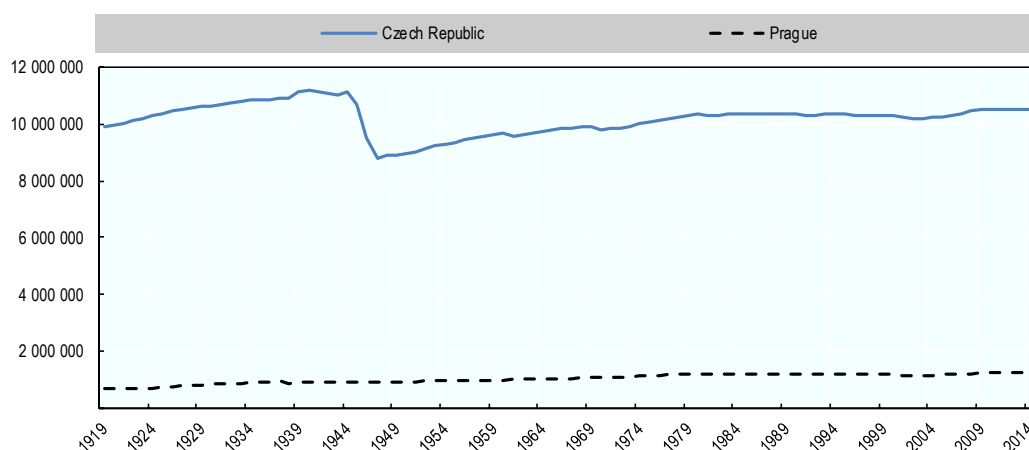
Socio-economic and demographic profile

Population growth in Prague is driven primarily by internal and international migration

Population growth or decline is one of the most important elements that shape how land is used in a city, impacting demand for housing, services, transportation and amenities. While Prague has seen reasonably strong population growth over the past 100 years, it has not always been consistent. Prague’s population almost doubled between 1919 and 2015, but decreased between 1993 and 2001 (Figure 2.10). Since 2002, Prague’s population has increased yearly, with the exception of 2009-10, when it again declined. Over the past 15 years, the population of the city has increased by 6.6% overall.

Migration is the largest contributor to population growth in Prague. The net migration rate was 4.8 in 2015 while the natural increase was 1.9; this is higher in both instances than the national average (Table 2.2). Among Czech regions, Prague has the highest birth rate in the country (11.7 live births per 1 000 population, 2015), the lowest death rate in the country (9.8 deaths per 1 000 population, 2015) and the second highest net migration rate (4.8 per 1 000 population, 2015) (Czech Statistical Office, 2016e). Prague’s inhabitants have the highest life expectancy among Czech regions.¹⁰ This is attributed to the better availability of medical care, but also to some high quality of life factors (despite poorer environmental conditions such as air pollution). The share of population in Prague aged 65 and over has grown since 1993 and stands above the national average at 18.5% (compared to 17.4% for the country as a whole in 2015).

Figure 2.10. Population growth, Prague, 1919-2015



Note: Data based on mid-year population counts; missing data for the German population during World War II.

Source: Czech Statistical Office (2016a), *Database of Demographic Indicators for Selected Towns of the Czech Republic*, <https://www.czso.cz/csu/czso/database-of-demographic-indicators-for-selected-towns-of-the-czech-republic#p>.

Table 2.2. Key population data, Prague, 1993-2015

Indicator	Prague		Czech Republic
	1993	2015	2015
Population	1 217 897	1 262 507	10 511 000
Foreigners (excluding asylum seekers)	x	171 408	464 670
Persons ages 0-14	16.8%	15.0%	15.0%
Persons ages 15-64	67.4%	66.9%	67.6%
Persons ages 65+	15.7%	18.5%	17.4%
Average age (31 December)	39.3 years	42 years	42 years
Live births (per 1 000 pop.)	9.5	11.7	10.2
Deaths (per 1 000 pop.)	12.4	9.8	10.4
Immigrants (per 1 000 pop.)	12.7	26.7	23.0
Emigrants (per 1 000 pop.)	10.0	21.9	x
Natural increase (per 1 000 pop.)	-2.9	1.9	-0.2
Net migration (per 1 000 pop.)	2.7	4.8	2.1

Source: Czech Statistical Office (2016f), *Statistical Yearbook of the Capital City of Prague – 2016*, <https://www.czso.cz/csu/czso/statistical-yearbook-of-prague-2016>.

Given the city's long-standing low levels of unemployment and substantially higher than average salaries, Prague is an attractive destination for labour migration, both domestic and international (Kostecký et al., 2014). There were 171 000 foreigners residing in Prague in 2015 – which represents a threefold increase since 2000 (Czech Statistical Office, 2016e). The proportion of foreigners (population with other than Czech citizenship) is now (2015) 13%, with Ukrainians, Slovaks, Russians and Vietnamese being the largest groups of immigrants, accounting together for over 60% (Czech Statistical Office, 2016e). However, it should be noted that foreign migration is linked to economic conditions and has varied considerably over the years – from a high in 2007 to a net loss in 2013. The analytical materials of Prague's strategic plan remark on the city's success in migrant integration (IPR Prague, 2015b). This stems in part due to the type of migrants

(e.g. Ukrainian and Russian populations with a strong language and cultural ability) and their relatively high skill levels and hence successful labour market attachment (IPR Prague, 2015b).

There is strong suburbanisation in the areas surrounding Prague

Between 2001 and 2011, 150 000 people moved from Prague to the Central Bohemian region surrounding the city. Many young families and seniors have moved out of Prague in search of more affordable and spacious housing. These areas have become “bedroom communities” to Prague, with inhabitants commuting to the city for employment. More than 200 000 people travel to Prague for work or school on a daily basis. A further 150 000 people are in the city daily for various reasons (foreign and Czech tourists, visitors on business trips, users of healthcare institutions, etc.). Thus, during a regular day, Prague accommodates around 1.6 million people.

There are several reasons for this suburbanisation phenomenon. Land can be cheaper in these outer areas and therefore homes can be larger and/or more affordable; it can also be easier to receive building permits in these areas (a point that will be returned to in Chapter 3). Suburbanisation is also grounded in cultural preferences. Post-1989, there was a strong preference for individuals to own their own homes and to own a car – both of which contribute to the suburbanisation phenomenon. Another reason in Prague’s case is that the majority of EU structural funds in the Czech Republic flow to the Central Bohemian region. All the major technology structures are located outside of Prague’s city limits in order to qualify for these funds.

Suburbanisation is a dominant trend across the Czech Republic (Box 2.3). In 2011, 94% of the country’s population lived in local labour market areas with suburbanisation and de-urbanisation as the dominant processes of spatial change (Sýkora and Mulíček, 2012). This phenomenon has greatly changed land uses surrounding Prague, with an expansion of built-up areas on former agriculture lands (Bičík et al., 2015; Ouředníček, 2003). Prior to 1989, the opposite trend was dominant, with individuals tending to move to cities and big towns from the countryside.

Continued population growth is anticipated to 2050 – and a growing share of the young and the elderly

Population projections for Prague anticipate growth to 2050 across the low, medium and high scenarios (Figure 2.11). According to the middle and the most probable scenario, Prague’s population is anticipated to increase by 20%; to 1.49 million by 2050 (this scenario has been used for the new land-use plan – the Metropolitan Plan Prague). Under the low scenario, the population would increase by just 0.3% to the year 2050; under the high scenario the population would increase by 36% to 2050.

An increase in life expectancy is also anticipated such that Prague will have an ageing population. For example, under the middle range population scenario, the percentage of the population aged 65 and over is anticipated to increase by 36% between 2016 and 2050, while for those aged under 25 it is anticipated to increase by 21% and for those ages 26-64, by 12% (Figure 2.12). This has important implications for how land is used. A growing population will require new housing, public amenities and infrastructure. Further, specific age cohorts will have additional needs. For instance, Prague’s growing senior population will create demand for accessible and affordable housing and good public transportation in order to ensure that seniors are able to successfully age in place.

(OECD, 2015). An increase in the share of children is also anticipated. This will increase demand for schools, recreation facilities, parks and other public amenities.

It bears noting that while the population is expected to increase in Prague and Central Bohemia due to immigration, other regions in the Czech Republic will mostly face stasis or population decline. Population ageing will continue in all the regions, but it is anticipated to be slower in Prague and Central Bohemia than elsewhere in the country (Fiala and Langhamrová, 2014).

Box 2.3. Land-use trends in the Czech Republic: Growing suburbanisation

Developed land in the Czech Republic grew slowly to moderately in urban, rural and intermediate regions between 2000 and 2012. Urban regions experienced the strongest growth of developed land, but the per capita area of developed land declined slightly, as the growth in developed land was outweighed by stronger population growth. In contrast, the growth of developed land in intermediate and rural regions did not occur in parallel with population growth and developed land per capita increased in those regions. Within urban areas, a pattern of suburbanisation emerged, as the population in commuting zones has increased disproportionately relative to the urban cores.

Table 2.3. Land cover at the national level in the Czech Republic

	National	Urban regions	Intermediate regions	Rural regions close to cities
Land cover (km ²)				
Total area	78 906	11 532	29 167	38 207
Total developed land	5 092	1 044	2 205	1 843
% of total	6.5%	9.1%	7.6%	4.8%
Annual change in developed land, 2000-12	14.5	5.9	3.7	4.9
% annual change in developed land, 2000-12	0.29%	0.58%	0.17%	0.27%
Agricultural land	45 007	7 113	16 155	21 740
% of total	57.0%	61.7%	55.4%	56.9%
Annual change in agricultural land, 2000-12	-19.5	-6.9	-6.0	-6.5
% annual change in agricultural land, 2000-12	-0.04%	-0.10%	-0.04%	-0.03%
Forests	26 331	3 182	9 533	13 616
% of total	33.4%	27.6%	32.7%	35.6%
Annual change in forest, 2000-12	18.2	0.5	15.8	1.9
% annual change in forest, 2000-12	0.07%	0.02%	0.17%	0.01%
Land cover per capita (m ²)				
Total developed land per capita	485	414	488	532
% annual change in developed land per capita, 2000-12	0.11%	-0.19%	0.19%	0.23%
Agricultural land per capita	4 284	2 821	3 574	6 276
% annual change in agricultural land per capita, 2000-12	-0.23%	-0.86%	-0.01%	-0.07%
Forests per capita	2 506	1 262	2 109	3 931
% annual change in forest per capita, 2000-12	-0.11%	-0.75%	0.19%	-0.03%

Box 2.3. Land-use trends in the Czech Republic: Growing suburbanisation
(continued)

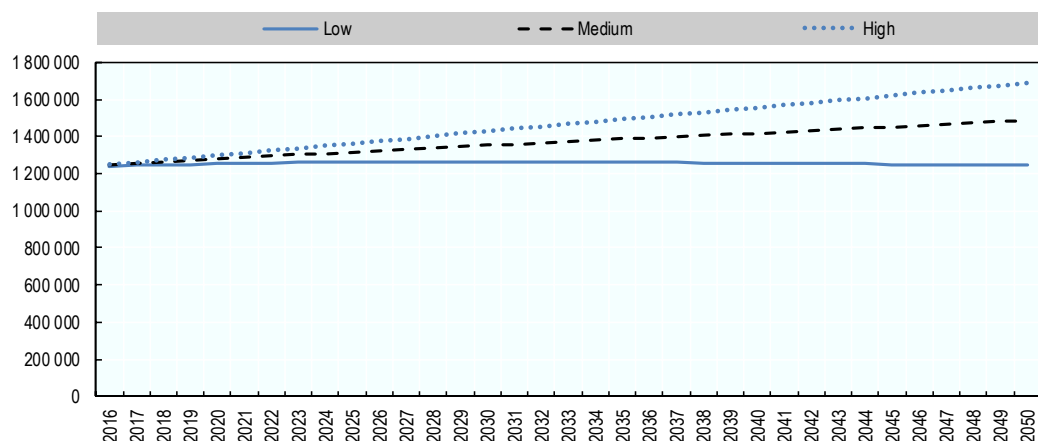
Table 2.4. Land cover in functional urban areas

Land cover in functional urban areas (in km ²)	Functional urban areas	Urban core	Commuting zone
Total area	17 648	2 130	15 518
Total developed land	1 999	843	1 155
% of total	11.3%	39.6%	7.4%
Annual change in developed land, 2000-12	8.6	1.4	7.2
% annual change in developed land, 2000-12	0.44%	0.17%	0.65%
Agricultural land	9 900	790	9 111
% of total	56.1%	37.1%	58.7%
Annual change in agricultural land, 2000-12	-9.9	-1.7	-8.2
% annual change in agricultural land, 2000-12	-0.10%	-0.21%	-0.09%
Forests	5 131	434	4 697
% of total	29.1%	20.4%	30.3%
Annual change in forest, 2000-12	6.9	0.7	6.1
% annual change in forest, 2000-12	0.14%	0.17%	0.13%
Land cover per capita in functional urban areas (m ²)	Functional urban areas (50,000+ inhabitants)	Urban core (only functional urban areas 500 000+)	Commuting zone (only functional urban areas 500 000+)
Total developed land per capita	406	238	613
% annual change in developed land per capita, 2000-12	0.06%	0.04%	-0.56%
Agricultural land per capita	2 010	163	3 817
% annual change in agricultural land per capita, 2000-12	-0.48%	-0.65%	-1.45%
Forests per capita	1 042	71	1 709
% annual change in forest per capita, 2000-12	-0.24%	-0.31%	-1.21%

Note: All land cover statistics for the Czech Republic are based on OECD calculations from the *Corine* dataset.

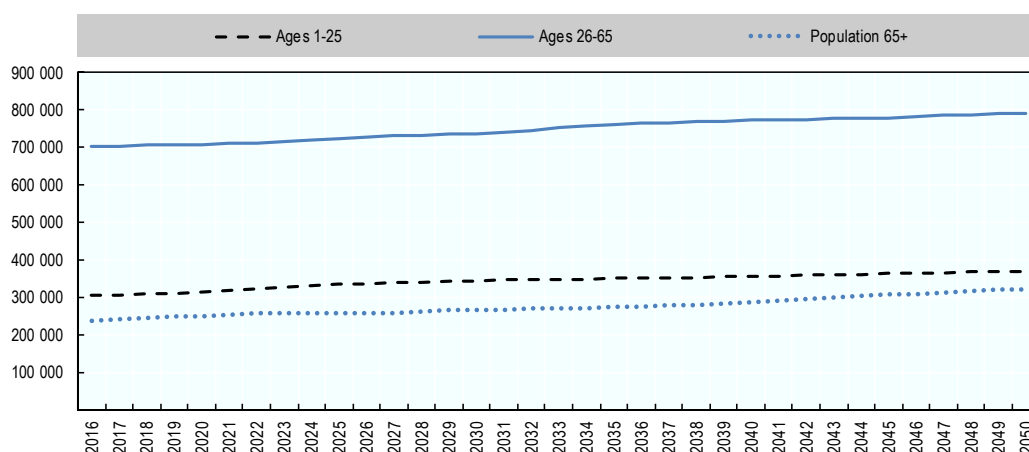
Source: OECD (2017), *Land-use Planning Systems in the OECD: Country Fact Sheets*, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264268579-en>.

Figure 2.11. Prague population forecasts, 3 scenarios



Source: IPR Prague (2015c), “Demografie, bydlení a veřejná vybavenost v Praze, Analýza a Prognóza Demografického Vývoje Prahy”, www.iprpraha.cz/uploads/assets/dokumenty/Demografie/2_Demografie_2015-06-29_final.pdf.

Figure 2.12. Middle range population forecast, by age grouping

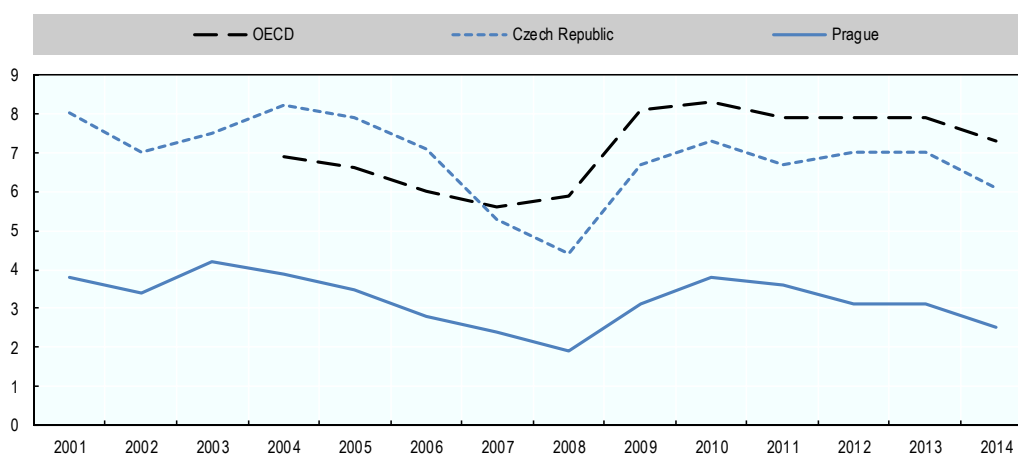


Source: IPR (2015), “Demografie, bydlení a veřejná vybavenost v Praze, Analýza a Prognóza Demografického Vývoje Prahy”, www.iprpraha.cz/uploads/assets/dokumenty/Demografie/2_Demografie_2015-06-29_final.pdf.

Prague has a robust labour market and higher wages compared to other regions

Prague has a robust labour market, a highly educated labour force, higher than national average wages and low unemployment. The city’s employment rate in 2015 stood at 61.23 (Czech Statistical Office, 2016f). Over the long term, Prague has had the lowest unemployment rate of all Czech regions. In 2014, its unemployment rate stood at 2.5%, while the national average was 6.1% and the OECD average was 7.3% (OECD, 2016d). Prague’s unemployment rate dipped as low as 1.9% in 2008.

Figure 2.13. Unemployment rate, OECD, Czech Republic, Prague, 2001-14



Note: Percentage unemployed, ages 15 and over; labour force 15 and older.

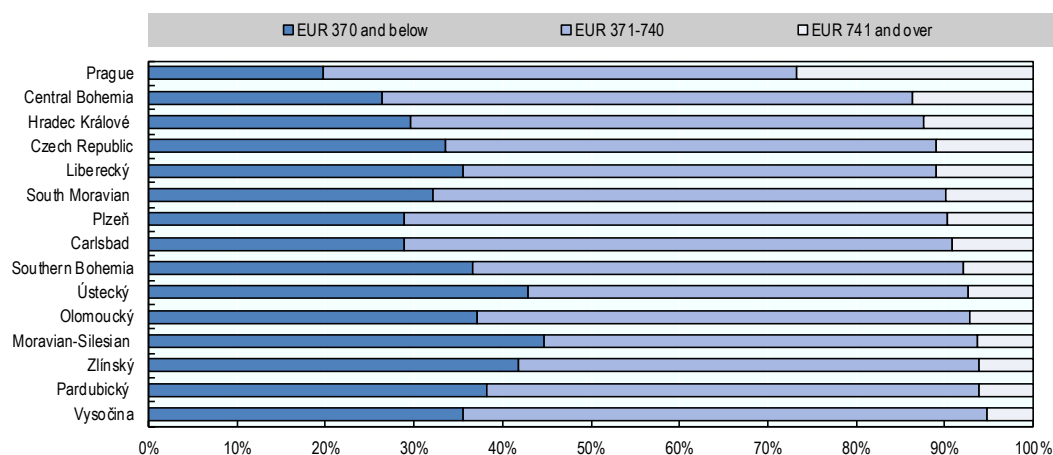
Source: OECD (2016d), “Regional labour markets”, *OECD Regional Statistics* (database). <http://dx.doi.org/10.1787/f7445d96-en> (accessed 20 December 2016).

Among Czech regions, Prague has the lowest proportion of low- and middle-income residents and the highest proportion of higher income residents (Figure 2.14).¹¹ Prague’s dynamic labour market has led to a concentration of highly educated professionals and housing prices – rental, ownership and co-operative forms of housing – have risen

accordingly. Approximately 30% of those over 15 years of age in Prague held a university degree in 2015, which was twice the national average.¹² The percentage of inhabitants with secondary and higher education is also high, at 85% in 2015.

Average wages in Prague are significantly higher than wages in other regions. In 2013, the average monthly gross wage per employee in Prague (full-time equivalent) was CZK 32 879, while the same value for the Czech Republic reached CZK 25 128. Relatively high wages have led to a strong housing market in Prague. For example, the average price of family homes, dwellings and multi-unit buildings was 2- 2.5% higher in Prague than in the surrounding Central Bohemian region between 2012 and 2014.

Figure 2.14. Share of population by net monthly income, by region, 2015



Source: Czech Statistical Office (2016f), *Statistical Yearbook of the Capital City of Prague – 2016*, <https://www.czso.cz/csu/czso/statistical-yearbook-of-prague-2016>.

Interpersonal income inequality – as measured by the Gini coefficient – is higher in Prague than the national average (Figure 2.15). Prague has the lowest poverty rate among Czech regions, much lower than the national average and significantly lower than the OECD average (Figure 2.15).

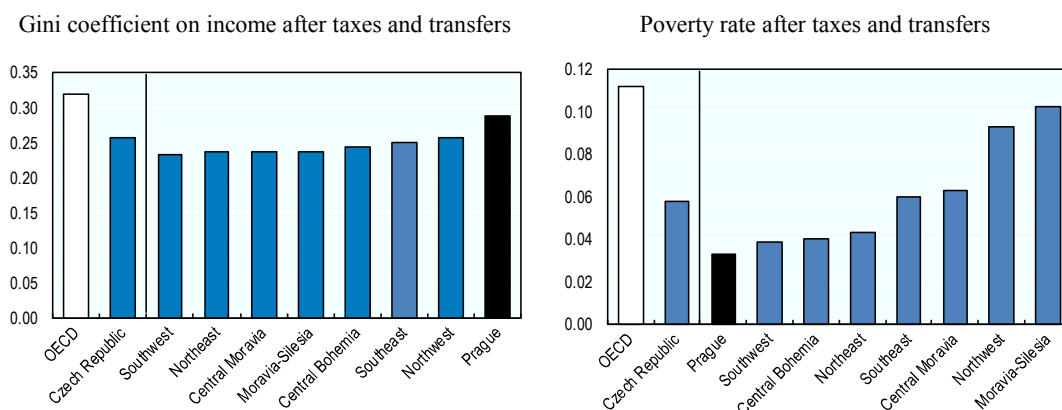
Spatial distribution of poverty

The Czech Republic generally has low levels of poverty and socio-economic inequality, including in Prague.¹³ This low socio-spatial differentiation has its roots in the post-war and socialist eras. Due to generous social assistance and the survival of rent regulation in Czech cities (until 2012), lower income residents have been pushed from attractive neighbourhoods that have seen an influx of investment relatively slowly (Lux, Sunega and Katrňák, 2013). The spatial concentration of poverty is largely only apparent at the micro level, encompassing individual buildings or at most several blocks of houses (Kostecky, Patockova and Illner, 2012). The number of individuals living in socially excluded areas declined in Prague between 2006 and 2014 while it rose in most other regions in the country (Figure 2.16).

At the neighbourhood level, gentrification can be witnessed in some areas of the city, such as Vinohrady (Prague District 2) or Letná-Holešovice (Prague District 7). Over the longer term this could lead to new areas of spatially concentrated poverty, as lower income residents are induced to move to seek more affordable housing options. There are also a

growing number of gated communities that, by their very nature, have low social mixity (Brabec and Sýkora, 2009). Further, the overall high price of housing has restricted in-migration of lower income residents to the city, which leads to lower levels of social mixity overall.

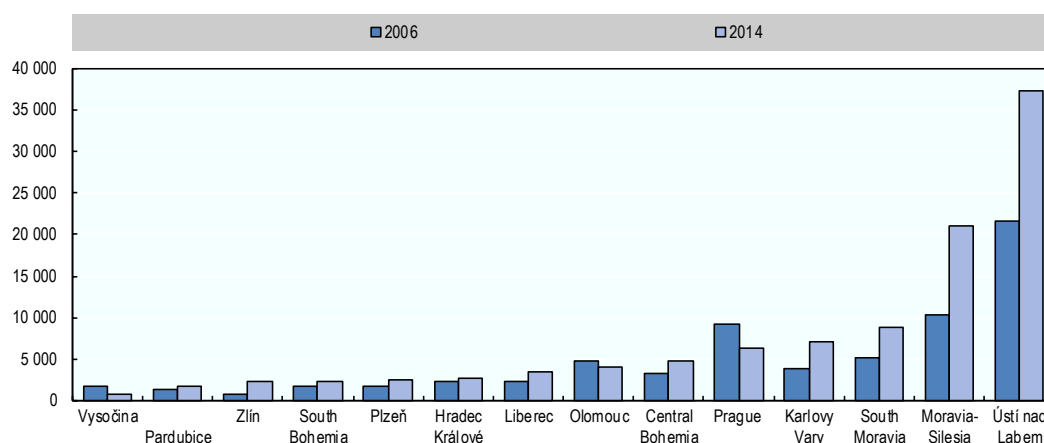
Figure 2.15. **Inequality and poverty, OECD, Prague and Czech regions, 2014**



Notes: The Gini coefficient is 0 if everyone has the same income and is 1 if one person has all the income. The poverty rate shows the share of the population with an income of less than 50% of the respective national median income. Income is after taxes and transfers, adjusted for differences in household size.

Source: OECD Regional Well-Being database, <http://dotstat.oecd.org/Index.aspx?DataSetCode=RWB> and OECD Income Distribution database.

Figure 2.16. **Number of people living in socially excluded areas, TL2 regions, Czech Republic**



Note: Socially excluded areas are defined as physically or symbolically delimited spaces where more than 20% of the population live in inadequate conditions. The data shown are the midpoint of the estimated range.

Source: GAC (2015), “Analysis of socially excluded Roma localities in the Czech Republic”, www.gac.cz/userfiles/File/nase_prace_vystupy/GAC_MAPA_Socially_Excluded_Roma_Localities_in_the_C_R_en.pdf; UNDP/World Bank/European Commission (2011), “Regional Roma Survey 2011” and Agency for Fundamental Rights (2011), “FRA Pilot Survey 2011”, www.eurasia.undp.org/content/dam/rbec/docs/Roma_survey_data_Czech_Republic_2011.xls; World Bank (2012), “Toward an equal start: Closing the early learning gap for Roma children in Eastern Europe”, <http://documents.worldbank.org/curated/en/843991468251107542/pdf/697290WP00PUBL00RomaECD0FinalReport.pdf>.

The historical city core and the housing estates show the lowest level of segregation in Prague (Kährlik et al., 2014).¹⁴ Therefore, they can be regarded as at most mixed-income neighbourhoods. Housing estates are home to over 40% of Prague's residents. They consist of large-scale high-rise developments that were largely built between the 1950s and 1980s. These areas have been traditionally socially mixed, but over time the movement of higher income (and more mobile residents) creates a threat of social polarisation. This is compounded where the infrastructure and amenities serving housing estates fall into neglect and disrepair. Lower income residents tend to be concentrated in the inner suburbs where there is more affordable housing, including tenement houses. In contrast, high-income residents tend to be concentrated in newly built neighbourhoods, the historic core and villa neighbourhoods.¹⁵

It is also important to note that there are marginalised residents – mainly elderly people, single parents (mostly women), persons with disabilities, homeless persons and Roma – who face disproportionately high costs for housing and who concentrate in substandard housing, often dormitories with short-term and insecure leases (Kährlik et al., 2014; Tsenkova, 2014). The number of homeless people in Prague is estimated to be around 4 000, which is the highest proportion out of all Czech regions (Nadeje, 2015). Another 10 000 residents are at risk of being without a home due to income insecurity. Elderly residents are a particularly vulnerable group as they face a higher risk of poverty.

Housing and real estate trends

There are distinct eras of housing that have shaped the city's morphology – the historic urban core, the inner suburbs which include a large number of housing estates, and the lower density outer suburbs dominated by single-family homes and low-rise multi-unit housing. Each of these areas of housing brings distinct land-use challenges. The vast majority of residents in Prague live in owner-occupied apartments (43.4%) followed by rented domiciles (31.1%), co-operatives, (11.4%), houses (11.4%) and other accommodations (2.4%) (Czech Statistical Office, 2016f). Historical areas require special protection; housing estates require ongoing refurbishment, investment and good public amenities, meanwhile areas with single-family housing, face pressures for densification and enhanced transport connectivity.

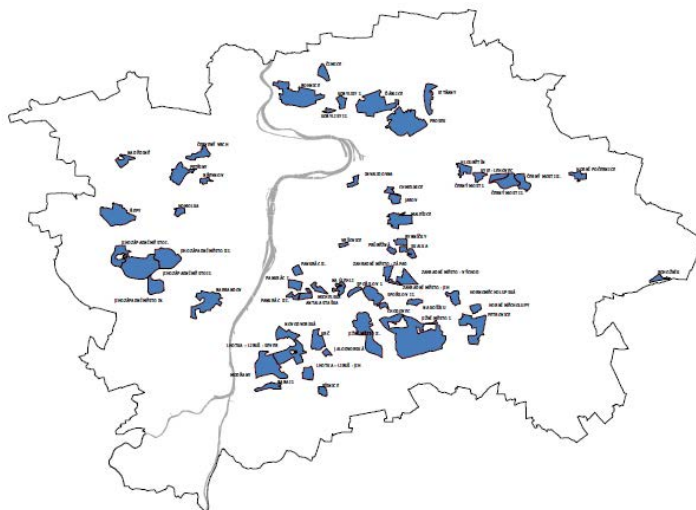
The post-war era saw rapid expansion of the city's housing stock

In the early 20th century, housing quality and quantity in Prague was generally poor – the number of flats was insufficient and basic facilities were lacking. The vast majority of flats consisted of just one or two rooms and were therefore inadequate for families. Housing stock in the city was also polarised. For instance, in the 1930s there were distinct “blue-collar” neighbourhoods and “white-collar” neighbourhoods.¹⁶ Wealthy residents chose to live centrally while the working and professional classes generally occupied blocks of flats constructed on the outskirts of the city centre. Very low-income residents occupied temporary flats within slums, which were constructed in the worst locations – i.e. waterlogged (Na Slatinách), dilapidated (Na Krejčárku), constricted (Libeňský ostrov) or remote (Na Košíku).

During the communist era, housing was government built and regulated. Central districts such as Prague 1 and 2 had around 93% state-owned property, which was transferred from private to state ownership during socialism (Eskinasi, 1995). Housing construction stagnated during World War II, to be revived again in the late 1950s. Housing estates were the dominant type of housing constructed during the socialist era and form a ring around the

central city (Figure 2.17). Many housing estates were socially mixed areas and home to a large proportion of families with children. The first post-war housing estate in Prague was built in 1946-47 (named “Solidarita”).

Figure 2.17. **Ring of housing estates, Prague**



Source: Background questionnaire for report.

Extensive housing construction in the 1970s had a positive impact on the housing stock structure both in terms of quantitative indicators (e.g. greater number of flats and rooms) and qualitative indicators (e.g. availability of basic facilities). In the post-war period up to the end of the communist era in 1989, flats with the highest degree of crowding could typically be found in the inner city (e. g. Žižkov, Vyšehrad) and in the housing estates of the outer city (e. g. Černý Most, Řepy).

Today Prague is dominated by three types of housing – historical residences, housing estates and single-family homes

Upon the transition to a democratic market economy in 1989, public housing assets were privatised and a process of restitution took place whereby property that had been confiscated by the communist regime was returned to its original owner (or their close descendants). During this period there was an influx of investment, particularly in the central areas of the city (Cook, 2010). In the historical centre, newly restituted property was often either rented as office or commercial space to international tenants or sold to international property developers luxury properties (Sýkora and Šimoničková, 1994). Further, the privatisation of housing stock built by the state during the socialist era provided a significant impulse for housing regeneration starting in the 1990s. However, a subsequent lack of maintenance and investment in repairs in some areas risks the physical degradation of this type of housing stock.

The transformation in property ownership accompanied changes in the structure of the city's housing stock. In almost all areas of the city, the share of larger flats has increased at the expense of the smaller ones. The greatest change has been observed on the outskirts of the city, where housing construction grew rapidly.¹⁷ The land occupied by the single-family houses built since 1989 is geographically fragmented in hundreds of

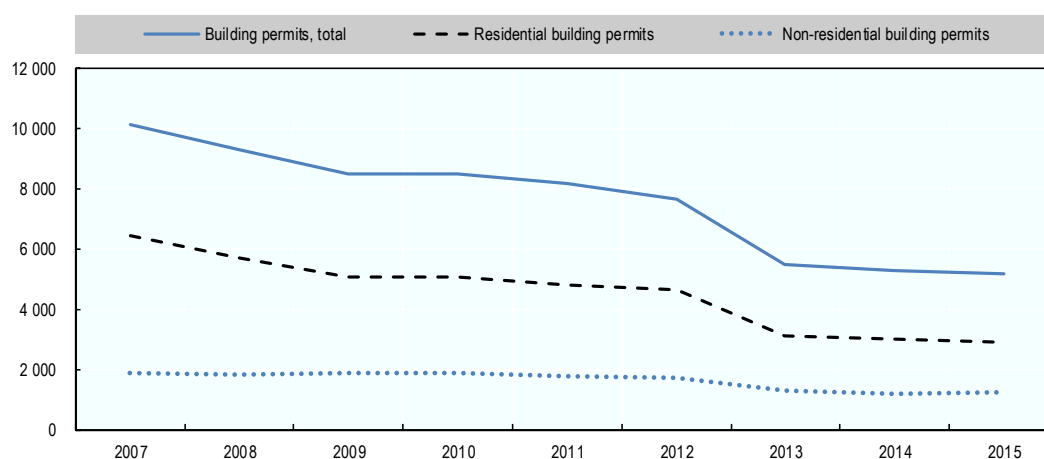
locations throughout Prague's outer suburban zone and immediately outside of Prague's boundary. This spatial pattern is in part attributed to competition among municipal governments for private investments and the accompanying land-use plans that allow for such developments. It is also clearly part of social and cultural preferences since the 1990s for the ownership of single-family homes.

Prague's large stock of historical buildings require special preservation. Prior to the fall of the communist regime, the renewal of historically important urban spaces was viewed as the purview of the national government and a key part of cultural preservation. There are ongoing questions about the functional usages of these historical buildings. While the facades of many historical buildings appear to be in good repair, they often hold vacant flats and business premises and their common spaces – staircases, corridors and inner courtyards – often lay in a state of decay.

The past decade has seen a slowdown in new home construction

The total number of construction and building permits in Prague shows a declining trend between 2007 and 2015, particularly in the case of residential buildings. The number of permits declined by almost 50% for this period overall while residential building permits declined by around 55% and non-residential permits by approximately 33%. These permits give an overall picture of housing and construction activity and can include both small changes to structures as well as entirely new ones.

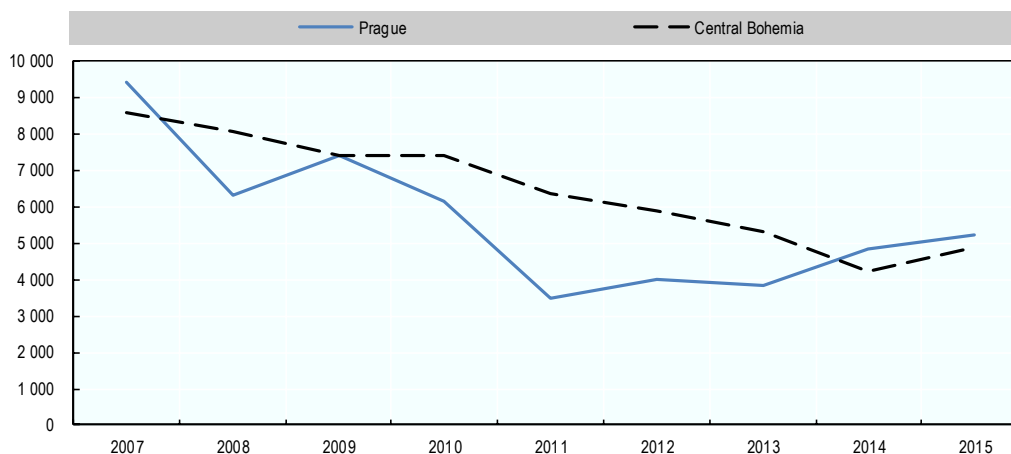
Figure 2.18. **Construction and building permits, Prague, 2007-15**



Source: Czech Statistical Office (2010, 2012, 2014, 2016), *Statistical Yearbook of Prague*, <https://www.czso.cz/csu/czso/yearbooks>.

The construction of new dwellings – both single-family homes and multi-unit dwellings, it has dropped over the past decade. This trend was evident both in Prague and the Central Bohemian region surrounding Prague. Since 2013, there has been a marked increase in the construction of new dwellings and Prague has outstripped Central Bohemia for the first time since 2007 in the construction of new dwellings (Figure 2.19). Prague has a Housing Policy Concept that has set a minimum threshold for new public housing construction based on anticipated need; this threshold is presently set at 500 new public housing units per annum. Over the past eight years, the city has not met this minimum. For example, in 2014, just 187 new public units were built (IPR Prague, 2016b: 30).

Figure 2.19. The construction of new dwellings, Prague and Central Bohemia, 2007-15



Source: Czech Statistical Office (2010, 2012, 2014, 2016), *Statistical Yearbook of Prague*, <https://www.czso.cz/csu/czso/yearbooks>; Czech Statistical Office (2010, 2012, 2014, 2016), *Statistical Yearbook of the Středočeský Region*, <https://www.czso.cz/csu/czso/yearbooks>.

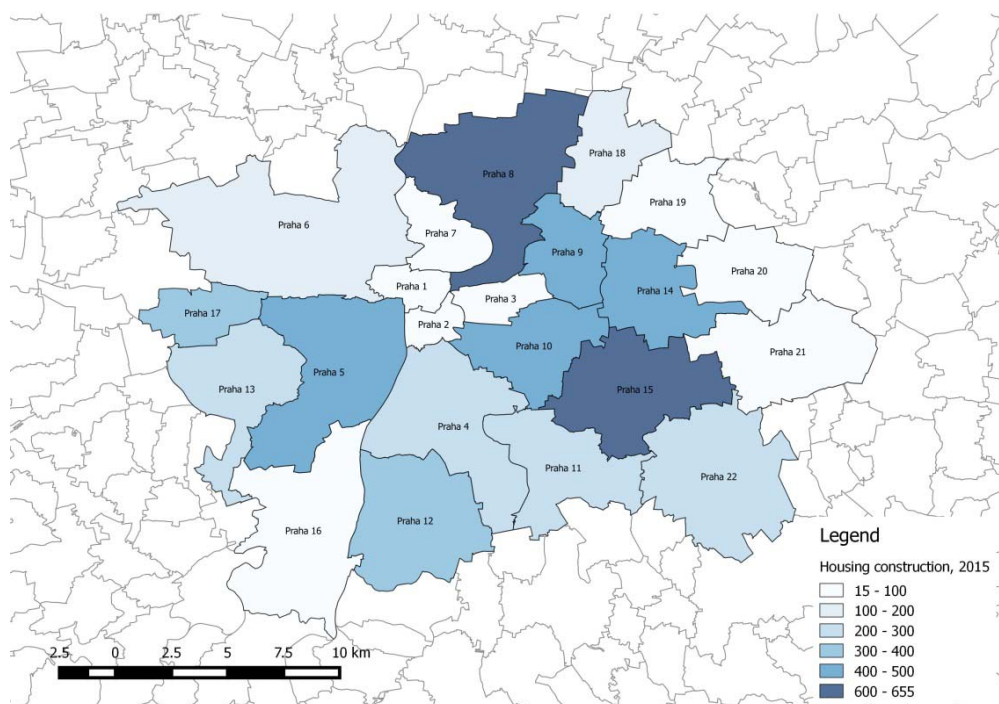
However, these regional comparisons conceal local dynamics. For example, 1 018 new dwellings were completed in the Central Bohemian district of Prague East (which surrounds the city to the east) in 2015, which is higher than any district in Prague. In the Central Bohemian region of Prague West, just 532 new dwellings were completed in 2015, indicating that the greatest amount of new development taking place outside of Prague's boundaries is to the east. Within the city proper, the greatest number of new dwellings completed in 2015 were in the Prague 15 and Prague 8 districts which lay in the city's east (Figure 2.20).

Housing prices in Prague are higher than those of the rest of the Czech Republic, reflecting higher demand

In 2016, the average price per 1 square metre of an apartment in Prague was 30% greater than that of the next largest city in the country, Brno (Realitymix, 2016). Prices also vary considerably across the city; in 2016, the average price per 1 square metre of an apartment in the Prague 9 district was almost 2.5 times higher in the central historical district of Prague 1 (Realitymix, 2016). While the purchase price for family homes and dwellings increased by around 2% in Prague between 2012 and 2014, the purchase price for multi-dwelling buildings decreased over the same period by around 20% (Czech Statistical Office, 2016f).

There is a growing demand in Prague for low-cost homes on the one hand and luxury homes on the other – demand for mid-range housing is fulfilled in large measure by the satellite communities surrounding Prague (CBRE, 2016). There are growing concerns about housing affordability in Prague given high purchase prices and rents. For example, a tenant pays on average CZK 18 000 a month for a 75 m² flat and if an average family wishes to purchase its own apartment, it will need to pay the equivalent of nearly 11 years earnings (IPR Prague, 2016a). The average maximum regulated rent has increased by approximately 1 000% in nominal terms since 1989 (Cook, 2010). In a recent public opinion poll, 65% of respondents report either “somewhat” or “strongly” disagreeing that it is easy to find good housing at a reasonable price in the city (Eurostat, 2016).

Figure 2.20. New dwellings completed, Prague districts, 2015



There is steady demand for office and industrial space

The office market in the Czech Republic is dominated by Prague, where total stock is the highest in the inner city (Table 2.5). The vacancy rate for office space stood between 12.3% and 15.4% in 2015 depending on the area of the city; demand is highest for new and modern office spaces. The industrial and warehouse leasing market is strong in greater Prague; the vacancy rate was 4.8% in 2015, which is below the natural average (5.1%) (CBRE, 2016).

Table 2.5. Office market indicators, Prague, Brno and Ostrava, 2015

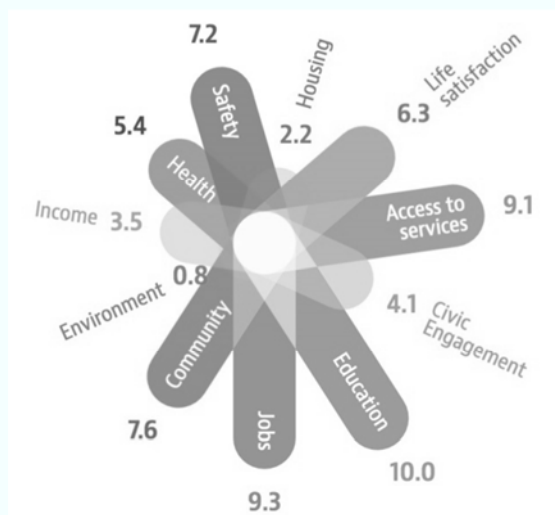
	Prague city centre	Prague inner city	Prague outer city	Brno	Ostrava
Total stock (m ²)	564 000	1 710 900	947 500	487 600	208 400
Vacant space (m ²)	86 600	267 600	116 600	66 900	47 200
Vacancy rate	15.4%	15.6%	12.3%	13.7%	22.7%
New supply (m ²)	0	136 100	54 500	1 500	7 700
Total leasing activity (m ²)	52 500				
Space under construction (m ²)	17 800	98 500	6 500	69 600	0
Prime rents (EUR/m ² /month)	18.50-19.50	15.00-16.50	13.00-14.50	13.00	11.50

Source: CBRE Research, Prague research Forum, Regional Research Forum, 2016.

Box 2.4. How's life in Prague?

The OECD's Regional Well-Being indicators offer a comparative assessment across 11 dimensions of well-being for 30 countries. Prague's regional well-being indicators exhibit strengths in education, jobs and access to services. Across the 11 indicators Prague is comparable to the regions of: Tel Aviv district, Bratislava region, Mazowieckie and Western Slovenia.

Prague holds the highest possible score for education, placing it among the top 5% of all regions in the OECD. Education is measured by the share of labour force with at least a secondary education, which in Prague stands at 96.7%. The region stands in the top 35% among OECD regions in the "jobs" indicator, which is based on the employment and unemployment rates. Prague stands in the top 40% among OECD countries in terms of access to services; this is measured by household broadband access, which stood at 78% for Prague.



However, the region is less competitive in some other areas. It is in the bottom 10% when it comes to "environment", which is measured as the average level of PM_{2.5} in the region experienced by the population (16.9 µg/m³ for Prague). Prague also stands in the bottom 30% of OECD regions in the indicators for: civic engagement (measured by voter turnout); housing (measured by the number of rooms per person); and income (measured as disposable income per capita).

The OECD's work on regional well-being uses specific indicators that are proxies for the broader concepts of environment, education and so on. It is recognised that there are many ways to depict well-being. The OECD's work in this area is specifically structured to facilitate comparative analysis between regions.

Source: OECD (2016), "OECD regional well-being indicators: Prague", <https://www.oecdregionalwellbeing.org/CZ01.html> (accessed 20 December 2016).

Transportation infrastructure and transit networks

Transportation infrastructure and services are intimately connected to the use of land in a metropolitan area. Denser cities or those organised around nodes tend to be more easily served with public transportation whereas settlements that are sprawling tend to be more car-dependent. Land-use decisions about what and where to build, and at what densities, impact transportation infrastructure demand and use. At the same time, new

infrastructure such as new highways and roads can open new areas to development and thus lead to a change in land uses.

As cities have sought to implement sustainable development practices, the importance of aligning transport and land-use policies has gained attention. For instance, best practices for transit-oriented development and walkable cities have supplanted car-centric developments in many locales.¹⁸ Prague has a strong public transport network on the one hand and many walkable districts; but on the other hand there is growing car reliance in the suburban and outer areas that has led to an increase in transportation congestion, air pollution, noise and other negative effects.

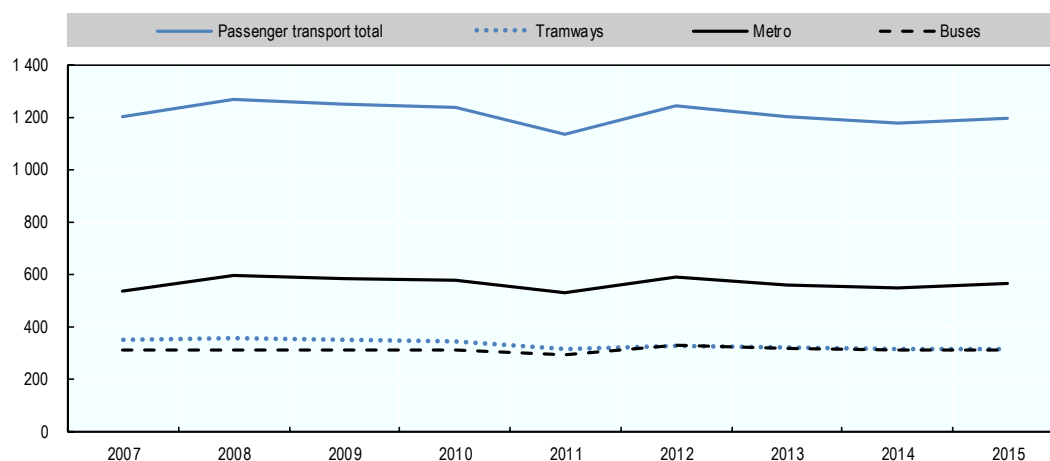
Prague has a strong public transportation network, but its suburban/outer areas are car-dependant

Central Prague is located in the large valley of the Vltava River, which bisects the city. Its outer areas extend along an elevated plateau – steep hills can make it difficult to provide public transportation in some areas. Prague has an integrated transport system that includes all forms of public transport in the city – the metro, trams, cableway to Petřín, city bus lines, commuter bus lines, railway transport and ferries. It is a major area of public expenditure – representing almost 30% of overall budget spending in 2015 for the city (von Radecki et al., 2016). The metro system was largely developed in the 1960s and 1970s to serve the new housing estates outside of the core.

Between 2007 and 2015, total urban passenger transport remained static; within this, passenger transport by tramway decreased (by 11%) while transport by metro and buses increased (by 6% and 1.5% respectively). Meanwhile, traffic intensity in the inner cordon of the city declined (IPR Prague, 2016b: 35). Over the same period (2007-15), regional passenger transport increased significantly, by over 50%. This demonstrates growing demand for public transportation in the city's surrounding locales. Passenger satisfaction with the public transit system in Prague is very high.¹⁹

Like Prague, the Central Bohemian region also has an integrated transport system. Part of Prague's transport system extends beyond its borders into five external zones in Central Bohemia and are funded by the Central Bohemian region (Paleta and Jandová, 2015: 478).

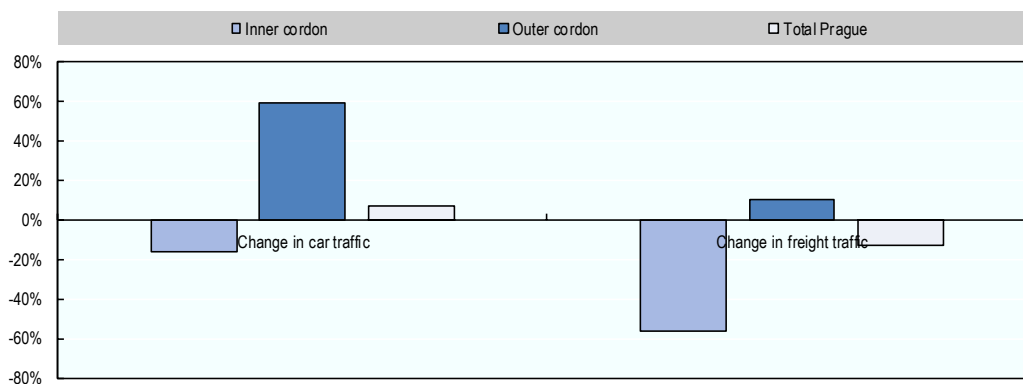
Figure 2.21. Urban passenger transport, Prague, 2007-15



Source: Czech Statistical Office (2016f), *Statistical Yearbook of the Capital City of Prague – 2016*, <https://www.czso.cz/csu/czso/statistical-yearbook-of-prague-2016>.

Growing sub- and peri-urbanisation has led to increasing pressure on the roadways and an increase in car ownership. The number of passenger cars (and vans) in Prague as a proportion of the population increased between 2009 and 2015 by 8.4% overall (Czech Statistical Office, 2016f). It also increased in Central Bohemia over the same period, though by a smaller amount – approximately 5% (Czech Statistical Office, 2016f). Traffic has increased in Prague’s outer cordon far more than in its inner one, particularly in the case of car traffic, which increased between 2000-15 by around 59% (Figure 2.22).

Figure 2.22. Change in traffic by area, 2000-15



Source: von Radecki, A. et al. (2016), “City lab Prague: Executive summary”, www.iprpraha.cz/uploads/assets/5039-morgenstadt-city-lab-prague.pdf, p. 13.

Prague is well linked to regional transportation networks and served by a busy international airport

Prague’s transportation infrastructure was greatly enhanced after the Czech Republic joined the EU in 2004. The motorways and trunk roads carry the largest proportion of transportation and connect the most important political, economic and recreational centres. In general, the Czech Republic is well connected by road, with a density of 0.70 km of roads per 1 km², which places it among the leading European countries. Prague’s Václav Havel – located 17 kilometres northwest of Prague city centre – is the second busiest airport in Central and Eastern Europe after Vienna. In 2014, it processed more than 11 million passengers.

Traffic intensity in Prague is often at a road’s full capacity and this congestion has attendant negative environmental consequences, such as air pollution (Lukeš, Kotek and Růžička, 2014). Some significant transportation projects have recently been completed or are planned to commence. For example, the Czech Republic’s busiest motorway (D1), which connects Prague, Brno and Ostrava, is in the process of being upgraded.²⁰ The daily traffic flow on the D1 motorway totals 100 000 vehicles. New road infrastructure is being completed in order to open up new areas for housing development.²¹ Prague is planning to construct a new outer ring road along with an inner city circumferential road, which should decrease growing traffic congestion in the city. Investments also continue in public transportation, including a new metro line, three new tram line extensions and the planned modernisation of the rail line connecting Prague to the airport.²² Given growing car usage in the region, much more will need to be done to promote sustainable mobility – e.g. car-sharing, park and rides, regional trains.

Greatest pressures for land development and protection

Ongoing peri-urbanisation processes require new transport solutions and efforts to control sprawl

The greatest pressures for land development in the greater metropolitan region of Prague occur to the west of the city and to a lesser extent in the east as well. There is a concentrated network of “bedroom” communities, where many residents commute to the city of Prague on a daily basis. Public transportation infrastructure does not extend to these areas and there is strong car dependency, which has the usual negative effects of air pollution and wasted time. These areas have grown rapidly, despite there being ample land within the city to develop. These bedroom communities have generated new demands for services like childcare and transportation. The large number of governments hampers coherent and strategic policy making and therefore planning of land use and transport (OECD, 2016g). These borders also create mismatches between users of services and local taxpayers (OECD, 2016g). Sub- and peri-urbanisation processes are one of the greatest land-use challenges for the metropolitan area to tackle. At present, both governance structures and incentives for co-ordination are lacking to address this issue.

Prague’s brownfield sites of today are forming the new growth centres of tomorrow

The largest development opportunities in Prague – those with the potential to transform entire neighbourhoods and districts – are located in central brownfield sites: for example, the railway yards in the Prague 5 and 7 districts and the Masaryk railway station in the historical core (Prague 1) (Box 2.5). These large plots of land, whose history reaches back to the pre-World War II era, have remained underused since the cessation of the communist regime. In the meantime, they have changed ownership several times, along with the planned development initiatives.

Despite the turbulent ownership and planning evolution, building on some of these plots is still limited by the development enclosure. Officially, this is because their future use has not been verified by detailed land-use planning documentation and supporting land-use planning information – the main prerequisites for building to start. Also, given the large scale of these projects, it is critical that the developers, residents, and district and city officials enter into constructive dialogue on how to make the most of these important spaces.

It further bears mentioning that the city of Prague owns a total of 14 776 hectares of land – roughly 30% of its total area – which also holds prospects for development.²³ The largest amount of publicly owned land is held in development areas in the outlying parts of the city. There is also a large amount of public land used for facilities within the city (e.g. metro and tram depot sidings and yards, bus garage lay-bys, central wastewater treatment plant areas, etc.). Publicly owned lands generate opportunity for new commercial and residential developments, green spaces and public amenities, among other uses.

High-quality agricultural land is being developed despite regulations against this

Cities in the Czech Republic have been historically founded in the areas with the highest quality soil for farming, and Prague is no different – it has superior soil and climatic conditions. Peri-urbanisation has occurred to a large extent on agricultural lands. Agricultural lands in the FUA have become fragmented with a discontinuous and low-density urban fabric as a result (Pazur et al., 2017). Between 2006 and 2012, a total of 2 816 hectares of agricultural land were converted into built-up areas in Prague

(Pazúr et al., 2016). Urbanisation (soil sealing) around Prague is a continuing trend that threatens agricultural productivity (Janků et al., 2016).

Box 2.5. Brownfield redevelopment projects in Prague

The Czech Republic has made the redevelopment of brownfield sites a national priority as outlined in the National Spatial Strategy. Since 2007, the Research Study for Brownfield Localisation in the Czech Republic has mapped 2 800 brownfields with a total area of more than 14 000 hectares that are suitable for renewal (regeneration or revitalisation) and subsequent reuse (this figure is continually being updated). Progressive mapping, detailed description and subsequent publication of information on the location of brownfields in the *National Brownfields Database* have led to an increasing awareness about the potential of brownfield sites for rehabilitation and renewal.

Brownfield redevelopment is also a major priority for the city of Prague. The following description of major ongoing brownfield redevelopment projects in the city provides a good example of their vast potential – and yet, the many complexities encountered in their development.

The Bubny railway grounds (78 hectares, Prague 7)

The Bubny-railway grounds bisect the Prague 7 municipal district – they are one of the largest brownfield areas in Prague. The site represents an important transformation zone and is expected to dramatically change the district in the coming years and will expand central urban functions beyond the core of the city. It is a large-scale and complicated project and many questions remain about the height of buildings, the number of green areas, integration with the neighbouring UNESCO area, the conservation of the site's existing industrial heritage and the integration of public and road transport. The Prague City Council approved a new master plan for the Bubny area at the end of 2013; however, a ban on construction remains in place and developers' plans have been left on hold. It is estimated that the vast area could accommodate tens of thousands of new residents. Local council representatives recently stated they want to turn the site into a high-quality urban area, incorporating mixed-use housing and linking the two isolated parts of Prague 7 by public transportation and with routes for pedestrians. The area is also important as a site of remembrance. Some 50 000 Czech Jews walked through the small departure lounge at the Bubny station to be put on transport trains taking them to the Łódź ghetto and later to the concentration camp in Terezín. The area needs to thoughtfully incorporate many uses and needs, including cultural and historic uses.

Smíchov (106 hectares, Prague 5)

This area is envisaged as a modern city district. An architectural competition was prepared by the area's investor (Smíchov Station Development, Inc.) in co-operation with the IPR Praha for the first phase of construction. For the past eight years, the Sekyra Group, in conjunction with Czech Railways, have been working on a project to redevelop the area around the station at Smíchov and to restoring and revitalizing the lower left bank of the Vltava River. An earlier land-use arrangement prohibited any alterations of the railway area. However, it is still hoped that a revitalized station will form part of any future development. As with the above-mentioned project (Bubny), the key factors in any change of use fall into four key areas: 1) the provision of public green spaces; 2) the height of the buildings; 3) the proximity of the UNESCO protected zone; and 4) the improvement of the transport infrastructure.

The Smíchov development is envisaged as a multi-functional neighbourhood extending some 210 000 m² down the left bank of the river. Warehouses would be replaced, and specially designed parks and pedestrian zones would reconnect the surrounding green hills with the Vltava valley, culminating in a riverside swimming pool and a recreational riverside path linking to the south-west of Prague. According to the plans, "Smíchov City" will feature a new north-south "green" boulevard, a tree-lined avenue with seating areas, a brand new commercial centre and pleasant housing to encourage job growth. The plan also envisages a new traffic hub, with a regenerated bus station, underground and tram stop, bike lanes and a park-and-ride facility. The developer for this project has been given final clearance by Prague authorities to construct a whole new area of the city next door to the city's Smíchov rail station. The development on 26 hectares will include flats, offices and shops. A new transport hub will also be developed at the rail station with bus services.

Box 2.5. Brownfield redevelopment projects in Prague (*continued*)

Praha-Masarykovo nádraží

Masaryk station and its environs fall completely inside Prague's UNESCO World Heritage Site and the late-empire style station is the oldest in Prague and one of the oldest in Europe (it dates from 1845). After four years of negotiations, Czech Railways has signed a contract with Penta Investments for the sale of three development sites around Masaryk railway station in central Prague. The immediate plans for the area call for adding 35 000 m² of curved mid-rise structures interspersed with public plazas. The project will stitch together Prague's Districts 1, 3 and 8, and create a new gateway to the city from Václav Havel Airport.

The construction of modern buildings in an urban environment as sensitive as Prague's has always been fraught with difficulties. The city has suffered from a long history of alleged and actual corruption, much of it disguised by the contractual delays and setbacks which are normal for such large-scale projects. The requirement for wise, fair and transparent dealings – both with public funds, private investors and contractors – means that such developments may still have to surmount significant hurdles before they are realised.

Masaryk Station Investments brings approximately 70 000 m² of multi-story office space to the Prague market, with total estimated investment of around EUR 250 million. Penta owns 80% of Masaryk Station Investments, a.s. (MSI) and is a member of the Masaryk Station Development (MSD) consortium along with Czech Railways. The main aim of the consortium of companies comprising MSD is to prepare the land and buildings near the Masaryk Railway Station in Prague for future commercial development of both property used by Czech Railways and the remaining area.

Žižkov Freight Railway Station (33 hectares)

Covering 33 hectares, Žižkov Freight Railway Station is one of the largest transformation areas in Prague. It was closed as a station more than 14 years ago. It has been hard to reach an agreement, as the area is divided up amongst several owners. The northern part of the area is owned by Discovery Group, which wants to build offices, apartments and a shopping centre here. The larger, southern part belongs to the Žižkov Station Development consortium, which has set up the Sekyra Group development company together with Czech Railways. What is also important, however, is the opinion of the Prague 3 District within which the station is situated; the town hall does not like the shopping centre project, and would prefer to build a school on part of the land. The functionalist railway building, declared a cultural monument in 2013, should house a variety of cultural institutions, headed by the National Film Archive, which is looking for new premises in the wider city centre. Funding is already prepared for the construction of the National Film Archive headquarters. There is also talk of the National Museum and the city of Prague building a joint stone sculpture exhibition on the station site.

The Žižkov Freight Railway Station area includes historically protected objects, diverse warehouses and unused areas. The aim of the transformation is to create a new local centre of City District Prague 3, including a completion of the Basel Square, with a large share of amenities and social infrastructure and housing as a major component. There are diverse requirements of owners, investors, local authorities and public sector that need to be taken into account when developing the territory. Local authorities require including shared public facilities and park areas, future transport service routes, and guaranteed heritage protection of the station building.

A study by Spilková and Šefrna notes that this urbanisation of high-quality agricultural land is occurring despite the existence of Czech legislation to protect the highest quality soils (2010).²⁴ These findings are echoed in a 2008 study by Hnutí-Nesehnutí and Koželuh, which finds that the application of environmental planning regulations is weak. In an analysis of development applications for new retail developments in the Czech Republic in 2007, they found that only 3 out of a total of 140 applications were submitted to the whole environmental impact assessment process; the remainder were exempted from the process by regional authorities. Their analysis

estimated that 69% of large-scale retail developments in 2007 were in conflict with nature and landscape protection regulations.

Flood water management along the river is critical

Prague sits in the heart of the Bohemian Basin and is surrounded by high hills. The city is bisected by the Vltava River, which is prone to occasional flooding. Erosion along the river's banks and flood protection are a critical element of land-use planning for the city. In 2002, Prague experienced severe flooding and infrastructure, housing and the environment were heavily damaged. The Czech Republic is one of the countries the most threatened by future floods; it is anticipated that climate change will lead to an increase in precipitation extremes and in climate variability in general (European Climate Adaptation Platform, 2016). It also bears noting that the soil sealing through peri-urbanisation also generates knock-on environmental effects, including flooding risks.

The city's many cultural heritage sites and historical zones require preservation

Prague is the most important urban heritage preservation from the point of view of the Czech Republic. According to the State Register of Cultural Structural Monuments, it contains 2 021 monument structures. Prague's historical centre (866 hectares) was added to the list of UNESCO World's Cultural and Natural Heritage in 1992. Its golden spires and dome-shaped roofs of churches and temples have led to the moniker "Mother Prague" or "Hundred-spired Prague". There are over 2 000 protected heritage monuments in Prague. The historical centre includes the unique complex of the Prague Castle and Hradčany and Malá Strana (Lesser Town) with Charles Bridge, Old Town, Josefov (Jewish quarter), New Town and Vyšehrad. Prague also has heritage conservation areas where traditional folk architecture is preserved – Stodůlky (Prague 5) and Ruzyně (Prague 6).

There is a need for nature conservation and landscape preservation

Prague has 12 nature parks that comprise 20% of the city's territory and which hold special protection status.²⁵ These areas are under tremendous pressure from the nearby Barrandov and Western Township Housing Schemes. It also bears noting that while the city overall has a large number of natural areas and parks, these are not evenly dispersed throughout the city. In particular, the centre of Prague has very few high-quality public parks. In general, the state of urban and suburban greenery has been neglected though there are recent efforts to improve its quality. However, this issue of quality green space that offers recreation amenities is an ongoing challenge for the city to manage while also balancing the need of nature conservation and landscape protection. As has already been mentioned, the protection of agricultural areas with high-quality soils is also an extremely important issue; a large amount of highly productive agricultural land has already been lost.

Notes

1. The NUTS classification (from the French *Nomenclature des Unités Territoriales Statistiques*) is a fundamental tool for providing statistical information to the European Union. The classification was updated in the Czech Republic with effect from 1 January 2008, 1 August 2011, and the most recently 1 January 2013. It contains four levels of NUTS (NUTS 3 is the lowest level), which represent size groups. Prague is a cohesion region. There are eight such regions in the country, which are groupings of NUTS 3 regions (Czech Statistical Office, n.d.).
2. The OECD has developed functional urban areas (FUAs) as a means of comparing metropolitan areas across countries. FUAs are characterised by a densely inhabited city, and commuting zone whose labour market is highly integrated with the cores. FUAs represent the area across which people live, work and commute and as such give a better picture of the how the city relates to its broader environs and the labour market connections between core and peripheries than administrative boundaries do.
3. According to Act No. 131/2000 Coll., of 13 April 2000, on the Capital City of Prague, in wording of later regulations, Prague is the capital of the Czech Republic, a region and a municipality at the same time. It is broken down into city boroughs, positions and competence of which are stipulated by the above-mentioned act, a special law and the statute approved by the Council of Representatives of the Capital City of Prague. City boroughs (city districts) were established based on Act 418/90 of Czech National Council, of 9 October 1990, on the Capital City of Prague, with effect from 24 November 1990. At that time, 56 self-governing city boroughs were created. In 1992, from Praha 7 city section an independent city section called Praha – Troja was separated. The statute, which was passed by Decree No. 55/2000 Coll., splits the city now into 57 city boroughs administered by their councils, boards and offices. The statute delegated some competences to 22 city boroughs for them to carry out the delegated competences as administrative districts for the remaining city boroughs, too (see Chapter 1 for the splitting of the 57 city boroughs into 22 administrative districts). In addition to the administrative arrangement, Act No. 131/2000 Coll., Article 11, defined the territory in technical terms as follows: the territory of the Capital City of Prague comprises cadastral areas as annexed to this Act⁷.
4. This population density for the city of Prague refers to all of the land within the boundaries of the city of Prague.
5. Among metropolitan areas (functional urban areas) in the OECD, Prague stands in the top quartile for the share of GDP growth (3.3%, 2000-13), alongside such cities as Brno, Reynosa, Charleston and Call. It is also in the top quartile for GDP as a share of national value (at 30.3%, 2013). By this indicator, Prague is similar to such metropolitan areas as Tokyo, Stockholm, Paris and Bratislava. Prague also stands in the top quartiles among OECD countries for labour productivity growth at 2.3% (2000-13), which is similar to that of Santiago, Yokkaichi, Ljubljana, Budapest and Wakayama.
6. GDP per capita for Prague in 2005 was CZK 829 168 while for the South Moravian region it was CZK 397 233 (Czech Statistical Office, 2016e).
7. In 2001, 77% of all employment in the city was in the services sector; this increased even further to 81% in 2015 (Czech Statistical Office, 2016d).
8. Change of use requests are included in the building permits figures.

9. The value of construction projects in Prague was approximately CZK 28 million as opposed to CZK 31 million in the case of the Central Bohemian region in 2014 (Czech Statistical Office, 2016c).
10. In 2014, the life expectancy at birth for women reached 82.5 and for men 77.5 years. Women on average live five years longer than men.
11. In 2016, the proportion of the population in Prague with a net monthly income per person of EUR 370 or below was 19.8% (versus the national average of 33.6%); this was lower than any other region. Similarly, the proportion of the population in Prague with a net monthly income per person in the middle range (EUR 371-740) was 53.5%, which was slightly below the national average and again lower than any other Czech region. Meanwhile, the proportion of the population in Prague with a net monthly income per person of EUR 741 or higher stood at 26.8%, which is significantly higher than the national average 10.9% and much higher than any other region in the country (Czech Statistical Office, 2016f).
12. This is in part because there are eight public universities in Prague and a few dozen other institutions of tertiary education. More than a third of all post-secondary students in the country study in Prague, and of those, nearly 70% are from regions outside of Prague. The scientific and research capacity of the Czech Republic is largely concentrated in Prague, both in terms of public research institutions and dozens of other organisations and businesses that conduct research and development, including health establishments.
13. In a recent study of 12 European cities, Prague was found to be among the most equal (Tammaru et al., 2015).
14. This is based on research of data taken from Prague Census carried out in 2001 and 2011.
15. High-income residents comprise approximately 50% of the inhabitants in neighbourhoods with a high share of newly built housing.
16. “Blue-collar” neighbourhoods include such areas as Žižkov, Vršovice and Nusle; “white-collar” neighbourhoods include such areas as Vinohrady, Karlín and Dejvice.
17. In neighbourhoods such as Kolovraty, Uhřetěves, Lipence and Březiněves.
18. Amsterdam offers a good example of the former approach, where just over a third of traffic movement in the city is by bike, compared to 22% by car and 16% by public transport; in the city centre, 48% of traffic movement is by bike (2014) (OECD, 2017).
19. Eurostat perception survey results report that 86% of respondents were either satisfied or very satisfied with public transport in the city in 2015; this is an increase from 72% in 2006 (Eurostat, 2016).
20. The work on the D1 motorway began in May 2013 and has an estimated completion date of 2019-20.
21. The Radlická Radial Road connecting Smíchov area and the highway to Plzeň D5.
22. These investments are: new metro line D: Pankrác (Prague 4) to Písnice Line; three tram line extensions: Barrandov – Holyně – Slivenec (CZK 663 million, 1.6 km), Divoká Šárka – Dědina (CZK 862 million, 2.3 km), Sídliště Modřany – Libuš (CZK 430 million, 1.8 km); high-quality rail connection between the city centre and Ruzyně Airport, relating to the modernisation of the Prague-Kladno rail: it should be state financed – the Railway Infrastructure Administration is the responsible organisation.

23. Within this, 26% are communications (roads, land used for transport), 24% vegetation or bodies of water and 10% of land owned by the city or its individual districts are parks, including large open areas within housing estate projects. The remainder is held in outlying areas and areas for facilities management.
24. The highest quality soils are noted as Chernozems and Luvisols.
25. In this respect, the most important nature parks are Prokopské and Dalejské Valleys, Sarka – Lysolaje, Drahan – Troja, Rokytka and Ricanka. The Prokopské and Dalejské Valleys nature park was the last to be declared, but it is undoubtedly the most important one at the same time. It comprises many sites with a plethora of rare plant species and many valuable geological objects.

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Chapter 3.

The governance of land use in Prague

This chapter describes Prague's spatial and land-use planning policies and instruments and its fiscal environment. It proceeds by describing the key governance actors for land use. Following this, the city's major strategic and spatial politics and plans are described. This includes both the long-term development intentions of the city and the tools and instruments within the planning system to realise these goals. Following this, the fiscal pressures, tools and incentives that shape spatial planning are elaborated. The chapter concludes with a description of the new Metropolitan Act and how it will likely affect the governance of land use in the city.

How land is governed is not just the product of formal rules and institutions, rather it is the result of a complex interplay of these institutional elements that structure behaviour alongside historical relations; political dynamics; economic forces; and social and cultural expectations and logics; as well as the legacies of the built environment, geography and climate. In the case of Prague's governance of land use, historical legacies loom particularly large. The shift from a communist regime towards a market democracy led to a major change in the planning system – new institutions and modes of working were established and continue to evolve. These changes have presented a challenging environment for land-use planning. In the early days, the so-called “wild 1990s”, there was a massive privatisation of formerly public lands and foreign investment flooded into the city, particularly into its historic core. Incidences of corruption and opaque processes led to a low level of trust between developers, residents and public officials, which have coloured relations between these groups to this day.¹ There are ongoing efforts to rebuild these relationships. This issue is of particular importance since Prague is in a period of growth and investment which requires co-operation between these groups, particularly on the types of large-scale brownfield redevelopments that have the potential to transform entire neighbourhoods.

Another critical issue is the need for an updated land-use plan to guide the city's future development. There has been prolonged discontent with current (and much amended plans) and a new Metropolitan Plan is presently under preparation. A common theme across all of Prague's land-use planning documents is the need to make better use of the city's neglected potential. Prague would like to make use of its overgrown city “jungles” or brownfields instead of taking up free land at the outskirts of the city for new developments. Land-use planning in Prague has been often critiqued as conservative or technocratic – based on a value-free role of a planner who executes the orders of those in power (Horak, 2007; Hoffman, 1994). Plans are expected to service the interests of the state as well as the increasingly powerful developers lobby. But the planning system in Prague needs strong strategic direction and political buy-in to be effective. This has been lacking in the past but there are high hopes that the new Metropolitan Plan can provide such a vision for the future. It also bears noting that while the formal element of spatial planning systems such as regulations and plans shape land use, so too do other policies and practices. In particular, fiscal relations and instruments can produce powerful incentives for behaviour that affect how land is used. The potential of these instruments in Prague – which has low fiscal autonomy – is presently underused.

This chapter focuses on how land is governed in Prague, including both the institutions responsible for spatial management and the policies that are adopted to direct land-use outcomes. It further examines the policies and incentives that exist beyond the purview of the formal spatial planning system that nevertheless shape spatial outcomes. Among these, the fiscal incentives that municipalities and boroughs face are of particular importance. Finally, it reflects on the key challenges facing the planning system in Prague, including an assessment of the intended directions for future development and its implementation potential.

The city of Prague's multi-level governance

Prague's governance is unique in the Czech Republic. It has some of its own legislation, such as its own Municipal Act and Building Code. It has the powers of a region and the powers of a municipality, but some of these powers have been delegated to the

city districts and boroughs. There is an interplay among these levels that makes planning processes more complex. These various features influence how land is governed in the city.

Land-use planning at the city level

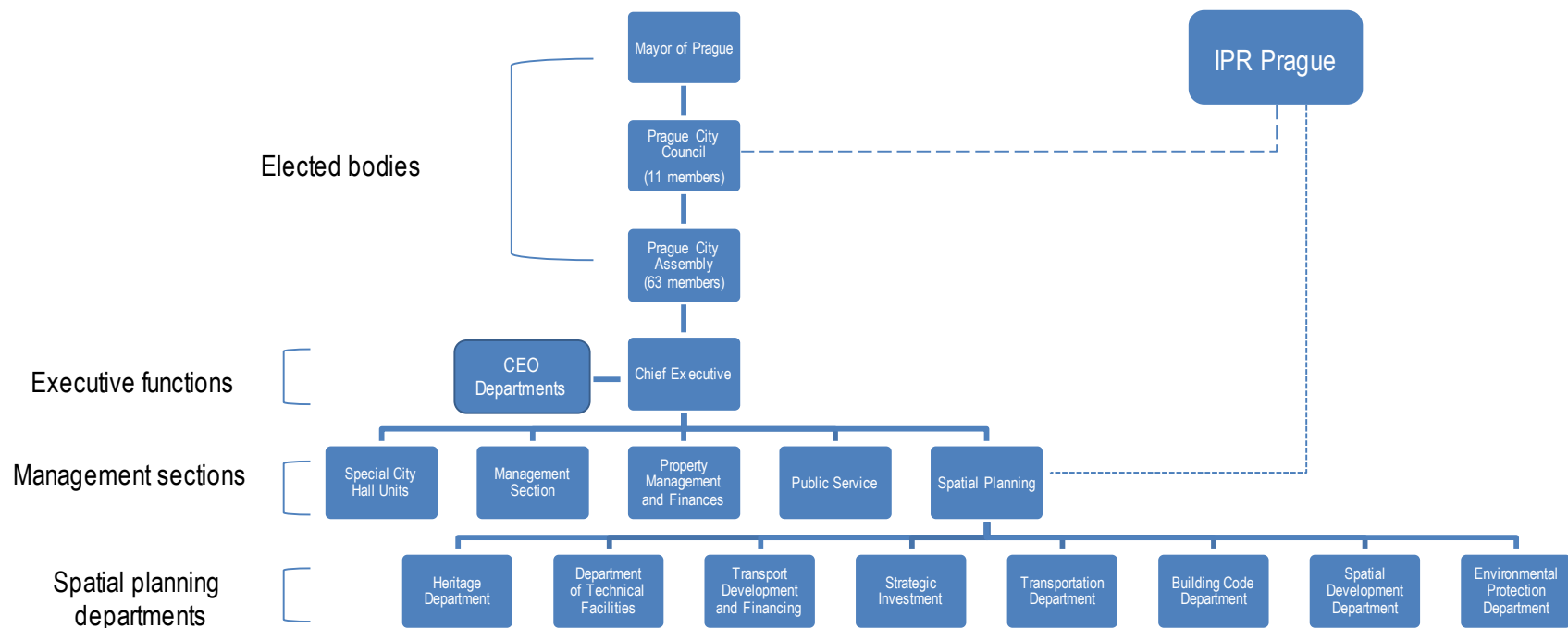
Prague's land use is governed by the nested planning hierarchy described in Chapter 1. Its plans must conform to the principles laid out by the Ministry of Regional Development's Spatial Development Principles and by a range of sectoral and even supranational (European Union) regulations that protect the public interest and the environment. However, when it comes to the details of how urban development proceeds, the city has a great deal of authority to shape and direct this process through its statutory plans, which provide the legal basis for building permission. The Prague City Assembly and Prague City Council initiate land-use documentation and procure and approve the resulting plans (Figure 3.1).² The Spatial Development Department of the city of Prague commissions land-use documentation and develops policy in the areas of heritage, environmental protection, building codes and transportation, among others.

Prague has delegated the responsibilities for developing concepts and drafting land-use documentation to the Prague Institute for Planning and Development (IPR Prague), which represents the city in spatial planning matters. The IPR has its own annual budget, which is part of the city budget approved by the City Assembly and the director of the institute is appointed by the City Council. The city's Spatial Development Department (which has delegated power for spatial planning) sets some tasks for IPR Prague and co-ordinates with them in the development of plans. IPR Prague chiefly drafts and co-ordinates documents in the areas of strategic and spatial planning and development, public space, transport, technical matters, and landscape and economic infrastructure.³ The institute has been tasked with the creation of the new land-use plan for Prague – the “Metropolitan Plan” – along with an updated strategic plan. IPR Prague is also in charge of processing geographical data and information, both for applied research and for the creation of supporting documentation that is important for the development of the city (e.g. the Prague Analytical Land Use Documentation). Thus, it acts as an important centre of expertise for most aspects of spatial development. As of 2015, IPR Prague can sell its services to other municipalities – as yet, the institute has only worked with Prague's municipalities and not, for example, municipalities in Central Bohemia.

The role of Prague's boroughs in the development process

Municipal reforms in the 1990s handed Prague's boroughs some important powers over land use – namely, they granted them the power to approve development programmes. However, the reforms did not grant them the power to approve land-use plans, which remains with the city (Horak, 2007: 64). Prague's 57 boroughs (22 of which are also administrative districts), each with their own directly elected council, can also receive delegated powers from the city by way of municipal statute. While the boroughs do not have allocated responsibilities for the actual development of plans, they are legally obliged to provide certain services and they are the layer of government that is closest to the people. The borough level organises local politics and is an important voice on local issues; though its opinion has no binding force, it does provide an opinion on decisions for building approvals. In boroughs with a growing population, there is increasing pressure to provide nursery and primary educational spaces and social services.

Figure 3.1. **Organisational structure, city of Prague**



Boroughs have no direct influence on decision making in Prague City Hall beyond lobbying City Assembly members. In general, the boroughs have weak local autonomy and their budgets are controlled by the municipalities; boroughs have no access to autonomous revenue sources (Horak, 2007). This reliance on funding gives the city of Prague considerable influence over the administrative and organisational capacity of boroughs (Horak, 2007: 66). Remarking on these dynamics, Maier notes that despite weak borough power, “some local mayors have succeeded in developing their own image, and their informal influence may reach further than their formal powers, enjoying a more immediate contact with their electorate than the remote and impersonal ‘big town hall’ can achieve” (2003: 224). While there are limits on their statutory roles, boroughs can influence development issues.

Boroughs cannot own property but they are delegated to manage city property; this generally consists of physical amenities and services such as schools, parks, recreational centres and public housing (Horak, 2007: 66). The city of Prague, however, has retained control over the most valuable public lands that have the potential for urban development. This is important because it is a function that complements land-use plans. The planning permit office is at the city-wide level; however, building permit offices are partly decentralised and permits for most types of structures are provided by district offices. It has been remarked that “overlaps and tensions repeatedly occur between boroughs and the ‘big town hall’” (Maier, 2003: 224). As will be discussed, the city’s own strategic plan recognises that responsibilities between the two levels are not always clear and that reforms are potentially needed to clarify responsibilities and management processes (IPR Prague, 2016a). Table 3.1 provides a general outline of the division of responsibilities between the city of Prague, the administrative districts and boroughs.

Table 3.1. **Division of responsibilities: Prague, districts and boroughs**

City of Prague	22 administrative districts
– Care of historical sites – Cultural activities and grants – Parks and environmental protection (of fauna and flora) – City planning and development – Approval of Building Code (Prague building regulations) – by City Council – Health services of regional level (policlinics, etc.) – Drug prevention – Planning (procuring and approving of land-use plans and zoning instruments) – Regional/local economic development – Social services – Education – secondary schools, vocational schools, higher vocational schools, special schools – Important parks (large-scale parks) management – Tourism (development plans in the field of tourism, implementation and monitoring of their performance) – Transport (roads, public transport provider) – Other matters of regional/city-wide importance – Safety (municipal police, firefighting, ambulance services) – Waste collection – Youth (funding), funding for sport and youth – Resilience, flood protection, emergency management – Ownership of property – Driving licences – Parking zones planning	- Delegated state powers/authority: – Planning and building permission (administration) – Business/entrepreneurs registry and licences – Citizens cards (ID cards, passports) – Registry office – Collection of fees (e.g. tourism fees) – Fish and hunting authority
	57 local boroughs, of which 22 are districts
	– Education (kindergartens, primary schools) – Public space maintenance (different companies throughout the city) – Parks maintenance – Some cultural and sports activities – Activities for seniors; some social and health programmes – Delegated ownership from the city of Prague – Ownership, maintenance and, sometimes, sale of public property, especially public housing – Cemeteries – Public library – Volunteer fire brigades – Collection of fees – Parking zones fees and management

Box 3.1. Prague's development: From conurbation to unicity to the two-/three-tier district model

For most of its history, Prague – being a conurbation of separate municipalities from medieval times till the beginning of the industrial era – applied the polycentric model. Over time, the ring of growing, independent suburban towns encroached upon the historical centre of Prague. It was only in 1920 that Greater Prague was established as a centralised metropolitan unit. The city later evolved into a two-tier model with 16 districts (in 1949) and then 10 districts (in 1960). The annexations in 1968 and 1974 resulted in very large and heterogeneous outer districts, with some rural units on the fringe. The political change after 1989 reopened debates about the governance of the capital city. Barlow's recommendations – to establish a strong central administration in Prague that would reduce overlap and conflict with lower level authorities – were carefully listened to and followed by the political leaders of Prague.

Since 2001, Prague is both a region and a municipality, and is governed by the Act on the Capital City of Prague (2000). It is completely surrounded by the Central Bohemian region governed by the Act on Regions (2000). The Assembly of 55 representatives is elected by means of communal elections every four years. For operative decision making, the Assembly establishes the Council, consisting of the mayor and 11 councillors. Municipal and regional administrative services are provided by the Municipal Office. The administration of the Municipal Office also exercises the competencies transferred from the central government. For the activities of the state administration delegated to the local level, Prague is subdivided into administrative districts. To reflect the specific position of small units in the outer parts of the jurisdiction, administrative districts were complemented by 57 boroughs in 1990.

The boroughs do not have the legal position of municipalities: financially they are fully dependent on the city of Prague. Each borough has its own elected assembly, which selects from among themselves a council and a local mayor. Inner-city boroughs are mostly identical to the administrative districts. Some out-of-town boroughs are small, formerly rural villages, which were annexed by Prague in 1974. The latest reform of the administrative division of Prague came into force in 2001. It increased the number of administrative districts to 22, in order to locate offices nearer to citizens. At the same time, more activities were transferred from the Municipal Office of Prague to the administrative districts. Building offices, which are important for the implementation of spatial policies as they issue planning permission and building permits, are now one of the typical features of the administrative districts.

The governmental structure outside Prague follows the general nationwide pattern. No formal representation exists for the metropolitan region. The immediate 2 administrative districts comprise 175 self-governed municipalities, 9 of which are towns with an entrusted local office. The average population size of a municipality in these two districts is only 970.

Source: Maier, K. (2003), "The Prague metropolitan region", in: Salet, W.G. and A. Kreukels (eds.), *Metropolitan Governance and Spatial Planning: Comparative Case Studies of European City-Regions*, Taylor & Francis.

Strategic and land-use plans in Prague

The adoption of land-use plans in Prague has been historically fraught with difficulties. In 1920, the first professional agency to address urban development in the city, the State Regulatory Commission, sought to produce a comprehensive regulatory plan, but its efforts in this endeavour were undermined by multiple objections lodged by individuals and boroughs alike (Landa, 2016; IPR Prague, n.d.). Post-World War II, a new planning commission was established to direct building restoration. After the communist coup in 1948, the commission's objectives were broadened and it was tasked with developing a

master city plan for Prague. A year later the commission was abolished, new administrative regions were created and the task of developing a master plan for Prague was handed to a new institution – the Central National Committee. It was then over a decade until a master plan for Prague was finally approved in the 1960s. This plan was based on socialist planning principles with distinct areas for living, working, recreation and transportation. It also made way for the ring of housing developments that still shape Prague today.

After the Velvet Revolution in 1989 – the non-violent transition of power in what was then Czechoslovakia – there was distrust in the office of previous planning institutions. They were viewed as a symbol of top-down technocratic decision making. Moreover, there was a general ideological tendency to leave development to the free market and to reduce government intervention as much as possible. Urban planning and policy were seen as contradictory to market-led developments and as such, short-term and *ad hoc* decisions tended to be preferred over that of longer term and strategic plans for the city's development (Sýkora, 2006: 136). In the mid-1990s, the responsibilities for creating plans was administratively separated from the approval of zoning decisions in an effort to revive trust in planning institutions (Landa, 2016). But the need for an updated regulatory instrument remained and finally, in 1999, a new land-use plan for Prague was approved. This, along with regulatory plans for specific areas and development principles, form the main statutory instruments of planning for the city today (Table 3.2). The 1999 land-use plan for the city was approved along with the city's strategic plan, which set the development priorities for the following 15-20 years. This process was largely closed to civic actors, who raised serious concerns about the preference for freeway development in the city (Horak, 2007: 140).

Table 3.2. **Main statutory spatial planning documents in Prague**

Year	Title	Main policy fields	Geography and scale
1999 (valid since 1 January 2000)	Land-Use Plan for the Capital City of Prague (<i>Územní plan sídelního útvaru hlavního města Prahy</i>)	Housing/services (and their uses), public infrastructure, environment, transport	Entire city of Prague/ 1:100 000
2002	Zoning Plan (Regulatory Plan) of Ann's Quarter (<i>Plán zóny (Regulační plan) Anenská</i>)	Detailed use of plots, spatial parameters, public space, commerce, greenery	The historical part of the city in Prague 1 (18 hectares or 0.04% of the city's territory)/ 1:1 000
2009 (revised 2014)	Development Principles of the Capital City of Prague (<i>Zásady územního rozvoje hlavního města Prahy</i>)	Transport, environment, technical infrastructure	Entire city of Prague/ 1:100 000
2016 (ongoing development)	Plan of the Capital City of Prague (Metropolitan Plan) (<i>Návrh Územního plánu hlavního města Prahy</i>)	Housing, transport, environment, infrastructure, heritage	Entire city of Prague/ 1:10 000

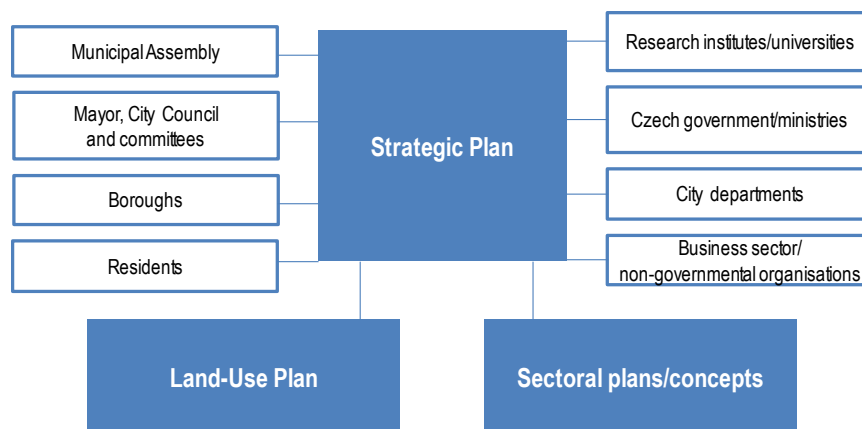
This brief overview of the various plans that have guided Prague's development reveal the ongoing tensions within the planning process in the city. It has been difficult to obtain consensus on planning priorities and the plans themselves have been subject to rigorous debate and contestation. Each time a new plan is elaborated for the city, debates about the core aims for development and the role and scope of planning therein are reopened. There has been a great deal of mistrust of the planning system by the public, civic groups and boroughs, whose voices have not always been included. There have also been major protest movements against some of the major tenants of planning in the city – such as the preference for freeway development and the expansion of the ring road in the

late 1980s and 1990s (Horak, 2007). As will be discussed, Prague is in the final stages of developing a new Metropolitan Plan for the city. Learning from previous critiques of relatively closed processes, the plan's elaboration has proceeded in a participatory manner with many efforts to engage the public, boroughs, developers and other key stakeholders. The new plan has also sought to address the critique that Prague's land-use plans have been rigid and inflexible – acting as static regulatory documents that do not adequately encourage new and innovative uses to emerge. The remainder of this section will discuss the current strategic plan that guides the city's development along with the main statutory planning instrument – the land-use plan – and the city's development principles.

Prague's strategic plan

Prague's strategic plan determines the primary direction for development in the medium and long term (10-15 years), and sets out the city's social and economic objectives and priorities. It offers diagnoses of the major challenges facing the city and the critical areas for action and investment across a wide range of policy areas – from education to transportation and land-use planning. It forms a political document that is used to communicate areas of priority action to citizens and businesses as well as other levels of government and the European Union. In terms of land-use planning, it is the basis of the legally required guideline document for the land-use plan. At the same time, the city's land-use plan is a critical implementation tool of the strategic plan (Figure 3.2 depicts the role of the strategic plan in the city's management). Thus, the two are meant to complement one other and mirror each other's objectives. Prior to the 1990s, Prague had no historical traditions of strategic planning (Horak, 2007: 145).

Figure 3.2. Strategic plan within the city's management



Source: Adapted from City of Prague (1999), "A strategy for Prague", www.monet.cz/strategplan/PDF/english/en_2.pdf (accessed 21 February 2017).

Prague's earlier strategic plans – 1994-2015 – catching up with a rapidly changing city

Work to develop a strategic plan for Prague commenced in 1994 with the elaboration of a "Prague 2010" document that set out ten main areas for the city's development and declared its ambition to be "prosperous, efficient in its operation, and healthy and friendly to its inhabitants and tourists alike" (City of Prague, 1999). This strategic document was created through a closed process involving international consultants and local experts. A

year after this document's completion, the newly created Prague Development Authority (the former City Architect's Office) was tasked with producing a new strategic plan which would broaden the process and engage more openly with public and private actors in identifying key priorities and areas of action. The final version of the resulting plan was approved by the Municipal Assembly in 2000 and addressed a wide variety of topics, including the city's competitiveness, environment, infrastructure, safety and security, public administration and spatial development. The strategic document was again updated in 2009 and in 2016.

Both the 2000 and 2009 version of the city's strategic plan identifies similar challenges. It is, for instance, noted that Prague has increasing car transport and noise issues, outdated infrastructure, a lack of affordable housing for families, an increasing crime rate, and "inflexible and often ineffective local authorities" (IPR Prague, n.d.). A lack of funding for strategic priorities along with the poor management of municipal priorities and growing pressures on the historic core are further noted as challenges that need to be tackled. A major aim of the plan is to develop Prague as an important centre of Europe and to offer a competitive environment in which to work, live and invest against that of the other major metropolises in Central Europe. The 2000 and 2009 strategic plans had a strong outward-oriented outlook reflecting a desire to encourage foreign investment in the city – albeit in a more ordered and transparent manner than that which was seen in the early 1990s.

In terms of spatial development, the 2009 strategic document aims to lessen the impact on the historical urban core by shifting employment functions to other areas of the city – in other words, to transition from a monocentric to a polycentric form of urban development (IPR Prague, 2009). It further identifies the need for a new land-use plan for the city, along with the accompanying studies, models and analysis to support its development. It notes that the city wishes to improve its architectural and urban quality and engage more effectively with the public – sharing planning goals with both the public and specialists through exhibitions and workshops. These tasks, including the elaboration of the new Metropolitan Plan, have fallen on IPR Prague to achieve.

Each of the projects defined in the 2009 Strategic Plan (through its 2008-15 Action Plan) was guaranteed by a city council or city hall department or other stakeholders. However, the plan lacked a strong binding vision and requirements for all municipal activities (including the city budget and other strategic documents) to be in agreement with the plan. Therefore, in practice, the plan's implementation was very selective as projects which required implementation outside of the current project and planning agenda of city hall departments were very difficult to implement. In effect, the strategic plan did not adequately act as an overarching document to manage municipal priorities for development and investment.

Prague's 2016 strategic plan – embracing flexibility, adaptability and participatory processes

The most recent update to Prague's Strategic Plan (2016) contains many of the familiar themes of previous iterations, including a need to reduce pressure on the urban core and improve the quality of the urban environment and architecture. However, it takes a very different approach in a few critical areas. First, the elaboration of the strategic plan was more consultative, involving a wider variety of actors from the public and private sectors than that in its previous iterations; an estimated 4 000 individuals participated in its development through various outreach efforts (e.g. workshops, conferences, online engagement). Perhaps as a result of this, the importance of an active civil society emerges

from the strategy as a critical component of its implementation. This stands in contrast to the previous strategic plans, where government and governmental actors were at the forefront of almost every strategic action. There is, in essence, more space for society coproduction within the new strategic plan. With an emphasis on public engagement and the need to rebuild trust between the public and government officials, the most recent iteration of the strategy also serves as a document to hold city representatives accountable. Further, in contrast to the previous strategic plans, the importance of culture and creativity to the city's development is more prevalent. This responds to earlier critiques that strategic planning in Prague has lacked a strong cultural pillar – focusing more instead on the economic, environmental and to a lesser extent, social elements of planning.

The most recent iteration of Prague's strategic plan also seeks to learn from prior experiences with implementation challenges. In elaborating the document, IPR Prague identified core challenges that need to be tackled, including the need to follow compact city and good governance principles; the need to align organisational structures with a more integrated approach to planning (one that can more effectively address policy siloes); and the need to gain the support of a wide variety of actors – city, boroughs/districts, residents, developers/investors – for the core values and priorities of the strategic plan. In order to achieve this, the plan's implementation requires ongoing evolution in terms of the city's own administrative functions as well as how it works with outside actors.

Prague's 2016 Strategic Plan is detailed, encompassing five separate volumes.⁴ It contains three strategic directions for the city around the themes of: 1) a cohesive and healthy metropolis; 2) a thriving and creative metropolis; and 3) a well-governed metropolis (Figure 3.3). There are numerous action items under each of these themes that are operationalised through the implementation programme for the strategic plan, which extends to the year 2030 and proceeds in three four-year phases starting in 2019. Annual implementation plans detail the preparation of individual projects across the city and its boroughs and the implementation of these projects will be a priority in the allocation of the city budget. Some of the key recommendations within the strategy open up the potential for important reforms. For example, under the theme "good and smart city governance", the need to reconsider the alignment of the division of competencies between the city and its boroughs and districts is raised. Other recommendations make light of long-held critiques – for example, it is noted that the city should more actively manage the property that it owns.

Prague's 2016 Strategic Plan was authorised by the Mayor and City Council and Assembly after a participation process which involved all the administrative bodies, institutions and various stakeholders, including the public and academia and in particular, the city's 57 boroughs (which, by law, must be intensively consulted in the preparation of the strategic plan). Each of Prague's boroughs can adopt its own strategic plan, and those plans are not obliged to be in agreement with the strategic plan for the whole city. This creates an implementation challenge and some boroughs have the power to block projects of city-wide strategic importance. Beyond this, there continues to be a large number of municipal strategies and frameworks, programmes or sectoral concepts that are prepared by the city administration which are also not obliged to be in agreement with the city's 2016 Strategic Plan. Therefore, despite the ambition for the new strategic plan to overcome policy siloes and administrative fragmentation, there remain inherent co-ordination challenges that have the potential to undermine its effectiveness.

Figure 3.3. Prague's 2016 Strategic Plan: Key themes

A cohesive and healthy metropolis	A prosperous and creative metropolis	A well-governed metropolis
• Responds to the threat that the city is unprepared for demographic change (e.g. population aging and an increase in international migration); the threat of deterioration in the quality of life (e.g. degradation of urban centre's structures) and deterioration of quality of life (e.g. quality of the environment) • Strengthens the city's accessibility and connections to the natural environment • Develops the city's potential through high-quality technical infrastructure and an active civil society	• Responds to impending parochialism, decline and loss of competitiveness in the international position of Prague, neglected cultural capital city and the declining performance of the education system • Reinforces the strengths of the city's attractive position and strong brand based on its heritage • Develops the potential of a flexible workforce and innovative cultural and creative industries	• Responds to the lack of participation of the population in the management of the city, poor communication and a lack of respect for the conceptual elements of planning • Develops the potential of an active civil society and strengthens institutional capacities at the city and borough levels

Source: IPR Prague (2016a), "Strategic plan", www.iprpraha.cz/clanek/1464/navrhova-cast (accessed 22 February 2017).

Prague's development principles – outlining strategic transport and technical infrastructure

Prague's 2009 (revised 2014) Development Principles are another type of strategic plan for the city – they set priorities for the construction of transport and technical infrastructure. Development principles are required for all regions by Czech law. In regions other than Prague they form an important co-ordinating mechanism for municipalities within a region whose land-use plans must abide by their principles. However, in the case of Prague, this co-ordinating function is moot since the city is also the region.

Prague's development principles project strategic infrastructure and transportation needs and corridors over the short term and are updated every four years. They determine the border areas and corridors of supra local importance and the requirements for their use (e.g. public works, public benefit measures, they determine the criteria for decision making on possible variants or alternatives of the changes). The principles further assess the impact of these requirements on sustainable development and the environmental impact of projects. The development principles contain no measurable or reportable outcomes.

Because the plan is strictly binding on land-use plans, any changes to infrastructure requirements which are not presently included in the principles will require an update to them. Major infrastructure projects are often a flashpoint for disagreement in any city and it is for this reason perhaps unsurprising that Prague's development principles have been legally challenged in this regard. They have been challenged by an individual in one instance and in two other instances by a number of boroughs that have disputed some infrastructure projects, such as the expansion of the ring road. In all three cases, these appeals were overturned in court.

Land-Use Plan for the Capital City of Prague, 1999

Prague's current (in force) land-use plan was prepared in the late 1990s (1996-98) after the transformation of the country's economy and political system.⁵ The plan takes a regulatory approach to the management of land – it seeks to protect the environment and attempts to define very precisely what and where can be developed according to specific uses. For example, it contains specifications for buildable volume and delineates the area where no high-rise buildings are allowed.⁶ The plan also includes a phased approach wherein some areas can only be developed once other aspects of the plan are fulfilled. As such, the plan specifies both areas for new development and areas of potential future development, depending on how development actually unfolds in the city.

Zones are divided among multifunctional or monofunctional areas and the space is regulated or prescribed by the maximum capacity of the development. Areas that are considered stabilised (not in the process of ongoing development) are treated differently from those where transformations are currently taking place or may take place in the future. Stabilised areas do not generally prescribe maximum capacities (maximum of building capacity). The height regulation is limited only to the delineation of areas where high-rises are not permitted and in the old village centres accordingly. The plan also prescribes the minimum share of dwellings per area of land in some cases. Several areas in Prague are excluded from development in the plan in order to ensure more detailed study. This feature of the plan has created a *de facto* building ban in certain areas and after almost 20 years, detailed studies in these areas have yet to be approved for the most part. The plan stipulates the protection of the environment and addresses the importance of connecting nature ecosystems in order to protect habitat for fauna and flora. The plan further addresses the importance of flood protection and the location and development of public amenities and facilities, as well as technical and transportation infrastructure. The plan does not include measurable or reportable outcomes and indicators. Also, it is rigid in that it does not allow flexibility in time; the idea of temporary or short-term uses is prohibited.

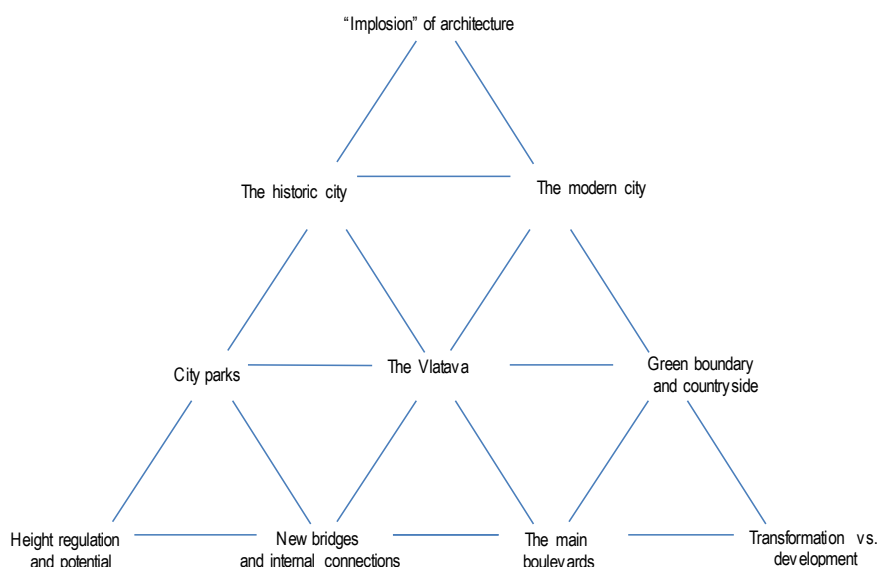
Given Prague's fast-paced investment in the early 1990s, the 1999 land-use plan clearly responds to a need for more predictability around what can be developed and where. However, the plan has been in force far past what was anticipated; it was meant to be replaced in 2010, but was instead updated in 2006 when Prague adopted new building laws and bylaws. Since the late 1990s, Prague's land-use plan has been continuously changed through thousands of amendments brought forward by the city, local boroughs, or investors and developers. Hundreds of changes to the plan have been submitted yearly to increase the designated capacity, change land-use delineations or to change areas from unbuildable to buildable. On the one hand, these changes demonstrate that the plan has been flexible and had adapted to the desire for changed and new uses. On the other hand, it demonstrates that the existing land-use plan is either not fit-for-purpose, given that so many amendments have been requested, and/or that it is not effectively managing spatial developments. One outcome has been that the large number of amendments has created advantages for some developers over others. An important purpose of any land-use plan is to provide some consistency and predictability for individuals to understand spatial changes in their city and neighbourhoods. The large number of amendments to Prague's 1999 land-use plan undermines this function.

Prague's new Metropolitan Plan – 2017 pending approval

Prague's new land-use plan – the Metropolitan Plan – is presently under preparation. In general terms, the new land-use plan aims to concentrate and intensify the use of existing areas and to develop brownfields, while designating almost no new greenfield

areas for development. It is grounded in a compact city approach. The plan further aims to reforest existing open areas as much as possible in order to increase ecological stability. The ten main elements of the Metropolitan Plan are described in Figure 3.5. The term “implosion of architecture” at its pinnacle refers to the desire to increase the compactness of the city while maintaining a high-quality urban environment well served by public amenities, high-quality public spaces and transportation.

Figure 3.4. **The ten elements of the Metropolitan Plan**



Source: reproduced from IPR Prague (2014), “The spirit of the plan: Ten fundamental theses on the city of Prague”, p. 49.

Much as the latest strategic plan has sought to address the critique of its previous iterations, the new land-use plan seeks to address the rigidity of its predecessor and adopt a more adaptive approach. The new land-use plan is viewed as a living document. It seeks to help the city meet its potential by providing less regulatory direction in the parts of the city that are stable and more guidance in rapidly changing areas where there is greater risk for land-use conflict due to changing uses. Rather than defining zones and their functions, the new plan describes an area’s characteristics and how it can be improved given its unique character. In this, the new land-use plan adopts a more flexible approach – something that many municipalities across the OECD are moving towards (see, for example, the Netherlands, where a new planning act is enabling such approaches, Box 3.2).

Unlike previous iterations, the new land-use plan will contain all relevant information on one map with two levels at higher and lower levels of detail.⁷ The plan focuses on encouraging development in already built-up areas and protecting unbuilt ones (open landscape, agricultural fields) from development. As such, it allows for increasing intensity of use in the inner city areas and the development of brownfield sites. The development and transformation of areas are described and regulated according to several parameters or specific needs. The discussion about phasing or building bans is open to the process of public review. The plan has an index of usage/capacity for an area, which measures the changes in the capacity of the area (locality). It shows and regulates the proposed capacity of the floor-to-area ratio of stabilised areas as well as how they might change in the future. This decision regarding density is partly related to the capacity of local infrastructure.

Box 3.2. Towards a more flexible and responsive spatial planning system in the Netherlands: The new Dutch Environmental and Planning Act

Are spatial policies and land-use plans responsive enough to changing conditions and concerns? Do they hamper economic development by being too stringent, imposing onerous regulatory burdens on projects? These questions have long been a source of debate in the Netherlands and were of particular concern in the wake of the 2008 economic recession, when building and infrastructure construction was an important economic stimulus. In response to these concerns, the 2010 Crisis and Recovery Act was adopted in order to speed up the planning process by reducing or simplifying some of the permit requirements. At the same time, there were emerging discussions about how the spatial planning system could be further simplified and how it might better address some of the growing tensions between economic and environmental agendas that are embedded in sectoral policy responses. The impetus for reform also arose from the observation that existing environmental legislation tended to focus on protecting the local environment and residents from noise and pollution as opposed to enabling the transition to sustainable development and was further anchored in the need for place-based policies given that the different regions of the Netherlands are experiencing quite divergent trends, such as population growth in central urban regions and decline in more peripheral rural ones.

In response to these issues, in 2016 the Netherlands adopted the Environment and Planning Act, which combines a raft of legislation into a new encompassing framework. The act merges 26 separate acts into 1; merges 120 Orders of the Council into 4; and simplifies over 100 ministerial regulations in order to create greater coherency among them. By 2019, environmental plans will replace structure plans/visions at each level of government. A major change at the municipal level is the adoption of one plan for the entire territory that will encapsulate all applicable zoning regulations and pertinent administrative laws. In essence, cities will be required to create one area-wide environmental plan that will be based on a “dynamic system of continuous adjustment and renewal” (RLI, 2016, 8). With the new legislative framework, the Netherlands chooses flexibility over certainty. In Amsterdam, it is anticipated that the new legislative and regulatory framework will make it easier to build houses and open the possibility to transform plots to new uses and foster innovation and experimentation. It is intended that the new legislation does not reduce the level of environmental protection or due diligence for new projects. The city has already adapted to some of these changes through the recent Crisis and Recovery Act. But the new Environmental Act goes much further.

Much is unclear about how the mechanics of the new legislation will operate. In part this is purposeful. The system aims to increase discretion at the local level while determining national and provincial standards and protecting the key interests at those scales where it is deemed necessary. There will be many areas where municipalities and water boards, together with provinces and the national government, will need to work together on joint projects – as they have always done – but with fewer regulations guiding practice and a greater latitude for decision making in some instances. There will be a far greater reliance on collaborative planning than in the past. This entails a more active role for citizens in planning processes and a closer relationship between initiators/developers, authorities and citizens. The public engagement function will be critical in order to make sure the new system works effectively. With less formalistic rules, there may be less recourse to legal procedure, but more onus put on building consensus and mediating conflict in advance. At the same time, the planning process could easily become increasingly beholden to more powerful groups that are better placed in terms of time, energy and resources to achieve their agendas.

There is inherent risk within a more flexible approach. In more rigid, formal and legalistic systems, the interactions between the various actors are often highly constrained, which has the benefit of certainty. Under the new system emerging in the Netherlands, how these relationships play out will in large measure depend on the project at hand, but will need to balance inclusiveness, timeliness and flexibility across inherent power asymmetries of the actors involved. Within this, municipalities will need to play the role of fair broker and be extremely transparent about how regulatory requirements are being met and how and when stakeholders are included in decision making. Further, under such a system, fiscal incentives could come to play a bigger role in directing and shaping actor behaviour.

Source: OECD (2017b), *The Governance of Land Use in the Netherlands: The Case of Amsterdam*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264274648-en>.

The new land-use plan adopts “locality” as a new basic unit for analysis. Areas within the plan are defined by their position in the city, the prevailing character of built-up areas and landscape, and the cultural and economic conditions. The new plan aims to support the urban character of the various localities such that different regulations will apply to different localities. It is anticipated that these regulations will help to prevent, for example, the development of solitary high-rises in inappropriate locations like low-rise residential areas. The plan further establishes building height limits across Prague in order to maintain the character of different areas of the city.

Critically, the new plan aims to stop the uncontrolled expansion of developments into fields by defining clear borders between the city and the countryside. It recognises that the creation of environmentally harmful and uneconomical urban sprawl on the city’s outskirts should stop. However, it bears noting that – name aside – the new plan does not cover any areas beyond Prague’s border which are seeing some of the largest sub-/periurban growth. It governs only the territory of the municipality, like the land-use plans before it. This co-ordination challenge between Prague and its surrounding areas is the subject of Chapter 4.

Prague’s building regulations and approvals process

Prague’s new building regulations are grounded in urbanism principles – aiming to create walkable, attractive neighbourhoods with high-quality public and green spaces

Prague’s land-use plan is the key document governing what gets built where in the city. This is complemented and operationalised by the city’s building regulations that set up the technical standards about the height of the buildings, their placement on a lot, and the distance between building, the height of individual rooms inside the buildings, the amount of parking places per building and so on. The building regulations ensure a construction project’s consistency with the Prague land-use plan and its approval in territorial management (placement of buildings in the area) and in construction management (approval of construction and technical design buildings). Unlike the rest of the Czech Republic, Prague can issue its own building regulations; however, these regulations are reviewed by the national government and can be rejected if they are deemed to not meet its standards.⁸ The focus of the new text of Prague’s building regulations has shifted to resolving the city’s current problems, and reacts to the disintegration of urban structure and associated economic, environmental and social impacts. The text also contains traditional urban planning instruments, such as street or building lines.

The new building regulations mark a return to traditional values that were stipulated in Prague’s building codes during the so-called First Republic and in older versions. Previous regulations considered buildings on an individual basis, while under the new building regulations, links between new or changed buildings and that of the broader area are made. The new regulations place an emphasis on having new or changed buildings fit the existing character of a neighbourhood and promote walkable and bikeable neighbourhoods. They also emphasise the importance of trees and green spaces to the urban landscape and the importance of rainwater management. Efforts were made to establish a clear and user-friendly set of regulations in plain language, with detailed regulations provided in supplementary annexes.

Prague’s new approach was much debated and controversial to some. The two most controversial elements of the new regulations involved parking spaces and billboard usage. In Prague, like in the rest of the Czech Republic, any new buildings require a certain

number of parking spaces to be included in the plans (a minimum and maximum permissible number is calculated per building). The new building regulations take into account proximity to public transportation and reduce the required number of parking spaces when prudent and place a preference for underground parking (in order to free up public areas as much as possible). This type of change is increasingly common in many building code regulations across the OECD. However, it was a controversial change in Prague due to concerns that there would not be enough parking available and that underground parking imposes higher costs. The second change has placed limits on the amount of public billboards and advertising permitted in order to improve the attractiveness of the city and reduce the distractions facing drivers and pedestrians. It establishes a rule for the permitted size of commercial signage and the distance between signs. It further forbids billboards altogether in conservation areas and parks. Some members of the business community expressed a lack of support for this policy change since it creates limits on public advertising.

Prague building codes also form a critical element of the negotiations that occur between the city and developers. The building regulations allow for contracts between the city and private developers to be negotiated such that a developer can be asked to financially contribute to the costs of transport and technical infrastructure. In some countries, these types of developer agreements can be used to finance healthcare and other elements such as education; but in the Czech Republic this is not possible under current national legislation.

Box 3.3. Prague's Public Space Design Manual

Increasing the quality of life in the city is a theme that pervades all of the documents drafted at IPR Prague. The objective is to create places to spend and share one's free time thanks to first-rate public spaces. In order to support this objective, the city has developed the *Prague Public Space Design Manual*, approved in June 2014, which aims to gradually transform Prague into a pleasant city that draws people out into public space. The manual contains rules and recommendations for achieving the stipulated objectives, and describes the optimal procedure for preparing and executing investments.

An important issue is making the city pedestrian-friendly. In busy areas, the pavement should be wide enough to allow room for pedestrians, trees and front gardens. Tramway line poles or streetlamps should be grouped together so as to be as unobtrusive as possible. The movement of pedestrians should not be complicated by railings, overpasses and underpasses. The manual also focuses on the aesthetics of public space. It addresses the regulation of advertising and the design of street furniture. It also offers a balanced solution for all public space users: pedestrians, cyclists and drivers. The manual also aims to improve co-ordination, so that, for example, one street is not needlessly repaired several times a year. In addition to making public space more enjoyable, the manual will ensure cost and time savings in connection with the construction of such space.

Source: IPR Prague (2016f), *Prague Public Space Design Manual*, <http://en.iprpraha.cz/clanek/1361/public-space> (accessed 2 March 2017).

Box 3.4. The use of neighbourhood plans in the United Kingdom

Land-use planning is about achieving better use of land to enable sustainable growth for the benefit of society; but in many parts of the world, local communities do not see how they might benefit. For the new government in 2010, it was a bold move to create and promote in England the concept of neighbourhood plans – a new tier of development plan below district-wide local development plans. Prime Minister David Cameron himself said: “If you’ve got an idea to make life better, if you want to improve your local area, don’t just think about it ... Neighbourhoods who are in charge of their own destiny, who feel if they club together and get involved, they can shape the world around them.” Neighbourhood plans became the key element in a new Localism Act. As the responsible minister put it, “for too long local people have had too little say over a planning system that has imposed bureaucratic decisions by distant officials in Whitehall and the town hall”. His department sponsored “front-runners” and provided financial assistance to help willing local communities to plan. Neighbourhood planning – at a level well below the long-standing district municipality-wide local plans – was promoted as a new way for communities to decide the future of the places where they live and work:

- choosing where they want new homes, shops and offices to be built
- having their say on what those new buildings should look like and what infrastructure should be provided; and even
- granting planning permission for the new buildings they want to see go ahead.

The government wanted to put power back in the hands of local residents, employees and business, councils and civic leaders – “those who know best the needs of their local areas”.

Such enthusiasm for localism may have missed the warnings of the OECD in its *Economic Survey of the Czech Republic*, where three-quarters of some 6 200 municipalities have fewer than 1 000 residents. In that country, long-standing concerns were expressed that such municipalities are too small to deliver high-quality services, although to be fair, the development management function is not in fact mentioned – nor is the need to make best use of the land resource. Away from the cities, local government in France is also very local in extent. If communes prepare their own *plan local d’urbanisme*, or a *carte communale*, the local mayor will make decisions of applications for development permits. Otherwise, the civil servants in the prefecture will make the decision, taking account of the views expressed by the local mayor. The local government finance system creates a priority for mayors to attract enterprises to address unemployment and obtain fiscal resources to finance public equipment. And the recent amalgamation of councils into larger units takes those decisions further from local communities.

Could the transfer of more planning power to English communities help achieve more local sustainable growth, and buy-in? It must be understood that development management decisions remain with the principal local authorities. And the communities do not have a free hand in preparing the new neighbourhood plans. After local consultation, the draft plans must be passed to the principal local government tier – the borough council planning authorities – to check that the local policies proposed meet legally defined tests, including:

- having regard to national policies and advice contained in guidance issued by the national government
- a requirement for policies to be in general conformity with the strategic policies contained in the development plan for the area of the authority
- making a contribution to the achievement of sustainable development (a term not itself defined)

Box 3.4. The use of neighbourhood plans in the United Kingdom (*continued*)

An independent examiner is then appointed to check compliance, and amend the plan if necessary to meet the legal tests. In the next stage, local people vote on the plan in a local referendum. The aim is to achieve local buy-in to development. This is a novelty in the United Kingdom; there are no votes on other tiers of the planning system, perhaps out of a fear that local people would be inclined to agree that development is needed, but to vote against plans on the rationale that it is better located in other parts of the planning area.

At the time of writing, well over 100 referendums had been held and each one was approved by local people. Are they achieving community buy-in? Certainly, early research suggests that neighbourhood plans can actually result in an increased housing allocation – by an extra 11%. So, safeguards over where the homes go and what they would look like, with protection of local green spaces, traffic management and so on, perhaps the NIMBY (Not In My Back Yard) tendencies are tamed. Or maybe they are persuaded by the financial incentive – a larger slice of the so-called community infrastructure levy, which developers contribute to help pay for the extra service infrastructure – schools, local roads, medical facilities, etc. that development requires.

Professor of Town Planning Mark Tewdwr-Jones contends that localism and neighbourhood planning, if they are really going to take hold, will require a fundamental shift in the way that neighbourhoods and communities think and act. The challenge is to engage communities in the wider aspects of planning for best land use – for example, in helping to value the environmental services landowners deliver locally, in recognising the value of natural capital locally, and shaping development to add to social and economic capital without drawing down natural capital. It's not just about housing numbers. Nor should it be just about rural communities. The United Kingdom's Minister Gary Barwell has said, "The real challenge is to make sure neighbourhood planning is adopted uniformly across the country, so deprived communities make use of it as much as more affluent areas." His aim is that more neighbourhood plans are drawn up in deprived urban areas, where take-up of the policy has so far been low. In short, better local understanding of all the facets of land-use and development planning policies will be crucial in a more densely populated world, if people in both rural and urban places are to engage more fully, and in the interest of the wider community. Until that point is reached, few neighbourhoods will positively welcome developers, who are so often seen as interested only in a quick profit and leaving only, so it would seem, damage to the local environment.

Prague's lengthy two-step building approvals process requires reform

What actually gets built comes down to the projects that are approved. For this, Prague has a two-step building approval process: 1) planning permission; and 2) building approval. First, in seeking planning permission, the project's conformity with the land-use plan is checked, and the developer/investor must receive a view from public authorities (e.g. monument protection, water protection, fire protection, environmental protection). The investor is responsible for collecting the opinions from all of the relevant government authorities in order to proceed with the approvals process. Next, individuals neighbouring the proposed development are informed about it directly and their remarks or objections are collected. Non-governmental organisations (NGOs) can be also involved, if they ask or send their opinion on time. In this phase of the approvals process, the position on plot, volumes, relation to surrounding areas and overall design is assessed. In the second phase – building approval – the construction and design solution of the building itself is checked. Again, the investor must receive all advice and the process is similar to the planning permission process. At this phase, objections and appeals are possible (e.g. to the regional planning authority, to courts). Change of use is always permitted, but it needs

to go through this process. If a project does not meet the existing zoning approval requirements then a change is required to the land-use plan; this process generally takes one to two years and entails several phases.⁹

Public engagement processes are an important part of any building approvals process. It is critical that neighbours and other interested and affected parties are informed of proposed changes and that their opinions can be considered and potentially incorporated into building plans. This can lead to better use of space, more attractive buildings, safer building features and other positive outcomes. In Prague, individuals can organise themselves as NGOs or associations and ask to be automatically informed about all projects in the territory of any municipality. Further, if the project is big, it is announced by public notice/announcement, in order to engage as many people as possible.

While the administrative costs related to building approvals in Prague are relatively low compared to other European cities, the length of time that it takes to receive a permit is much longer and the process is more complex (Deloitte, 2016). With the two-step approval process there is more space for objections, which the regional planning authorities must address. In each step, the investor must obtain and receive approval from several (tens) of municipal and state authorities in various fields, plus approvals from service delivery authorities (often private companies, or semi-private ones). As such, investors have limited certainty about the time frame for this approvals process. If any of the involved bodies do not agree with the result in each step, it is possible to request an opinion or decision from the Building Authority at the city hall. If objections are still not resolved, they will proceed to court (ending at the highest administrative court). The objection can be formal or site-specific, and can be sent after the decision for planning permission has been made.

Overall, the approval process can take years from the point of initial study. Amendments to the current land-use plan generally take at least two years; planning permissions generally take two years and building permissions generally take one to two years on average. The process is administratively onerous, requiring the binding opinions of 23 authorities for both steps, which may in some cases reach up to 45 (Deloitte, 2016). A more efficient process can be found in Berlin, where the administrative costs are higher, but which has a system where the building office secures all underlying documents for a project.

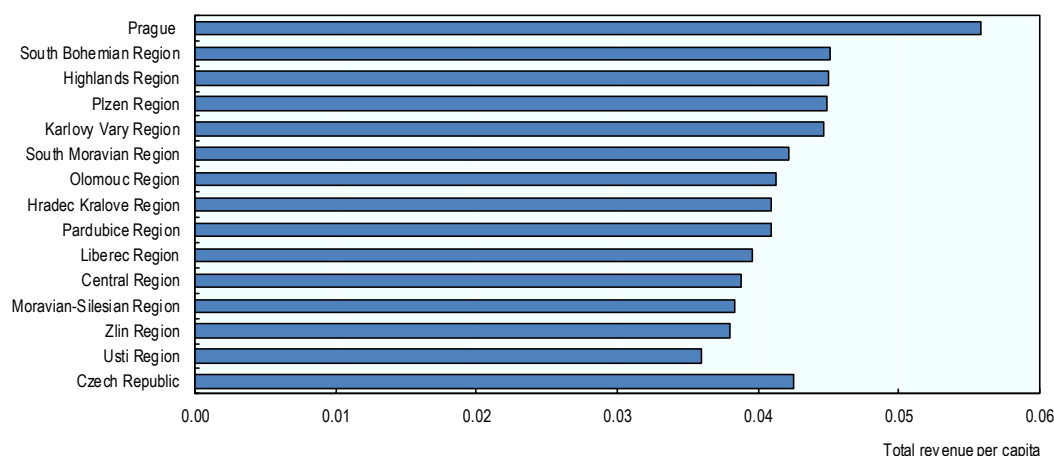
The fiscal environment, tools and instruments

While the preceding section focused on the planning system – including strategic and land-use plans and the approvals process – it is equally important to consider how fiscal relations, tools and instruments shape the incentives that governments, businesses and individuals face. As was mentioned in Chapter 1, municipalities in the Czech Republic have low fiscal autonomy. This is also true of regions, like Prague. Municipalities that tend to rely on own-source revenues – for which the property tax is typically of chief importance – tend to face expansionary pressures. For example, in municipalities where a business tax is an important source of revenue, more business will be engaged to locate there, while in those where residential property taxes are important, a municipality will typically seek to attract new residents and make the land available for expansion in the process. As a city/region with low fiscal autonomy and limited financial instruments at its disposal, Prague faces a different set of incentives. On the one hand, Prague does not face strong expansionary pressure in order to raise revenues; nor does it face inherent competition with surrounding municipalities for the location of residents on fiscal terms (though it does on

environmental and other terms). However, at the same time, the city does not see strong benefits from economic growth and fiscal planning and urban planning are poorly co-ordinated. For example, the fiscal implications of land-use plans are not considered; IPR Prague is presently in the processes of developing ways to measure the fiscal implications of land-use plans (e.g. the differential costs of developing in the inner areas versus peripheral areas).

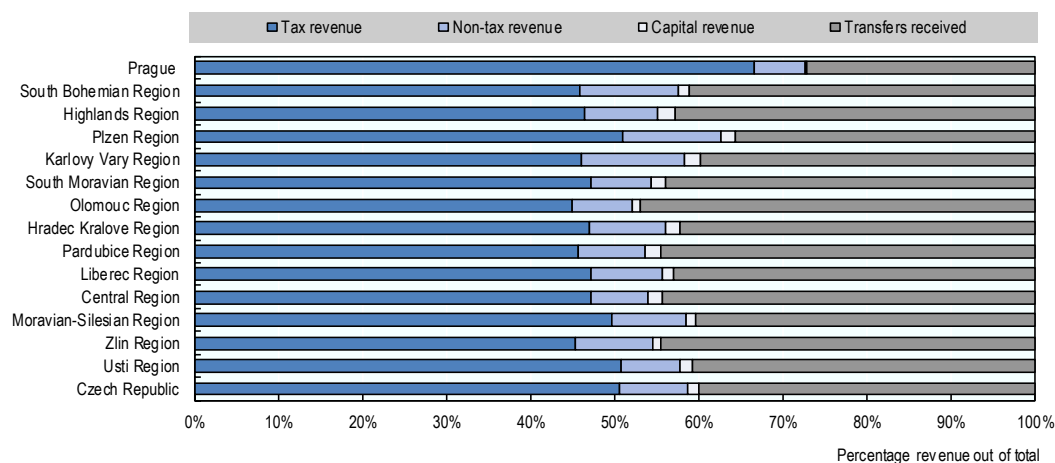
Prague's revenue per capita is significantly above that of other regions in the Czech Republic (Figure 3.6). Revenue per capita in Prague stood at EUR 2 066 in 2015 versus EUR 1 572 for the country as a whole; however, this is in large measure due to Prague's joint functions as both a city and a region. In comparison, in Central Bohemia (the region surrounding Prague), revenue per capita stood at EUR 1 437 in 2015. In terms of revenue sources, Prague has the largest share of tax revenue of any region in the country (67% out of total revenue versus an average of 50% for all Czech regions) (Figure 3.7). Tax revenue transfers from the national government to its regions are based on respective population size. There are, of course, also subventions for specific strategies and projects; however, the budgetary distribution of taxes forms the majority of Prague's income. With the exception of non-purpose contribution from the state budget used for the executions of state powers, all of the other finances from the state are strictly purposed and are subjected to yearly review (non-purposed finances are those coming from tax revenues). Prague's non-tax revenue is significantly less than that of other regions, at 6% out of total revenue versus an average of 8% for all Czech regions. In this, Prague is comparable to the regions of Central Bohemia (where non-tax revenue is 7% out of all revenue); but is much lower than, for instance, the Karlovy Vary region, where non-tax revenue forms approximately 12% out of total revenue. It is also notable that Prague has the lowest capital revenue as a percent of total of any region in the Czech Republic, standing at 0.05% as opposed to an average of 1.29% for all Czech regions. Finally, Prague received far fewer transfers than any other region in the country; these form 22% of its revenue while the average for all regions is 40%. In Central Bohemia, approximately 44% of its total revenue is from transfers received. These differences are in large measure due to Prague's eligibility for certain EU funds.

Figure 3.5. Total revenue per capita, Prague and regions, 2015



Source: CZO (2015), "Local government budgets", <https://www.czso.cz/csu/czso/6-local-government-budgets-abnu6j6plz>.

Figure 3.6. Revenue sources by region, 2015



Source: CZO (2015), “Local government budgets”, <https://www.czso.cz/csu/czso/6-local-government-budgets-abnu6j6plz>.

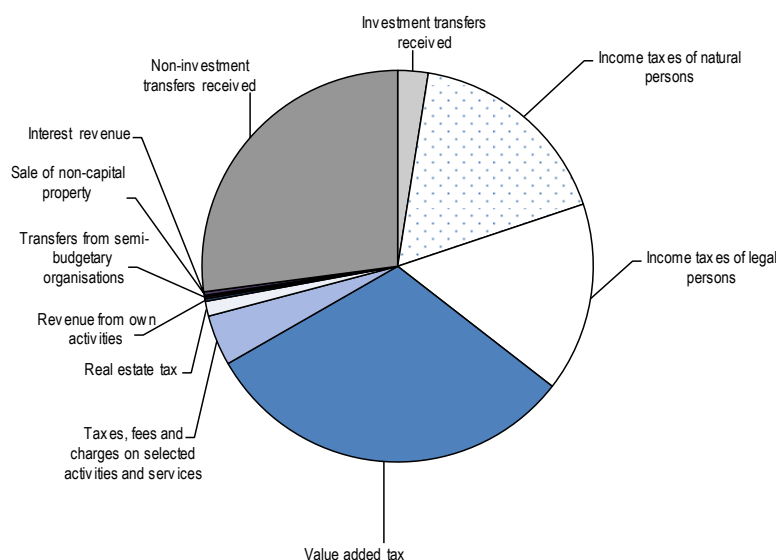
Prague’s revenue comes mostly from non-direct taxes and transfers from the national government

The vast majority of Prague’s revenue comes from either taxes or, to a lesser extent, transfers. The vast majority of these transfers and grants are earmarked, mostly for education and investment spending (OECD, 2016). In terms of taxes, Prague’s largest revenue contributor is the value-added tax, followed by business taxes (income taxes of legal persons) and personal income taxes (income taxes of natural persons). The city can also levy charges and fees on select activities and services. For example, it levies pollution charges and administrative fees and charges; however, these are small contributors to the budget. Prague’s real estate taxes also make up a relatively small share, at approximately 1% out of total revenue. As noted in Chapter 1, these taxes are non-direct – they are collected by the national government and transferred back to the city. Therefore, while Prague fiscally gains from, for instance, new residents and businesses, it does not see a direct link from these gains. Moreover, business or residential expansion can create costs which then need to be borne by the municipality – if these costs are not viewed as adequately covered by taxes and subventions, then there is a clear disincentive for the city to pursue such developments. Boroughs receive a per capita transfer and a small amount based on where businesses register. Prague’s non-tax revenue, which includes revenue from own activities and revenue from leased property, forms approximately 6% of the city’s revenue while its capital revenue forms less than 1%. In terms of transfers received, the largest share is from non-investment transfers from the state budget (17.5% out of total revenue). Prague also receives EU funding; for example, funds for integrated territorial investments in order to pursue metropolitan co-ordination and also from the operational programme “growth pole” in order to support the creation of favourable business environment and support for education and science. Overall, the taxes and fees for which Prague has local discretion are low, such as the property tax and other taxes.

It is also important to consider the budgetary pressures that Prague faces. The city’s two greatest expenditures are for transport and education. Transport forms roughly 37% of the city’s budget while education expenditures are roughly 26% (in 2015). In terms of

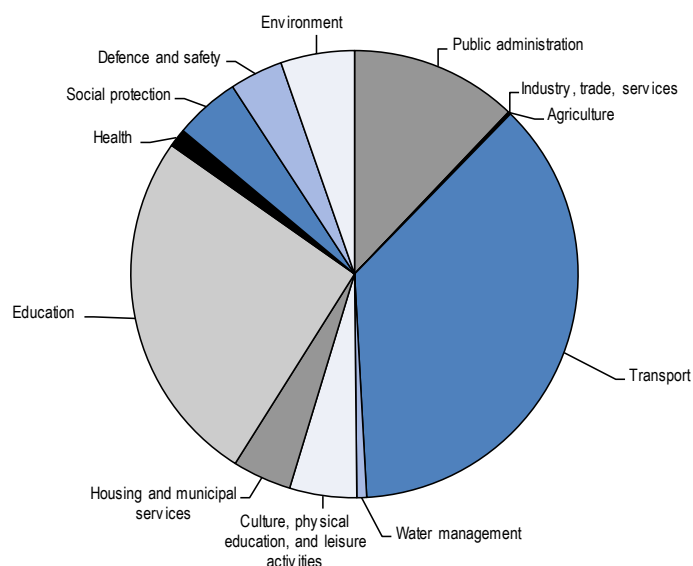
budgetary pressures, the rate of capital expenses is slightly decreasing, but operational expenses are rising, particularly for public transportation. In the last decades there have been some important investment transfers for transportation infrastructure (e.g. roads, metro line extensions). However, the city's main budgetary pressures continue to stem from the operational expenses associated with transportation. Fares covered 25% of operational expenses for public transportation in Prague in 2015.

Figure 3.7. Prague, revenue by type, 2015



Source: CZO (2015), "Local government budgets", <https://www.czso.cz/csu/czso/6-local-government-budgets-abnu6j6plz>.

Figure 3.8. Prague, expenditure by type, 2015



Source: CZO (2015), "Local government budgets", <https://www.czso.cz/csu/czso/6-local-government-budgets-abnu6j6plz>.

Property taxes could be better linked to spatial planning objectives

As has been mentioned, property taxes in Prague are not a major contributor to its budget. In general, property taxes in the Czech Republic are unusually low (OECD, 2010). However, they could be an important source of revenue and they could be better linked to spatial planning objectives – chief among these the desire for more compact city development. At the national level, property taxes are calculated based on property function. Each municipality can then select a local coefficient (one for the whole administrative area) from a possible range to adjust the level of property tax payment. In Prague, the basic coefficient is 5; the local coefficient is 1 and the business coefficient is 1.5 (for 2017). This mechanism would be more effective if the local coefficient could be differentiated across the territory – particularly in the case of Prague which covers a large territory. The property tax is collected by the Financial Office of the State, but sent directly to the city. There are some exceptions for the size of coefficients, but generally it is not possible to incentivise one part of the city in comparison to the other one.

Further, the property tax does not capture market value; it is spatially neutral and does not capture, for instance, increases in the value of properties due to public investments in infrastructure. The property tax in the Czech Republic consists of a building tax and land tax that are calculated based on the type of land or building and its area; they are not based on market valuation. Land taxes are collected on all types of land and vary by type (e.g. orchard, arable soil, building plot). There are a number of exceptions for taxes on land, including state- or church-owned land. Also, property taxes are exempted on buildings that serve to improve the environment. The Czech Republic further allows all expenses for maintaining historical buildings to be deducted from the property tax and 15-year property tax exemptions are given for resituated houses – as long as the homes are used for residential purposes and the taxes are used for home improvements. This creates an incentive to refurbish historical buildings, which is in line with Prague's spatial development objectives.

At present, the property tax has limited effectiveness within the broader context of spatial planning objectives, such as increasing density (see Box 3.5 for examples). A shift to an *ad valorem* tax on property is warranted – i.e. a tax that takes the actual market value of the property into account. The OECD has long recommended such a shift for the Czech Republic while at the same time recognising that this can be politically difficult to introduce and also that it requires changes to revenue-sharing arrangements among levels of government (OECD, 2010: 110). Effective tax rates should be raised to increase the share of revenues that municipalities directly control and their calculation should be based on property value rather than property size, with these values updated regularly, as in most OECD countries (OECD, 2016). This should be combined with land-use planning instruments at the municipal and regional levels to avoid unintended consequences such as urban sprawl (Blöchliger and Netty, 2015). Changes to the property tax need to carefully consider the tax base, the rate at which property would be taxed, how property would be assessed and how the tax would be collected. It could, for instance, be accompanied by measures to ensure that low-income households can afford the tax without having to liquidate their property.

A broader array of fiscal tools and instruments to meet spatial objectives are needed

Beyond property taxes, there are a wide variety of other fiscal instruments that the city of Prague could draw on to more effectively to meet its spatial objectives. For example, at present parking rates in the city are very low. In many cities, such as

Amsterdam, parking rates are used to manage congestion, with rates set highest in the historical core and less far out, with discounted rates provided for residents.¹⁰ At present, Prague is incentivising commuting by car by having low parking rates at the same time as its spatial development strategy seeks to lessen traffic congestion and ex-urban commuting. There is national legislation that presently places limits on the amount that can be raised on parking fees or new tolls. This is an important tool for spatial and traffic management and its usage should be reconsidered.

Box 3.5. Designing property taxes for sustainable land use

Properly structured, the property tax can be an effective tool for sustainable land use

While the literature finds mixed spatial outcomes of property taxes, they can clearly facilitate sustainable land-use policies if they are well-structured (Blöchliger and Netty, 2015). For example, a pure land-value tax that does not take the value of buildings into account can help contain urban sprawl and foster the densification of developed land instead of greenfield development. Land values are independent from what the land is used for. For example, the land of an empty brownfield site in a city centre has approximately the same value as the land under an adjacent skyscraper because the value of the skyscraper is not considered in the land-value calculation. Under a land-value tax, both plots would be subject to the same taxes. It would be very expensive for the owner of the brownfield site to pay taxes on it without earning revenues from it. Thus, a land-value tax provides strong incentives to develop urban brownfield sites. In contrast, under a general property tax that considers the value of the building and the land together, the owner of the brownfield site would have to pay much lower taxes than the owner of the plot with the skyscraper and consequently, would have fewer incentives to develop the land.

Alternately, specifically designed “green” property taxes (soil-sealing taxes, development charges, etc.) can increase the costs of specific aspects of land use that are particularly undesirable from a societal point of view. They create a mechanism through which developers compensate the public for the costs that they impose on the public by developing land in particular ways. Since such a tax also makes it more costly for landowners to pursue specific forms of development, such development will occur less frequently. Expressed differently, green property taxes force landowners to (partly) internalise the externalities of developments.

Blöchliger and Netty (2015) offer an assessment of key policy issues that should be addressed in order to ensure that the property tax is used as an effective tool for sustainable land-use management:

- Property taxes have to be viewed in the context of other policy instruments to influence land use. This can include, for example, land-use planning and transport policy that can also help internalise externalities related to urban sprawl. Other policy instruments will often have a much stronger impact on land use than the property tax, which is typically low. Moreover, while property taxes can have an overall impact on land-use patterns, they are too rough an instrument to ensure the protection of specific land plots or to foster specific land-use patterns, e.g. protecting certain natural amenities from development altogether. The property tax can, however, underpin land-use policies such as urban spatial planning or transport policy.
- The impact of property taxation on land use depends on design. A pure land tax increases the cost of hoarding land and provides incentives to put land to its most valuable use. Development becomes more attractive, particularly in areas where land values are high, such as around existing infrastructure. As such, a pure land tax fosters denser cities. As already mentioned, the effect of the traditional property tax (or two-tier tax) which covers both land and improvements is less clear-cut. On the one hand, if the tax is shifted to consumers, house prices increase, increasing the demand for smaller housing units and thereby population density. On the other hand, the property tax can promote urban sprawl as it reduces the capital-land ratio and thereby the number of housing units per unit of land area and density.

Box 3.5. Designing property taxes for sustainable land use (*continued*)

- Where land values are low, a tax on land area sets a stronger incentive to make efficient use of land than a tax on land value. A proposal being discussed in Germany is a land-use tax, which would differentiate land tax rates depending on how land is used and the associated environmental costs. Taxes on new developments to internalise negative environmental externalities – such as development or soil-sealing taxes – are also being discussed. A tax on the welfare loss associated with the loss of open space due to development has been discussed in the Netherlands and the United States, although estimating the social value of open space is difficult.
- Property transaction taxes are bad for sustainable land use. They increase incentives to buy cheap land, which is generally farther away from city centres and transport infrastructure, and they discourage transactions that might help put land to a more efficient use. They also encourage the purchase of undeveloped land for new development at the expense of upgrading developed areas.
- Property taxes can create perverse incentives for local governments. Local governments might eye land development or rezoning for purely fiscal reasons. They might even be tempted to increase revenues from environmental land taxes such as a soil-sealing or greenfield tax, thereby undermining the original purpose of such taxes. Governments should tackle such perverse incentives through adequate land-use planning instruments: local government should address local land-use externalities; and upper-level government should address externalities with a wider geographical reach.
- Property taxes can be redesigned to foster green investment. For example, local governments in the United States count numerous property tax incentives for raising energy efficiency and renewable energy use. The Czech Republic, Italy, Norway and Spain are further examples of countries that provide property tax relief for renewable energy installations. The efficiency and effectiveness of these property tax rebates would have to be weighed against their costs in terms of a narrower property tax base and less tax revenue. Studies assessing the efficiency of property tax relief to promote investments in energy efficiency and renewable energy are not available. It is difficult to assess whether property taxes in this context are more or less effective than other instruments to promote the same objectives.

Where differential property tax rates exist, they have an effect on land use. For example, US states that have a lower effective property tax rate on single-family homes compared to apartment buildings have experienced less pronounced declines in land consumption than states which tax single-family homes more strongly relative to apartment buildings. Most US states tax single-family homes at lower effective tax rates. If effective tax rates were adjusted to be identical for both types dwellings, important incentives for more compact development would be provided.

Adapted from: OECD (2017), *The Governance of Land Use in OECD Countries: Policy Analysis and Recommendations*, <http://dx.doi.org/10.1787/9789264268609-en>.

Sources: Brueckner, J. K. and H. Kim (2003), “Urban sprawl and the property tax”, <http://dx.doi.org/10.1023/A:1022260512147>; Ihlanfeldt, K.R. (1984), “Property taxation and the demand for housing: An econometric analysis”, [https://doi.org/10.1016/0094-1190\(84\)90042-1](https://doi.org/10.1016/0094-1190(84)90042-1); Song, Y. and Y. Zenou (2006), “Property tax and urban sprawl: Theory and implications for US cities”, <https://doi.org/10.1016/j.jue.2006.05.001>; Banzhaf, S.H. and N. Lavery (2010), “Can the land tax help curb urban sprawl? Evidence from growth patterns in Pennsylvania”, <https://doi.org/10.1016/j.jue.2009.08.005>; Blöchliger, H. and M. Nettle (2015), “Sub-central tax autonomy: 2011 update”, <http://dx.doi.org/10.1787/5js4t79sbshd-en>.

Further, the city does not currently employ any fiscal instruments to encourage density despite this being a critical spatial objective. The city could use, for example, transfer of development rights (TDR), which preserve open space and limit density in underserved/peripheral areas; increase density in well-served ones (i.e. limit sprawl and preserve open space) (Box 3.6). These are a type of market-based incentive programme that is typically combined with density bonusing. Another critical tool for the city could be brownfield redevelopment incentives. The redevelopment of brownfields over that of greenfield sites in the city is a major part of its spatial strategy and land-use plan. Brownfield redevelopment incentives could help the city meet its goal in this regard more quickly by offering subsidies or grants as an inducement to develop and can be attached to other criteria – e.g. making high-quality public spaces part of the project (Box 3.6). Another potential application is to introduce a differentiated hotel tax with higher rates in the urban core, which could encourage visitors to stay in areas outside of the city centre, thus lessening the environmental impacts in this high-use zone. Presently, Prague’s tourist tax is quite low, at CZK 15 per person per night (Prague, 2017).

Box 3.6. Fiscal instruments to manage development

A wide range of policy instruments can be applied to control, regulate and stimulate desired development outcomes in OECD countries. Many fiscal instruments operate as taxes and exactions levied on developers to raise revenues and mitigate the negative impacts of development. Others are structured as incentives in the form of subsidies, tax credits, development rights and direct state action to encourage economic agents to take actions aimed at improving the conditions of the built environment and protecting the natural environment (Silva and Acheampong, 2015). A key point here is that, in many cases, the statutory instruments of planning alone are unlikely to produce the desired outcomes. Fiscal instruments can provide a critical inducement to meet spatial planning objectives.

Transfer of development rights (TDR) emerged in the 1960s as a tool for historic preservation – but their use has since proliferated, particularly in the United States, to address a wide range of planning goals, including the promotion of affordable housing and the protection of environmental resources (Linkous, 2016). TDRs are a market-based incentive programme that are generally structured so that landowners forfeit development rights in areas targeted for preservation and then sell those development rights to buyers who want to increase the density of development in areas designated as growth areas by local authorities (Nelson, Pruetz and Woodruff, 2012). As such, they are a useful tool that can be used to steer development away from undesirable areas, such as areas that are poorly linked to infrastructure, transport and that lack services, and towards areas where these features exist. Similarly, they can be used to preserve natural open spaces, maintain historical and cultural assets, farmland, and other local assets (Nelson, Pruetz and Woodruff, 2012).

Simply put, TDRs transfer development potential, such as the density, from an area that is to be preserved to an area where there will be clustered development. If this is done as a one-to-one transfer, the average density of an urban area will not change, but it will be redistributed such that some areas can be maintained as open natural space for example. In receiving areas – to which the density rights are being transferred – developers are generally permitted to exceed the baseline level of development determined by the zoning code, which would generally require community buy-in (Nelson, Pruetz and Woodruff, 2012). Therefore, TDR is often combined with density bonuses in order to create the incentives for developers to buy the development rights in the first place. As far back as 1916, New York City’s zoning code made provision of the transfer of development rights between properties. While increasingly prevalent in the United States, TDR programmes also exist in other OECD countries such as France, Italy, New Zealand and Turkey (Silva and Acheampong, 2015). Silva and Acheampong (2015) note that legal issues and administrative complexity represent some of the key challenges confronting its application in other countries.

Box 3.6. Fiscal instruments to manage development (*continued*)

Brownfield redevelopment incentives

Brownfield redevelopment incentives create an important inducement for private developers to take on projects in areas that can be more expensive to develop because of the presence of existing structures, the need for soil remediation, higher land costs and complex ownership rights. A study by Alberini et al. (2005) explored the impact of economic incentives for brownfield redevelopments versus liability relief or regulatory relief (such as fast-track planning approval processes). Their study, which was based on a survey of real estate developers in Europe, found that economic incentives, such as subsidies or tax rebates, can provide an important inducement to develop brownfield sites, particularly for experienced developers in the case of contaminated sites. Echoing this, in a review of brownfield policies in select European states, Thornton et al. (2007) find fiscal incentives, entailing either direct (e.g. tax incentives) or indirect forms of funding (e.g. structural policy, public credit programmes or pilot projects) are important inducements for brownfield redevelopment – particularly in the cases of the most complex and contaminated types of sites.

Such financial incentives can be set at national, regional or local levels. For example, in the United States, a federal brownfields tax incentive was introduced in 1997 which entailed fully tax deductible environmental clean-up costs, including petroleum cleanup. This programme was sunset in 2011. Meanwhile, examples from cities abound – for instance, New York City offers grants to property owners and developers to clean up and redevelop brownfields. Critically, these incentives do not extract value from urban development, but rather, provide a subsidy to developers undertaking desirable behaviours that will presumably benefit the community as a whole by revitalising unused spaces. It bears noting that property and landowners in the immediate vicinity of such revitalised sites stand to financially benefit through higher property prices due to the presumed effects of neighbourhood revitalisation, which can be significant (De Sousa et al., 2009). If brownfield redevelopment has strong positive effects on property prices in the neighbourhood, it is possible to finance redevelopment incentives through value-capture instruments, such as betterment levies.

Sources: Silva, E.A. and R.A. Acheampong (2015), “Developing an inventory and typology of land-use planning systems and policy instruments in OECD countries”, <http://dx.doi.org/10.1787/5jrp6wgxp09s-en>; Alberini, A. et al. (2005), “The role of liability, regulation and economic incentives in brownfield remediation and redevelopment: Evidence from surveys of developers”, <https://doi.org/10.1016/j.regsciurbeco.2004.05.004>; Linkous, E.R. (2016), “Transfer of development rights in theory and practice: The restructuring of TDR to incentivize development”, <https://doi.org/10.1016/j.landusepol.2015.10.031>; Nelson, A.C., R. Pruetz and D. Woodruff (2013), *The TDR Handbook: Designing and Implementing Transfer of Development Rights Programs*; Thornton, G. et al. (2007), “The challenge of sustainability: Incentives for brownfield regeneration in Europe”, <https://doi.org/10.1016/j.envsci.2006.08.008>.

Land value-capture tools have great potential and are not being used in Prague

One of the most important consequences of the fact that Prague is not making the most of its property taxes is that it is not adequately capturing the changes in land use that are occurring as a result of public investments in, for example, green spaces, amenities and new transportation linkages. Rather than allowing private individuals and businesses to retain the market value benefit from increased property values attributable to public spending and investment, the city should take steps to “capture” a portion of the increases in value. It can do this by raising revenues from a value-based property tax, and/or by various “value-capture” mechanisms linked to specific public infrastructure projects (Table 3.3).

Table 3.3. Land value-capture tools

Category	Tool	Incidence	Description	Examples
Tax-based	Land tax (pure land-value or split-rate property tax)	Existing land use, multiple projects, compulsory	Tax on land value or a higher tax for land than for buildings. Considered less distortionary, more progressive and efficient than the composed property tax (land + building) and the tax on commercial activities or labour.	Pure land tax in Australia, Denmark, Estonia
	Betterment contribution (levy or charge)	Existing land use, multiple projects, compulsory	One-time tax, levy or charge imposed on landowners adjacent to public infrastructure investment that would have contributed to land valorization. "Beneficiaries pay" rationale. Yet clear link between investment and land valorisation beneficiaries is difficult to assess in practice.	Split-rate in Belgium and France
	Developer contribution (impact fee or developer exaction)	New land use, single-project, negotiated or standardised	Developers must collaborate with supplying off-site infrastructure and service needs steered by their project. If in money, it is a standardised impact fee or development charge. If in-kind and negotiated, it is a developer exaction. For external infrastructure like schools, hospitals, highways.	Betterment charge in Brazil and Colombia Special assessment districts in the United States
Development-based	Development rights sale (air rights, building rights)	New land use, multiple projects, compulsory	Additional building potential is sold to developer by municipal authority, at auctions or direct negotiation. Allows for higher density in special operations. Alternatively, it may be simply transferred to compensate for previous restriction of building capacity due to historical or environmental protection.	Korean land development charge, US cities (transfer of development fees in San Francisco), London and Paris, India (impact fee in Hyderabad Growth Corridor)
	Joint development (public-private partnership, urban redevelopment scheme)	New land use, single-project, negotiated	Public and private sectors co-operate in a project, typically large infrastructures. It can be a joint venture or a concession. Reliance on collaboration of private sector, risk sharing. Must co-ordinate with land development and resale or lease.	São Paulo (Certificate of Additional Construction Potential, sale of air rights; transfer of building rights in New York City, for historical properties, but also sale of air rights (Atlantic and Hudson Yard projects))
	Strategic land asset management	New land use, single-project, voluntary	Local authorities acquire land, develop it and then resell it, or sell land to raise funds for a specific project, or stay in control of land property and lease it. Whatever is more strategic but also coherent in the long run.	TOD in Tokyo; London; Chinese Taipei; Hong Kong, China; and Washington, DC Grand Paris Express Urban operations in Brazil
	Land readjustment or land pooling schemes	New land use, multiple projects, negotiated	Landowners pool their land to be developed, financing such investments with future sale of portion of serviced land.	India, People's Republic of China, Netherlands, Battery Park in New York, Tokyo Public land leasing in Ethiopia and Poland Botswana, France, Germany, Korea, Chinese Taipei, Tokyo

Source: Figueiredo, L. and A. Schumann (forthcoming), "Theory and practice of land-value capture tools in funding urban development".

For example, Prague could adopt betterment levies (sometimes called special assessments), charged to capture the increase in property values due to a public action, such as the rezoning of land or the provision of infrastructure. In contrast to impact fees, which are generally related to the provision of infrastructure that services a particular property, betterment levies are more broadly defined and can also capture the windfall gain that occurs from the rezoning of a plot or the provision of a public service to an area (Silva and Acheampong, 2015). Further, they can be charged over larger areas to capture the increase in property values in an entire neighbourhood that benefits from a new public transport connection. Whereas impact fees are charged at the time development occurs, betterment levies can be charged at any point in time at which a public action causes an increase in property values.¹¹

Capturing a portion of the increase in value could help the city more quickly meet its spatial development objectives; it could also help the city pay for expenditures such as the growing operational costs associated with the public transportation system. Land value-capture instruments are used in a number of countries including Denmark, Estonia, parts of Australia, New Zealand and the United States, and many more cities are presently exploring their potential, including London.¹² Presently, Prague does not have any regular tools for land value-capture and no municipal policy to govern its use.

Negotiating with developers for public investment

Negotiations between developers and city officials are a critical part of the development process and practices differ considerably across the OECD in terms of how these are conducted, the types of contributions that can be asked for from developers and the regularity of interactions.¹³ For example, municipalities may charge development impact fees to be paid by landowners for the construction of infrastructure which directly services their plots. Such fees are often charged when land is initially developed, but may also be due when infrastructure is upgraded or significantly rehabilitated. Development impact fees may focus narrowly on the costs of infrastructure provision in the immediate vicinity of developments, but can also include costs for infrastructure at greater distances of a development. This is a relatively common instrument that exists in 17 OECD member countries (Silva and Acheampong, 2015).

Development impact fees ensure that developers bear at least a portion of the cost of new construction. As development becomes more expensive, urban expansion slows down. Burge and Ihlanfeldt (2006) show that impact fees spur the development of smaller homes in inner suburban areas and of medium and large homes throughout all suburban areas. The authors attribute the increased construction in inner suburban areas to new multifamily houses being built. This is supported by another study that finds evidence that impact fees reduce the spatial extent of US urbanised areas (Geshkov and De Salvo, 2012). Development impact fees could therefore be an important part of Prague's efforts to reduce suburban sprawl if they were large enough to incentivise such behaviour.

According to Czech building law, a development contract can be created between the municipality and developer to co-finance transport and technical infrastructure. However, this is not a common practice among Czech municipalities; it is a legally complicated process that is rarely used in Prague. In part this is because it is a relatively new function; until 2012, it was not possible to contribute to infrastructure for developers and there is no set tariff. Prague and its boroughs should develop a clear framework to support developer contributions for infrastructure. There should be a transparent framework for such negotiations that is uniformly applied; this would improve negotiations and the trust

between the investor and the public bodies. In the case of large-scale projects, developer contributions should be negotiated upfront and the resulting agreements should be subject to public input and scrutiny. Beyond this, the limitation of developer contributions to technical and transport infrastructure only should be reconsidered. It could, for instance, be expanded to include contributions to public spaces, schools and amenities, which are critical investments to support dynamic neighbourhoods. Boroughs have a right to discuss with investors whether they are prepared to participate in changes in the public space prior to the building permit process and recent experience has shown that such negotiations can be positive for all, with developers benefiting from self-promotion and improved neighbourhood relations. However, there is no legal instrument that supports this type of negotiation and city districts cannot sign planning agreements.

Negotiations between developers and the city and its boroughs differ considerably at present. Some boroughs have more capacity to act effectively in these negotiations either because they are larger and/or because they have more experience with such agreements. The city should work with its boroughs to make the most of these negotiations and develop clear frameworks for these interactions so that the process is predictable and clear to all parties. IPR Prague is presently creating a map of public infrastructure which will define the costs incurred by the city for different types of new construction – e.g. greenfield or brownfield. This will greatly assist in the negotiations process with developers and will help to create a transparent and binding basis for negotiations with investors on public investments.

Key issues and directions for reform

This is an important time for spatial and land-use planning in Prague. The city's updated strategic plan sets a course of action which will be complemented and reinforced by the new Metropolitan Plan and the updated set of building regulations. After years of outdated strategic and regulatory documents that had limited public and political support behind them, efforts have been made to develop more inclusionary processes that offer a strong assessment of the major issues facing the city and directions for reform.

In the coming years the focus will turn towards implementation. Will Prague be able to meet its spatial development goals? Will it be able to, for instance, transform existing brownfield sites into new residential and commercial areas that are well linked to transportation networks and services; will the city be able to improve the quality of its public spaces and parks; will the desire for dynamic and mixed-use neighbourhoods come to fruition; can the expansion into greenfields, which has characterised so much of the city's development over the past two decades, be halted in favour of more sustainable forms of development? The tools and instruments that the city has at its disposal to shape these changes will greatly affect its ability to meet these ambitions. This section comments on the key spatial issues facing the city and proposes some directions for reform

Taking an integrated approach to spatial planning

Integrated spatial planning has become a new orthodoxy. This is driven by the recognition that spatial and land-use planning is intimately connected to much broader agendas, such as the transition to a low-carbon economy, reducing social-spatial inequality, and creating opportunities for economic growth and prosperity. It is thus linked to policy ambitions at multiple scales and sectors (e.g. transportation, environment, social policy), and as such, necessarily involves a larger array of actors in structures of governance. This

has fundamentally challenged planning systems to adapt, both in terms of the formal institutional rules, but also informal roles and ways of working (Stead and Meijers, 2009).

The shift towards integrated spatial planning raises a number of key governance challenges, such as:

- the need for mechanisms and governance structures which require land-use decisions at all levels to be taken with regard to the full range of services and values of land in different possible uses, given both individual preferences and strategic policy objectives
- the need for better data and intelligence, information flows and agreed methodologies to inform these decisions
- the need to ensure that decisions taken in different sectors are consistent in reflecting this overall approach
- the need to ensure appropriate incentives for land-use change and duties on landowners which encourage desired behaviours consistent with this approach and minimise tensions occurring within the system
- the need to change policy to better link land-use and management policy to climate change mitigation and adaptation efforts
- the need to ensure that governance of land reflects future needs as well as the present ones
- the need to embed a better understanding of the value and function of biodiversity and ecosystem services in the formulation and adoption of local and strategic land-use policies
- the need to reflect spatial considerations and geography most effectively in land-use policy
- the need to truly understand place identity and place uniqueness. (OECD, 2017b: 70).

Integrated spatial planning requires that there is agreement about the objectives of the land and the services required – economic, environmental and social and that individual and institutional preferences are aligned with these objectives.

In Prague, the city's strategic plan is the critical framework document that forwards an integrated approach to spatial and land-use policy. It sets the city's strategic objectives across a number of policy areas. However, the strategy's effectiveness is undermined by the fact that borough-level strategic plans are not obliged to conform to its objectives. Moreover, other municipal strategies and frameworks, programmes or sectoral concepts prepared by the city administration are also not obliged to conform to the strategic plan. This fundamentally undermines the co-ordinative purpose of such a strategy and its ability to be implemented. The persistence of sectoral divisions undermines the city's ability to solve complex challenges.

The city's strategic plan should be the guiding document for investment for both the city and its boroughs. It is both a political document, signalling investments for the future, and also a public document that was elaborated through a process of public dialogue and engagement. The implementation of the strategic plan should be monitored and reported on regularly in a way that holds both government actors and elected officials to account. This will in turn serve to build trust with residents, which is a priority for the city, particularly when it comes to spatial planning.

Reducing regulatory burden and enhancing the responsiveness of the planning system

Prague's land-use plans and the strategic plan above it set a direction for change. However, it comes down to individuals to realise these plans through the developments that they undertake. In some cases, the public sector might be a partner, but mostly it will fall to private sector actions. Given this, it is critical that the planning system is responsive and efficient. There are indications that presently this is not the case (Deloitte, 2016).

For developers, consistency and predictability are very important. It would seem that now, with new building code regulations and soon-to-be-adopted Metropolitan Plan, the regulatory environment will stabilise. This bodes well for the investment environment. However, the building approvals process remains cumbersome. The city should work to lessen the regulatory burden on developers by, for example, establishing a one-stop process for building permits so that it is not on the onus of the developer to obtain multiple approvals from individual departments. At present, the process is long, complex and administratively complicated (Deloitte, 2016). As a consequence, developers may choose to take their projects outside of Prague's administrative borders. Regulatory burdens may thus undermine the city's objective to be an attractive area for investment and to promote more compact development.

The city also has an ambition to increase the responsiveness of the planning system and to develop brownfield sites; these are mutually reinforcing objectives. For example, in Amsterdam, regulatory permission for flexible and temporary land uses have been instruments in the redevelopment of old industrial sites (Box 3.7). Further, they have been combined with soil remediation efforts. At present, Prague's land-use plan does not permit temporary uses. This is a regulatory element that bears reconsideration.

Improving the relationship between residents, developers and local government

Trust is a critical component of the spatial planning system in any country. In countries where there is a high degree of trust between actors, there can be much more informality in the planning system. For example, in the Netherlands, where plans are self-binding at each level of government, there is a culture of co-operation, and a commitment to core planning values. In the Czech Republic, trust is low – e.g. trust in others lies below the OECD European average at 5.3 versus 5.8 out of 10 (OECD, 2015: 2). Planners in Prague have had to work to overcome the distrust bred by planning under the socialist era (Lipsky, 1995) as well as the legacies of the early 1990s, where lax or non-existent conflict of interest legalisation together with weak regulatory environment led to graft and other forms of corruption in the nascent property market (Horak, 2007: 106-107).

Enhance public engagement through monitoring and reporting on strategic goals

Improving the relationship between residents, developers, and the city and boroughs is a high priority; it is mentioned in both the city's strategic and metropolitan plans. IPR Prague has worked to enhance the public engagement function in the elaboration of planning documents, which is laudable. This critical work should continue and should be expanded to include reporting on the progress on spatial strategies and monitoring neighbourhood change. Key indicators should be developed and communicated to the public annually; these could include subjective indicators that ask residents about how they experience their environment.

Box 3.7. Transforming brownfields: Temporary uses and a phased approach in Amsterdam

Buiksloterham is a former Shell research and development plot and industrial area located to the north of central Amsterdam. It, together with a former NDSM shipyard, forms a brownfield area with an attractive location and a great deal of development potential. However, expensive site remediation together with soil contamination issues and wetlands has made it a challenging site to redevelop. The city has taken on an innovative approach to land development in this area which is characteristic of its changing approach to active land policy. Redevelopment has cautiously proceeded in a phased approach that has encouraged temporary and experimental uses in order to work within site limitations, and to build a sense of community in the old industrial location – in other words, “place-making”. The area has been slowly transformed through creative industries and festivals; former squatters and artists have established cultural spaces; and creative businesses like MTV’s European headquarters have been drawn to the area (Jansen, 2015: 117). As one example, a site with soil contamination was made open to bidders by the city of Amsterdam for temporary use (ten years). The criteria for site development included a need to build structures without foundations (due to soil issues) and to implement site remediation. The innovative De Ceuveld project met these criteria by establishing a cafe, ateliers and small business offices out of past-use houseboats.

The city did not develop a detailed urban plan for the area, instead opting for a more organic transformation of the space. It established “rules of development” that included requirements regarding the mixed use, height, density and building lines but that also gave a great deal of latitude in terms of construction. Once dominated by industrial activities, Buiksloterham is now home to a variety of small businesses and creative industries. It is a mixed commercial residential area. The area welcomed its first residents in 2014 and approximately 3 000 homes will be developed over the coming decade. The city wishes to retain elements of the area’s heritage as a light industrial zone, and will be encouraging these functions. The city has also actively encouraged self-built homes – and through developments like Buiksloterham is finding “do it yourself” to be an increasingly viable part of the city’s housing market.

The area’s development has, however, not been without its challenges. The desire for mixed-use functions can pose problems where uses are incompatible and can lead to conflict due to noise, pollution or high traffic demands. Further, the development plan for the area was established in 2011 in the wake of the economic crisis. Consequently, large developers withdrew their interest in the site and some new guidelines were established to react to the changing conditions – namely, office space was removed and do-it-yourself builders were encouraged.

Sources: Gemeente Amsterdam (2016), “About Buiksloterham”, <https://www.amsterdam.nl/projecten/buiksloterham/about-buiksloterham>; Jansen, J. (2015), “Amsterdam waterfront development: A social-geographical overview”; Dembski, S. (2013), *Case Study Amsterdam Buiksloterham, The Netherlands: The Challenge of Planning Organic Transformation*, <http://hdl.handle.net/11245/1.391932> (accessed 23 June 2016).

Establish clear guidelines for the negotiations between developers and planning authorities

Establishing clearer guidelines for the negotiations between developers, boroughs and planning authorities will further improve relations. There is little regularity in these interactions at present. Such guidelines could help ensure that high-quality projects are undertaken that benefit the public; at the same time, developers would benefit from clear processes and expectations, and greater public trust.

Enhance the public engagement function and review appeals regulations

Objections and appeals for building approvals and other plans and documents within the Czech planning system are common. Such appeals are relatively easy and low cost to submit. The system has evolved in a confrontational and litigious manner. A number of actions need to be put into place in order to improve relations and reduce the recourse to the formal appeals process. Dialogue on projects should be opened at the conceptual stage of the planning approvals process, particularly on large projects. NGOs should be involved in a regularised way and efforts should be made to provide information in a clear and transparent manner in order to facilitate public input. In the case of larger projects, it may be useful to support an intermediary NGO between the city and developer to work with residents. This is a practice that has been adopted, for example, in Amsterdam, to positive effect (OECD, 2017a: 73).

The rules around public appeals and engagement should be revisited, including their time frame. For example, there should be limits on nuisance appellants, which is a common practice in many OECD countries. Beyond appeals for building/planning permission, at present there is a time frame of three years during which individuals can appeal at court against approved and accepted plans – at all levels, for any reason. This can create a litigation chill with planning authorities becoming risk adverse and potentially adopting less effective (and innovative) solutions as a result.

Using a broader array of tools – especially fiscal tools – to effect change

Prague should explore a broader range of tools to use for land-use governance. For instance, some existing tools are underused (e.g. planning agreements which define terms of co-operation between the government and investors). Planning is largely a regulatory instrument that restricts future choices. It can effectively block or constrain the actions of individual households and firms. But it does not alter preferences, which ultimately shape behaviour. In addition to planning policies and regulations, there is the possibility to use market forces directly by offering incentives that can alter preferences and by using taxes or subsidies to alter the costs that individual firms and households incur with different decisions. For example, user fees are a market solution that could be explored as a way to address free-riding on public services. If these fees are differentiated for residents and non-residents of Prague, they also provide a cost differential signal to locational choices. There is also the potential to use financial instruments in the form of taxes or subsidies to alter the costs of certain actions. In this respect Prague is significantly constrained by national laws, but it may be able to find specific charges or subsidies it can adopt. Finally, Prague is in a period of growth and investment and the value of land is increasing as a result of public actions. Rather than have the total value of these increases captured by individuals, a portion of the value could be captured by the city to in turn reinvest in neighbourhoods and improve public services and amenities and infrastructure.

Enhancing the monitoring and evaluation of spatial trends

Across the OECD, too little is known about how land is used and how it is regulated. A lack of monitoring and evaluation makes it difficult to identify which policies work well at the local level and which do not. Better monitoring and evaluation is especially important if land-use policies focus more strongly on providing incentives and less strongly on setting restrictions (OECD, 2017a). In Prague, improved monitoring and evaluation is critical on a number of fronts. It will help assess the impacts of the new Metropolitan Plan, once it has been adopted, and determine whether the city is on track to

meet its spatial development goals. It will help monitor and respond to change and communicate this to citizens. It will further help the city monitor and respond to risks, such as growing social segregation, or to respond to demographic trends, such as a growing elder population.

In particular, the city has placed compact development at the forefront of its spatial strategy. Special attention should be paid to monitoring compact city indicators. The OECD's comparative work in this area (OECD, 2012) has demonstrated a range of approaches to achieve these objectives and has proposed indicators that can be used to mark their progress (Table 3.4). Finally, as will be discussed in Chapter 4, there is a critical need to improve the monitoring and evaluation of land-use changes in the suburban and peri-urban zones; this is a prerogative for multiple actors: municipalities, Prague, Central Bohemia and the national government.

Table 3.4. Core compact city indicators

	Category	Indicator	Description
Indicators related to compactness	Dense and proximate development patterns	Population and urban land growth	Annual growth rate of population and urban land within a metropolitan area
		Population density and urban land	Population over the surface of urban land within a metropolitan area
		Retrofitting existing urban land	Share of development that occurs on existing urban land rather than on greenfield land
		Intensive use of buildings	Vacancy rates of housing and offices
		Housing form	Share of multi-family houses in total housing units
		Trip distance	Average trip distance for commuting/all trips
		Urban land cover	Share of urban land in a metropolitan area
	Urban areas linked by public transport systems	Trips using public transport	Share of trips using public transport (for commuting/for all trips) in total trips
		Proximity to public transport	Share of population (and/or employment) within walking distance (e.g. 500 metres) of public transport stations in total population
Indicators related to the impact of compact city policies	Accessibility to local services and jobs	Matching jobs and homes	Balance between jobs and homes at the neighbourhood scale
		Matching public services and homes	Balance between local services and homes at the neighbourhood scale
		Proximity to local services	Share of population within walking distance (e.g. 500 metres) of local services
		Trips on foot and by bicycle	Share of trips on foot and by bicycle (for commuting/for all trips) in total trips
	Environmental	Public space and green areas	Share of population within walking distance (e.g. 500 metres) of green space accessible to the public
		Transport energy use	Transport energy consumption per capita
		Residential energy use	Residential energy consumption per capita
	Social	Affordability	Share of household expenditure on housing and transport in total housing expenditure
	Economic	Public services	Expenditure on maintaining urban infrastructure (roads, water facilities, etc.) per capita

Source: OECD (2012), *Compact City Policies: A Comparative Assessment*, <http://dx.doi.org/10.1787/9789264167865-en>.

Notes

1. There are several institutional factors that contributed to this. First, there was no conflict of interest legislation at the local level for some time in the 1990s and elected representatives did not face sanctions for not reporting for-profit activities. Secondly, the deals negotiated between the municipality and private developers at the time were done through a closed door process – a legacy of the communist era. As such, civic actors had no legal means to obtain information about the development permit process. As Horak notes, members of the local council had a direct opportunity to enrich themselves (Horak, 2007: 106-107).
2. The capital city of Prague has some special powers. On condition that the metropolitan authority of the capital city of Prague procures the plan for the territory of the capital city of Prague, the powers of the regional office are executed by the Ministry of Regional Development. If the authority of the municipal district procures the plan for the specified part of the capital city of Prague, the powers of the regional authority is executed by the metropolitan authority of the capital city of Prague.
3. Such documents include the recently completed Prague Building Regulations, the Prague Waterfront Concept and the *Prague Public Space Design Manual*.
4. The first volume offers an introduction to the strategy and its key priorities around the themes of prosperity, civic engagement, authenticity, social cohesion, ensuring a beautiful city. The following three volumes of the strategic plan outline the core element of its design around the themes of: a cohesive and healthy metropolis; a prosperous and creative metropolis; a well-run city. The final volume is an appendix of the changes and updates to the plan.
5. The Assembly of the Capital City of Prague (after the City Council prepares it formally to be approved) approves the plan. Implementation and monitoring of the plan is in the hand of delegated state power Planning Authority of the City Hall and building authorities of the 22 district boroughs. The plan goes through the following phases prior to approval: plan assessment, concept phase and proposal of the plan. Public review was part of each phase.
6. Detailed land use and permitted use (e.g. pure housing, mixed housing, mixed uses of the city, parks, sport areas, sport fields, city greenery, isolating greenery, natural areas). It specifies uses permitted, exceptionally permitted and permitted under special conditions. It regulates the volume in development areas (not in the stabilised areas) by the index of buildable volume for specific land use by specific areas delineated in the plan. This index is complemented by the index of greenery prescribing the surface of green areas in the territory (unbuildable part of the area). There is area where no high-rises are permitted. Infrastructure is delineated throughout the specific land-use areas.
7. The 2000 Land-Use Plan of the city of Prague included 34 maps in total. The new Metropolitan Plan makes use of a change to the legislation in 2007, which enabled a second level of zoning plan to be adopted.
8. The city of Prague stipulates general land-use requirements and technical requirements for buildings in the city of Prague in Act No. 183/2006, on land-use planning, and the building code (the Building Act), as amended, stipulates general land-use requirements and technical requirements for buildings in the city of Prague. The order applies only to the administrative territory of the city of Prague, amounting

to approx. 496 km², i.e. about 6% of the entire area of the Czech Republic. Prague Building Regulations have been recently notified by the European Union.

9. The phases are as follows: 1) initiation – through the building authority at the borough level, the request is expressed and sent to city hall; 2) assessment of the change – the approval process involves the borough, IPR Prague, the Board of Experts by the City Council, the Council, the Board for City Development by Assembly and the City Assembly. The City Assembly must agree; it can agree when none of previous bodies agreed; 3) providing the change – preparation of study or drawing the change for the plan change; 4) change proposal – the approval process involves the borough, IPR Prague, the Board of Experts by the City Council, the Council, the Board for City Development by Assembly and the City Assembly. The City Assembly must agree, it can agree when none of the previous bodies agreed. If the change is approved, it is processed at city hall – Spatial Planning Section, Spatial Development Department.
10. Amsterdam has made good use of its parking tax by establishing variable tariffs in different parts of the city – it has been a critical instrument to manage accessibility (Bertolini and le Clercq, 2003). For instance, the hourly parking rate in the centre of the city is EUR 6, while resident permit holders in that part of the city pay just EUR 0.10 an hour (Gemeente Amsterdam, 2015). Meanwhile, more suburban locales have much lower parking rates (e.g. Buikslotermeerplein at EUR 1.3 per hour). These tariffs encourage visitors to take transit or bike to the centre without penalising residents.
11. Despite the conceptual differences between impact fees and betterment levies, in practice they may not be clearly distinguishable. In Germany, impact fees can, for example, be charged to entire neighbourhoods that benefited from rehabilitation measures that are not necessarily related to particular plots. As such, these fees have characteristics that are in many respects similar to betterment levies (Silva and Acheampong, 2015).
12. See London Assembly (2016).
13. For example, in Toronto, ward councillors can negotiate cash and in-kind benefits from developers looking to build higher and with greater density than is allowed in the zoning (Moore, 2013).

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Chapter 4.

The need for a co-ordinated metropolitan spatial development strategy

This chapter examines the options available to Prague to engage nearby municipalities in co-ordinated spatial development. Because Prague cannot compel these local authorities to collaborate, and it is unlikely that the national government will provide this supervisory authority, Prague must find a way to negotiate agreements with multiple autonomous small counterparts. Prague's situation is not atypical amongst OECD countries and the experience of other cities in finding "win-win" solutions to this challenge suggests ways for Prague to proceed.

The preceding chapter demonstrated important changes to the spatial planning system in Prague. The new strategic plan creates a multi-sectoral strategy for the city's development while the new Metropolitan Plan emphasises a commitment to compact and sustainable urban development and elaborates an instrument that is less rigid than its predecessor to achieve these aims. These goals, along with desire to reduce traffic congestion are, however, only partly the purview of Prague. There is a lack of a metropolitan vision and strategy. The rapid and continued growth of hundreds of communities surrounding Prague necessarily impacts the city itself. It has led to a large number of commuters to the urban core daily along with the attendant traffic congestion and air pollution problems; it has placed pressure on Prague's services and infrastructure; and it has transformed former agricultural and green areas to new residential and commercial/industrial uses with services and infrastructure not always keeping up adequately to the pace of these new developments. How can Prague better co-ordinate with municipalities across its functional urban area to tackle pressing spatial development challenges?

Prague is not alone in facing these challenges. The mismatch between jurisdictional boundaries and functional areas is common across the OECD. Metropolitan-wide planning can be achieved by either formal and informal institutions or a mix thereof depending on how sectoral competencies are divided. The effectiveness of either institutional approach depends to a large extent on the types of issues that a territory faces, the relationships among the actors, the resources at their disposal and, in general, the capacity to implement a common agenda. The policies of upper-level governments, regional or national, have a major impact on the adoption of inter-municipal or metropolitan planning frameworks. In countries with consensus-oriented politics and high capacity at the local level like the Netherlands, soft co-ordination mechanisms are likely to work well. In other cases, more stringent co-ordination mechanisms at the metropolitan scale may be more effective and national and regional governments have a critical role to play in creating the financial incentives and/or regulations to pursue such mechanisms. Metropolitan-wide planning raises questions about the appropriate scale to tackle land-use issues; the democratic legitimacy of decisions that take place outside of formal governmental institutions; and the ability to secure stable forms of funding and achieve long-term goals. Experiences from other jurisdictions demonstrate some potential strategies for Prague to pursue.

This chapter discusses these issues by first describing the importance of metropolitan government, the way in which path dependency structures action, and the features of Prague's spatial boundaries that impact the potential for collaboration. Following this, strategies to manage inter-jurisdictional land-use conflicts are discussed along with the potential of rural-urban partnerships. The chapter ends with a discussion of implications for the Prague metropolitan area.

Metropolitan governance for integrated spatial planning

The more functionally integrated cities within an urban agglomeration are, the better the economic performance of the whole (Ahrend et al., 2014). Prague, as the largest city in the Czech Republic and one of the major metropolitan centres in Central Europe, plays an important economic and political role that extends well beyond its administrative borders. While economic growth in metropolitan Prague is strong, the city/region government is concerned that much of this growth takes place outside its borders and this challenges its efforts to reshape the urban fabric of Prague. Broader spatial planning authority that has jurisdiction over the hinterland of Prague would facilitate this task. However, the direct authority of the local administration of Prague is bound by the city border. Prague

is restricted in terms of its ability to shape the spatial development of the territory beyond its border.

While it has less direct influence over the spatial development of land in municipalities adjacent to its boundary than is the case for many metropolitan regions in the OECD, the situation of Prague is not unique. For example, Washington, DC in the United States and the city *Länder* of Berlin, Hamburg and Bremen in Germany are all highly spatially constrained with no ability to directly influence land use in adjacent territories. In addition, there are also cases where at least one border of a city is also the boundary of some other higher order subnational unit of government, such as a region, state or province. Examples are: New York City that extends across state boundaries into New Jersey, or Ottawa in Ontario, Canada but is connected to a part of the province of Quebec. In these cases, while the city administration may have influence over spatial development along part of its border, it cannot manage development along other parts of the border.

For any city administration, co-ordination of land use in adjacent territory is vital to future development because it determines transportation corridors, the location of major public facilities, and patterns of business location and residential development. Achieving co-ordination can be challenging when multiple administrative units are involved, especially when their visions for future development are not aligned (Wheeler, 2007). One way to resolve the challenge is to centralise the land-use planning process so that decisions are made in an integrated manner by a single body. More formal forms of metropolitan governance can be more effective at tackling such issues by setting clear targets and parameters for all municipal actors – for example, Metro Vancouver (Canada), a metropolitan political body that establishes plans for urban growth, among other functions (Box 4.1). It is important to note that Metro Vancouver does not have a directly elected governing board – rather, appointed representatives from its constituent municipalities form its governing board. However, this can raise questions about loss of local democracy and the ability of individuals to shape the environment in which they live.

Most importantly, in situations where the various municipalities that are part of a larger metropolitan region are in different higher order subnational jurisdictions (regions, provinces or states), the possibility for a formal integration is difficult. Even if all the municipalities involved agreed to form a new integrated government, the higher order governments that supervise them may not be willing to accept the arrangement. Further, it is not assured that even where an opportunity to formally merge governments is presented, that it will receive support. For example, a regional referendum in 1996 to merge the city *Länder* of Berlin with the surrounding *Länder* of Brandenburg as “Berlin-Brandenburg” failed to reach the necessary majority vote in Brandenburg, while a majority of Berliners voted in favor of the merger (Hauswirth, Herrschel and Newman, 2003).

Forms of metropolitan governance in the OECD – regional development, spatial planning and transport

The vast majority of large cities within the OECD do not rely on some form of supervisory authority to manage their relations with nearby jurisdictions – i.e. metropolitan governance bodies (Figure 4.1; Box 4.2). Instead, the main mechanism is some form of voluntary agreement that results in co-ordinated actions (OECD, 2015). These agreements can be complex to negotiate and may be limited, at least initially, to topics where all parties see an immediate benefit. This can restrict their scope. However, when long-term collaboration has been achieved, it is often possible to agree on items where one party benefits and another party loses, because the relationship is seen as an extended game

where what matters is that the net total benefit over time is positive for all parties, and not that all parties gain in every round of negotiation.

Box 4.1. Metro Vancouver's Regional Growth Strategy

The Vancouver region is located in south-western British Columbia, Canada, and covers an area of 2 832 km². The area is bounded by mountains, rivers, the Pacific Ocean and the US border. It is Canada's only non-amalgamated major metropolitan area. The population is around 2.4 million, approximately 50% of the population of British Columbia and about 13% of that of Canada. The region has experienced substantial growth over the past three decades, adding more than 1 million people in a generation, and it has the highest housing prices in Canada.

The region is administered by Metro Vancouver, a supra-municipal authority that was first created in 1967; it brings together 24 local authorities (22 municipalities, 1 "electoral area" and 1 aboriginal community called "Treaty First Nation"). Metro Vancouver is mainly in charge of utilities such as regional water and waste management, air quality management, regional parks, growth management, and affordable housing. It has a staff of approximately 1 500 and a budget of CAN 699.1 million in 2017. Metro Vancouver's annual budgets are driven primarily by the costs of delivering fundamentally utility services in partnership with member municipalities (i.e. drinking water supply, sewerage and management of solid waste).

There is a separate metropolitan public transport authority called TransLink, which was created in 1998 and is responsible for setting and administering fares for regional public transport services. TransLink is governed by the Mayors' Council on Regional Transportation (where all 24 member local governments of Metro Vancouver are represented) and the TransLink Board of Directors. Metro Vancouver is responsible for formulating the Regional Growth Strategy and regional air quality objectives that TransLink must consider when developing long-term transport strategies. Metro Vancouver also provides input to TransLink on its long-term transport strategies and ten-year transport investment plans along with input to the Mayors' Council on proposed borrowing limit increases in ten-year transport investment plans. Translink has approximately 6 700 employees and TransLink receives its revenue mainly through taxation (mostly fuel and property taxes), user fees and government transfers. Total consolidated revenues for 2016 are expected to be CAD \$1. 4 billion on a funded basis.

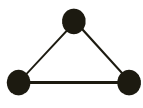
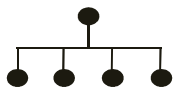
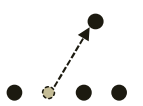
Metro Vancouver's regional growth strategy – interconnected management plans to guide sustainable regional growth

Metro Vancouver's regional growth strategy (RGS) is an agreement between a regional district and its member municipalities on social, economic, and environmental goals and priority actions. The RGS' objectives are to co-ordinate action on housing, transport, infrastructure and economic development in recognition that collaboration at regional level will make individual municipal action more effective. All regional district bylaws and all official community plans of member municipalities must be consistent with an RGS.

Metro Vancouver's current regional growth strategy – "Metro Vancouver 2040: Shaping our Future" – was adopted in 2011. It contains strategies to advance five goals related to urban development, the regional economy, the environment and climate change, housing and community amenities, and integrating land use and transportation. The regional growth strategy is reviewed every five years and progress on its core goals is reported annually. This includes an extensive set of performance measures for each of its five goals and component strategies (Metro Vancouver, 2014a). Assessments are also made against the baseline performance report (Metro Vancouver, 2014b).

Sources: OECD (2015), *Governing the City*, <http://dx.doi.org/10.1787/9789264226500-en>; drawing on various sources including TransLink (2014), "Regional transportation authority of Metro Vancouver", www.translink.ca (accessed May 2015); Metro Vancouver (2014a), "Progress towards shaping our future, report highlights", www.metrovancouver.org/services/regional-planning/PlanningPublications/MV_2040_2014_Highlights.pdf; Metro Vancouver (2014b), "Progress towards the baseline annual report", www.metrovancouver.org/services/regional-planning/PlanningPublications/Progress-toward-Shaping-our-Future-Baseline-Annual-Report-min.pdf; OECD (2012), *Compact City Policies: A Comparative Assessment*, <http://dx.doi.org/10.1787/9789264167865-en>.

Figure 4.1. Four broad categories of metropolitan governance bodies in OECD metropolitan areas

Informal/soft co-ordination. Often found in instances of polycentric urban development, lightly institutionalised platforms for information sharing and consultation are relatively easy both to implement and to undo. They typically lack enforcement tools and their relationship with citizens and other levels of government tends to remain minimal. Frequency: 52% of metropolitan areas in the OECD.	
Inter-municipal authorities. When established for a single purpose, such authorities aim at sharing costs and responsibilities across member municipalities – sometimes with the participation of other levels of government and sectoral organisations. Multi-purpose authorities embrace a defined range of key policies for urban development such as land use, transport and infrastructure. Frequency: 24% of metropolitan areas in the OECD.	
Supra-municipal authorities. An additional layer above municipalities can be introduced either by creating a directly elected metropolitan government, or with the upper governments setting down a non-elected metropolitan structure. The extent of municipal involvement and financial capacity often determine the effectiveness of a supra-municipal authority. Frequency: 16% of metropolitan areas in the OECD.	
Special status of “metropolitan cities”. Cities that exceed a legally defined population threshold can be upgraded into a special status as “metropolitan cities”, which puts them on the same footing as the next upper level of government and gives them broader competencies. Frequency: 8% of metropolitan areas in the OECD.	

Source: Adapted from OECD (2015), *Governing the City*, <http://dx.doi.org/10.1787/9789264226500-en>, p. 21.

The number of metropolitan governance bodies across the OECD has proliferated in the past several decades. Data from the OECD’s Metropolitan Governance Survey (2014) indicates that more than two-thirds of OECD metropolitan areas (178 out of 263, or 68%) currently have a metropolitan governance body (OECD, 2015). Among these, the majority do not have regulatory powers and as such are a form of informal or soft co-ordination. In terms of the policy areas that they cover, the majority of metropolitan governance bodies work on regional development, spatial planning and transport. However, considerable diversity persists in their legal status, composition, power, budget and staff – hence in their impact on policy design and implementation. Data analysis shows that around 80% of metropolitan governance bodies work on regional development, over 70% on transport and over 60% on spatial planning (OECD, 2015). More than half of metropolitan governance bodies are active in these three fields at the same time.

Prague’s spatial boundary and managing urban expansion

Prior to the pre-socialist era, local government in Prague had a considerable ability to shape its spatial development. For most of its history, the administrative boundary of Prague was easily expanded to provide sufficient land for urban growth (Box 4.3). During the socialist era, local governments had no independent function and national policies were implemented through the planning hierarchy and local Communist Party organisations. Under the socialist regime, planners were able to control the shape and speed of development and use additional land as they saw fit, with little regard for existing settlement patterns. The result was a steady expansion of built area as new industrial sites and their associated worker housing were introduced in the 1950s through the 1970s as national policy steadily increased the role of heavy manufacturing in the Prague area.

Box 4.2. Defining metropolitan governance

The OECD classifies an organisation as a metropolitan governance body when it meets the following four criteria:

Geographical scope: The organisation must cover the central city and a large share of the remaining parts of the metropolitan area. If its geographical scope extends beyond the metropolitan area, the metropolitan area must constitute the predominant part of its sphere of responsibility. The geographical focus of an organisation has to lie on the metropolitan area in order to be considered its governance body. In particular, both the central city and the surrounding areas must be represented in it. In practice, it rarely occurs that the geographical extent of a governance body coincides perfectly with the geographical extent of the metropolitan area. Furthermore, in many countries, there is no official definition of metropolitan area. Therefore, the geographical scope can be somewhat different from the metropolitan area as long as it shows a clear focus on the metropolitan area.

Involved actors: National or subnational governments must be dominant actors within the organisation, or the organisation itself has to have the status of a subnational government. National and subnational governments are the most important actors in metropolitan area governance. This has to be reflected in the composition of the governance body, which must be predominantly composed of representatives of such governments. While governments are the most important actors in metropolitan area governance, they are not the only ones. Therefore, the condition does not rule out that other actors, such as the business community or representatives of the civil society, be represented on the governance body. In some countries, organisations that were created explicitly for the purpose of metropolitan area governance have the status of a full local government. These organisations typically present the most integrated approach to metropolitan area governance and are also considered governance bodies.

Thematic focus: The organisation must primarily deal with issues that are directly and predominantly relevant to metropolitan area governance. Metropolitan governance concerns a wide range of topics. While it is not possible to provide an exhaustive list, all of them concern policy fields that require co-ordination between parts of the metropolitan area. Often, these are issues where decisions in one part of the metropolitan area have spillover effects on other parts. Furthermore, the issues should be directly predominantly relevant for metropolitan areas. They should appear more frequently or have a higher relevance in metropolitan areas than in other areas. In practice, the jurisdictions of many subnational governments coincide with metropolitan areas. Usually, such subnational governments were not created with metropolitan area governance in mind and do not focus on it. Instead, they fulfil functions that are similar to other subnational governments of the same level that do not cover metropolitan areas. Therefore, they are not considered governance bodies as long as they have not received particular powers or responsibilities that strengthen their role as a metropolitan area governance body.

Thematic width: An organisation must have a mandate that allows it to work on more than one issue that is related to metropolitan area governance. This criterion serves to distinguish metropolitan area governance bodies from single issue bodies and sectoral authorities. Metropolitan area governance always concerns a variety of issues. Furthermore, these issues can rarely be viewed in isolation, because they tend to interact with each other. Any organisation that can be considered a metropolitan area governance body must be able to address this complexity. Of course, it is not guaranteed that every organisation which deals with at least two different issues addresses the complexities of metropolitan area governance in a meaningful way. Nevertheless, the distinction between organisations that focus on one issue and organisations that focus on many issues is an operationally useful and objective way to identify organisations that work across individual policy fields.

Source: Adapted from Ahrend, R., C. Gamper and A. Schumann (2014), “The OECD Metropolitan Governance Survey: A quantitative description of governance structures in large urban agglomerations”, <http://dx.doi.org/10.1787/5jz43zldh08p-en>.

With the end of communism, a new national and local administrative structure was introduced. The national government reintroduced municipalities as the basic building block of subnational government in 1990 as part of the process of restoring democratically elected governments. Municipalities were given significant responsibility for local administration and planning, with each municipality having independence from oversight by other municipalities. In addition, districts, with boundaries that had been identified by the communist government in 1962, were established as an intermediate administrative layer for national agencies. In this process, the city of Prague retained its legacy “urban centre” administrative boundary that did not extend very much beyond its existing development perimeter and became a distinct district. Crucially, the municipalities in the peri-urban land adjacent to Prague were placed in two other districts, Prague East and Prague West in Central Bohemia. While this had few consequences when districts were simply mechanisms for delivering national administrative services, the evolution of subnational government over time made this decision crucial.

Additional reforms to subnational government in 1997 led to the creation of regions that were assembled from districts. Once again, the city of Prague was established as a free-standing urban region that contained only one district/municipality. East Prague and West Prague became part of the Central Bohemia region along with ten other districts. Unlike districts, regions were given actual authority and legislative powers as an intermediate layer of government. This action effectively severed any authority or formal influence Prague might have had over the land outside its existing administrative boundary, since Prague and Central Bohemia had identical status. Moreover, Central Bohemia had a population roughly the same size as Prague and a relatively high level of income, giving it similar weight in any discussions about regions with the national government.

Additional legislative action in 2000 further strengthened the powers of regions and clarified their autonomy (Yoder, 2003: 279). At this time, the administrative functions of districts were abolished and assigned to the regions, although they continued to exist as statistical units. While this legislation also regrouped some of the smaller regions so that the remaining regions were all large enough to meet EU accession requirements, it did not alter the boundaries of Prague and Central Bohemia, even though it was clear by then that the hard boundary would be problematic for Prague (Jacoby and Cernach, 2002). By then, the privatisation process and economic restructuring had already led to rapid peri-urban growth that was beneficial to the municipalities in the former Prague East and Prague West districts in Central Bohemia, but challenging for Prague.

By the turn of the century, the difficulty in managing suburban growth was clear, but regional borders were left unchanged in order to maximise economic benefits for all regions in the Czech Republic from accession to the European Union. Clearly, the national government could have revised the administrative boundary of the Prague region in 2000 to extend it into the Prague East and Prague West territory when it modified regional groupings as part of the EU accession process. Central Bohemia would still have remained a large enough region to satisfy European Union requirements. However, the cost of the boundary change would have been that Prague would not have qualified for EU Objective 2 funds, because the additional territory would have lowered the expanded region’s income levels and growth rate below the EU threshold requirement. Leaving Prague spatially constrained was the price for all other Czech regions to qualify for Objective 1 support and for Prague to qualify for Objective 2 support (Charvatova and Charvat, 2009). Effectively, Prague received a significant amount of EU funds that supported its core economic development strategy at the cost of giving up control over its

immediate hinterland, since merging it with all or part of the two surrounding districts would have disqualified the new enlarged region for Objective 2 funding.

Box 4.3. The importance of historical path dependency to Prague's spatial boundary

Path dependency results from decisions made in the past that continue to significantly constrain the opportunities that current local governments have for managing the growth process. Spatial planning in Prague is complicated by two constraints. The first is the historic pattern of land use that reflects the impact of the socialist economy that was in place for over 40 years after World War II. The second is the more recent regional administrative structure that was introduced by the Czech government in 2000 as part of the accession process to the European Union. The former created a built environment that was based on national economic plans that did not incorporate any role for land prices in determining land uses. The latter has left the Prague local/regional government tightly spatially bounded with limited ability to influence land use and economic development in its peri-urban area. While Prague has an interest in how economic growth evolves in its surrounding hinterland, it has no direct capability to manage this growth.

The spatial legacy of the communist era

Spatial development decisions made during the post-war period of communist government have left Prague with a distribution of buildings and transport networks that constrain its spatial development. Prague largely escaped the destruction of World War II and emerged with an intact spatial structure that reflected the evolution of the city since mediaeval times. A notable feature of the core of older cities in Europe is a highly irregular street pattern and a system of radial roads that connect the core to outlying areas. These are part of the city's charm, but can be barriers to modern urban redevelopment. Prague's spatial evolution was shaped by its changing economic function, and by its role first as the main city of Bohemia and later as a principal city in the Austro-Hungarian Empire, and ultimately as a national capital. Importantly, during most of this period, land markets had played a major role in determining land uses. By the end of World War II, the result was an urban core with a variety of high-value commercial and residential buildings, built in various periods, that provided a high level of cultural and historical amenities, and a surrounding ring of manufacturing establishments and worker housing that reflected the role of the region as a major industrial manufacturing centre.

For more than 40 years, land-use decisions did not reflect market forces but rather the decisions of central planners focused on maximising industrial output. Prague's role as a manufacturing hub was further enhanced by the introduction of a socialist state that was embedded in the larger economic structure directed by the Soviet Union. The city grew rapidly, largely as a result of economic planning decisions that its role was to be a major supplier of industrial machinery for Czechoslovakia and other central and eastern European countries. However, with socialism, the evolution of firms and housing and their spatial location were no longer guided by market forces, but instead by the central planning process (Sykora and Simonickova, 1994: 47-49). Under the central planning system, heavy manufacturing increased in Prague, which required both new establishments and additional worker housing. New industrial capacity was added in what was then the rural periphery and new housing was provided in relatively close proximity to keep workers close to their jobs. This type of joint development peaked in the 1960s when high-density housing estates were constructed using pre-fabricated modules near large industrial plants on the outskirts of Prague. This type of development led to a flattening of the population density gradient as people and economic activity moved away from the urban core, which remained largely intact but with a declining role and a shrinking share of the population (Bertaud and Renaud, 1997). With the end of communism, market forces led to considerable change in the local economy and in the relative value of different locations.

Box 4.3. The importance of historical path dependency to Prague's spatial boundary *(continued)*

The end of the socialist system and the return to a market economy

The end of the socialist system in 1989, the return to a market economy after 40 plus years changed Prague's role and economic function. The assured market for industrial machinery collapsed and Prague experienced a loss of income and employment. This led to important changes in urban spatial relations. Large amounts of land that had been industrial sites were abandoned or underutilised. Large suburban high-density housing estates that had been built to place workers close to major industrial employers became undesirable as nearby job opportunities disappeared (Sykora and Bouzarovski, 2011). On the other hand, the historic urban core – that had been largely ignored under the socialist planning system – became highly desirable. As the economy shifted from manufacturing to services, the old urban core, with its collection of historical buildings and amenities, increased in value. The increase in demand in the core led to an increase in land prices and concurrent gentrification (Temelova, 2007). Moreover, new residential construction shifted from an emphasis on large apartment complexes towards single-family homes and small multi-family units which better reflected consumer preferences and the broadening of the income distribution. At the same time, private ownership of cars exploded, leading to a reduced role for public transit, and an increase in commuting distances as people were no longer assigned to housing units proximate to their jobs (Sykora, Kamenicky and Hauptman, 2000). Over time, the connection between place of work and place of residence further eroded as people began to change employers with greater frequency.

Source: Bertaud, A. and B. Renaud (1997), "Socialist cities without land markets", *Journal of Urban Economics*, Vol. 41/2, pp. 137-151, <https://doi.org/10.1006/juec.1996.1097>; Sykora, L. and S. Bouzarovski (2011), "Multiple transformations: Conceptualizing the post-communist urban transition", *Urban Studies*, Vol. 49/1, pp. 43-60; Sykora, L. and I. Simonickova (1994), "From totalitarian urban managerialism to a liberalized real estate market: Prague's transformations in the early 1990s", in: Barlow, M., P. Dostal and M. Hemple (eds.), *Development and Administration of Prague*, University of Amsterdam, Amsterdam, Netherlands; Sykora, L., J. Kamenicky and P. Hauptmann (2000), "Changes in the spatial structure of Prague and Brno in the 1990s", *Acta Universitatis Carolinae Geographica*, Vol. 35/1, pp. 61-76; Temelova, J. (2007), "Flagship developments and the physical upgrading of the post-socialist inner city: The golden angel project in Prague", *Geografiska Annaler, Series B, Human Geography*, Vol. 89/2 pp. 169-181, <http://dx.doi.org/10.1111/j.1468-0467.2007.00246.x>.

Managing inter-jurisdictional land-use conflicts

Following the change from a socialist system to a market-oriented economy, Prague experienced a mismatch in its housing, commercial and industrial building stock. The planned economy had focused on expanding large machinery manufacturing facilities and other forms of industry and on constructing large residential complexes of relatively small apartments (Sykora, Kamenicky and Hauptman, 2000; Sykora and Mulicek, 2014). Commercial space was not a priority, especially non-government office space. With the change in government in 1989, a significant portion of the industrial economy closed and employment shrank. At the same time, there were major increases in the service sector, which required new office space. Similarly, retail shifted from state stores and small shops to a western model of large shopping centres that required parking for a population that had embraced automobiles. Finally, with the restoration of a private housing market, the demand for detached homes and more luxurious and lower density apartments developed and state-owned housing largely disappeared (Sládek, 2013).

In the immediate vicinity of Prague there was ample land and local municipal governments who were willing to support new construction to expand the local tax base – a trend that remains

to this day. The result was a major surge of new housing construction in the former Prague East and Prague West districts that was followed by growth in commercial and retail activity as populations increased (Novak and Sykora, 2007). A consequence of this suburbanisation was a major increase in automobile commuting and associated congestion, as well as an erosion of the tax base in Prague, even as many of the suburban residents continued to make use of services provided by the city government.

The main way that these new demands were accommodated within the city boundaries at the time was by redeveloping existing land and buildings. In the city centre, this was possible because the housing and building stock was already more diverse, and high-value new construction could be introduced in an area that was expensive for building. In principle, unused and underutilised industrial sites also presented an opportunity for brownfield development. However, these sites faced expensive remediation costs that were high enough to preclude their use for most low-density residential and many commercial and light manufacturing activities that required inexpensive facilities (Sykora, 2007: 88).

Suburbanisation led to a decreasing proportion of the core city of Prague on population, employment, economic activity and public sector income (Sykora and Ouředníček, 2007). While Prague lost population and income, the demand for services provided by Prague did not fall, as suburban residents continued to place demands on transport, education and other public services in the city. In addition, Prague's ambition to be a leader among European cities in terms of green growth was challenged by urban sprawl. Gaining control over land-use planning across the entire metropolitan region was seen by the city as vital for its sustainable development.

This suburbanisation process has been common for almost all cities in OECD countries and creates challenges for both urban cores and for the territories receiving the new growth. Finding ways to better manage government responses to the pressures for urban expansion is a major and ongoing challenge, and better spatial planning is a key element. But when the city and the hinterland have different local governments planning, other forms of co-ordination become inherently difficult, especially if the costs and benefits from suburbanisation are asymmetric, with cities seeing themselves as losing and suburban governments seeing the process as beneficial, especially where it includes employment growth (White, 1999).

Various mechanisms to improve inter-municipal co-ordination of land use exist, but most are not available to Prague

Four possible solutions exist for resolving the asymmetric incentives facing cities and adjacent local governments. The first is annexation, which can occur if the urban area has the power to unilaterally absorb territory from its smaller neighbor. This leads to a reduction in the size of the smaller administration and an increase in the size of the larger unit, as well the obvious ability to regulate the development of the newly acquired territory. A second option is the merging of both local governments into a new enlarged single unit. This merger process can be either voluntary or forced by a higher level of government that controls the structure of local governments. A third option is to transfer the land-use planning function away from local governments and up to the next level of subnational government. Finally, there is the option of a negotiated agreement between the two governments that provides a structure for managing future land development in a mutually beneficial manner.

Unlike the first three options that have clear winners and losers, the fourth solution creates a positive sum outcome because it only occurs if both parties voluntarily agree. Incentives and regulatory frameworks structure these interactions. In the United Kingdom, for example, the government has established a “duty to co-operate” on cross-boundary matters (Box 4.4).

Meanwhile, in metropolitan Prague, as will be discussed, EU funding has provided an important incentive for such co-ordinated approaches.

Box 4.4. The United Kingdom and the “duty to co-operate”

The Prague City/Region – like any other – has a finite area of land within its defined boundary. That boundary has been shaped more by political history than economic geography. Despite the lack of economic rationale for the boundary, the land within it is a capital resource. It is in the city’s interest, as well as the national interest, to use that resource to serve the population – economically and environmentally – and hence achieve social goals compatible with sustainable development principles. Land-use planning tools have an important role in facilitating the best use of land in the city. Cities are, however, not islands. People move across the boundaries – commuting for work, or visiting for public and private services. The location of suburban homes can impose pressures on city infrastructure. And commercial development in suburban locations can often impact on the economic strategies of the city. The city hinterland also supplies essential services, such as the supply of food and drinking water, flood management, and waste disposal. So, city governments need to take an interest in land outside the city boundary – if possible to deter urban sprawl, development that may increase flood risk and the need for transport infrastructure. Equally, local governments outside the city need to reflect how the development of the urban area will place demands on their plans and land use. David Audretsch’s book, *Everything in its Place*, sets out a framework for strategic management of growth in a place-based approach; but across multiple places, big and small, how can development planning help to avoid unwarranted externalities and thus achieve the best overall outcome in use of land?

In the United Kingdom, an attempt was made to address this dilemma in the context of planning for housing, after the abolition of regional strategies. How could the national need for sufficient new homes be reflected in the totality of local plans, while (reflecting the views of those who elected them) local planning authorities were reluctant to designate sufficient land to deliver a “fair share”? The Localism Act 2011 set out to give local governments more freedom to plan for their places while still delivering national goals – a place-based approach. But it placed a legal duty on local planning authorities, county councils in England and public bodies to engage constructively, actively and on an ongoing basis to maximise the effectiveness of local and plan preparation in the context of strategic cross-boundary matters. During the development plan-making process, local planning authorities must demonstrate how they have complied with the duty. If a local planning authority cannot demonstrate that to the satisfaction of the independent government-appointed inspector, their local plan is essentially halted. And where there is no up-to-date plan and no evidence of a five-year supply of sites for new housing, developers can benefit from a presumption in favour of development, overriding local government objections.

The duty to co-operate is not, the national government stresses, a duty to agree. And it has been criticised for being process-dominated; and for the lack of incentive for individual local planning authorities to reach substantive agreements. The threat to halt progress on a plan generally only worries the local government preparing the plan, not the other authorities being consulted. Constructive co-operation and co-ordination of plans is clearly an important goal to ensure the best use of land and infrastructure investment. Within London and the larger English conurbations, non-statutory arrangements and statutory joint committees are emerging as a way of guiding good planning without the creation of new levels of cumbersome plans. Elsewhere, the creation of joint core strategies covering the area of more than one planning authority could be criticised for attempting too much detail. For example, a strategy under preparation for three planning authorities in Gloucestershire has effectively delayed local plan making by at least six years. Given some of the challenges neighbouring local governments face in engaging their neighbours, it is helpful that the Local Government Association in England has published some key learning points along the following lines:

Box 4.4. The United Kingdom and the “duty to co-operate” (*continued*)**Table 4.1. The United Kingdom’s duty to co-operate**

The process of co-operation	1. The duty to co-operate is about good strategic planning based on co-operation. 2. The onus is on the local government preparing the plan to demonstrate effective co-operation – leading to outcomes that are clearly translated into planning policy. 3. Discussions should be started early and carried on as the plan is prepared. 4. Plans need to reflect the evidence, giving detailed and rigorous consideration of the development needs of areas nearby, and whether they could be met in the area being planned. 5. The plan-making authority needs to be rigorous, proactive and persistent to assure proper engagement. 6. Engagement needs to be constructive. 7. Ensure partnership arrangements are fit for purpose. 8. Work with new partnerships in strategic planning – for example with regional enterprise agencies as well as neighbouring local governments. 9. The plan is tested on how it was prepared – but future arrangements for co-operation in implementation will be helpful.
Evidence	10. Plans should reflect joint working and co-operation to address larger than local issues, including strategic housing policies, waste generation and management, flood management, economic assessments, transport and green infrastructure studies, minerals planning, landscape management, and renewable energy potential. 11. Plans need to reflect housing market assessments and contribute to the objectively assessed needs of the wider market area, including the impact of outward migration from major city areas. 12. An audit trail of co-operation will help to demonstrate that outcomes are sound.
Other lessons	13. Local government elected members and officer teams all need support and resourcing.

Source: adapted from Government of the United Kingdom (2011), “Localism Act 2011”, www.legislation.gov.uk/ukpga/2011/20/section/110/enacted.

Clearly, arrangements to implement a duty to co-operate need to reflect the nature of the area. Within the city of Prague, for example, there is a new emphasis on flexibility in land-use planning – in place of overly rigid planning based on hard data, often out of date before implementation of policies can begin. In total there are 57 boroughs with elected bodies in Prague and 22 of them hold the status of city districts (with delegated powers). In the Central Bohemia region surrounding the city, local plan making is in the hands of many smaller self-governing units and the state can only intervene in matters to protect the national laws. Both within the city, and between the city and neighbouring local governments, a duty to co-operate might well lead to more cost-efficient infrastructure delivery along with social and environmental benefits in line with the overall National Framework of Sustainable Development.

Source: Government of the United Kingdom (2011), “Localism Act 2011”, www.legislation.gov.uk/ukpga/2011/20/section/110/enacted.

If Prague is to achieve some influence over land use outside its administrative boundary it will have to be by negotiated agreements

In the case of Prague, the last option is in reality the only possible solution because of the unique circumstances put in place by the process of constructing regional government in the Czech Republic. Prague cannot annex territory outside its boundary because it lacks the authority to do so. Because Prague is in one region and its immediate hinterland Prague East and Prague West are in another region, both the second and third options are not available without the national government redefining regions or taking responsibility for land-use planning. Since the national government could have addressed this issue

in 2000 and chose not to, and reopening the issue would likely be highly divisive, a merger is unlikely. The national government is unlikely to take over spatial planning at the level of making local land-use decisions, not that this would be desirable. By a process of elimination, only developing a negotiated agreement remains as an option for resolving conflicts over suburbanisation. This is the best option in the short term as the other option, although valid, may require a long period of uncertain negotiations.

Such agreements are bolstered when there is funding to be accessed. There have been some promising developments of late in this regard. The Regional Operational Program for the NUTS 2 Cohesion Region of Central Bohemia (2007-13) provided financial support for transport infrastructure in the Prague suburban zone. Prague's integrated transit system, which extends into some parts of Central Bohemia, is one of the few successful examples of metropolitan co-operation to date; but it has not led to efforts to co-ordinate on land-use issues (Stanilov and Sykora, 2014: 157). More recently, a new EU tool – integrated territorial investments (ITI) – creates a useful incentive for such collaboration. ITIs encourage integrated planning across functional urban areas. Through ITIs, municipalities are required to form collaborative bodies (municipal association agreements) in order to forward projects of metropolitan importance and to access investments. However, with ITIs there is a risk that, when such collaborative planning is driven by voluntary local government associations, only certain types of issues – those that are less contentious and mutually benefit local actors – will be addressed, leaving substantive issues with little scope for action.

Box 4.5. The EU's integrated territorial investments

Metropolitan areas have new EU tool: integrated territorial investments (ITIs). As at least 5% of the financial volume of the ERDF will be allocated to the Czech Republic in 2014-20, ITIs are expected to have a significant impact on land-use development. In Prague that means projects where the Central Bohemian region is co-operating with Prague. Most of the projects are therefore expected to be realised on the borders of both regions.

The spatial strategies of urban and rural areas need to be coherently linked. The European Union's ITIs in the Czech Republic encourage integrated spatial planning across functional urban areas. It is important that such investments be based on the good land-use practices that have been described in plans and strategies at the national, regional and local levels, such as developing brownfield sites in advance of greenfield ones; permitting developments only in areas where there is existing infrastructure to support them; and protecting agricultural lands, forested areas and watersheds. Through ITIs, municipalities are required to form collaborative bodies (municipal association agreements) in order to forward projects of metropolitan importance and to access investments. This mechanism has greatly facilitated municipal co-operation. It will be very important to institutionalise these practices in order to encourage such co-operation in the longer term (beyond the life of the ITIs). This could include special incentives for metropolitan co-operation, such as dedicated funding streams for such projects.

However, where such collaborative planning is driven by voluntary local government associations, there is the risk that only certain types of issues – those that are less contentious and mutually benefit local actors – will be addressed, leaving substantive issues with little scope for action.

One way to frame the types of negotiations Prague faces can be found in a study of conflicts over land use in Sydney, Australia

Stanilov and Sykora (2012) suggest that fragmented spatial development of housing in Prague is a reflection of both market forces and current municipal spatial plans that are disconnected. Without better co-ordination, it will be impossible to achieve a more coherent structure. In a study of metropolitan governance of Sydney, Australia that focuses on conflicts over land-use planning, Kubler explores the concepts of joint decision systems and negotiated agreements (Kubler, 2007: 637-639). These ideas are appropriate when actors engaged in a policy problem are unable to independently achieve their objectives and either unanimity or near unanimity is required for a successful solution. He discusses four ways to get to such a solution. The first is through negative co-ordination, which requires all actors to eliminate all actions that result in an objection from others. This, of course, reduces allowable actions to a very small set, effectively those which make one actor better off but makes none of the other actors worse off. This is of course the Pareto criterion in welfare economics. Importantly, it does not require negotiations because conflict does not actually occur.

Bargaining is the second mechanism discussed, and it requires that actors who lose from an action be fully compensated by those who gain. Bargaining adds more potential solutions to the feasible set but requires that aggregate losses be smaller than aggregate gains and that claims of potential loss be credible. Problem solving is the third mechanism, and it differs from bargaining in that the focus of negotiations shifts from the distribution of benefits and costs among actors to finding a solution that maximises general welfare, even if some actors are not full beneficiaries. It requires that actors be willing to set aside distributional issues and focus only on the greater good.

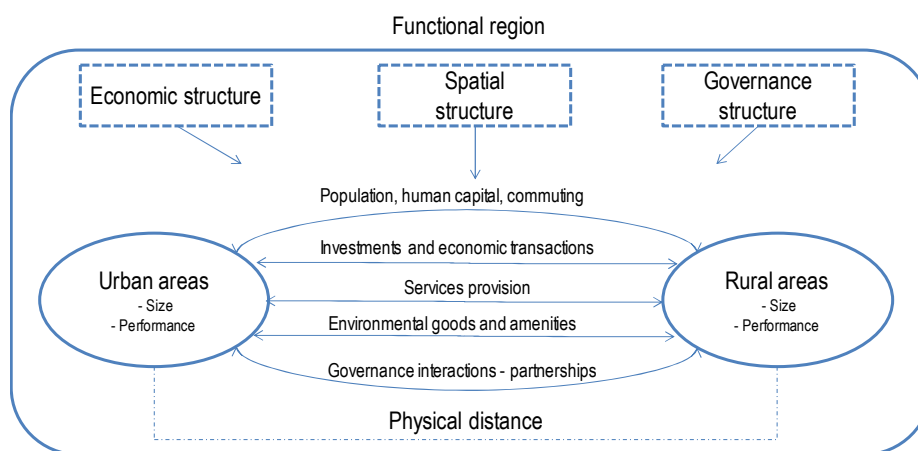
The final mechanism discussed is positive co-ordination, which is similar to problem solving but reintroduces distributional issues as part of the process of finding the maximum common good. With positive co-ordination, the objective for the negotiations is to focus on maximising aggregate welfare but in a way that does not harm any individual actor. Compensation for losses are explicitly incorporated into the calculation of welfare. This, of course, leads to the largest possible set of potential outcomes, but it requires the most complex set of negotiations and the greatest degree of trust among participants. Kubler suggests that in the case of Sydney there was an evolution over multiple decades from a bargaining approach that focused on achieving specific outcomes to one that is more like problem solving and is oriented to finding a process to manage land-use conflicts.

Rural-urban partnerships for co-ordinated spatial development

Rural-urban partnerships have been used by the OECD to identify ways in which urban and rural local governments are linked to each other and to identify ways that co-operation can develop. Ways to better manage interconnections between urban areas and their more rural hinterlands were explored in the 2013 report *OECD Rural Policy Reviews: Rural-Urban Partnerships*. Prague was one of the 11 case study regions. The main conclusion of the report is that rural and urban places within metropolitan regions are strongly coupled across multiple dimensions, including: population and commuting flows, investments and economic transactions, service provision, environmental goods and amenities, and government interactions (Figure 4.2). Given the importance of these linkages and the fact that the independent local governments responsible for ensuring the quality of life of their residents typically have equal levels of authority but often unequal

levels of capacity, finding better ways to better manage these linkages is important. Clearly, the potential for co-operation is made more difficult by asymmetries in the benefits and costs from alternative management decisions.

Figure 4.2. **Urban-rural relationships within functional regions**



Source: OECD (2013), *Rural-Urban Partnerships: An Integrated Approach to Economic Development*, <http://dx.doi.org/10.1787/9789264204812-en>, p.23.

While some of the linkages take place through market exchanges, for example the purchase of goods and services, a large share are not market-based relationships and have no price. These include such things as the amenity benefits of rural scenery, congestion on roads caused by commuting, the ability of rural residents to access cultural services funded by urban residents, and scale economies that arise from combining demand from urban and rural customers. These unpriced linkages result in various combinations of externality effects, public goods and free-riding behavior (where people would be willing to pay if they had to but are able to avoid paying). The result is an inefficient production and allocation of the various services subject to these effects. That is: too much congestion, too few natural and cultural amenities or under-provision of goods and services because demand was wrongly estimated. Importantly, these problems are almost always local in nature so there is little incentive for national or even regional/state governments to engage in their solution, but strong incentives for local stakeholders to do so.

While linkages intensify with proximity, institutional barriers can block attempts to build collaboration

As Figure 4.2 suggests, the intensity of the linkages tends to be inversely related to physical distance between the people and governments that are involved. Close proximity makes interactions stronger and more numerous, leading to a higher degree of connectivity among rural and urban places. However, strong interactions may not be sufficient to bring about a way to connect rural and urban places. Institutional barriers caused by the structure of government can impede co-operation. These barriers can reflect border effects where one part of a metropolitan region is in a different government structure from other parts, and the two higher level governments block co-operation either intentionally or inadvertently.

Agreements to improve linkages through a partnership can be limited to a single topic or can be comprehensive and cover multiple linkages, such as solid waste management or public transit routes and service levels, or more general, and involve multiple areas of co-operation in an integrated approach. While the latter is almost always preferable, it is often essential to start with a single non-controversial approach that is easy to agree upon and implement (Lackey, Freshwater and Rupasingha, 2002). Areas for co-operation identified in the OECD study are:

- economic growth or economic development
- natural resource management, including land use
- improving service provision, including transportation
- political co-ordination to strengthen requests from higher levels of government. (OECD, 2013: 49-51)

In principle, any set of local governments in a metropolitan area can form a partnership to improve rural-urban linkages, but in many cases such an agreement is not put in place. A crucial factor for success is a sufficient overlap of goals or objectives that different stakeholders can put aside differences and focus on the benefits from co-operation. This means that gains from co-operation have to be seen by all participants as being larger than any losses that result from giving up independent action. Second in importance is the ability of potential partners to trust that their counter-parties can be trusted to follow through on commitments and fully implement the partnership. Typically these agreements are difficult to enforce if a participant shirks their responsibility, so a lack of trust can make an agreement improbable even if the potential benefits are significant. Clearly, the intensity of the linkages also plays a relevant role in creating an incentive to collaborate. Where problems from a lack of co-operation are large or benefits from co-operation are obvious, there is more incentive to find an agreement than if one or more parties do not believe the linkages have significant consequences for them.

In bargaining among urban and rural governments, differences in capability of the potential partners can impede the process of reaching an agreement. Urban governments can bring far more resources in terms of finance, professional staff and other factors to the negotiation. This can raise concerns in rural representatives that they may be agreeing to a process that will ultimately not be in their best interest because they lack the same information. Finally, the larger institutional framework can limit the ability to bargain. It may simply not be possible to address some linkages because participants lack sufficient authority to address them. While local governments in a metropolitan area might be willing to collaborate, they may not be able receive authority from higher level governments to do so. This is a critical point in the Czech Republic. Control of the planning system from the supra-local levels is weak in the Czech Republic. In this, the Czech Republic is similar to such countries as Hungary, Romania and the Slovak Republic (Piorr, Ravetz and Tosics, 2015: 82).

France offers an alternative approach; the national government has established territorial coherence plans (*schémas de cohérence territoriale*, SCoT), which are a key mechanism through which to pursue strategic spatial planning among both rural and urban communes (Box 4.6). They establish a common strategy that is binding on local land-use plans. Identifying the appropriate geography in which to establish a rural-urban partnership is crucial. As in the case of France's SCoTs, the OECD approach is to use a functional region based on commuting flows to identify the core of the partnership area. These local labour markets identify where a large share of the linkages take place,

particularly commuting patterns and use of public and private services across local government boundaries. Local labour markets do not typically respect administrative borders and because many of the linkages are not market-based they can only be managed by government action. This means that ultimately addressing linkages requires adopting a geography that is based upon administrative boundaries for the local governments responsible for the area involved.

Box 4.6. Strategic spatial planning: France's territorial coherence plans

Over the past two decades there has been a significant rise in the number of strategic spatial plans across urban agglomerations in the OECD. In France, as in many other countries, it is the notion of cohesion that underpins this joint spatial development project. The territorial coherence plan (*schéma de cohérence territoriale*, SCoT), created in 2000, is a key mechanism for intercommunal planning using a sustainable development framework. It covers the “local labour market” or “urban area” (*basin de vie* or *aire urbaine*) for parts of the country. This type of plan was established by the Solidarity and Urban Renewal Law (Loi solidarité et renouvellement urbain 2000, SRU).

A SCoT links housing, urban planning and transportation plans more effectively than they otherwise would be and supports cohesive development strategies for the entire area. There is no compulsory requirement for communes or groups of communes to participate in a SCoT, but there are incentives to do so. For example, according to national law, natural areas can be developed only if the area is covered by a SCoT. Such incentives have been further strengthened by the requirement that developed areas that are not covered by a SCoT cannot be expanded starting from 1 January 2017 onwards. To encourage the adoption of SCoTs, since 2010 the state has been setting up annual calls for proposals to increase participation in rural territories with limited human and financial resources to draw up SCoTs.

The plan establishes a reference framework for territorial planning over a time frame of 20 years. As such, it does not give granular detail on land-use development – that task falls to plans and planning decisions at the scale of the commune (PLU for instance), but these must align with the principles or fundamental guidelines. Every municipality covered by the same SCoT commits itself to integrated and joint development, which can help mediate and settle territorial issues for the whole area. In total, 448 SCoTs have been approved or are presently in the process of being developed. This covers 25 137 communes (nearly 70% of total), 50.5 million inhabitants (77% of the French population) and almost 60% of national territory (Government of France, 2015).

SCoTs have become the reference strategic planning documents for urban planning and development in large residential zones or urban areas. They constitute plans that go beyond commune, intercommune or across *département* administrative boundaries. The SCoT must, for example, set statistical objectives regarding the consumption of agricultural, natural and woodland spaces. It must also create a link between development and other policies; for example, the SCoT specifies conditions that favour the development of urbanisation as a priority in areas already served by public transport, but it can also promote creating new public transport services in locations that require them to improve access. However, it should be noted that this policy is not always successfully implemented. Many city regions in France have not succeeded in setting up a SCoT even though attempts have been made (Hoggart, 2016: 74).

Sources: OECD (2016), *The Governance of Land Use in France: Case Studies of Clermont-Ferrand and Nantes Saint-Nazaire*, <http://dx.doi.org/10.1787/9789264268791-en>; Government of France (2015), “Overview of SCoT”, <http://www.logement.gouv.fr/schema-de-coherence-territoriale-scot> (accessed 2 May 2016); Hoggart, K. (ed.) (2016), *The City's Hinterland: Dynamism and Divergence in Europe's Peri-urban Territories*.

The OECD recommends a simple framework for approaching negotiations

The OECD has proposed a strategic framework that can provide a way to approach negotiations to strengthen urban-rural linkages through a partnership approach (OECD 2013: 137). There are five sequential steps in the process:

1. promote a better understanding of socio-economic conditions in urban and rural areas and foster a better integration between them
2. address territorial challenges with an approach based on functional linkages between urban and rural areas
3. encourage the integration of urban and rural policies by working towards a common national agenda
4. promote an enabling environment for rural-urban partnerships
5. clarify the partnership objectives and related measures to improve learning and facilitate the participation of key urban and rural actors.

These five points offer a starting point to determine the tasks involved in forming an effective agreement.

Implications for the Prague metropolitan area

Prague and its surrounding municipalities can jointly benefit from identifying how they are linked and from exploring a partnership to improve these linkages. At present, there is both a high degree of linkage associated with the effects from rapid suburban growth that revolve around weaknesses in road and public transport investment, congestion rising from the increase in commuting, perceptions that suburban residents are using urban public services that they are not paying for, and a shift in tax base from Prague to nearby municipalities. Because Prague is spatially bound, almost any suburban development takes place outside its municipal boundary, which makes the intensity of the effects high. Prague is striving to adopt a green growth urban strategy that is based on a compact city and to encourage urban renewal through redevelopment of brownfield sites. While this is the vision of the city of Prague's government, it does not appear to be the vision of the surrounding municipalities, nor of the people who have relocated there. Consequently, there is a significant gap in objectives between the urban and rural elements of the metropolitan region.

Prague cannot enforce its vision of development on nearby local governments. This suggests that a collaborative agreement to jointly manage development in a way that provides benefits to both Prague and the proximate municipalities would be in every party's interest. Prague's 2008 update of the Strategic Plan articulates this as a major priority; it recommends forging stronger links between Prague and Central Bohemia through the creation of a permanent working group on transboundary development (Stanilov and Sykora, 2014: 155). Meanwhile, Central Bohemia's Regional Development Program (2006, updated 2009) articulates similar goals. In the past, the ability to negotiate joint agreements appears to have been impeded by a lack of trust and conflicts between the regional government of Central Bohemia and Prague. But in recent years there have been clear signals that co-ordination is a welcomed priority. At present, joint co-ordination between Prague and Central Bohemia is focused on the EU integrated territorial investment instrument.

However, there remain the problematic asymmetries involved in negotiations between a single city with a million residents on one side, and a collection of small municipalities with populations in the low tens of thousands on the other side. These differences in scale are also apparent in the case of Nuremberg and Lübeck in Germany. In both cases, a single larger urban centre is surrounded by either a variety of urban places of varying size in the case of Nuremberg, or by small settlements in the case of Lübeck. In both instances it was possible to find a mechanism for constructing a negotiated agreement among the parties that allowed a joint approach to managing economic development (Boxes 4.7 and 4.8). As is the case with Prague, the larger municipality had the most to gain from an agreement and had advocated collaboration, but the smaller places feared that collaboration would lead to exploitation due to asymmetries in power, knowledge and influence. There was also a fear that if discussions were opened, the larger municipality could engage in strategic coalition building and divide the small municipalities. Ultimately, in each case, the negotiation succeeded because the larger municipality agreed to provide the majority of resources, but accept a minority role in voting on any actions.

Prague needs to conduct negotiations at two levels – with multiple municipalities and with the region of Central Bohemia, which adds an additional degree of complexity

Prague is faced with a similar situation to that of Nuremberg and Lübeck, but more complex. It has to conduct simultaneous but different discussions. It must negotiate as a municipality with all the small municipalities in the Prague East and Prague West districts of Central Bohemia that are part of its metropolitan area. Unfortunately there is no municipal association as was the case in Lübeck to bargain as a single entity. However, both sides have a lot to gain from resolving the problems. Prague is unlikely to see significant urban renewal as long as greenfield development opportunities are available just outside its boundary. However, small municipalities cannot resolve growing transport problems, nor provide the full set of services to their new residents without co-operation from Prague.

At the same time, Prague needs to negotiate with the Central Bohemia region as an equal. This ultimately may be a more difficult task because there is a considerably smaller shared interest between the two regions than between Prague and its nearby municipal neighbors. In this case, Kubler's (2007) discussion of types of negotiations might suggest that a more limited set of objectives might be desirable. While Prague will be entering into an evolving long-term relationship with the municipalities, it needs a limited framework agreement from Central Bohemia that gives the municipalities in the Prague East and Prague West districts permission to negotiate with Prague without the regional government of Central Bohemia blocking the process. Further, the development principles of both Prague and Central Bohemia should align on strategic spatial objectives.

The European Union's integrated territorial investments establish a nascent framework for joint planning approaches

In 2016, Prague, together with Central Bohemia, developed an Integrated Strategy for ITI (integrated territorial investment) for the Prague metropolitan area, which was prepared by IPR Prague. The EU-funded programme will operate to 2020 and could inject as much as CZK 4.6 billion into the Prague metropolitan area for joint projects with Central Bohemia and other partners. Priority areas at present include increasing the capacity of kindergartens around Prague as well as flood prevention measures and

transport solutions. For spatial planning, the issue of transport is paramount. One of the goals of the strategy is to improve the connections of the suburban rail system to Prague's public transport system and also to increase the number of park and ride options in peripheral communities. This has the potential to reduce congestion in Prague and therefore supports the city's spatial objectives at the same time as benefiting its peripheral communities. While the ITI will address aspects of transport planning, it does not as yet include projects for co-ordinated spatial development more broadly. It will be critical to translate this programme into longer term partnerships that address those issues that are not just mutually beneficial, but also potentially contentious, spatial planning among them.

Box 4.7. Regional governance in the Lübeck metropolitan area

Lübeck is an ancient port city located on the River Trave near the Baltic Sea. It was the leading city of the Hanseatic League and existed as an independent city until 1937 when it was annexed by Prussia. Currently Lübeck is part of the *Länder* of Schleswig Holstein, but part of its hinterland is in the former East German *Länder* of Mecklenburg-Vorpommern. The city has a population of about 220 000 but is ringed by smaller towns and cities. Because it was a walled city and then a free city for most of its history, it has a relatively constrained administrative area with a lot of small urbanised areas in close proximity. The city remains a major port and has some manufacturing strengths, but has been eclipsed by Hamburg. For several decades local government in Lübeck tried to interest nearby governments in joint activity to improve local economic conditions, but with little success. Each local government believed that in any bargain with Lübeck it would be an unequal partner due to the greater size, capability, resource base and visibility of the city.

In 2001, the German Ministry of Agriculture introduced a pilot national programme that was a variation on the LEADER programme, *Regionen Aktiv*. One of the 18 successful regions in the competition for inclusion in the programme was the Lübeck Bay region, which had a population of 425 000, including Lübeck, and 101 municipalities (Fock, 2006). Importantly, the city of Lübeck was not part of the group because the focus of *Regionen Aktiv* was on rural development. Initially the objective of the Lübeck Bay group was to improve environmental conditions and to stimulate rural tourism based on local natural resources and agriculture. But in the process, the group realised the city of Lübeck was itself an additional source of demand for local products and visitors. In addition, it was clear that Lübeck had broad visibility to potential visitors in more distant locations because of its historic city centre.

While the individual projects undertaken by the Lübeck Bay group were useful, perhaps the most important outcome was that participating in *Regionen Aktiv* led to about 100 municipalities that had not worked together in the past forming an organisational structure that supported collaboration (Oppermann and Rahmann, 2004). Fairly rapidly the leaders of the Lübeck Bay group realised that the organisation was useful for broader purposes than simply the management of the *Regionen Aktiv* programme. If the various small municipalities could form a coherent agenda on broader regional development issues, they could also aggregate their voices and have an opportunity to influence events both regionally and at the *Länder* level (Oppermann and Rahmann, 2004: 46).

Over time the *Regionen Aktiv* leaders were able to form a partnership with the city administration. The partnership came about because of two important factors. The first was a common interest in strengthening tourism by co-ordinating the historic and cultural offer of the city with the nature-based and agricultural tourism of the hinterland. The second factor was the role of the Lübeck Bay *Regionen Aktiv* programme in establishing a way for the individual rural municipalities to form a common association that had shared values and that could act as an agent when discussing options for partnering with the city. By aggregating the individual municipalities into a single unit, the two populations were more equal in size and the negotiations could take place with the rural municipalities having already agreed on a single strategy.

Source: Oppermann, R. and G. Rahmann (2004) "Transforming rural communication: Three sociological case studies in a developed and urbanized rural area of northern Germany: Regional partnership Lübeck Bay, organic dairy farming and nature protections", http://orgprints.org/8729/1/135_TRUC_Bericht_für_LBF_Sonderband.pdf.

Box 4.8. Nuremberg Metropolitan Region

The city of Nuremberg has a population of about 500 000, which makes it the 14th largest city in Germany. However, in a larger European context, it is much further down the city size ranking; and this was seen by city leaders as making it less attractive for: inward investment, attracting conventions, obtaining more flight connections and in competing for EU funding. To increase its attractiveness Nuremberg had the ambition to create a metropolitan region as a way to expand its perceived importance by adding population. Simply considering the urban area with a population of about 760 000 that includes the three nearby but smaller cities of Furth, Erlangen and Schwabach, as well as some smaller municipalities, was not seen as creating a sufficient increase in size. However, a metropolitan region that expanded much further out into its hinterland could boost the regional population to about 3.4 million, which was a large improvement.

The challenge facing the city was to find a way to persuade all the other local governments that banding together with Nuremberg to create an organisation that would become the Metropolitan Region of Nuremberg was in their individual best interest. Because the region contains multiple linked but distinct cities it is not a conventional monocentric city system, but something that is inherently more distributed in nature. Initial reactions tended to see the metropolitan region as being useful for Nuremberg, but of limited value for other local governments. The size of the region goes well beyond the local labour market of Nuremberg, as defined by daily commuting flows, and is best defined by the extent of the integrated public transport network, which makes it a very large geographic area (OECD, 2012: 220).

However, over time Nuremberg was able to convince elected officials in 23 administrative districts and 11 self-administered towns to become members of the metropolitan region. The city accomplished this by emphasising that the region would be seen as polycentric, with Nuremberg as only one of multiple poles in a geographically dispersed economy. An emphasis was placed on building rural-urban partnerships so that smaller places did not believe they would become residential satellites of Nuremberg, but instead could obtain economic benefit from the relationship. The process also promised: to improve transport linkages across the entire region, to ensure that new economic development activity would be broadly distributed over the entire territory, and to work to bring about improvements in the quality of life of all residents, both urban and rural.

Most importantly, while Nuremberg contributes the majority of the monetary and staff resources to the administration of the metropolitan region, it does not dictate policy, nor does it have a controlling share of the votes in management decisions. The main administrative body, the Council of Elected Officials, has 55 lord mayors, mayors from smaller places and representatives from the *Länder* of Bavaria. Each member has one vote so all actions require that a majority of the representatives from smaller places agree, since they make up the majority of the members. A key element is the use of seven forums, each made up of experts and stakeholders for a specific topic – industry and infrastructure, science, transport and planning, culture, sports, leisure and tourism, and marketing – that are drawn from across the entire region. These forums provide action and policy recommendations to the Council. In addition, there is a fairly small staff for the organisation that mainly acts as administrative support for the Council and the forums.

By promoting a structure where it did not have control, and an agenda that emphasised broader benefits across the entire geography, while agreeing to provide the majority of the funding and other resources, the city of Nuremberg was able to convince other local governments to participate in the new metropolitan region. To cement their support, Nuremberg ensured that the initial benefits from joint action were broadly distributed across the region, including in smaller places. While this may seem very altruistic, at the end of the day Nuremberg achieved its objective of elevating its position in a European context, where metropolitan regions, and not individual cities, are increasingly seen as the appropriate unit for urban analysis and policy.

Source: Adapted from OECD (2013), *Rural-Urban Partnerships: An Integrated Approach to Economic Development*, <http://dx.doi.org/10.1787/9789264204812-en>.

***Incentives need to be in place to encourage ongoing partnership –
and the national government has a critical role to play in this regard***

Prague and its neighbouring region need regular and long-term mechanisms to prioritise investment decisions and encourage integration, synergies and interactions between separate urban jurisdictions. Co-ordination on urban extension and infilling could minimise transport and service delivery costs, optimise the use of land, and support the protection and organisation of urban open spaces. Co-ordination on urban upgrading and retrofitting could increase residential and economic densities and promote more socially integrated communities. Engagement between the regions and municipalities in the functional urban area should be a continuous and iterative process, grounded in enforceable regulations that aims to promote a vibrant, more compact Prague and with synergies between territories.

The national government's spatial development strategy articulates support for the polycentric development of the settlement structure and the creation of pre-conditions to strengthen the partnership between urban and rural areas in order to improve their competitiveness (Ministry for Regional Development, 2006). However, there needs to be concrete incentives in place to promote these partnerships, particularly when it comes to spatial planning. Further, the Czech government's 2010 urban policy states that there is a need to co-ordinate land-use planning documents at all levels and to prevent the negative manifestations of suburbanisation (urban sprawl) (Ministry of Regional Development, 2010). At present, the mechanisms to achieve such co-ordination are weak. Municipalities are expected to inform their neighbours of new land-use plans and offer an avenue for consultation; however, there are no joint planning mechanisms at the level of strategic spatial plans or land-use plans.

Prague's new ITI is an important step towards ongoing partnership. It will establish working relationships between communities and enhance the monitoring and evaluation of key spatial trends across the broader functional area. This partnership needs to be solidified and extended in the longer term such that a co-ordinated approach to spatial development is adopted across the territory for, ideally, spatial, transportation and economic development. The national government has a critical role to play in this regard by either establishing ongoing fiscal incentives for such collaboration and/or regulatory frameworks that can overcome the inherent co-ordination challenges. There are many options in this regard. On the regulatory side, it could establish a new type of spatial strategy to govern functional areas in the territory much as France has done with its territorial coherence plans. Such plans help to overcome France's territorial fragmentation and large number of communes – a feature which is pertinent in the Czech Republic as well. In terms of funding, the national government could create a specific funding stream that is linked to co-operative spatial development projects and/or plans. One objective in this regard should be to enhance the co-ordinated spatial planning capacities of suburban and peri-urban communities that are seeing the greatest population growth and/or commercial and industrial expansion. Prague's functional urban area by the OECD definition encompasses 435 municipalities, with the city of Prague and the municipality of Kladno forming its core. Given the large number of municipal actors involved, partnerships should be prioritised based on need.

There is an urgency to address the negative consequences of peri-urbanisation and develop co-ordinated strategies

The transformation of natural, open or agricultural land into urban land dominated by built structures and sealed surfaces causes many major environmental impacts, such as the fragmentation of landscapes, destruction of natural habitats and ecosystems, and the loss of high-quality agricultural soils. In dispersed settlement structures it can be more difficult and costly to provide public services and infrastructure. In Prague, these processes have led to growing traffic congestion, with residents commuting to work in the central city, along with the attendant negative environmental consequences such as air pollution. Peri-urbanisation can also have positive outcomes, such as new affordable housing, new sources of income for rural dwellers, and new amenities including recreation areas and parks. Spatial policy and land-use planning plays a critical role in managing these processes and ensuring that the benefits are on balance positive.

Given the rapid growth of communities surrounding Prague, it is critical that there are coherent spatial development strategies. The intense process of suburbanisation around Prague since the 1990s has largely been “piecemeal, rather than involving a planned or ‘blanket’ suburbanisation effect” (Ferry, 2014). Peri-urban communities should have a character in their own right, beyond that of sprawling bedroom communities or industrial zones. Ideally, they will follow a nodal form of development which can more easily be serviced by transportation networks and public services, including schools. More efforts are needed to ensure that planning at the subnational regional level fosters economic development by promoting regional economies of scale and agglomeration, increasing productivity and prosperity, strengthening urban-rural linkages and adaptation to climate change impacts, reducing disaster risks and intensity in the use of energy, addressing social and spatial disparities, and promoting territorial cohesion and complementarities in both growing and declining areas.

The national level, e.g. the Czech Republic’s National Institute for Spatial Development, could support the elaboration of spatial development strategies in peri-urban areas by convening a thematic research project that will both monitor peri-urban spatial trends and assess the policy implications for, for example, service delivery and transportation provision. This should also be a prerogative for regional governments to support coherent rural-urban spatial strategies. Such evidence-based assessments will help establish priority areas for collaboration.

Finally, the structures to achieve the co-ordination between levels of government could be improved. Austria’s Conference on Spatial Planning, which assembles representatives from all levels of government to discuss spatial policies, is one of the best examples of multi-level government spatial co-ordination within the OECD (Box 4.9). The conference is located at the centre of government (within the Office of the Chancellor), and therefore serves an important role in carrying out the necessary cross-sectoral policy co-ordination between different branches of the national government. In France, the newly created territorial conferences for public action will promote dialogue between regions and local authorities on thematic areas.

Box 4.9. Mechanisms for vertical co-ordination on spatial planning

Currently, many countries lack the structures to achieve the required co-ordination between levels of government on spatial planning issues. Both Austria and France have established regular conferences that provide such structure, but at different scales and for different topics. The Austrian Conference on Spatial Planning assembles representatives from all levels of government and is specifically targeted to address spatial planning issues whereas France's territorial conferences for public action focus on dialogue between regions and local authorities and are open to a range of thematic areas.

The Austrian Conference on Spatial Planning (ÖROK, *Österreichische Raumordnungskonferenz*) is an organisation dedicated to co-ordinating spatial planning policies between the three levels of government in Austria (the national level, the states and the municipalities). Its decision-making body is chaired by the Federal Chancellor and its members includes all federal ministers, the heads of all federated states and representatives of associations of local governments. Furthermore, business and labour organisations are represented on the body as consulting members. The work of the decision-making body is supported by a permanent secretariat with a staff of approximately 25-30. One of the central tasks of ÖROK is the preparation of the Austrian Spatial Development Concept (ÖREK, *Österreichisches Raumentwicklungskonzept*), which covers a planning period of approximately ten years and provides a vision and guidelines for spatial development that is shared by all levels of government. Beyond the preparation of the Spatial Development Concept, ÖROK also monitors spatial development across Austria. It has developed an online tool that provides a mapping function of a variety of important indicators at the municipal and regional level and releases a report on the state of spatial development every three years. ÖROK is also the co-ordinating body for structural funds provided by the European Union. It manages the integration of structural funds into broader spatial strategies and was directly responsible for the programming work related to 1 of the 11 thematic objectives of the programming period 2014-20. ÖROK also serves as national contact point within the framework of European Territorial Cooperation.

France's territorial conferences for public action (*conférences territoriales de l'action publique*, CTAP) are a relatively new institutional mechanism. They were established (mandated) as part of the Modernisation of territorial public action and affirmation of metropolises law (2014) and are intended to strengthen dialogue between local authorities and the region and to co-ordinate responsibilities. The CTAP in each region are chaired by the President of the Regional Council. Its membership includes representatives of *départements* and intercommunalities of different sizes. Each CTAP organises its work around thematic topics. The state representative in the region (prefect) is informed of the meetings of the CTAP and participates, at its request, or when a commune asks for state delegation of authority. The CTAP determine arrangements for co-operation through the adoption of draft conventions of agreements between parties and are reported yearly. The objective is to support an integrated and cross-disciplinary planning process, instead of a sector-specific one and to foster regional-local co-ordination on thematic topics.

Source: ÖROK (2015), "Österreichische Raumordnungskonferenz/Austrian Conference on Spatial Planning", www.oerok.gv.at/fileadmin/Bilder/1.Reiter-Uber_die_Oerok/OEROK-Geschaeftsstelle/OEROK_Folder.pdf (accessed 1 June 2016).

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