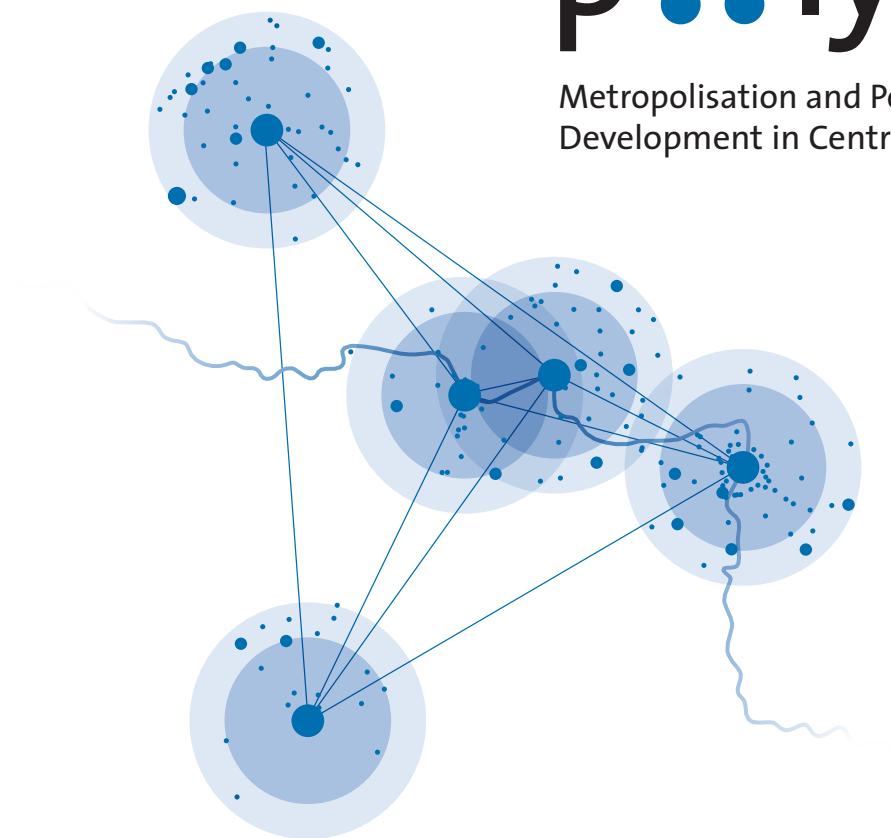


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Metropolisation and Polycentric  
Development in Central Europe







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Development in Central Europe



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# Table of Contents

Preface Maria Vassilakou, Deputy Mayor, Vienna.....	7
Authors & Stakeholder Cities .....	8
Abbreviations .....	9
Executive Summary (E).....	12
Executive Summary (CZ).....	21
Executive Summary (DE) .....	30
Executive Summary (HU) .....	40
Executive Summary (SI).....	50
Executive Summary (SK).....	59
<b>REPORT.....</b>	<b>69</b>
<b>1 INTRODUCTION .....</b>	<b>70</b>
1.1 Objectives .....	71
1.2 Basic Concepts.....	71
1.3 Structure of this Report .....	73
<b>2 CENTRAL EUROPEAN POLYCENTRIC SYSTEM.....</b>	<b>74</b>
2.1 Flows & interactions between Central European Metropolises .....	75
2.2 Embeddedness in Company & Research Networks.....	76
2.3 Intra-Metropolitan Polycentric Structures Compared .....	77
2.4 Polycentricity in Policy, Planning and Decision-making .....	78
<b>3 METROPOLISATION AND GROWTH OF CENTRAL EUROPEAN METROPOLISES .....</b>	<b>81</b>
3.1 Costs & Benefits of Urban Development.....	81
3.2 Preconditions of Metropolitan Growth .....	82
<b>4 CENTRAL EUROPEAN METROPOLITAN PROFILES .....</b>	<b>85</b>
4.1 Comparing POLYCE City Metropolitan Profiles .....	85
4.2 Similarities & Differences of POLYCE City Metropolitan Profiles .....	86
4.3 Competitiveness & Inclusion in POLYCE Metropolises.....	87
<b>5 METROPOLITAN REPORTS.....</b>	<b>88</b>
5.1 Metropolitan Report Bratislava .....	88
5.2 Metropolitan Report Budapest.....	93
5.3 Metropolitan Report Ljubljana .....	97
5.4 Metropolitan Report Praha .....	102
5.5 Metropolitan Report Wien .....	107
<b>6 METROPOLITAN AGENDAS.....</b>	<b>114</b>
6.1 Metropolitan Agenda Bratislava .....	114
6.2 Metropolitan Agenda Budapest .....	116
6.3 Metropolitan Agenda Ljubljana .....	117
6.4 Metropolitan Agenda Praha .....	119
6.5 Metropolitan Agenda Wien .....	120

<b>7</b>	<b>A CENTRAL EUROPEAN DEVELOPMENT AGENDA .....</b>	<b>123</b>
7.1	The European Context: Embedding POLYCE in European Policy.....	123
7.2	Comparative Analysis of POLYCE City Agendas .....	126
7.3	Common Activities of POLYCE Metropolises.....	127
7.4	Recommended Shared Activities .....	129
<b>8</b>	<b>CONCLUSIONS .....</b>	<b>131</b>
8.1	Strengthening Metropolitan Positioning and Cohesive Territorial Development .....	131
8.2	Strategic Recommendations .....	132
8.3	Options for Further Research .....	135
<b>9</b>	<b>FIGURES .....</b>	<b>138</b>
<b>10</b>	<b>MAPS .....</b>	<b>138</b>
<b>11</b>	<b>ANNEXES .....</b>	<b>139</b>
11.1	Metropolitan Profiles: Underlying Structure .....	139
11.2	Equilibrium Size of Metropolises .....	143
	POLYCE Final Conference.....	144
	Conference Participants .....	145
	Impressions from the Final Conference .....	146





# Preface

## Network of cities with a high quality of living



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Today, European cities such as Vienna cannot be viewed as isolated entities. They have established close contacts with the surrounding regions, have set up economic, social, and cultural networks with other urban centres worldwide, and are therefore faced with specific opportunities and challenges of urban change and growth.

In the framework of the EU research project POLYCE scientists have, for the first time, compared the cities of Bratislava, Budapest, Ljubljana, Prague, and Vienna that together form a lively network of Central European metropolises. The survey focused on their connections with their surrounding areas and the future potential for competition and cooperation with each other and other European metropolises. The central theme has been the good quality of living, which is above EU average in all five city regions. Great cooperation potentials have been identified in the knowledge-based economy, traffic and transport management, and governance of metropolitan regions. At the same time, topics such as regional transport connections, the integration of migrants, and the exchange of information between the five cities still have potential for development. Skills of the other cities' languages could also be improved.

Sustainable urban development, curtailing suburbanisation and reducing the dependence on cars have been identified as the greatest common challenges of all five metropolises. Improving governance processes in the framework of relevant urban and regional planning plays a central role in this context. The cities are interested in increasing the exchange of knowhow and jointly developing the best strategies. The City of Vienna makes valuable contributions, for example in the framework of the EU Strategy for the Danube region, the European region CENTROPE, in the Planning Community East (PGO), and in the City Environs Management Programme (SUM).

The five cities initiated the survey at hand in the European Observation Network for Territorial Development and Cohesion (ESPON). A consortium of Central European universities, headed by the Vienna University of Technology, has carried out the scientific work supported by EU funds.

I am very happy about the successful cooperation between European research and urban development policies, and think that the symbiosis of different viewpoints in theory and practice is highly profitable.

***Maria Vassilakou***

*Deputy Mayor*

*Executive City Councillor for Urban Planning, Traffic & Transport,  
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# Abbreviations

<b>CC</b>	Core City, synonymous with administrative boundaries of capital city
<b>CED-zone</b>	Central Europe - Danube Global Integration Zone
<b>GaWC</b>	Globalization and World Cities database
<b>GDP</b>	Gross Domestic Product
<b>GVA</b>	Gross Value Added
<b>ESDP</b>	European Spatial Development Plan
<b>ESPON</b>	European Observation Network for Territorial Development and Cohesion, European Programme Initiative
<b>ETC</b>	European Territorial Cooperation, European objective supporting cross-border, transnational and interregional cooperation
<b>EUROSTAT</b>	European Statistical Office
<b>EUSDR</b>	EU Strategy for the Danube Region
<b>FIRE</b>	Finance, Insurance, and Real Estate firm networks, as indicated in GaWC database
<b>FMA</b>	Functional Metropolitan Area, as defined in the POLYCE project via commuter flows
<b>FUA</b>	Functional Urban Area, spatial concept, as defined in ESPON 1.1.1
<b>ICT</b>	Information and Communication Technologies
<b>LUZ</b>	Large Urban Zone, spatial concept, as defined in Urban Audit
<b>MEGA</b>	Metropolitan Growth Area, spatial concept, as defined in ESPON 1.1.1
<b>MR</b>	Metropolitan Region, as defined in the POLYCE project via commuter flows
<b>NUTS</b>	Nomenclature of statistical units
<b>POLYCE</b>	Project acronym: 'Metropolisation and Polycentricity in Central Europe'
<b>TEN</b>	Trans-European Networks
<b>URBACT</b>	European programme promoting sustainable urban development



# Executive Summary

The following pages comprise the Executive Summary of the Final Report of POLYCE. It is to present the most important findings of the project in condensed form, allowing readers to obtain an overview of elaborations of this research. Texts written in italics are meant to give the reader more methodological background information about how to read the following section.

# Smart Metropolitan Development

## Introduction

POLYCE analyses five Central European capital cities and their functionally related surrounding areas: Bratislava, Budapest, Ljubljana, Praha, and Wien. The project emerged from the respective city administrations' wish to research the cities' future competitive and cooperative potentials both among each other and vis-à-vis other metropolises. A main goal was to conduct a comparative analysis of the five cities and their related surrounding areas in order to elaborate in-depth results on their specificities and commonalities. The objective was to draw an up-to-date picture of the preconditions for urban development in Central Europe.

Within this framework, the two analytical concepts of metropolisation and polycentricity came into play, as both are seen as drivers of specific paths of metropolitan development. The approach of POLYCE considered both concepts in the context of analysing the five Central European capitals, also trying to identify their mutual relations, and hence to what extent both can support sound and balanced metropolitan development.

## Terminology

The two analytical concepts of 'metropolisation' and 'polycentricity' provide the basis for defining objectives and research aims in POLYCE. Within the project, the two concepts are defined as follows:

*Metropolisation* is a process of urban restructuring that can be defined by specific aspects:

- a spatial concentration of (new) economic functions or population – the latter often caused by immigration (Friedmann, 1986 and 2002; Geyer, 2002)
- possession of important command and control functions and well-developed connectivity (Keeling, 1995)
- economic restructuring due to an increase of knowledge-intensive activities (Krätke, 2007)
- specialised functions are unequally allocated within a city or in a polycentric agglomeration (Kunzmann, 1996; Leroy, 2000; Sassen, 2002; Elissade, 2004)

*Polycentricity* describes the existence of more than one pole or node within a certain territory. The concept has several (interlinked) aspects:

- morphological polycentricity: hierarchies and structures of nodes according to their size and significance
- relational polycentricity: flows and interactions between nodes
- polycentricity in governance: mutual interests, considerations, inspiration, collaboration, complementarity in decision-making in and between the various nodes

## Policy Challenge

Both concepts are inevitably connected to the politically more common concepts of competitiveness and inclusion, which are often cited not only at the level of metropolitan policy, but also in European policy documents (cf. EC, 2010). Balancing both of these paradigms is considered crucial for what is called '*smart metropolitan development*'.

In recent years, the term '*smart*' has become a buzzword, although its definition is still quite unclear. While originally indicating a focus on economic activities related to information and communication technology, it must be extended when applied to urban development. From this broader spatial perspective (which indeed is closely linked to a policy perspective), '*smart places*' - as defined by the

European Commission in the EU 2020 Strategy (EC, 2010) - have to combine various functions, such as those related to knowledge and innovation, connectivity or governance. Thus becoming a 'smart city' implies the '[...] ambition of a city to improve its economic, social, and environmental standards and consequently its competitiveness in urban competition' (Giffinger et al., 2010, p. 304 f.). This of course underlines the importance of governance measures that integrate a variety of actors: from local inhabitants and economic actors to policymakers.

The main challenges of metropolitan development - which is also referred to in the EU 2020 Strategy (EC, 2010) – lie in achieving competitive and inclusive metropolitan development. Thus 'smart metropolitan development' indicates the ability of a metropolitan agglomeration to cope with both these challenges. But not only local facilities of endowment may be understood as potentials in this respect. Smart metropolitan development also covers the activities of self-decisive and independent citizens in terms of awareness and participation. It supports strengthening existing assets and fosters activating new potentials. Consequently, in POLYCE a 'smart metropolis' is understood as a functionally integrated metropolitan area where processes of both, i.e. competitive and inclusive development, take place – the important aspect being that a balance between these two aspects has to be steered by related governance approaches.

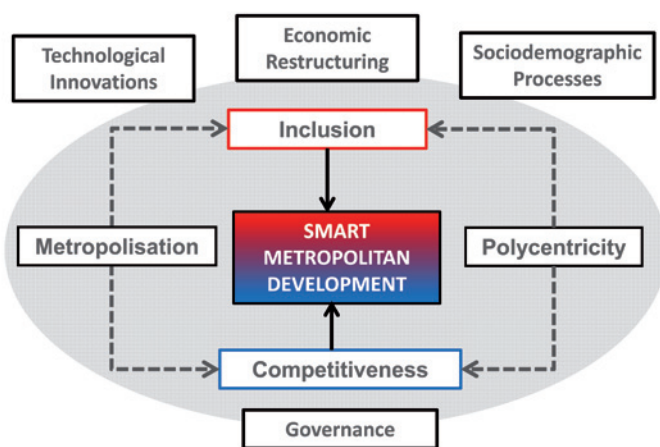


Figure 1: Understanding smart metropolitan development

## Recommendations for Smart Central European Metropolises

*In the following section, potential future activities of each metropolis are sketched in what is called 'metropolitan agendas'. General development paths are proposed for each metropolitan area first, while current challenges of the respective metropolis are shortly outlined afterwards. The agendas are meant as suggestions for promising future activities of the five Central European metropolises. Rather than comprehensive metropolitan strategies, they thus represent a structured collection of possible activities. They were developed in close collaboration with a set of relevant local and regional stakeholders in the five metropolises. Above all, the agendas build upon interactive discussions of the empirical project results with a number of selected stakeholders. Therefore the ideas presented inevitably embody a selective perspective. However, they originate from stakeholder discussions based on empirical project results and thus reflect the empirical analyses conducted over the course of the project.*

## **Bratislava's Metropolitan Agenda**

### **Vision**

**Metropolitan Bratislava should increase its competitiveness through a clear positioning based on knowledge-intensive activities in research and development clusters. At the same time, it needs improved cross-border governance approaches to realise a set of strategic activities supporting inclusive metropolitan development.**

### **Activities**

Bratislava should focus on strengthening the position and competitiveness of the metropolitan area by more intensely pushing knowledge-based activities, concentrating on relevant services and research and development clusters.

### **Challenges and barriers**

The central geographic position of the Bratislava metropolitan area within the Danube Region is an important potential which still has to be exploited. Planning approaches and related forms of governance, which have to involve the whole setting of urban and regional management, are needed to strengthen metropolitan competitiveness. The actors involved must focus cross-border management, the coordination of activities, common decision-making and other initiatives supporting a permanent exchange of information.

### **Smart metropolitan development**

Infrastructural and institutional development has a tendency towards being inclusive, while economic specialisation and image strategies strongly foster metropolitan competitiveness. Suggested environmental and governance activities must be understood as having an inclusive tendency only in the short run while yet being capable of improving the competitive performance of metropolitan Bratislava in the long term.

## **Budapest's Metropolitan Agenda**

### **Vision**

**Budapest's competitiveness should be enhanced by positioning the metropolitan area as a Danube Region metropolis. At the same time, it must not forget tackling a more balanced distribution of economic functions in the metropolitan area as a means to achieve territorial cohesion.**

### **Activities**

The underlying potentials of this approach are clearly identified by stakeholders and extend across several fields of action. The activities suggested cover a broad variety of measures ranging from image-related, infrastructural and governance activities to environmental issues.

### **Challenges and barriers**

Challenges lie in the administrative capital city's predominance in a rather monocentric metropolitan region with only few sub-centres and a heavy concentration of metropolitan functions in the core city. Infrastructural and governance measures softening this dominant situation are on top of the list, as they could guide metropolitan Budapest towards more inclusive development.

### **Smart metropolitan development**

Metropolitan planning approaches have to take regional potentials of surrounding areas into account even more, as they might support both the city's competitiveness within the Danube Region and, at the same time, more inclusive metropolitan development.



## Ljubljana's Metropolitan Agenda

### Vision

**Metropolitan Ljubljana should steer its development through specific activities in the economic sphere and promote its image as an attractive centre of education and research. Polycentric development must be strengthened to guarantee more territorially cohesive development.**

### Activities

Measures should be taken to improve the functional relations within the metropolitan area. This also includes activities to achieve a more balanced distribution of metropolitan functions at a regional level. Ljubljana's importance as a European middle-sized city has led to a concentration of specific functions in the core city inducing negative side effects, which must be tackled by policymakers to prevent the city from losing its high living standards. Furthermore, Ljubljana should strive for a more integrated sustainable transport system as well as for an improvement of metropolitan embeddedness in the international context. Additionally, the peripheral location within the Central European Danube Region has to be compensated by improving transport connections to the other Central European metropolises on the Danube.

### Challenges and barriers

A main challenge for the city lies in its peripheral location within the Central European Danube zone. Consequently, the strategic orientation of the Ljubljana metropolitan region focuses both on the Alpine and Mediterranean macro-regions as well as on the Danubian and Central European territories.

### Smart metropolitan development

Metropolitan governance approaches are needed that foster the participation of the local population in decision-making processes, potentially leading to greater social cohesion. At the same time, the variety of economic activities might help to strengthen Ljubljana's competitive position. Governance efforts like institutionalised cooperation and harmonised funding are thus very important for smart development that balances inclusive and competitive development.

## Praha's Metropolitan Agenda

### Vision

**'Knowledge' is a key term in Praha's metropolitan development, since it can foster competitiveness and inclusion at the same time. Further developing metropolitan Praha's cultural image is an objective, as it can serve as a driver of both economic prosperity and social cohesion.**

### Activities

Knowledge exchange is an important goal for metropolitan Praha at several levels. Cooperation must be intensified on the regional and Central European scale to learn from others, share own experiences and obtain insights into areas where metropolitan policy is amendable. Knowledge exchange should also be fostered between relevant actors at a regional level. In this context, Central Bohemia's common cultural values could be actively integrated as a basis for developing a metropolitan image for the city of Praha. These values must be openly discussed to ensure the inclusive character by strengthening a common metropolitan identity.

### Challenges and barriers

The greatest challenge for Praha lies in the lack of existing cooperation at a regional level. This will require innovative ways to overcome existing, inherited institutional barriers to cooperation, specifically between the city and the regional level.

### **Smart metropolitan development**

An explicit strategy to foster knowledge exchange at several levels may be expected to enhance not only metropolitan competitiveness but might have inclusive effects as well. Eliminating inefficiencies and supporting innovative approaches in metropolitan planning will leave space for integrating a broader group of actors.

## **Wien's Metropolitan Agenda**

### **Vision**

**Metropolitan Wien is challenged to find the right mixture of strategic activities to secure its European competitiveness and its attractiveness for residents at the same time. This approach also includes territorial cohesion at the regional level. Based on a participatory approach, the position and the function of the city within the Danube Region should be defined very clearly.**

### **Activities**

The improvement of transport accessibility at regional level should be a core focus of planning activities in Wien, specifically with regard to the improvement of regional public transport infrastructure. Wien's vanguard position in terms of environmental development comes into play as a supporter of both economic competitiveness and sustainable metropolitan development. The city should furthermore strive to strengthen its image as a green city (e.g. by expanding the focus on environmental technologies). Governance approaches explicitly integrating social groups who are questioning this future development path must be initiated. Learning processes, implying common decision-making about the allocation of specific metropolitan functions, play a decisive role in this respect. Knowledge exchange at joint events should be organised periodically to enhance relationships between the core city and smaller centres and to clarify the role of Wien in an urban network within the Danube Region.

### **Challenges and barriers**

A main challenge lies in the current lack of an integrated urban region in institutional and transport-related matters, but also relating to the allocation of metropolitan functions in the region. Here measures should be taken to overcome these barriers in order to ensure territorially cohesive development.

### **Smart metropolitan development**

Strategies to foster knowledge exchange can be expected to have predominantly inclusive effects, while the strengthening of Wien's image as a green, environmentally friendly city should also contribute to urban competitiveness by sharpening the image of the city.

## **Central European Agenda**

*The following section sketches potential future activities in the Central European Danube zone. They are meant as suggestions for promising future activities of the five Central European metropolises. Rather than comprehensive strategies, they thus represent a structured collection of possible activities. Like the 'metropolitan agendas' above, they were developed in close collaboration with a set of relevant local and regional stakeholders in the five metropolises. Above all, the agenda builds upon interactive discussions of the empirical project results with a number of selected stakeholders. Therefore the ideas presented inevitably embody a selective perspective. However, they originate from stakeholder discussions based on empirical project results and thus reflect the empirical analyses conducted over the course of the project.*

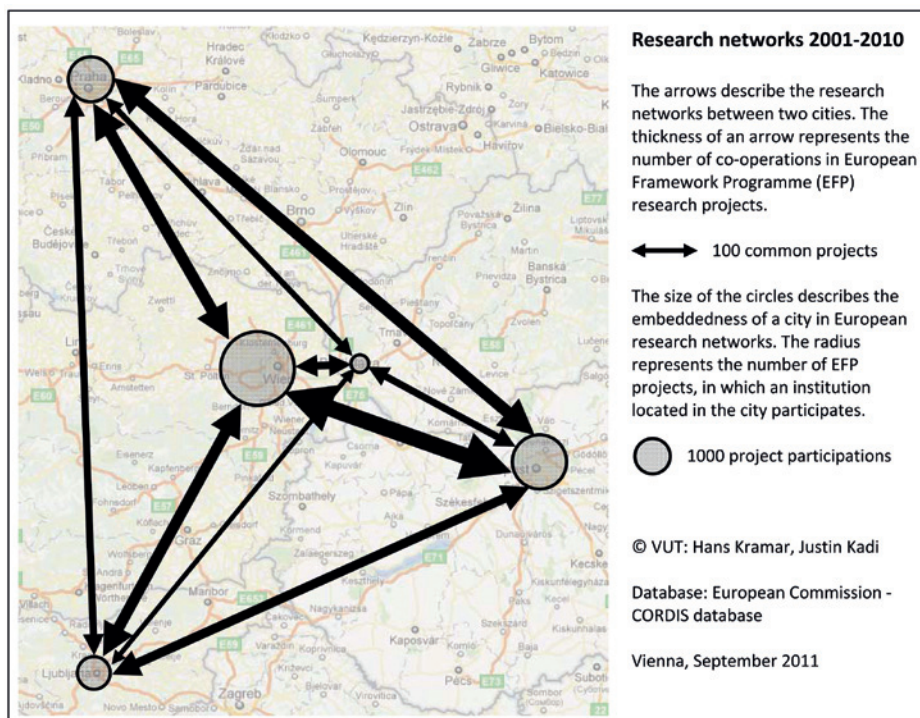
**Common strategic activities of the five POLYCE metropolises should strengthen the position of each metropolis and improve different forms of polycentric relations of the Central European Danube zone. Common strategic endeavours of the POLYCE metropolises have to focus on aspects of territorial cohesion within the Central European Danube zone explicitly. Enhancing polycentric relations might help to manage processes of metropolisation and related metropolitan growth.**

- Cooperative potentials and assets among the POLYCE metropolises are particularly strong in the fields of knowledge economy, transport management and metropolitan governance.
- Relational capital (e.g. language skills, new administrative and strategic capacity) needs to be improved among Central European stakeholders. This includes (1) improving contacts, and accessibility to information, (2) transforming information into valuable knowledge about partner metropolises as output of continuous and systematic contact facilities, (3) improving common lobbying for interests of Central European Danube zone partners within the EU.
- Discussions show that all five metropolises try to position themselves as hubs towards outside neighbouring regions and countries in their own geographical context. Therefore territorially cohesive development within the Central European Danube zone needs new common strategic endeavours that are not limited to promoting activities improving accessibility through infrastructure investments.
- Historical, social and economic ties of the five metropolises should be a proper base for further cooperation between public institutions, civil society and private businesses. These relations can be extended and deepened by various cross-border networking projects, which can well be subsidised within existing EU Regional Policy programmes: programmes under the 'European Territorial Cooperation' (ETC) objective, the interregional cooperation programme aiming at fostering all kinds of city networks; the URBACT II programme, which is specifically directed at information exchange between cities; the transnational cooperation programme CENTRAL EUROPE“, which covers not only the five cities but also their hinterlands.
- Since this programme area also includes Poland, eastern and southern parts of Germany and northern Italy, this programme places the POLYCE metropolises in a wider spatial context, connecting them to cities such as Berlin, Warsaw, Munich and Milan, which are highly relevant partners for the region.
- Cooperative strategic activities should take the European Strategy for the Danube Region into account. Together, the five metropolises can play an important role in steering the further development paths of this strategy. Promising approaches to act as initiators and important drivers of specific issues in the Danube Region already exist but need to be well coordinated between all five metropolises.

**Considering polycentricity, each of the five POLYCE metropolises stands out in its own way, making each an important actor in the Central European urban network. Nevertheless, some still have to improve their inner polycentric structure, strengthen their ties within European economic or research networks or improve their connectivity. Different kinds of flows, networks and cooperation ventures between cities might stimulate and strengthen each other. Consequently, enhancing political, economic and social networks via related governance measures will definitely improve the conditions for all kinds of interaction between the POLYCE metropolises.**

- The urban system of Wien is by far the most functionally integrated among the five metropolises. The city of Bratislava is best integrated into the balanced system of small and medium-sized neighbouring towns, while Ljubljana dominates the urban system of its wider metropolitan region. Budapest, Wien and Praha play a far more dominant role in their metropolitan regions.
- Commuting data clearly demonstrate the difference between the functionally integrated urban system of Wien and urban systems in former communist countries, which are dominated by capital cities through unidirectional commuting to the core city and hierarchical subordination of smaller centres in the surrounding metropolitan area.

- Strong (economic) ties can be recognised between Budapest, Praha and Wien, with all three metropolises also being highly integrated into wider European and global networks.
- Although central control functions are to be found in Budapest, Praha and Wien, Wien stands out as hosting more high-ranking firm and company locations and participating in more European research cooperation ventures than the other cities in the region. Praha, however, ranks first concerning the number of FIRE (finance, insurance, real estate) company relations within the region and also shows strong links to other European or global cities.
- Considering the different city sizes, Bratislava performs quite well in company networks within the Central European Danube region as well as on the global scale. Ljubljana plays a stronger role in European research networks.
- Inter-city relations in terms of company and research networks are significantly influenced by travel times and ethnic ties, pointing to the continuing influence of transport accessibility and historical relations on economic activities.



Map 1: Research networks between POLYCE metropolises (2001-2010)

The Central European metropolises analysed have one outstanding commonality: they all provide exceptional living conditions. Common initiatives must take this aspect into account, particularly if processes of metropolisation imply aspects of growth that might threaten these remarkable preconditions. Furthermore, it becomes clear that each of the five can play a different, maybe decisive role as a generator of competitiveness of the Central European urban system in a wider spatial context.

- The analysis shows that the five metropolitan areas investigated all perform well in terms of living conditions. Significantly, it is the only metropolitan characteristic where all score above average within the sample of all 50 European cities compared.
- Overall, only Praha and Wien outdo the average of the cities selected. Among the five POLYCE metropolitan areas, they do best in terms of economic development. Still, they benefit more from another well-performing characteristic, i.e. highly rated living conditions.

At the same time, both suffer from weaknesses in demography and education as well as low ethnic diversity – all subsumed under the ‘People’ category.

- Conversely, Bratislava and Ljubljana perform notably well in the field of ‘People’ – a fact that puts these two metropolises in an important position within the five POLYCE cities, especially with respect to approaches fostering education and ethnic diversity.
- Wien’s profile shows its important position as a role model for environmental concerns. Although other Northern and Western European cities outperform Wien in this respect, the metropolitan area obviously shows some valuable conditions among its Central European partners. The same is true for ‘Mobility’ (subsuming public transport, accessibility and the like), where Wien’s position is at least equally important.

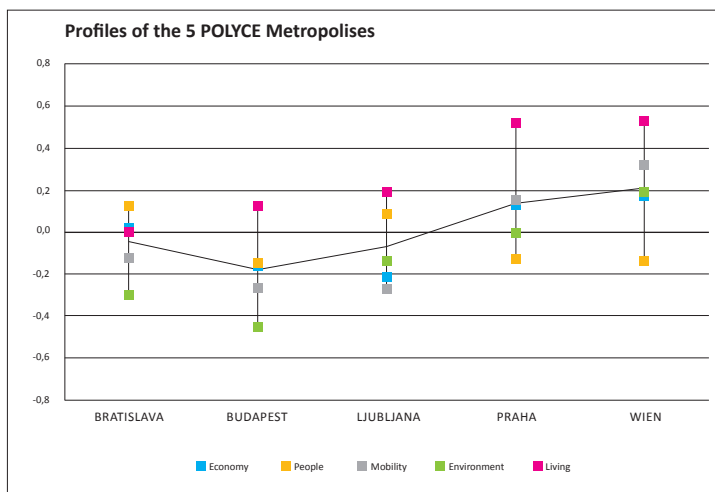


Figure 2: Profiles of the five POLYCE metropolises

**All five metropolises face different challenges concerning population growth, when recent preconditions of the metropolitan areas are taken into account. Praha, and to a lesser degree also Wien and Budapest, should elaborate strategies and specific measures for providing a sound spatial structure in the functional metropolitan area. Conversely, Bratislava, and to a lesser degree Ljubljana, harbour potential in their preconditions for population growth.** Underlying empirical results depict those factors as having positive and negative impacts on coping with urban growth and stress the importance of a sound metropolitan planning strategy:

- Land rent, social distress associated with urban life as well as urban sprawl indicate the most important urban costs and thus negatively influence population growth. Hence these factors are crucial for urban development in the future.
- Urban amenities indicating metropolitan attractiveness, industrial diversity, relational polycentricity in knowledge-intensive activities (research networks) and metropolitan functions (power functions in the political, economic and cultural sphere) all have a clear positive impact on the size of urban agglomerations.
- The identification of the effects of these factors demonstrates the relevance of a sound spatial structure, in the form of external networking and the reduction of sprawl, for metropolises.
- Linked to a sound metropolitan and planning strategy with corresponding projects, these factors generate greater urban benefits and efficiency while at the same time reducing the costs associated with physical size. Developing urban quality, urban amenities and attracting human capital-rich professionals is called for to generate enhanced attractiveness and competitiveness, once again supporting a wider, more diversified urban realm.

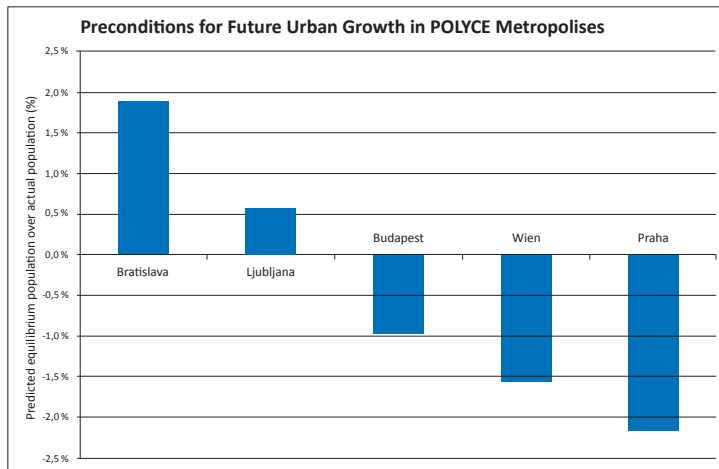


Figure 3: Preconditions for further urban growth in POLYCE metropolises

## Need for Further Research

**Investigating relational polycentricity:** research can be deepened at the level of Central European functional interrelations. Cooperation ventures and networks between the five POLYCE metropolises and with other European or global urban nodes require extended exploration, particularly concerning economic and social ties.

**The role of medium-sized cities for cohesive development:** as this research was based on an investigation of five big Central European metropolises, questions regarding the importance of medium-sized urban agglomerations were not touched upon. Researching their role in polycentric networks of the major metropolises seems to be of importance, as they presumably have a decisive stake in polycentric and, consequently, cohesive development.

**Delimiting metropolitan areas:** the spatial distribution of population and commuter relations is only a starting-point in defining functionally integrated metropolitan areas. As the need for such definitions was urged several times by different stakeholders, agreeing on a common approach to delimit metropolitan areas should be an instant task.

**Governance debates in targeted analyses:** the integration of local and regional experts into ESPON's targeted analyses takes account of the importance attributed to communicative approaches in planning. This recognition is highly valued, although the approach is in some respects too limited. The role of city administrations as project partners is not always clear enough, and while the general claim for integrating other stakeholders is welcome, the timeframe for implementing such methodological approaches is not sufficient. Consequently, governance debates should be conducted, discussing the trade-off between short-term results and in-depth analyses.



# Inteligentní metropolitní rozvoj

## Úvod

POLYCE provedla analýzu pěti středoevropských hlavních měst a s nimi funkčně spojených přilehlých oblastí: Bratislava, Budapešť, Lublaň, Praha a Vídeň. Projekt vychází z přání samosprávy uvedených měst provést průzkum budoucího potenciálu měst v oblasti konkurenceschopnosti a spolupráce jednak mezi nimi samotnými tak i mezi nimi a dalšími hlavními městy. Hlavním cílem bylo provést komparativní analýzu těchto pěti měst a příslušných přilehlých území a získat podrobné údaje o tom, co mají společného a v čem se liší. Mělo to napomoci získat aktuální obraz předpokladů rozvoje měst ve střední Evropě.

V rámci této práce se pracovalo se dvěma analytickými koncepcemi – s koncepcí metropolizace a polycentricity, jelikož obě jsou chápány jako hnací motory specifických cest metropolitního rozvoje. Obě koncepce byly při analýze uvedených pěti hlavních středoevropských měst vzal projekt POLYCE v rámci zvoleného přístupu do úvahy a také se pokusil určit jejich vzájemný vztah – tedy do jaké míry může polycentricity a metropolizace podpořit zdravý a vyvážený metropolitní rozvoj.

## Terminologie

Obě analytické koncepce 'metropolizace' a 'polycentricity' tvoří základ pro definování cílů a zaměření výzkumu POLYCE. V rámci projektu jsou tyto dvě koncepce definovány takto:

*Metropolizace* je proces městské restrukturalizace, kterou lze definovat pomocí specifických aspektů:

- Prostorová koncentrace (nových) ekonomických funkcí nebo obyvatelstva – přičemž k tomu druhému dochází často v důsledku přistěhovalectví (Friedmann, 1986 a 2002; Geyer, 2002)
- K dispozici jsou důležité vedoucí a řídicí funkce a také dobře rozvinuté propojení (Keeling, 1995)
- Ekonomická restrukturalizace díky nárůstu činností náročných na intenzitu znalostí (Krätke, 2007)
- Specializované funkce jsou rozmístěny nerovnoměrně ve městě nebo polycentrických aglomeracích (Kunzmann, 1996; Leroy, 2000; Sassen, 2002; Elissade, 2004)

*Polycentricita* znamená existenci více než jednoho pólu nebo uzlu na určitém území. Tato koncepce se vyznačuje několika (vzájemně souvisejícími) aspekty:

- Morfologická polycentricita: hierarchie a struktury uzlů podle jejich velikosti a významu.
- Vztahová polycentricita: toky a interakce mezi uzly
- Polycentricita v řízení: sdílené zájmy, motivy, inspirace, spolupráce, vzájemné doplňování se v rozhodovacím procesu v jednotlivých uzlech a mezi nimi.

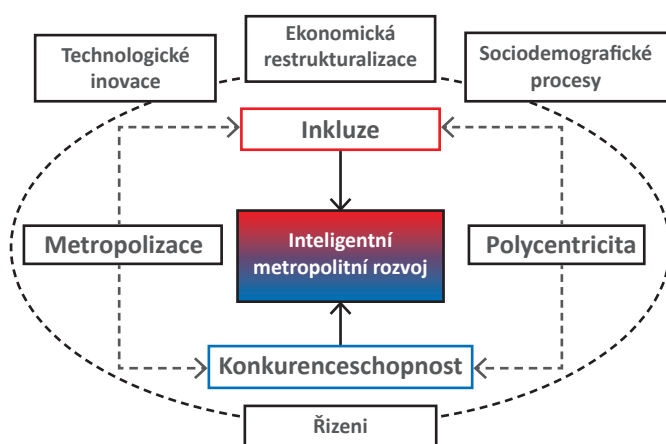
## Výzvy pro politiky

Obě koncepce jsou nevyhnutelně spojeny s politicky běžnějšími pojmy konkurenceschopnost a inkluze, jež se často zmiňují nejen na úrovni metropolitní politiky, ale rovněž v politických dokumentech evropských (cf. EC, 2010). Předpokládáme, že vyrovnanost těchto dvou pojetí je klíčovým faktorem pro to, co se nazývá "inteligentním metropolitním rozvojem".

Výraz 'smart' – chytrý, inteligentní – se v posledních letech stal často skloňovaným slovem, ačkoliv jeho definice je stále dosti nejasná. Původně naznačoval zaměření na hospodářské činnosti spjaté s informačními a komunikačními technologiemi, avšak pokud se aplikuje na městský rozvoj, je zapotřebí

jeho vymezení rozšířit. Z této širší prostorové perspektivy (jež je opravdu úzce spjatá s perspektivou politickou) *‘smart places - inteligentní místa’* – dle definice Evropské komise ve Strategii EU 2020 ( EU 2020 Strategy, EC, 2010) – musí kombinovat více funkcí, jako například funkce spojené s vědomostmi a inovací, konektivitou nebo vedením. Být *“inteligentním městem”* dále znamená, že “[...] město má ambici zlepšit svoji ekonomickou, sociální a environmentální úroveň a v důsledku toho svou konkurenceschopnost v rámci měst” (Giffinger et al., 2010, str.304 f.). Toto samozřejmě zdůrazňuje důležitost opatření v oblasti vedení, jež sjednocují celou řadu aktérů: od místního obyvatelstva a ekonomických subjektů až po ty, kteří vytvářejí politiku.

Hlavními výzvami pro metropolitní rozvoj – na něž také odkazuje Strategie EU 2020 (EU 2020 Strategy - EC, 2010) – jsou rozvoj konkurenceschopnosti a inkluzivní metropolitní rozvoj. Takže *‘inteligentní metropolitní rozvoj’* znamená schopnost metropolitní aglomerace vyrovnat se s oběma uvedenými výzvami. Ovšem jakožto potenciál v tomto ohledu nelze chápat pouze místní dosažitelnost dotací. Inteligentní metropolitní rozvoj v sobě rovněž zahrnuje činnosti nezávislých občanů, kteří se sami rozhodují, pokud jde o jejich uvědomělost a začlenění se do celého procesu. Podporuje to posílení existujících základních prostředků a aktivaci nového potenciálu. Proto POLYCE chápe *“inteligentní metropoli”* jako funkčně integrované metropolitní území, kde probíhají oba procesy – rozvoj konkurenceschopnosti a inkluzivní rozvoj – přičemž důležitým aspektem je skutečnost, že rovnováha mezi oběma musí být řízena pomocí odpovídajících přístupů vedení.



Obrázek 1: Interpretace inteligentního metropolitního rozvoje- insert the traslated chart

## Doporučení pro inteligentní střeoevropské metropole

V následující sekci jsou možné budoucí činnosti každé metropole načrtnuty v *“programu metropole”*. Nejdříve jsou pro každou metropolitní oblast navrženy obecné cesty rozvoje, a pak jsou krátce nastíněny současné výzvy, stojící před jednotlivými metropolemi. Uvedené programy představují návrhy perspektivních budoucích aktivit pro uvedených pět střeoevropských hlavních měst. Spíše než o ucelené metropolitní strategie se tedy jedná o strukturovaný soubor možných činností. Byly vytvořeny v úzké spolupráci se skupinami důležitých místních a regionálních subjektů z uvedených pěti hlavních měst. Programy jsou především vystavěny na interaktivních diskusích o empirických výsledcích projektů s celou řadou vybraných aktérů. Předložené návrhy tudíž nevyhnutelně představují selektivní hledisko. Pocházejí však z diskuse zainteresovaných stran o empirických výsledcích projektů, a proto odrážejí empirické analýzy, provedené během projektu.



## Metropolitní program pro Bratislavu

### Vize

Metropolitní Bratislava by měla zvýšit svou konkurenceschopnost pomocí jasného vyprofilování, založeného na činnostech stojících na intenzivních znalostech v klastrech vědy a výzkumu. Zároveň potřebuje zlepšené přístupy přeshraničního vedení, aby mohla realizovat soubor strategických činností na podporu inkluzivního metropolitního rozvoje.

### Činnosti

Bratislava by se měla zaměřit na posílení pozice a konkurenceschopnosti metropolitní oblasti pomocí intenzivnějšího prosazování činností vycházejících ze znalostí a měla by se soustředit na důležité služby a klastry výzkumu a vývoje.

### Výzvy a překážky

Geografická poloha bratislavské metropolitní oblasti ve středu regionu kolem řeky Dunaje představuje důležitý potenciál, který zatím čeká na své využití. Je zapotřebí plánovat přístupy a s nimi spjaté formy vedení, aby se posílila metropolitní konkurenceschopnost, což zahrnuje celé nastavení městského a regionálního řízení. Zainteresovaní aktéři se musí zaměřit na přeshraniční management, koordinaci činností, společné rozhodování a další iniciativy, které podporují neustálou výměnu informací.

### Inteligentní metropolitní rozvoj

Rozvoj infrastruktury a institucí má tendenci být inkluzivní, zatímco ekonomická specializace a strategie na vytváření image silně podporují metropolitní konkurenceschopnost. Navrhované činnosti v oblasti správy a životního prostředí je třeba chápat tak, že budou mít inkluzivní tendenci pouze z krátkodobého hlediska, a že budou mít schopnost zlepšit výkonnost metropolitní Bratislavy v oblasti konkurenceschopnosti z hlediska dlouhodobého.

## Metropolitní program pro Budapešť

### Vize

Konkurenceschopnost Budapešti by se měla zlepšit pomocí vyprofilování metropolitní oblasti jakožto metropole regionu v oblasti Dunaje. Zároveň je třeba nezapomínat na vyváženější rozložení ekonomických funkcí v metropolitní oblasti, jež je prostředkem k dosažení územní soudržnosti.

### Činnosti

Základní potenciál tohoto přístupu zainteresované strany dobře vnímají. Pokrývá několik oblastí činností. Navrhované aktivity zahrnují celou řadu témat, od vytváření image, přes činnosti v oblasti infrastruktury a správy až k environmentálním tématům.

### Výzvy a překážky

Výzvu tvoří převaha administrativního hlavního města v dosud převážně monocentrickém metropolitním regionu pouze s omezeným množstvím podcenter a výrazným soustředěním metropolitních funkcí v jádrovém městě. Opatření v oblasti infrastruktury a správy, jež by zmírnila toto dominantní postavení, jsou na hlavních místech seznamu opatření, neboť by mohla vést Budapešť k více inkluzivnímu rozvoji.

### Inteligentní metropolitní rozvoj

Přístupy k metropolitnímu plánování musí vzít více do úvahy regionální potenciál přilehlých území, jelikož by tato území mohla být oporou jak pro konkurenceschopnost města v Podunajském regionu, tak zároveň i pro inkluzivnější metropolitní rozvoj.

## Metropolitní program pro Lublaň

### Vize

**Metropolitní Lublaň by měla svůj rozvoj řídit prostřednictvím specifických činností v ekonomické sféře a propagovat svoji image jakožto atraktivního střediska vzdělávání a výzkumu. Polycentrický rozvoj je třeba posílit, aby se zaručil územně soudržnější rozvoj.**

### Činnosti

Měla by se učinit opatření, aby se zlepšily funkční vztahy v metropolitní oblasti. Patří mezi ně rovněž činnosti vedoucí k dosažení rovnoměrnějšího rozdělení metropolitních funkcí na regionální úrovni. Význam Lublaně jakožto středně velkého evropského města vedl k soustředění specifických funkcí v hlavním městě včetně negativních vedlejších vlivů, které musí tvořit součást programu činitelů, vytvářejících politiku, aby město nepřišlo o svou vysokou životní úroveň. Dále by se měla Lublaň snažit vytvořit integrovanější udržitelný dopravní systém a rovněž zlepšit metropolitní začlenění do mezinárodního kontextu. Navíc je třeba okrajovou polohu v rámci středoevropského Podunajského regionu kompenzovat zlepšením dopravního spojení s dalšími hlavními městy středoevropského Podunajského regionu.

### Výzvy a překážky

Hlavní výzva pro toto město spočívá v jeho okrajové poloze v rámci středoevropské Podunajské oblasti. Zdá se, že neexistuje jednotný názor na to, zda by město mělo orientovat své aktivity na střední Evropu, Balkán nebo Středomoří.

### Inteligentní metropolitní rozvoj

Jsou zapotřebí přístupy k metropolitnímu vedení, jež podporují účast místního obyvatelstva na rozhodovacích procesech, která by mohla vést ke větší sociální soudržnosti. Rozrůznění ekonomických aktivit by zároveň mohlo napomoci zlepšení konkurenční pozice Lublaně. Úsilí v oblasti vedení, jako je institucionalizovaná spolupráce a harmonizované financování, je tedy velice důležité pro inteligentní rozvoj, který vyrovnává inkluzivní rozvoj a rozvoj konkurenceschopnosti.

## Metropolitní program pro Prahu

### Vize

**‘Znalost’ je klíčové slovo pro metropolitní rozvoj Prahy; rozvoj znalostní ekonomiky může posilovat konkurenceschopnost i inkluzi současně. Další rozvoj kulturní image metropolitní Prahy může být hnacím motorem jak ekonomické prosperity, tak i sociální soudržnosti.**

### Činnosti

Důležitým cílem metropolitní Prahy je výměna vědomostí na několika úrovních. Je třeba zintenzívnit spolupráci v regionálním a středoevropském měřítku a učit se od ostatních, sdílet vlastní zkušenosti a získat vhled do těch oblastí, ve kterých lze metropolitní politiku zlepšit. Měla by se rovněž podporovat výměna vědomostí mezi důležitými aktéry na regionální úrovni. V rámci tohoto kontextu by se měly aktivně začleňovat společné středočeské kulturní hodnoty jakožto základ rozvoje metropolitní image města Prahy. O těchto hodnotách je třeba otevřeně diskutovat, aby se zajistil inkluzivní charakter pomocí posílení společné metropolitní identity.

### Výzvy a překážky

Největší výzvu pro Prahu představuje nedostatek existující spolupráce na regionální úrovni. To bude vyžadovat inovativní cesty, vedoucí k překonání současných zděděných institucionálních bariér spolupráce, zvláště mezi městem a regionální úrovní.

### **Inteligentní metropolitní rozvoj**

Lze očekávat, že jasná strategie podpory výměny znalostí na několika úrovních zvýší nejen metropolitní konkurenceschopnost, ale mohla by mít rovněž inkluzivní dopady. Odstranění neefektivnosti a podpora inovativních přístupů v metropolitním plánování vytvoří prostor pro integraci širší skupiny aktérů.

## **Metropolitní program pro Vídeň**

### **Vize**

**Metropolitní Vídeň stojí před výzvou nalézt směsici strategických aktivit, které zajistí její evropskou konkurenceschopnost a zároveň i atraktivitu pro její obyvatele. Tento přístup rovněž zahrnuje teritoriální soudržnost na regionální úrovni. Postavení a funkce města v rámci Podunajského regionu by se mělo velice jasně definovat na základě participativního přístupu.**

### **Činnosti**

Ústředním bodem zaměření plánovacích činností ve Vídni by mělo být zlepšení dopravní dostupnosti na regionální úrovni, zvláště pokud jde o zlepšení infrastruktury regionální veřejné dopravy. Čelní postavení Vídně v oblasti environmentálního rozvoje hraje podpůrnou roli jak při rozvoji ekonomické konkurenceschopnosti tak i udržitelného metropolitního rozvoje. Město by se mělo dále snažit posilovat svoji image zeleného města (například rozšířením svého zaměření na environmentální technologie). Je třeba iniciovat přístupy vedení, jež jednoznačně integrují sociální skupiny, které o této cestě k budoucímu rozvoji pochybují. Procesy učení, z nichž plyne společné rozhodování o přidělování specifických metropolitních funkcí, hrají v této oblasti rozhodující roli. Měly by se pravidelně organizovat společné akce na výměnu znalostí, aby se zlepšil vztah mezi samotným městem a menšími středisky, a aby se vyjasnila role Vídně v síti měst v Podunajském regionu.

### **Výzvy a překážky**

Hlavní výzvy představují současné nedostatky integrovaného městského regionu v institucionální a dopravní sféře, ale také v oblasti přidělování metropolitních funkcí v regionu. Měla by se učinit opatření na překonání těchto překážek, aby se zajistila soudržnost při rozvoji oblasti.

### **Inteligentní metropolitní rozvoj**

Lze očekávat, že strategie podporující výměnu znalostí budou mít převážně inkluzivní účinky, zatímco posílení image Vídně jakožto zeleného města šetrného k životnímu prostředí by mělo rovněž přispět ke konkurenceschopnosti města, neboť se image Vídně více zvýrazní.

## **Program pro Střední Evropu**

*V následující sekci jsou nastíněny možné budoucí činnosti Podunajské oblasti ve střední Evropě. Jedná se o návrhy přínosných budoucích činností pro pět střeoevropských metropolí. Spíše než o komplexní strategie se jedná o strukturovaný soubor možných aktivit. Podobně jako výše uvedené "metropolitní programy" byly vytvořeny v úzké spolupráci se skupinou hlavních místních a regionálních aktérů z uvedených pěti metropolí. Spíše než o ucelené metropolitní strategie se tedy jedná o strukturovaný soubor možných činností. Byly vytvořeny v úzké spolupráci se skupinami důležitých místních a regionálních subjektů z uvedených pěti hlavních měst. Programy jsou především vystavěny na interaktivních diskusích o empirických výsledcích projektů s celou řadou vybraných aktérů. Předložené návrhy tudíž nevyhnutelně představují selektivní hledisko. Pocházejí však z diskuse zainteresovaných stran o empirických výsledcích projektů, a proto odrážejí empirické analýzy, provedené během projektu.*

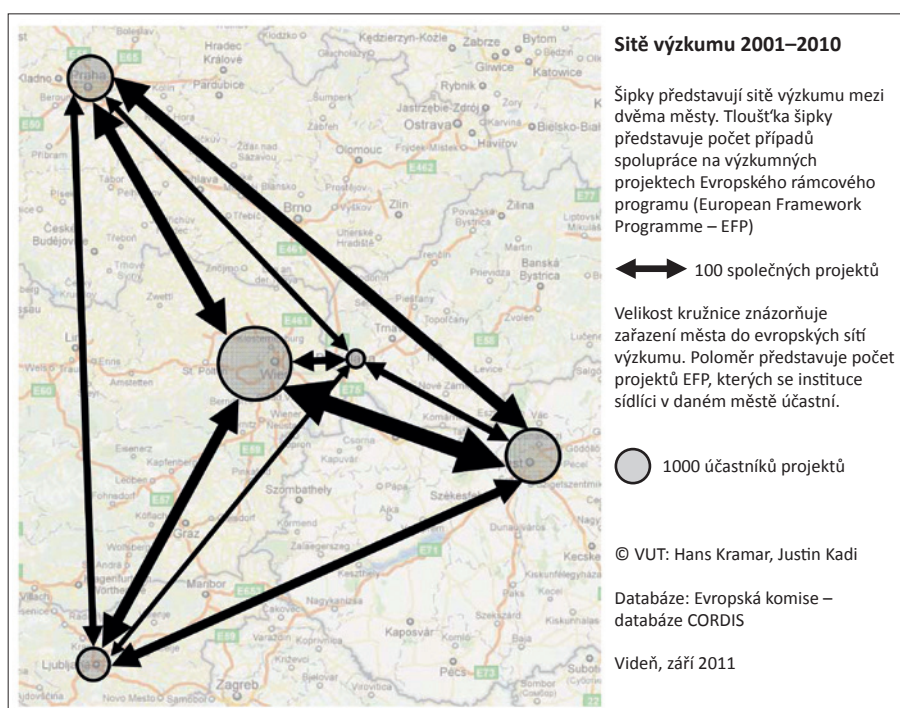
**Společné strategické činnosti pěti metropolí POLYCE by měly posílit pozici každé metropole a zlepšit různé formy polycentrických vztahů střeoevropské podunajské zóny. Společné strategické snahy metropolí POLYCE se musí výslovně zaměřit na aspekty územní soudržnosti v rámci střeoevropské / podunajské zóny. Zlepšení polycentrických vztahů by mohlo napomoci při ovlivňování / managementu procesů metropolizace a s ní spojeného metropolitního růstu.**

- Možnosti a výhody spolupráce mezi metropolemi POLYCE jsou zvláště silné na poli znalostní ekonomiky, managementu dopravy a metropolitní správy.
- Vztahový kapitál (např. jazykové znalosti, nová správní a strategická kapacita) mezi hlavními střeoevropskými aktéry je potřeba zlepšit. To znamená (1) zlepšit kontakty a přístup k informacím, (2) transformovat informace do cenných znalostí o partnerských metropolích pomocí neustálých a systematických kontaktních možností, (3) zlepšit společný lobbying za zájmy partnerů ze střeoevropské podunajské zóny v rámci EU.
- Diskuse ukázaly, že všech pět hlavních měst se ve svém vlastním geografickém kontextu snaží nalézt svoji pozici vůči sousedním regionům a zemím. Územně soudržný rozvoj ve střeoevropské podunajské zóně ale potřebuje nové společné strategické snahy, které podporují nejen činnosti vedoucí ke zlepšení přístupnosti pomocí investic do infrastruktury.
- Historické, sociální a ekonomické vazby uvedených pěti metropolí by měly být dostatečným základem pro další spolupráci mezi veřejnými institucemi, občanskou společností a soukromým podnikáním. Tyto vztahy lze rozšířit a prohloubit pomocí různých přeshraničních propojovacích projektů, které mohou být podporovány v rámci současných programů EU v oblasti regionální politiky: programy v oblasti "Evropské územní spolupráce" (ETC), meziregionálním programem spolupráce, cíleným na podporu různých typů městských sítí; program URBACT II, který je zvláště zaměřen na výměnu informací o městech; program transnacionální spolupráce "Střední Evropa", zaměřený vedle uvedených metropolí také na jejich zázemí.
- Vzhledem k tomu, že oblast tohoto programu rovněž zahrnuje Polsko, východní a jižní části Německa a sever Itálie, klade tento program metropole POLYCE do širšího prostorového kontextu a spojuje je s městy jako Berlín, Varšava, Mnichov a Milán, jež jsou pro střeoevropský region vysoce důležitými partnery.
- Strategické činnosti spolupráce by měly brát v úvahu Evropskou strategii pro Podunajský region. Všech pět metropolí může hrát společně důležitou roli při řízení dalších cest rozvoje této strategie. Slibná snaha hrát roli iniciátorů a důležitých hnacích motorů v některých specifických oblastech podunajského regionu již existuje, ovšem je třeba ji mezi uvedenými pěti městy dobře koordinovat.

**Pokud jde o polycentricitu, všech pět měst POLYCE určitým způsobem vyniká a každé z nich tvoří důležitý článek v síti střeoevropských měst. Nicméně některé z nich musí ještě zlepšit svou vnitřní polycentrickou strukturu, posílit své spojení s evropskými ekonomickými nebo výzkumnými sítěmi či zdokonalit svou konektivitu. Nejrůznější toky, síť a spolupráce mezi městy je mohou navzájem stimulovat a posilovat. Zlepšení politických, ekonomických a sociálních sítí pomocí patřičných opatření v oblasti vedení pak následně zcela jistě vytvoří lepší podmínky pro všechny druhy interakcí mezi městy POLYCE.**

- Vídeňský městský systém je z hlediska fungování zdaleka nejvíce integrován ze všech uvedených metropolí. Dvě menší města, Bratislava a Lublaň, jsou lépe včleněna do vyrovnaného systému malých a středně velkých okolních měst. Budapešť, Vídeň a Praha hrají ve svých metropolitních regionech daleko dominantnější úlohu.
- Data o dojížděci jednoznačně ukazují rozdíl mezi funkčně integrovaným městským systémem Vídně a městskými systémy v bývalých komunistických zemích, kterým hlavní města dominují díky jednosměrnému dojíždění do města a hierarchickému podřízení menších středisek v okolní metropolitní oblasti.

- Silné (ekonomické) vazby lze vidět mezi Budapeští, Prahou a Vídní – všechny tři metropole jsou také vysoce zaintegrované do širších evropských a globálních sítí.
- Centrální řídicí funkce se podle očekávání nacházejí v Budapešti, Praze a Vídni, Vídeň ale ve srovnání s ostatními městy v regionu vyniká díky přítomnosti důležitých firem a účasti ve více výzkumných projektech v rámci evropské spolupráce. Praha zaujímá první místo v oblasti počtu vztahů FIRE firem (finančních, pojišťovacích a realitních) v rámci regionu a také vykazuje silné spojení s dalšími evropskými nebo světovými městy.
- Podíváme-li se na situaci z hlediska rozdílné velikosti měst, vede si Bratislava velice dobře v rámci firemních sítí ve středoevropském Podunajském regionu a rovněž tak i v globálním měřítku. Lublaň hraje silnější úlohu v evropské síti výzkumu.
- Vztahy mezi městy v oblasti firemních a výzkumných sítí jsou výrazně ovlivňovány dobou potřebnou k cestování a etnickými pouty, což ukazuje na setrvalý vliv dopravní dostupnosti a historických vztahů na ekonomické aktivity.

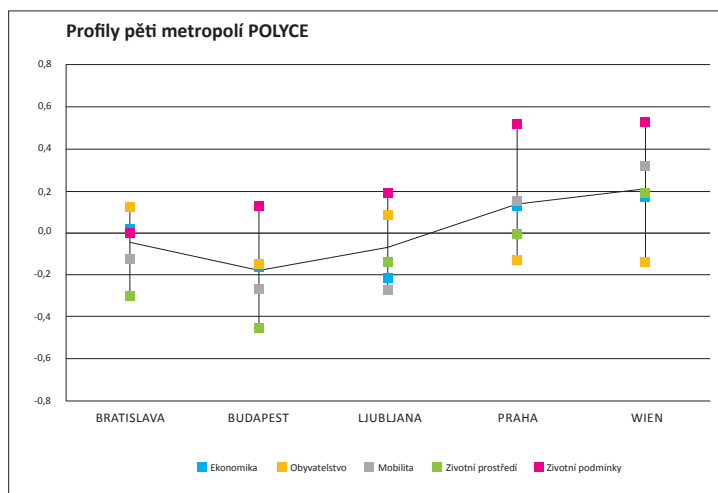


Obrázek 2: Síť výzkumu mezi metropolemi POLYCE (2001–2010)

**Analyzované středoevropské metropole mají jeden společný rys: všechny poskytují vynikající životní podmínky. Společné iniciativy musí tento aspekt brát v úvahu, zvláště pokud proces metropolizace s sebou přináší aspekt růstu, který může tyto mimořádně dobré podmínky ohrozit. Dále je rovněž jasné, že každé z těchto pěti měst může hrát jinou, možná rozhodující úlohu při vytváření konkurenceschopnosti středoevropského systému měst v širším prostorovém kontextu.**

- Analýza ukazuje, že všech pět zkoumaných metropolitních oblastí si vede dobře, pokud jde o životní podmínky. Důležitá je skutečnost, že toto je jediná metropolitní charakteristika, kde všech pět měst získalo nadprůměrné skóre ve vzorku 50 srovnávaných evropských měst.
- Celkově pouze Praha a Vídeň si vedou lépe než je průměr vybraných měst. Pokud jde o ekonomický rozvoj, vedou si z pěti metropolitních oblastí POLYCE nejlépe. Přesto však více profitují z dalších úspěšných charakteristik, jako jsou vysoce ceněné životní podmínky. Zároveň je však ovlivňují slabé stránky v oblasti demografie, vzdělávání a malé etnické diversity – vše je zařazeno pod kategorií Obyvatelstvo.

- Bratislava a Lublaň si naopak v kategorii Obyvatelstvo vedou velice dobře – díky tomu se obě metropole v rámci pěti měst POLYCE staví do důležité pozice, zvláště pokud jde o přístupy podporující vzdělávání a etnickou diverzitu.
- Profil Vídně ukazuje důležité postavení města jakožto vzorového modelu v otázkách životního prostředí. Ačkoliv severská a západoevropská města si v této oblasti vedou ještě lépe než Vídeň, ve srovnání se středoevropskými partnery vídeňská metropolitní oblast vykazuje zcela zřetelně vysoké hodnoty. Totéž platí pro Mobilitu (zahrnuje veřejnou dopravu, dostupnost apod.), kde je postavení Vídně přinejmenším stejně dobré.

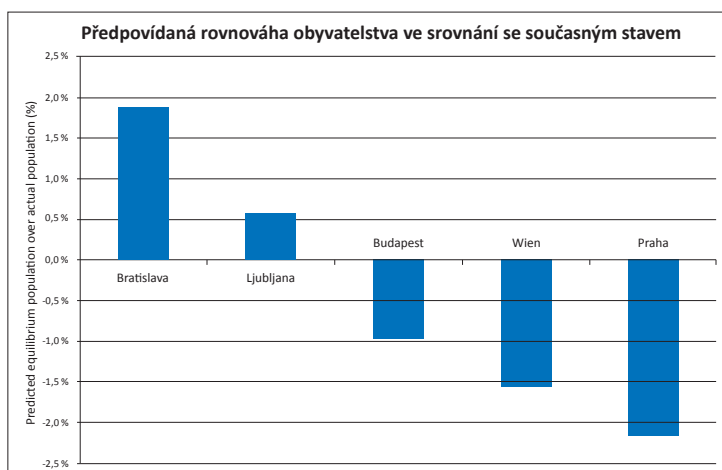


Obrázek 3: Profily pěti metropolí POLYCE

**Před všemi pěti metropolemi stojí různé výzvy v oblasti populačního růstu, když se vezmou v úvahu nejnovější podmínky metropolitních oblastí. Praha, a v menší míře Vídeň a Budapešť, by měla vypracovat strategie a specifická opatření pro zdravé prostorové struktury ve funkční metropolitní oblasti. Bratislava a v menší míře Lublaň, na druhé straně, vykazují potenciál v oblasti svých základních podmínek pro populační růst.** Podkladové empirické výsledky dokreslují tyto faktory, jež mají pozitivní i negativní dopady na vyrovnání se s městským růstem a kladou důraz na důležitost zdravé metropolitní strategie plánování:

- Ceny pozemků, sociální potíže spjaté s městským životem a rovněž suburbanizace a urban sprawl představují nejdůležitější náklady rozvoje a mají negativní vliv na populační růst. Proto jsou tyto faktory klíčové pro městský rozvoj v budoucnu.
- Občanská vybavenost, která představuje atraktivitu metropole, odvětvová diverzita, polycentricita vztahů v činnostech spojených s intenzivními znalostmi (výzkumné sítě) a metropolitní funkce (mocenské funkce v politické, ekonomické a kulturní sféře), to vše má jasný kladný dopad na velikost městských aglomerací.
- Identifikace vlivů těchto faktorů ukazuje na důležitost zdravé prostorové struktury metropolí ve formě vytváření externích sítí a snížení živelného růstu města.
- Tyto faktory – spjaté se zdravou metropolitní a plánovací strategií s odpovídajícími projekty – generují vyšší městské přínosy a efektivitu, a přitom zároveň snižují náklady spojené s fyzickou velikostí. Rozvíjení urbánních kvalit, občanské vybavenosti a přilákání profesionálů představujících silný lidský kapitál, bude mít za následek zvýšení atraktivity a konkurenceschopnosti a bude podporovat širší, více diverzifikované městské prostředí.





Obrázek 4: Základní podmínky dalšího městského rozvoje v metropolitních POLYCE

## Potřeba dalšího výzkumu

**Výzkum vztahových aspektů polycentricity:** Je možné prohloubit výzkum na úrovni vzájemných funkčních vztahů ve středoevropském prostoru. Spolupráce a síť mezi uvedenými pěti metropolemi POLYCE a dalšími evropskými nebo světovými městskými uzly vyžaduje další výzkum, zvláště v oblasti ekonomických a sociálních vazeb.

**Úloha středně velkých měst v soudržném rozvoji:** Vzhledem k tomu, že tento výzkum byl založen na zkoumání pěti velkých středoevropských metropolí, nebyly otázky důležitosti středně velkých městských aglomerací řešeny. Výzkum jejich úlohy v polycentrických sítích velkých metropolí je zřejmě důležitý, jelikož mají pravděpodobně rozhodné slovo v polycentrickém a v důsledku toho i v soudržném rozvoji.

**Vymezení metropolitních oblastí:** Prostorové rozložení obyvatelstva a dojíždění jsou pouze výchozím bodem při definování funkčně integrovaných metropolitních oblastí. Vzhledem k tomu, že jejich vymezení několikrát požadovaly nejrůznější zainteresované subjekty, bezprostředním úkolem by mělo být dohodnutí společného přístupu k vymezení metropolitních oblastí.

**Debaty s řídicí mocí při cílené analýze:** Integrace místních a regionálních odborníků na cílenou analýzu ESPON bere na vědomí důležitost přisuzovanou komunikativním přístupům v plánování. Toto uznání je vysoce ceněno, přestože je v některých ohledech příliš omezený. Úloha městských správních úřadů jakožto partnerů projektu nebývá vždy dostatečně jasná a zatímco obecný požadavek na integraci dalších subjektů je vnímán pozitivně, časový rámec pro realizaci takových metodologických přístupů není dostačující. Proto by se měly vést debaty s řídicí mocí a mělo by se diskutovat o kompromisu mezi krátkodobými výsledky a hloubkovými analýzami.

# Smarte Metropolenentwicklung

## Einleitung

POLYCE analysiert fünf zentraleuropäische Hauptstädte und deren funktionale Verflechtungen mit dem Umland: Bratislava, Budapest, Ljubljana, Prag und Wien. Das Projekt entstand aus dem Wunsch der Verwaltungsbehörden dieser Städte, das zukünftige Wettbewerbs- und Kooperationspotenzial zwischen diesen und gegenüber anderen Metropolen zu erforschen. Vorrangiges Ziel war die Durchführung einer vergleichenden Analyse für die fünf Städte und ihre Umgebungsregionen, um anhand fundierter Daten ihre Unterschiedlichkeiten und Gemeinsamkeiten zu erkennen und ein aktuelles Bild von der Ausgangslage für die Stadtentwicklung in Zentraleuropa zu erhalten.

In diesem Kontext kamen auch die zwei analytischen Konzepte Metropolisierung und Polyzentralität ins Spiel, die beide für mögliche Wege der Metropolenentwicklung stehen. POLYCE berücksichtigte bei der Analyse der fünf zentraleuropäische Städte beide Konzepte und versuchte auch ihre wechselseitige Beziehung festzustellen, d.h. in welchem Umfang beide Konzepte eine vernünftige und ausgewogene Stadtentwicklung unterstützen können.

## Terminologie

Das POLYCE-Projekt basiert auf den zwei analytischen Konzepten *Metropolisierung* und *Polyzentralität*. Im Rahmen dieses Projektes gelten für diese zwei Konzepte die nachstehenden Definitionen:

*Metropolisierung* ist ein durch bestimmte Aspekte definierter städtischer Umstrukturierungsprozess:

- Eine räumliche Konzentration von (neuen) wirtschaftlichen Funktionen oder von Bewohnern, letztere oft aufgrund von Immigration (Friedmann, 1986 und 2002; Geyer, 2002)
- Wichtige Entscheidungs- und Kontrollfunktionen sowie ein hoher Grad an Vernetzung (Keeling, 1995)
- Wirtschaftliche Umstrukturierung aufgrund der Zunahme von wissensbasierten Aktivitäten (Krätke, 2007)
- Ungleiche Verteilung spezifischer Funktionen innerhalb einer Stadt oder einer polyzentral-polyzentralen Agglomeration (Kunzmann, 1996; Leroy, 2000; Sassen, 2002; Elissade, 2004)

*Polyzentralität* beschreibt das Vorhandensein von mehr als einem Zentrum oder Kerngebiet in einer bestimmten Region. Das Konzept hat mehrere (miteinander verknüpfte) Aspekte:

- Morphologische Polyzentralität: Die Hierarchien und Strukturen von Knotenpunkten richten sich nach ihrer Größe und Bedeutung
- Relationale Polyzentralität: Ströme und Interaktionen zwischen Knotenpunkten
- Polyzentralität in der öffentlichen Verwaltung: bei Entscheidungen in und zwischen den verschiedenen Kerngebieten fließen gemeinsame Interessen, Überlegungen, Ideen sowie Fragen der Zusammenarbeit und Komplementarität ein

## Politische Herausforderung

Beide Konzepte hängen zwangsläufig mit den politisch verbreiteten Konkurrenz- und Inklusionskonzepten zusammen, die häufig nicht nur in metropolitanen sondern auch in europäischen Strategiedokumenten (siehe EU, 2010) zitiert werden. Ein Gleichgewicht zwischen diesen zwei Paradigmen gilt für die sogenannte *smarte Metropolenentwicklung* als unverzichtbar.



Der Begriff *smart* ist in den letzten Jahren zu einem richtigen Modewort geworden, auch wenn es noch immer keine klare Definition davon gibt. Wurde dieser Begriff ursprünglich hauptsächlich in Zusammenhang mit Informations- und Kommunikationstechnologien verwendet, ist er in Zusammenhang mit der Stadtentwicklung in einem breiteren Kontext zu verstehen. Ausgehend von einer breiteren räumlichen Perspektive (die in der Tat eng mit einer politischen Perspektive verknüpft ist) müssen „*smarte Orte*“ – gemäß der Definition der Europäischen Kommission in der EU-Strategie 2020 (EU, 2010) – mehrere Funktionen vereinen, wie etwa Wissens-, Innovations-, Vernetzungs- und Verwaltungsfunktionen. Eine smarte Stadt zu werden, lässt daher auf die [...] Ambition einer Stadt schließen, ihre wirtschaftlichen, sozialen und ökologischen Standards zu verbessern und in der Folge damit auch ihre Konkurrenzfähigkeit im städtischen Standort-wettbewerb' (Giffinger et al., 2010, S.304 f.). Wichtig ist hierbei, dass Verwaltungsmaßnahmen unter Einbindung verschiedener Akteure erfolgen: von der lokalen Bevölkerung und Wirtschaftstreibenden bis hin zu politischen Entscheidungsträgern.

Die größten Herausforderungen für die Metropolitenentwicklung – auf die auch in der EU-Strategie 2020 (EU, 2010) Bezug genommen wird – sind Wettbewerbsfähigkeit und Inklusion. Somit steht eine *smarte Metropolitenentwicklung* für die Fähigkeit einer großstädtischen Agglomeration, diese zwei Herausforderungen erfolgreich bewältigen zu können. Aber nicht nur die Ausstattung mit metropolitenen Funktionen kann in diesem Bezug als Potenzial erachtet werden. Eine smarte Metropolitenentwicklung umfasst auch die Sensibilisierung und aktive Einbindung von selbst-bestimmten und unabhängigen Bürgern. Sie trägt zum Ausbau vorhandener Stärken bei und fördert die Erschließung neuer Potenziale. Daher verstehen wir bei POLYCE unter einer *smartem Metropole* eine funktional integrierte Großstadtregion, in der es sowohl rivalisierende als auch integrative Entwicklungsprozesse gibt, und der öffentlichen Verwaltung die wichtige Aufgabe zukommt, über entsprechende Steuerungsmaßnahmen ein Gleichgewicht zwischen diesen zwei Aspekten zu finden.

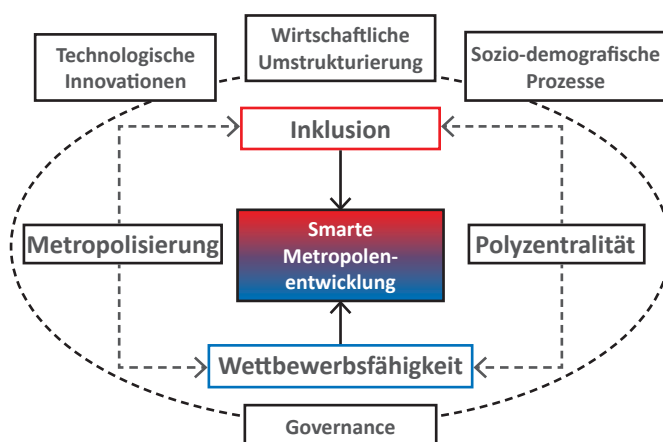


Abbildung 1: Smarte Metropolitenentwicklung verstehen

## Empfehlungen für smarte zentraleuropäische Metropolen

Nachstehend sind die potenziellen zukünftigen Aktivitäten der fünf Metropolen in sogenannten metropolitenen Agenden skizziert. Zuerst werden allgemeine Entwicklungsmöglichkeiten für jede Großstadtregion aufgezeigt, danach folgt eine kurze Zusammenfassung der aktuellen Schwierigkeiten der

*jeweiligen Metropolen. Die Agenden sind als Empfehlungen für zukunftssträchtige Aktivitäten gedacht. In diesem Sinne handelt es sich nicht um umfassende Entwicklungsstrategien sondern vielmehr um eine strukturierte Aufzählung möglicher Aktivitäten, die in enger Zusammenarbeit mit wichtigen lokalen und regionalen Stakeholdern in den fünf Metropolen entwickelt wurden. Als Ausgangspunkt dienten dabei vor allem die Workshops zu den empirischen Projektergebnissen, die mit einer Reihe ausgewählter Stakeholder durchgeführt wurden. Somit repräsentieren die hier vorgestellten Ideen zwangsläufig eine selektive Perspektive. Sie leiten sich aber aus Stakeholder-Diskussionen über die empirischen Projektergebnisse ab und spiegeln somit die im Rahmen des Projektes durchgeführten empirischen Analysen wider.*

## **Metropolitane Agenda für Bratislava**

### **Vision**

**Der Großraum Bratislava sollte seine Wettbewerbsfähigkeit durch eine klare Positionierung im Bereich von wissensbasierten Aktivitäten in Forschungs- und Entwicklungsklustern verbessern. Gleichzeitig benötigt Bratislava bessere grenzüberschreitende Verwaltungsmaßnahmen, um eine Reihe von strategischen Aktivitäten zur Förderung einer integrativen metropolitenen Entwicklung umsetzen zu können.**

### **Aktivitäten**

Bratislava sollte sich darauf konzentrieren, die Position und Wettbewerbsfähigkeit seiner Metropolregion durch eine größere Forcierung von wissensbasierten Aktivitäten zu stärken und den Schwerpunkt auf entsprechende Dienstleistungen sowie Forschungs- und Entwicklungsklustern legen.

### **Herausforderungen und Barrieren**

Die zentrale Lage der Großregion Bratislava im Donaauraum ist ein wichtiges Potenzial, das bisher noch nicht ausgeschöpft wurde. Entsprechende Planungsansätze und Verwaltungsmaßnahmen sind sowohl auf urbaner als auch auf regionaler Ebene erforderlich, um die Wettbewerbssituation der Metropole zu stärken. Die beteiligten Akteure müssen den Schwerpunkt auf grenzüberschreitendes Management, die Abstimmung von Aktivitäten, das gemeinsame Treffen von Entscheidungen sowie andere Initiativen für die Sicherstellung eines dauerhaften Informations- und Wissensaustausches legen.

### **Smarte Metropolenentwicklung**

Die Entwicklung von Infrastrukturen und Institutionen fördert die Inklusion, während wirtschaftliche Spezialisierungs- und Imagestrategien sehr stark die Wettbewerbsfähigkeit der Metropole verbessern. Es muss klar sein, dass empfohlene Umwelt- und Governance-Aktivitäten nur zu Beginn eine integrative Rolle spielen und dass sie langfristig zu einer Verbesserung der Wettbewerbssituation der Großregion Bratislava beitragen.

## **Metropolitane Agenda für Budapest**

### **Vision**

**Die Wettbewerbssituation des Standortes Budapest sollte durch die Positionierung der Großregion als Donaumetropole verbessert werden. Gleichzeitig darf Budapest nicht vergessen, mit einer gerechteren Verteilung der wirtschaftlichen Funktionen in der Metropolregion für eine territoriale Kohäsion zu sorgen.**

### **Aktivitäten**

Die Stakeholder sind sich der Möglichkeiten, die ein derartiger Ansatz für mehrere Bereiche mit sich bringt, sehr wohl bewusst. Die empfohlenen Aktivitäten umfassen eine Vielzahl an unterschiedlichen Maßnahmen und reichen von Image-, Infrastruktur- und Verwaltungsbelangen bis hin zu Umweltthemen.

### **Herausforderungen und Barrieren**

Die große Dominanz der Verwaltungshauptstadt in einer ziemlich monozentralen Metropolregion mit nur wenigen kleineren Zentren und einer starken Konzentration der metropolitanen Funktionen in der Kernstadt bringt Probleme mit sich. Ganz oben auf der Liste stehen Infrastruktur- und Verwaltungsmaßnahmen, die diese Dominanz der Hauptstadt verringern und für die Großregion Budapest eine integrativere Entwicklung möglich machen.

### **Smarte Metropolentwicklung**

Metropolitane Planungsansätze müssen die regionalen Entwicklungspotenziale der Umgebungsregionen noch stärker einbeziehen, da diese sowohl die Wettbewerbsfähigkeit der Stadt in der Donau-region stärken als auch gleichzeitig für eine integrativere Entwicklung der Metropole sorgen können.

## **Metropolitane Agenda für Ljubljana**

### **Vision**

**Der Großraum Ljubljana sollte seine Entwicklung durch gezielte wirtschaftliche Aktivitäten steuern und sein Image als attraktives Bildungs- und Forschungszentrum ausbauen. Mit einer stärkeren polyzentralen Entwicklung ist eine stärkere territoriale Kohäsion sicherzustellen.**

### **Aktivitäten**

Entsprechende Maßnahmen sind für eine Verbesserung der funktionalen Beziehungen in der Metropolregion zu ergreifen. Dazu zählen auch Maßnahmen für eine gerechtere Verteilung der metropolitanen Funktionen auf regionaler Ebene. Ljubljanas Stellung als mittelgroße europäische Stadt führte zu einer Konzentration von zahlreichen Funktionen in der Kernstadt und damit zu negativen Begleiterscheinungen, mit denen sich die politischen Entscheidungsträger auseinandersetzen müssen, damit die Stadt nicht ihren hohen Lebensstandard verliert. Darüber hinaus sollte sich Ljubljana um ein stärker integriertes und nachhaltiges Verkehrssystem bemühen und die Metropole auch auf internationaler Ebene besser vernetzen. Außerdem gilt es die Lage an der Peripherie der zentraleuropäischen Donau-region durch eine Verbesserung der Verkehrsverbindungen zu anderen Donaumetropolen Zentral-europas wettzumachen.

### **Herausforderungen und Barrieren**

Ihre Randlage innerhalb der zentraleuropäischen Donauregion ist für die Stadt ein Problem. Daraus resultiert, dass die Metropolregion Ljubljana ihre Aktivitäten sowohl auf den Alpen-Adria-Raum, als auch auf die Makroregionen von Donauraum und Zentraleuropa fokussiert.

### **Smarte Metropolentwicklung**

Es bedarf metropolitaner Governance-Ansätze, um die Teilnahme der lokalen Bevölkerung an Entscheidungsprozessen zu fördern, was wiederum zu einem stärkeren sozialen Zusammenhalt führen könnte. Gleichzeitig können die vielfältigen wirtschaftlichen Aktivitäten zu einer Verbesserung der Wettbewerbssituation Ljubljanas beitragen. Für die Entwicklung zu einer Smart City, für die die Faktoren Inklusion und Wettbewerbsfähigkeit gleich wichtig sind, sind Leistungen auf Verwaltungsebene wie etwa institutionalisierte Kooperationen und Harmonisierung der Finanzinstrumente sehr wichtig.

## Metropolitane Agenda für Prag

### Vision

Ein Schlüsselwort für die metropolitane Entwicklung Prags ist Wissen, da damit gleichzeitig die Faktoren Wettbewerbsfähigkeit und Inklusion gestärkt werden können. Ein Ziel ist auch das Image Prags als Kulturhauptstadt weiter zu entwickeln, da dies sowohl wirtschaftlichen Wohlstand bringt als auch den sozialen Zusammenhalt fördert.

### Aktivitäten

Ein wichtiges Ziel für die Großregion Prag ist der Wissensaustausch auf verschiedenen Ebenen. Die Zusammenarbeit auf regionaler und zentraleuropäischer Ebene ist voranzutreiben, um von anderen zu lernen, eigene Erfahrungen weiterzugeben und Einblicke in jene Bereiche zu erhalten, wo Großstadtpolitik veränderbar ist. Der Wissensaustausch zwischen wichtigen Akteuren auf regionaler Ebene ist ebenfalls zu forcieren. Vor diesem Hintergrund könnten die gemeinsamen kulturellen Werte Zentralböhmens in den Aufbau des Großstadtimages der Stadt Prag einfließen. Eine offene Diskussion dieser Werte fördert das Verbindende und stärkt eine gemeinsame Großstadtidentität.

### Herausforderungen und Barrieren

Das größte Problem für Prag ist die mangelnde vorhandene Kooperation auf regionaler Ebene. Nur durch innovative Modelle wird es möglich sein, die bestehenden Altlasten an institutionellen Barrieren für eine Zusammenarbeit - insbesondere zwischen der Stadt und den regionalen Ebenen - zu überwinden.

### Smarte Metropolenentwicklung

Eine gezielte Strategie zur Förderung des Wissensaustausches auf mehreren Ebenen dürfte nicht nur der Wettbewerbsfähigkeit der Metropole sondern auch dem sozialen Zusammenhalt zugutekommen. Durch die Beseitigung von ineffizienten Ansätzen und die Unterstützung von innovativen Methoden bei der metropolitane Planung erhält man Raum für die Einbeziehung einer größeren Gruppe an Akteuren.

## Metropolitane Agenda für Wien

### Vision

Die Herausforderung für die Metropole Wien liegt darin, den richtigen Strategiemix zu finden, um in Europa wettbewerbsfähig und für ihre Bewohner attraktiv zu bleiben. Dieser Ansatz umfasst auch territoriale Kohäsion auf regionaler Ebene. Auf der Grundlage eines partizipatorischen Ansatzes sollten die Position und die Funktion der Stadt innerhalb der Donauregion klar definiert sein.

### Aktivitäten

Ein wichtiger Schwerpunkt bei den Planungsaktivitäten in Wien sollte die bessere regionale Verkehrsanbindung sein, insbesondere die Verbesserung der öffentlichen Verkehrsinfrastruktur auf regionaler Ebene. Wiens Spitzenposition bei der umweltpolitischen Entwicklung wirkt sich positiv sowohl auf die wirtschaftliche Wettbewerbsfähigkeit als auch auf die Nachhaltigkeit der metropolitane Entwicklung aus. Die Stadt sollte sich bemühen, ihr Image als grüne Stadt weiter auszubauen (z.B. durch stärkeren Fokus auf Umwelttechnologien). Die Stadt muss konkrete Maßnahmen setzen, um auch soziale Gruppen einzubeziehen, die diesen Entwicklungsweg in Frage stellen. Eine wichtige Rolle in dieser Hinsicht spielen Lernprozesse, aus denen hervorgeht, dass Entscheidungen für die Verteilung von bestimmten Großstadtfunktionen gemeinsam erfolgen sollten. Ein regelmäßiger Informations- und Wissensaustausch ist bei gemeinsamen Veranstaltungen für die Verbesserung der Beziehungen zwischen der Kernstadt und kleineren Zentren sowie für die Klärung der Rolle Wiens im Städteverbund des Donauraums zu organisieren.

### **Herausforderungen und Barrieren**

Ein großes Problem besteht darin, dass es in institutioneller und verkehrstechnischer Hinsicht kein integriertes Stadtumland gibt und dass auch die Verteilung von metropolitanen Funktionen in der Region fehlt. Es werden Maßnahmen benötigt, um diese Barrieren zu überwinden und eine räumlich kohäsive Entwicklung sicher-zustellen.

### **Smarte Metropolenentwicklung**

Strategien zur Förderung von Wissensaustausch haben hauptsächlich integrative Auswirkungen, während die stärkere Profilierung Wiens als grüne, umweltfreundliche Stadt auch zur Wettbewerbsfähigkeit des Standortes beitragen sollte.

## **Zentraleuropäische Agenda**

*Nachstehend werden mögliche zukünftige Aktivitäten im zentraleuropäischen Donaauraum skizziert. Sie sind als Vorschläge für zukunftssträchtige Aktivitäten für die fünf zentraleuropäischen Metropolen gedacht. In diesem Sinne handelt es sich nicht um umfassende Entwicklungsstrategien, sondern vielmehr um eine strukturierte Aufzählung möglicher Aktivitäten. Wie die vorstehenden metropolitanen Agenden wurden sie in enger Zusammenarbeit mit wichtigen lokalen und regionalen Stakeholdern in den fünf Metropolen erarbeitet. Diese Agenda gründet sich vor allem auf interaktive Diskussionen über die empirischen Projektergebnisse, die mit einer Reihe ausgewählter Stakeholder geführt wurden. Somit repräsentieren die hier vorgeschlagenen Ideen zwangsläufig eine selektive Perspektive. Sie leiten sich aber aus Stakeholder-Diskussionen über die empirischen Projektergebnisse ab und spiegeln somit die im Rahmen des Projektes durchgeführten empirischen Analysen wider.*

**Mit gemeinsamen Strategien sollten die fünf POLYCE-Metropolen die Position jeder einzelnen Metropole stärken und die verschiedenen Formen der polyzentralen Beziehungen in der zentraleuropäischen Donauregion verbessern. Die gemeinsamen Anstrengungen der POLYCE-Metropolen müssen sich insbesondere auf Aspekte der territorialen Kohäsion innerhalb der zentraleuropäischen Donauregion konzentrieren. Die Verbesserung der polyzentralen Beziehungen kann den Umgang mit Verstärkerprozessen und dem damit verbundenen metropolitanen Wachstum unterstützen.**

- Große Kooperationspotenziale und –vorteile für die POLYCE-Metropolen gibt es vor allem in den Bereichen wissensbasierte Wirtschaft, Verkehrsmanagement und Metropolitan Governance.
- Das Beziehungskapital (z.B. Sprachkenntnisse, neue verwaltungstechnische und strategische Kapazitäten) muss zwischen den zentraleuropäischen Stakeholdern verbessert werden. Dazu gehören (1) eine Verbesserung der Kontakte und des Zugangs zu Informationen, (2) als Ergebnis kontinuierlicher und systematischer Kontaktmöglichkeiten die Umwandlung von Informationen in wertvolles Wissen über Partnermetropolen, (3) eine Verbesserung der gemeinsamen Lobbyingarbeit in der EU für die Interessen der zentraleuropäischen Donaumetropolen.
- Alle fünf Metropolen versuchen aufgrund ihrer geografischen Lage sich als Drehkreuz gegenüber anderen Regionen und Nachbarländern zu positionieren. Daher sind für eine territorial kohäsive Entwicklung innerhalb der zentraleuropäischen Donauregion neue gemeinsame Strategien erforderlich, die über die Förderung von Investitionen in die Infrastruktur hinausgehen.
- Die historischen, sozialen und wirtschaftlichen Verbindungen zwischen den fünf Metropolen sollten eine solide Grundlage für weitere Kooperationen zwischen den öffentlichen Institutionen, der Zivilgesellschaft und der Privatwirtschaft bilden. Diese Beziehungen können durch verschiedene grenzüberschreitende Vernetzungsprojekte ausgebaut und

vertieft werden, für die es im Rahmen bestehender regionaler Förderprogramme der EU finanzielle Unterstützung gibt: Programme mit dem Ziel der „Europäischen territorialen Zusammenarbeit“ (ETZ), das interregionale Kooperationsprogramm für die Förderung verschiedener Arten von Netzwerken zwischen den Städten; das URBACT II-Programm mit dem Schwerpunkt auf den Informationsaustausch zwischen den Städten; das transnationale Kooperationsprogramm „Zentraleuropa“, das nicht nur die fünf Metropolen umfasst sondern auch deren Hinterland.

- Da diese Programme gebietsmäßig auch Polen, Teile Ost- und Süddeutschlands sowie Norditalien umfassen, bedeutet das für die fünf POLYCE-Metropolen einen größeren räumlichen Kontext und eine Verbindung mit Städten wie Berlin, Warschau, München und Mailand, allesamt sehr wichtige Partner in dieser Region.
- Bei den gemeinsamen strategischen Aktivitäten sollte immer auch die Europastrategie für die Donauregion berücksichtigt werden. Zusammen können die fünf Metropolen entscheidend dazu beitragen, in welche Richtung sich diese Strategie in Zukunft weiterentwickeln wird. Es gibt bereits vielversprechende Ansätze als Initiator und treibende Kraft für bestimmte Themen in der Donauregion aktiv zu werden, allerdings fehlt noch die entsprechende Abstimmung zwischen den fünf Metropolen.

**Polyzentralität spielt für alle fünf POLYCE-Metropolen in gewisser Hinsicht eine große Rolle und macht sie damit zu wichtigen Akteuren im zentraleuropäischen Städteverbund. Trotzdem müssen einige von ihnen ihre innere polyzentrale Struktur verbessern, ihre Verbindungen zu europäischen Wirtschafts- und Forschungsprogrammen stärken oder ihre Vernetzung verbessern. Verschiedene Austausch-, Netzwerk- und Kooperationsformen zwischen den Städten können eine stimulierende und stärkende Wirkung haben. Daher führt eine Verbesserung der politischen, wirtschaftlichen und sozialen Netzwerke aufgrund entsprechender Regierungsmaßnahmen immer auch zu einer Verbesserung der Bedingungen für die Interaktion zwischen den POLYCE-Metropolen.**

- Das Städtesystem Wiens ist das mit Abstand am stärksten integrierte aller fünf Metropolen. Bratislava ist am besten in ein ausgewogenes System kleiner und mittelgroßer Nachbarstädte eingebettet, während Ljubljana das Städtesystem der umgebenden Region dominiert. Budapest, Wien und Prag hingegen spielen in ihren Metropolregionen eine weitaus dominantere Rolle.
- Der Unterschied zwischen dem funktional integrierten Städtesystem Wiens und den Städtesystemen der ehemaligen kommunistischen Länder zeigt sich vor allem beim Pendlerverhalten. In den Hauptstädten der früheren Ostblockländer pendelt die Bevölkerung hauptsächlich nur in Richtung Kernstadt und die kleineren Zentren im großstädtischen Umland sind hierarchisch untergeordnet.
- Es gibt starke (wirtschaftliche) Verflechtungen zwischen Budapest, Prag und Wien – und diese drei Metropolen sind auch sehr stark paneuropäisch und global vernetzt.
- Auch wenn es in Budapest, Prag und Wien zentrale Kontrollfunktionen gibt, sticht Wien gegenüber den anderen Städten der Region als die Stadt mit den meisten hochrangigen Firmensitzen und der Teilnahme an den meisten Forschungsk Kooperationen heraus. Prag hat die meisten Beziehungen zu Finanz-, Versicherungs- und Immobilienunternehmen in der Region und pflegt auch enge Verbindungen mit anderen Städten in Europa und auf der Welt.
- Berücksichtigt man die unterschiedliche Größe der Städte, schneidet Bratislava bei den Unternehmensvernetzungen innerhalb der zentraleuropäischen Donauregion und auch weltweit ziemlich gut ab. Ljubljana spielt eine größere Rolle bei den europäischen Forschungsnetzwerken.
- Der starke Einfluss von Reisezeiten und ethnischen Gemeinsamkeiten auf die Unternehmens- und Forschungsbeziehungen zwischen den Städten deutet auf die nach wie vor große Bedeutung von Erreichbarkeit und historischen Beziehungen in Zusammenhang mit wirtschaftlichen Aktivitäten hin.



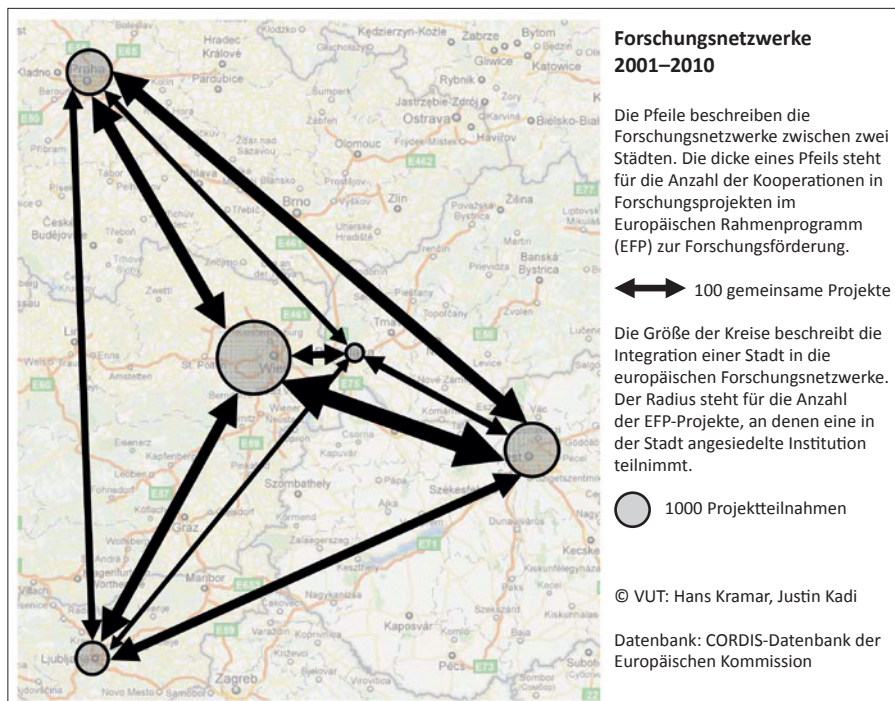


Abbildung 2: Forschungsnetzwerke zwischen POLYCE-Metropolen (2001-2010)

Die analysierten zentraleuropäischen Metropolen haben eine große Gemeinsamkeit: Sie bieten alle außergewöhnlich gute Lebensbedingungen. Bei gemeinsamen Initiativen ist dieser Aspekt zu berücksichtigen, insbesondere wenn die Verstärkerprozesse auf Wachstumsaspekte schließen lassen, die diese bemerkenswerte Situation gefährden könnten. Darüber hinaus wird klar, dass jede dieser fünf Metropolen eine andere, vielleicht entscheidende Rolle als Antriebsmotor für die Wettbewerbsfähigkeit des zentraleuropäischen Städtesystems in einem größeren räumlichen Kontext spielen kann.

- Laut Analyse schneiden alle fünf untersuchten Ballungszentren bei den Lebensbedingungen gut ab. Es ist bezeichnenderweise die einzige Kennzahl bei der alle fünf Metropolen unter allen 50 verglichenen europäischen Städten über dem Durchschnitt liegen.
- Insgesamt liegen nur Prag und Wien über dem Durchschnitt der verglichenen Städte. Unter den fünf POLYCE-Metropolregionen schneiden sie bei der wirtschaftlichen Entwicklung am besten ab. Trotzdem profitieren sie noch stärker von einer anderen guten Kennzahl, nämlich der als sehr hoch eingestuften Lebensqualität. Schwächen verzeichnen sie hingegen bei Demographie und Bildung und der geringen ethnischen Diversität – was in der Kategorie Bevölkerung zusammengefasst ist.
- Bratislava und Ljubljana schneiden dagegen in der Kategorie Bevölkerung bemerkenswert gut ab, eine Tatsache, die diese zwei Metropolen in eine wichtige Position innerhalb der fünf POLYCE-Städte bringt und hier insbesondere im Hinblick auf die Szenarien zur Förderung von Bildung und ethnischer Vielfalt.
- Wien erweist sich als großes Vorbild bei Umweltbelangen. Obwohl andere nord- und westeuropäische Städte Wien in dieser Hinsicht hinter sich lassen, bietet der Großraum Wien ganz offensichtlich einige wichtige Vorteile im Vergleich zu seinen zentral-europäischen Partnern. Das gleiche trifft auf die Kategorie Mobilität zu (unter diese Kategorie fallen öffentlicher Verkehr, Erreichbarkeit und ähnliches), in der die Position Wiens mindestens genauso wichtig ist.

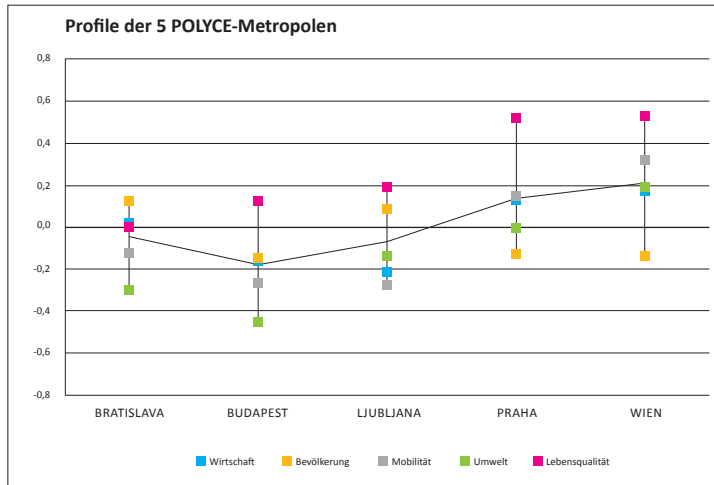


Abbildung 3: Profile der fünf POLYCE-Metropolen

Berücksichtigt man die jüngsten Entwicklungsszenarien der Ballungszentren, stehen alle fünf Metropolen in Bezug auf das Bevölkerungswachstum vor unterschiedlichen Herausforderungen. Prag, und in einem geringeren Ausmaß auch Wien und Budapest, sollten Strategien und konkrete Maßnahmen für die Bereitstellung einer soliden räumlichen Struktur in der funktionalen Metropolregion erarbeiten. Im Gegensatz dazu zeigt Bratislava, und in einem geringeren Ausmaß auch Ljubljana, ein gewisses Potenzial für Bevölkerungswachstum. Zugrundeliegende empirische Ergebnisse beschreiben jene Faktoren, die sich positiv oder negativ auf die Bewältigung des Städtewachstums auswirken und unterstreichen die Bedeutung einer gut durchdachten metropolitenen Entwicklungsstrategie:

- Grundstücksmieten, soziale Not in Zusammenhang mit dem Leben in der Stadt, sowie auch städtische Zersiedelung sind die wichtigsten Kostenfaktoren und wirken sich negativ auf das Bevölkerungswachstum aus. Daher sind diese Faktoren für die zukünftige Entwicklung von Städten ganz entscheidend.
- Die für die Attraktivität einer Metropole wichtigen städtischen Annehmlichkeiten, die industrielle Vielfalt, die Polyzentralität in Zusammenhang mit wissensbasierten Aktivitäten (Forschungsnetzwerke) und die metropolitenen Funktionen (Machtfunktionen im politischen, wirtschaftlichen und kulturellen Bereich) wirken sich eindeutig positiv auf die Größe von städtischen Agglomerationen aus.
- Das Aufzeigen der Auswirkungen dieser Faktoren veranschaulicht die Bedeutung einer gut durchdachten Siedlungsstruktur von Metropolen in Form externer Vernetzung und der Reduzierung der Zersiedelung.
- Diese Faktoren – zusammen mit einer gut durchdachten städtebaulichen Strategie mit entsprechenden Projekten – steigern die Vorteile und Effizienz einer Stadt und reduzieren gleichzeitig die mit der physischen Größe verbundenen Kosten. Durch den Ausbau der urbanen Lebensqualität und Annehmlichkeiten sowie den Zuzug hochqualifizierter Fachkräfte gewinnt eine Stadt an Attraktivität und Wettbewerbsfähigkeit, was wiederum zu mehr Vielfalt und Abwechslung im urbanen Raum führt.



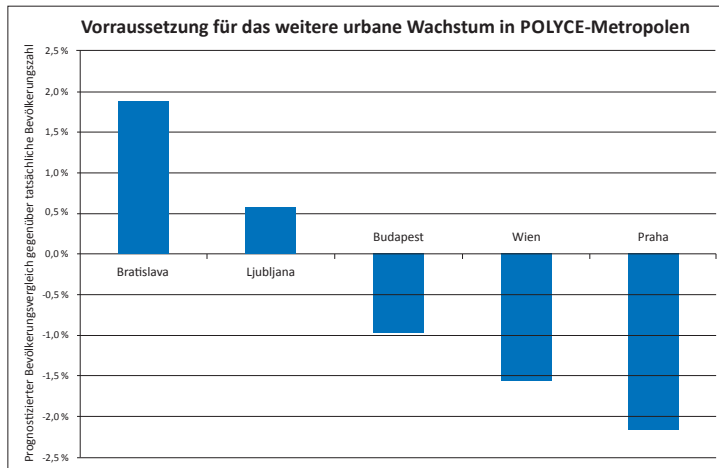


Abbildung 4: Voraussetzungen für das weitere urbane Wachstum in POLYCE-Metropolen

## Weiterer Forschungsbedarf

**Untersuchung relationaler Polyzentralität:** Detailliertere Erforschung der funktionalen Wechselbeziehungen in Zentraleuropa. Die Kooperationen und Netzwerke zwischen den fünf POLYCE-Metropolen sowie mit anderen europäischen oder globalen Drehkreuzen bedürfen der weiteren Erforschung, insbesondere in Bezug auf ihre wirtschaftlichen und sozialen Verbindungen.

**Die Rolle der mittelgroßen Städte für eine kohäsive Entwicklung:** Da diese Forschungsarbeit sich mit der Untersuchung von fünf großen zentraleuropäischen Metropolen beschäftigte, blieben Fragen zur Bedeutung von mittelgroßen städtischen Agglomerationen unberücksichtigt. Eine Untersuchung ihrer Rolle in den polyzentralen Vernetzungen der großen Metropolen erscheint wichtig, da sie wahrscheinlich einen entscheidenden Anteil an der polyzentralen und in der Folge auch kohäsiven Entwicklung haben.

**Abgrenzung von Metropolregionen:** Die räumliche Verteilung der Bevölkerung und das Pendlerverhalten bilden nur den ersten Punkt bei der Definition von funktional integrierten Metropolregionen. Da verschiedene Stakeholder bereits mehrmals die Notwendigkeit für derartige Definitionen urgiert haben, sollte ein gemeinsamer Ansatz für die Begrenzung von Metropolregionen rasch gefunden sein.

**Governance-Debatten in konkreten Analysen:** Angesichts der großen Bedeutung von Kommunikation in Zusammenhang mit allen Planungsaktivitäten erfolgen alle zielgerichteten Analysen von EPSON unter Einbeziehung von lokalen und regionalen Experten. Dieser Ansatz erfreut sich großer Wertschätzung, wenn er auch in mancherlei Hinsicht zu kurz greift. Die Rolle, die Stadtverwaltungen als Projektpartner spielen, ist nicht immer ausreichend geklärt, und während die allgemeine Forderung nach Einbeziehung anderer Stakeholder begrüßt wird, reicht der zeitliche Rahmen für die Umsetzung derartiger methodologischer Ansätze nicht aus. Daher sind Governance-Debatten über einen Kompromiss zwischen kurzfristigen Ergebnissen und ausführlichen Analysen zu führen.

# Okos nagyvárosi fejlesztés

## Bevezetés

A POLYCE öt közép-európai fővárost – Pozsonyt, Budapestet, Ljubljanát, Prágát és Bécsset – valamint azok funkcionálisan kapcsolódó környező területeit elemzi. A projekt a szóban forgó városok vezetésének azon kívánságából született, hogy egymás között illetve más nagyvárosok vonatkozásában városaik jövőbeli verseny- és együttműködési potenciálját kutassák. A fő célok közé tartozott, hogy összehasonlító elemzést végezzenek az öt városban és a hozzájuk kapcsolódó környezetben, és mélyreható eredményekre jussanak sajátosságaikra és közös jellemzőikre vonatkozóan. Naprakész képet kellett felrajzolniuk a városfejlesztés előfeltételeiről Közép-Európában.

Ezeken a kereteken belül felmerült két analitikai fogalom, a nagyvárosiasodás és a többközpontúság, mivel mindkettő a nagyvárosi fejlődés konkrét útjainak mozgatórugójaként fogható fel. A POLYCE megközelítése mindkét fogalmat figyelembe vette az öt közép-európai főváros elemzésének kontextusában, és megpróbálta kölcsönös kapcsolatukat is meghatározni – azaz, hogy milyen mértékben tudják támogatni a szilárd és kiegyensúlyozott nagyvárosi fejlődést.

## Terminológia

Ez a két analitikai fogalom, a „nagyvárosiasodás” és a „többközpontúság” képezi az alapját a POLYCE céljainak és kutatási irányainak meghatározásához. A projekten belül a két fogalmat a következőképpen definiáljuk:

A *nagyvárosiasodás* a városi átszerveződés folyamata, amelyet konkrét szempontok alapján lehet meghatározni:

- Az (új) gazdasági funkciók vagy a lakosság térbeli koncentrációja – az utóbbit gyakran a bevándorlás okozza (Friedmann, 1986 és 2002; Geyer, 2002)
- Fontos irányítási és ellenőrzési funkciók birtoklása és jól fejlett kapcsolódás (Keeling, 1995)
- Gazdasági átszerveződés a tudásintenzív tevékenységek megerősödése következtében (Krätke, 2007)
- A szakosodott funkciók egyenlőtlenül vannak elosztva a városon vagy többközpontú agglomerációban belül (Kunzmann, 1996; Leroy, 2000; Sassen, 2002; Elissade, 2004)

A *többközpontúság* azt jelenti, hogy egy adott területen egynél több pólus vagy csomópont található. A fogalomnak több (egymáshoz kapcsolódó) aspektusa van:

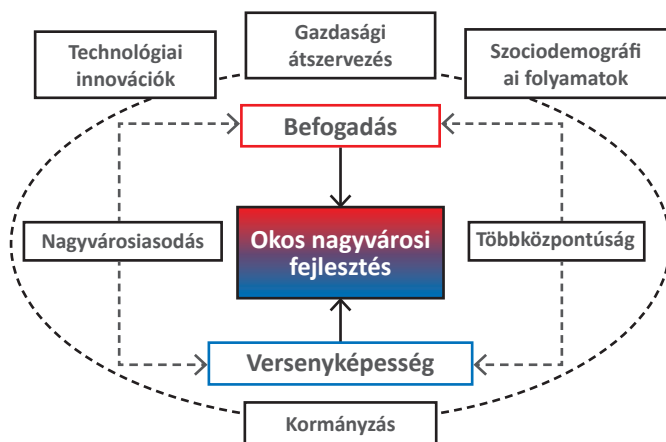
- Morfológiai, alaktani többközpontúság: a csomópontok méret és jelentőség szerinti hierarchiái
- Kapcsolati többközpontúság: a csomópontok közötti áramok és kölcsönhatások
- Többközpontúság a kormányzásban: kölcsönös érdekek, megfontolások, inspiráció, együttműködés, egymást kiegészítő jelleg a döntéshozatalban a különböző csomópontokban és azok között

## Politikai kihívás

Mindkét fogalom elkerülhetetlenül kapcsolódik a politikában gyakori versenyképesség és befogadás fogalmihoz, amelyeket gyakran idéznek nemcsak a nagyvárosi, hanem az európai szintű politikai dokumentumokban is (Ld. Európai Bizottság, 2010). E két paradigma kiegyensúlyozása kulcsfontosságú az ún. „*okos nagyvárosi fejlődés*” szempontjából.

Az „okos” szó az elmúlt évek során kissé elcsépeletté vált, bár meghatározása még mindig nem eléggé világos. Míg eredetileg az információs és kommunikációs technológiával kapcsolatos gazdasági tevékenységek középpontba helyezését jelentette, addig, amikor a városfejlesztésről beszélünk, jelentését ki kell bővítenünk. Ebből a szélesebb területi perspektívából (amely valójában szorosan kapcsolódik egy politikai perspektívához is) az „okos helyeknek” – ahogyan az Európai Bizottság az EU 2020 Stratégiában (Európai Bizottság, 2010) meghatározta – különböző, például a tudással, innovációval, a kapcsolódással vagy a kormányzással kapcsolatos funkciókat kell kombinálniuk. „Ezután az „okos várossá” válás magába foglalja „[...] egy város ambícióját arra, hogy javítsa gazdasági, társadalmi és környezetvédelmi standardjait és ebből következően versenyképességét a városi versenyben.” (Giffinger et al., 2010, p.304 f.). Ez a megfogalmazás természetesen hangsúlyozza azon kormányzási intézkedések jelentőségét, amelyek sokféle szereplőt integrálnak a helyi lakosoktól és gazdasági szereplőktől kezdve a döntéshozókig.

A nagyvárosi fejlesztés fő kihívásai – amelyekre az EU 2020 Stratégia (Európai Bizottság, 2010) is hivatkozik – hogy annak versenyképesnek és befogadónak kell lennie. Így az „okos nagyvárosi fejlesztés” egy nagyvárosi agglomeráció azon képességét jelzi, hogy megbirkózzon e kétfajta kihívás mindegyikével. E tekintetben azonban nemcsak a helyi adottságokkal rendelkező létesítmények tekinthetők lehetőségnek. Az okos nagyvárosi fejlesztés az önállóan dönteni képes és független polgárok tevékenységére is kiterjed a tudatosság, és a részvétel tekintetében. Támogatja a meglévő eszközök erősítését, és táplálja az új potenciálok aktivizálását. Következésképpen a POLYCE-ban egy „okos nagyvárost” egy olyan funkcionálisan integrált városrégióként kell felfogni, ahol a versenyképességet és a befogadást javító fejlődési folyamatok egyaránt zajlanak, és a fontos szempont, hogy a kettő közötti egyensúlyt a kapcsolódó kormányzási megközelítések révén kézben kell tartani.



1. ábra: Az okos nagyvárosi fejlesztés megértése

## Javaslatok az okos közép-európai nagyvárosok számára

A következő „nagyvárosi agendák” részben az egyes városok lehetséges jövőbeli tevékenységeit vizsgáljuk fel. Először általános fejlesztési pályákat ajánlunk mindegyik nagyvárosi terület számára, utána

*pedig röviden körvonalazzuk a szóban forgó nagyvárosok jelenlegi kihívásait. Az agendákat az öt közép-európai nagyváros ígéretes jövőbeli tevékenységeire vonatkozó javaslatokként kell felfogni. Nem átfogó nagyvárosi stratégiákat, hanem inkább a lehetséges tevékenységek strukturált gyűjteményét képviselik. Az öt nagyváros számos helyi és regionális érdekeltjével szoros együttműködésben kerültek kidolgozásra. Ezek az agendák mindenképp az empirikus projekteredmények számos kiválasztott érdekelttel történt interaktív megvitatásán alapulnak. Következésképpen az ismertetett elképzelések elkerülhetetlenül egy szelektív látásmódot képviselnek, ugyanakkor azonban az érdekeltekkel az empirikus projekteredmények alapján folytatott vitákból származnak, tehát tükrözik a projekt során végrehajtott empirikus elemzéseket.*

## **Pozsony nagyvárosi agendája**

### **Jövőkép**

**A nagyvárosi Pozsonynak a kutatás-fejlesztési klaszterekben folytatott tudásintenzív tevékenységeken alapuló egyértelmű pozícionálás révén kell fokoznia versenyképességét. Ugyanakkor jobb határokon átnyúló kormányzati megközelítésekre van szüksége ahhoz, hogy a befogadó nagyvárosi fejlődést támogató stratégiai tevékenységeket valósíthasson meg.**

### **Tevékenységek**

Pozsonynak a nagyvárosi terület pozícióját és versenyképességét a tudásalapú tevékenységek intenzívebb fejlesztésével kell megerősítenie, az ezzel kapcsolatos szolgáltatásokra és kutatás-fejlesztési klaszterekre koncentrálna.

### **Kihívások és korlátok**

Fontos potenciált képvisel a pozsonyi nagyvárosi terület központi földrajzi elhelyezkedése a Duna-régióon belül, aminek a kiaknázása még nem történt meg. A nagyvárosi versenyképesség megerősítése érdekében tervezési megközelítésekre és kapcsolódó kormányzati formákra van szükség, amibe be kell vonni a teljes városi és regionális vezetési környezetet. A bevonásra kerülő szereplőknek a határokon átnyúló menedzsmentre, a tevékenységek koordinálására, a közös döntéshozatalra és az állandó információcserét támogató egyéb kezdeményezésekre kell fókuszálnia.

### **Okos nagyvárosi fejlesztés**

Az infrastrukturális és intézményi fejlesztésben a bevonás tendenciája érvényesül, míg a nagyvárosi versenyképességet a gazdasági szakosodás és imázs-stratégiák ösztönzik erőteljesen. A javasolt környezeti és kormányzati tevékenységeket úgy kell értelmezni, hogy az első szakaszban csak a befogadást előmozdító tendenciájuk van, míg hosszú távon rendelkeznek azzal a képességgel, hogy fokozzák a versenyképes nagyvárosi Pozsony teljesítményét.

## **Budapest nagyvárosi agendája**

### **Jövőkép**

**Budapest versenyképességét a városségióon belül a Duna-régióbeli nagyvárosként való pozícionálásával kellene fejleszteni. Nem szabad ugyanakkor megfeledezni a gazdasági funkciók városségióon belüli kiegyensúlyozottabb elosztásáról sem, ami a területi kohézió elérésének egyik eszköze lehet.**

### **Tevékenységek**

Az e megközelítésben rejlő potenciálokat az érdekeltek jól látják, és ezek több akcióterületet lefednek. A javasolt tevékenységek közé intézkedések széles skálája tartozik, kezdve az imázssal kapcsolatosaktól az infrastruktúrán és a kormányzati tevékenységeken át a környezeti kérdésekig.

### **Kihívások és korlátok**

A kihívásokat a közigazgatási értelemben vett Főváros dominanciája jelenti egy meglehetősen egyközpontú városrégióban, ahol csak néhány alközpont van, és a nagyvárosi funkciók erősen a városmagba koncentrálódnak. A lista élén ennek a domináns helyzetnek az enyhítését célzó infrastrukturális és kormányzási intézkedések állnak, mivel ezek tudnák a nagyvárosi Budapestet egy befogadóbb fejlődés irányába terelni.

### **Okos nagyvárosi fejlesztés**

A városrégiós tervezési megközelítéseknek még nagyobb mértékben figyelembe kellene venniük a környező területek helyi potenciálját, mivel ezek egyszerre támogathatják a város versenyképességét a Duna régióban, és a befogadóbb nagyvárosi fejlődést.

## **Ljubljana nagyvárosi agendája**

### **Jövőkép**

**A nagyvárosi Ljubljanának fejlődését a gazdasági szférában végrehajtott konkrét tevékenységek révén kellene irányítani, és erősíteni kellene a róla kialakult képet, mint vonzó oktatási és kutatási központ. A többközpontú fejlesztést meg kell erősíteni a nagyobb területi kohéziójú fejlődés biztosítása érdekében.**

### **Tevékenységek**

Intézkedéseket kellene hozni a nagyvárosi területen belüli funkcionális kapcsolatok javítására. Ez magába foglalja a nagyvárosi funkciók egyenletesebb elosztásának biztosítására irányuló tevékenységeket is regionális szinten. Ljubljana, mint közepes méretű európai város jelentősége a konkrét funkcióknak a városmagban való koncentrációjához vezetett, annak negatív mellékhatásaival együtt, aminek be kell kerülnie a döntéshozók által megoldandó feladatok közé, hogy megelőzhető legyen a város magas életszínvonalának elvesztését. Ezen kívül Ljubljanának integráltabb, fenntartható közlekedési rendszer megteremtésére és a nemzetközi összefüggésrendszerbe való nagyvárosi beágyazottságának javítására is törekednie kell. Ezen túlmenően a többi, a közép-európai Duna-régióban található nagyvárossal való közlekedési kapcsolatainak javításával ellensúlyoznia kell a régióban való perifériális helyzetét.

### **Kihívások és korlátok**

A város számára az egyik fő kihívást a közép-európai Duna-régió belüli perifériális helyzete jelenti. Úgy tűnik, hogy nincs közös felfogás arról, hogy a városnak inkább a közép-európai, a balkáni vagy a mediterrán régió felé kellene-e irányítani tevékenységét.

### **Okos nagyvárosi fejlesztés**

Olyan nagyvárosi kormányzási megközelítésekre van szükség, amelyek előmozdítják a helyi lakosság részvételét a döntéshozatali folyamatokban, ami nagyobb társadalmi kohézióhoz vezethetne. Ugyanakkor a gazdasági tevékenységek változatossága segíthetne Ljubljana versenyhelyzetének megerősítésében. Így az okos fejlesztés érdekében, amely kiegyensúlyozza a befogadó és a kompetitív fejlesztést, nagyon fontosak a kormányzási erőfeszítések, mint pl. az intézményesített együttműködés, vagy a harmonizált finanszírozás.

## Prága nagyvárosi agendája

### Jövőkép

Prága nagyvárosi fejlődésében a kulcsfogalom a „tudás”, mivel ez egyszerre képes előmozdítani a versenyképességet és a befogadást. Cél a nagyvárosi Prága kulturális imázsának további fejlesztése, mivel ez mind a gazdasági prosperitásnak, mind a társadalmi kohézióknak mozgatórugója.

### Tevékenységek

A nagyvárosi Prága számára több szinten is fontos cél a tudáscsere. Intenzívebbé kell tenni az együttműködést mind regionális, mind közép-európai szinten, hogy tanuljanak másoktól, megosszák saját tapasztalataikat és elmélyült betekintést nyerhessenek azokba a területekbe, ahol a nagyvárosi politika javítható. A tudáscserét a megfelelő szereplők között regionális szinten is elő kell mozdítani. Ebben az összefüggésben Közép-Csehország közös kulturális értékei aktívan integrálhatók Prága városrégiós imázsának fejlesztése alapjaként. Ezeket az értékeket nyíltan meg kell tárgyalni a befogadó jelleg biztosítása, és a közös városrégiós identitás megerősítése érdekében.

### Kihívások és korlátok

Prága számára a legnagyobb kihívást a regionális szintű együttműködés hiánya jelenti. Ehhez innovatív megoldásokra van szükség a meglévő, örökölt intézményi korlátok leküzdésére, különösen a város és a regionális szint között.

### Okos nagyvárosi fejlesztés

Egy a többszintű tudáscserét előmozdító kinyilvánított stratégia várhatóan nemcsak a nagyvárosi versenyképességet mozdítaná elő, de befogadó hatásokat is kiválthatna. A hatékonyság hiányosságainak kiküszöbölése és az innovatív megközelítések ösztönzése a nagyvárosi tervezésben teret fog biztosítani a résztvevők szélesebb körének integrálására.

## Bécs nagyvárosi agendája

### Jövőkép

Bécs mint városrégió számára a kihívást az európai versenyképességet és az ott lakókra gyakorolt vonzerőt biztosító stratégiai tevékenységek megfelelő arányának megtalálása jelenti. Ez a megközelítés magába foglalja a regionális szintű területi kohéziót is. Egy részvételen alapuló megközelítés révén nagyon világosan meg kell határozni a város pozícióját és funkcióját a Duna régió belül.

### Tevékenységek

Bécs esetében a regionális szintű közlekedési hozzáférhetőség javításának központi szerepet kell játszania a tervezési tevékenységekben, különös tekintettel a regionális tömegközlekedési infrastruktúra javítására. Bécs élenjáró pozíciója a környezetfejlesztés terén mind a gazdasági versenyképesség, mind pedig a fenntartható nagyvárosi fejlesztés támogatójaként szerephez jut. A városnak továbbra is törekednie kell a „zöld város” imázs megerősítésére (pl. nagyobb figyelmet fordítani a környezetvédelmi technológiákra). Kezdeményezni kell az olyan társadalmi csoportok kifejezett integrálására irányuló kormányzati megközelítéseket, amelyek megkérdőjelezzik ezt a jövőbeli fejlődési pályát. E tekintetben döntő szerepet játszanak a konkrét nagyvárosi funkciók elosztására vonatkozó közös döntéshozatalt is magukba foglaló tanulási folyamatok. Közös események alkalmával rendszeres tudáscserét kell szervezni a város magja és a kisebb központok közötti kapcsolatok javítására és Bécs szerepének tisztázására a Duna régió városainak hálózatában.

### Kihívások és korlátok

Az egyik fő kihívást az integrált városi régió jelenlegi hiánya jelenti intézményi és közlekedési tekintetben, de a nagyváros funkciók elosztását illetően is a régióban. Itt intézkedéseket kellene hozni a korlátok legyőzésére, a területileg kohéziót nyújtó fejlesztés biztosítása érdekében.

### Okos nagyvárosi fejlesztés

A tudáscserét ösztönző stratégiáktól döntően befogadó hatások várhatók, míg Bécs, mint zöld, környezetbarát város jellegének erősítése hozzá kell, hogy járuljon a városi versenyképességhez is, mivel élesebb képet ad a városról.

## Közép-európai agenda

*A következő részben a közép-európai Duna-régió potenciális jövőbeli tevékenységeit vázoljuk fel. Ezeket az öt közép-európai nagyváros ígéretes jövőbeli tevékenységekre vonatkozó javaslatokként kell fel-fogni. Nem átfogó stratégiákat, hanem inkább a lehetséges tevékenységek strukturált gyűjteményét képviselik. A fenti „nagyvárosi agendákhoz” hasonlóan, az öt nagyváros számos helyi és regionális érdekeltjével szoros együttműködésben kerültek kidolgozásra. Ezek az agendák mindenképp az empirikus projekteredmények kiválasztott érdekeltekkel történt interaktív megvitatásán alapulnak. Következésképpen az ismertetett elképzelések elkerülhetetlenül egy szelektív látásmódot képviselnek, ugyanakkor azonban az érdekeltekkel az empirikus projekteredmények alapján folytatott vitákból származnak, tehát tükrözik a projekt során végrehajtott empirikus elemzéseket.*

**Az öt POLYCE nagyváros közös stratégiai tevékenységeinek erősíteniük kell mindegyik nagyváros pozícióját, és javítania kell a többközpontú kapcsolatok különféle formáit a közép-európai Duna-régióban. A POLYCE nagyvárosok közös stratégiai erőfeszítéseinek kifejezetten a közép-európai Duna-régióban a területi kohézió szempontjaira kell fókuszálniuk. A többközpontú kapcsolatok javítása segíthet a nagyvárosiasodás folyamatainak és az ezekhez kapcsolódó városrégiós növekedésnek a kezelésében.**

- A POLYCE országok közötti együttműködési potenciálok és eszközök különösen erősek a tudásalapú gazdaság, a közlekedésmenedzsment és a nagyvárosi kormányzás területein.
- Fejleszteni kell a kapcsolati tőkét (pl. nyelvtudás, új adminisztratív és stratégiai kapacitás) a közép-európai érdekeltek között. Ez magába foglalja (1) a kapcsolatok javítását, és az információhoz való hozzáférést, (2) az információknak a partner nagyvárosokra vonatkozó értékes tudássá való átalakítását, mint a folyamatos és rendszerszemléletű kapcsolati lehetőségek kimenetét, (3) a közös lobbizás javítását az EU-n belül a közép-európai Duna-régiós partnerek érdekeiért.
- A megbeszélések azt mutatják, hogy mind az öt nagyváros saját földrajzi környezetében csomópontként igyekszik pozicionálni magát kifelé, a szomszédos régiók és országok irányába. A közép-európai Duna-régióbelül tehát a területileg kohéziót mutató fejlesztéshez új közös stratégiai erőfeszítések szükségesek, amelyek nem csupán azokat a tevékenységeket ösztönzik, amelyek az elérhetőséget javítják infrastrukturális beruházások segítségével.
- Az öt nagyváros történelmi, társadalmi és gazdasági kötelei megfelelő alapot kell, hogy jelentsenek a további együttműködéshez a közintézmények, a civil társadalom és a magánvállalkozások között. Ezek a kapcsolatok kiterjeszthetők, és elmélyíthetők különböző, határokon átnyúló hálózatépítési projektek segítségével, amelyek jól támogathatók a meglévő uniós régiópolitikai programokon keresztül: az „Európai Területi Együttműködés” (ETE) kereteiben szereplő programok, a régiók közötti együttműködési program, amelynek célja minden fajta városi hálózatot ösztönzése, az URBACT II program, amely különösen a városok közötti információcserére irányul, a „Közép-Európa” nemzetek közötti együttműködési program, amely nem csak az öt nagyvárost, hanem azok hátszágát is lefedi.
- Mivel ez a program Lengyelországra, Németország keleti és déli részeire és Olaszország északi részére is kiterjed, a POLYCE nagyvárosait olyan szélesebb területi



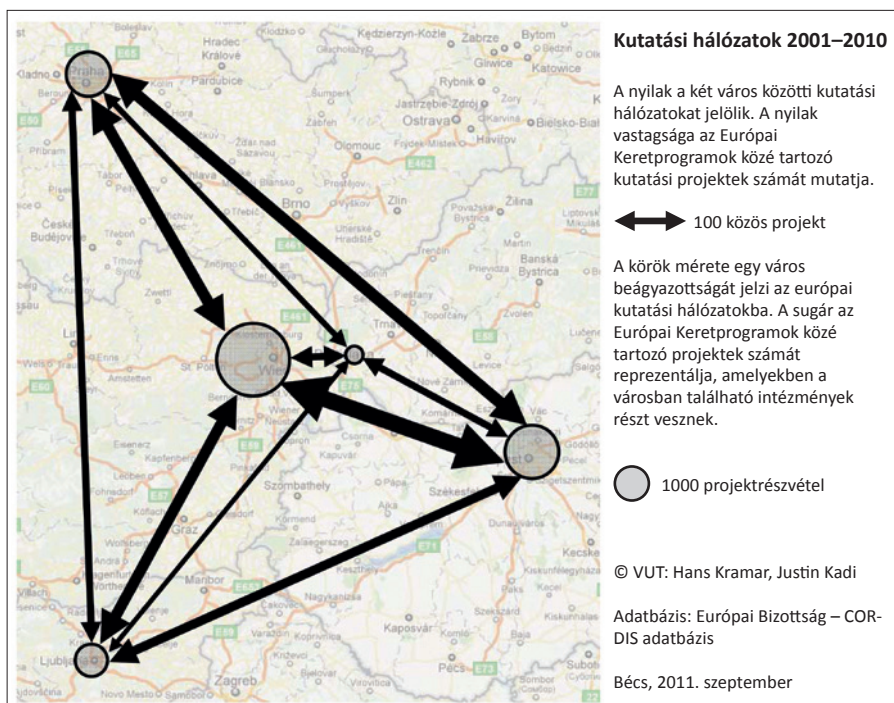
összefüggésrendszerbe helyezi, amely olyan városokkal köti össze őket, mint Berlin, Varsó, München és Milánó, amelyek a régió számára igen fontos partnerek.

- A kooperatív stratégiai tevékenységeknek figyelembe kell venniük a Duna régióra vonatkozó európai stratégiát. Az öt nagyváros közösen fontos szerepet játszhat e stratégia további fejlődési útjainak kidolgozása szempontjából. A Duna régióban már léteznek ígéretes hozzáállások, amelyek kezdeményezőként léphetnek fel, és konkrét kérdésekben jelentős mozgatórugók, de ezeket mind az öt fél között megfelelően koordinálni kell.

**A többközpontúság szempontjából mind az öt POLYCE nagyváros bizonyos szempontból kiemelkedik, ami mindegyiket a közép-európai városi hálózat fontos szereplőjévé teszi. Mindazonáltal egyeseknek még mindig javítaniuk kell belső többközpontú struktúrájukon, erősíteniük kell az európai gazdasági vagy kutatási hálózatokhoz fűződő köteleiket, illetve javítaniuk kell kapcsolódásukon. A városok közötti különféle áramok, hálózatok és együttműködések stimulálhatják és erősíthetik egymást. Következésképpen a politikai, gazdasági és társadalmi hálók a kapcsolódó kormányzati intézkedéseken keresztül egész biztosan javítani fogják mindenféle interakció feltételeit a POLYCE városai között.**

- Az öt város közül messze Bécs városi rendszere a leginkább integrált. A két kisebb város, Pozsony és Ljubljana jobban beágyazódott az őket körülvevő kis és közepes méretű városok kiegyensúlyozott rendszerébe. Budapest, Bécs és Prága messze dominánsabb szerepet játszanak saját nagyvárosi régiójukban.
- Az ingázási adatok egyértelműen mutatják a különbséget Bécs funkcionálisan integrált városi rendszere és a korábbi szocialista országokban működő városi rendszerek között, amelyeket fővárosaik uralnak egyirányú munkába járással a főváros felé, a környező nagyvárosi területen található kisebb központok hierarchikus alárendeltségével.
- Erős (gazdasági) kötelek ismerhetők fel Budapest, Prága és Bécs között – és mindhárom nagyváros nagymértékben integrálódott a szélesebb európai és világméretű hálózatokba.
- Bár központi ellenőrzési funkciók megtalálhatók Budapesten, Prágában és Bécsben is, Bécs kiemelkedik, mivel több olyan kiemelkedő cégnek biztosít helyet, és több európai kutatási együttműködésben vesz részt, mint a régióban található más városok. Prága viszont az első helyen áll a régióon belül a pénzügyi, biztosítási és ingatlan („FIRE”) céges kapcsolatok tekintetében, valamint erős kapcsolatokat mutat más európai vagy azon kívüli városokkal.
- Figyelembe véve a városok eltérő méretét, Pozsony egészen jól szerepel a céges hálózatok terén a közép-európai Duna-regióban és világszinten is. Ljubljana komolyabb szerepet játszik az európai kutatási hálózatokban.
- A városok közötti kapcsolatokat a céges és a kutatási hálózatok vonatkozásában jelentősen befolyásolja az utazási idő és az etnikai kötelek megléte, amely rámutat a közlekedési elérhetőség, valamint a történelmi kapcsolatok gazdasági tevékenységekre gyakorolt hatására.

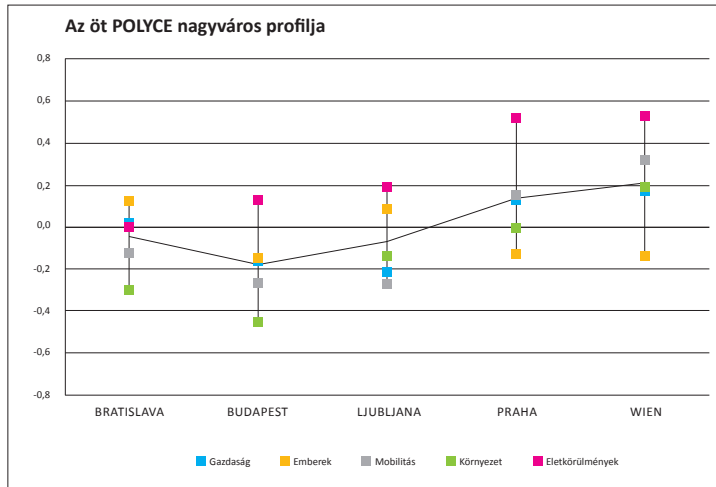




2. ábra: Kutatási hálózatok a POLYCE nagyvárosok között (2001-2010)

Az elemzett közép-európai nagyvárosoknak egy kiemelkedő, közös vonásuk, hogy mindegyikük kivételesen jó életkörülményeket kínál. A közös kezdeményezéseknek figyelembe kell venniük ezt a szempontot, különösen ha a nagyvárosiasodás folyamatai a növekedést is magukba foglalják, ami fenyegetheti ezeket a kiemelkedő előfeltételeket. Ezen túlmenően világossá válik, hogy az öt város mindegyike eltérő, és lehet, hogy meghatározó szerepet játszhat a közép-európai városrendszer versenyképességének létrehozásában egy szélesebb területi összefüggésrendszerben.

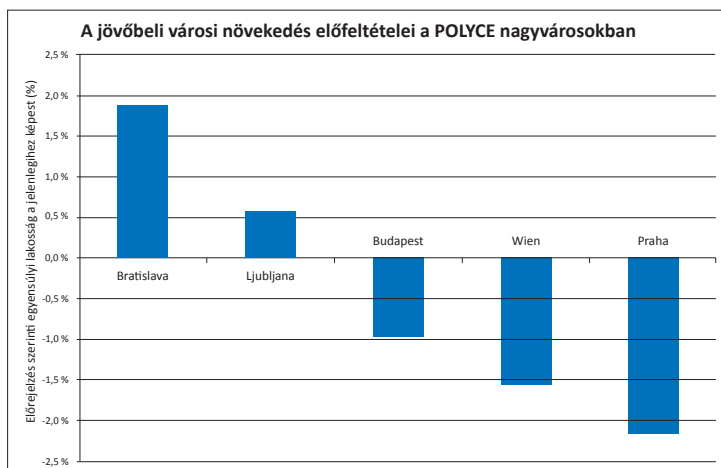
- Az elemzés azt mutatja, hogy az öt vizsgált városségió mindegyike jól szerepel az életkörülmények tekintetében. Kiemelendő, hogy ez az egyetlen olyan nagyvárosi jellemző, ahol mindegyik város a mintában szereplő 50 európai város átlaga fölött szerepel.
- Összességében csak Prága és Bécs szerepel a kiválasztott városok átlagánál jobban. Az öt POLYCE nagyváros között a gazdasági fejlődés terén szerepelnek a legjobban, de mégis több hasznot húznak egy másik jól szereplő jellemzőből, a jó életkörülményekből. Ugyanakkor mindkettő elmarad a demográfia, az oktatás és a kismértékű etnikai sokszínűség területén, amelyek mind az „Emberek” kategóriába tartoznak.
- Pozsony és Ljubljana ezzel szemben kiemelkedően jól szerepelnek az „Emberek” területen – ez olyan tény, amely fontos pozícióba helyezi ezeket a nagyvárosokat az öt POLYCE város között – különösen az oktatást és az etnikai sokszínűséget ösztönző megközelítések tekintetében.
- Bécs profilja mutatja a város fontos pozícióját mint szerepmodellét a környezetvédelmi megfontolások szempontjából. Vannak ugyan más, észak- és nyugat-európai városok, amelyek e tekintetben felülmúlják Bécset, de ez a nagyvárosi terület nyilvánvalóan értékes körülményeket mutat közép-európai partnerei között. Ugyanez vonatkozik a „Mobilitásra” (amely tartalmazza a tömegközlekedést, a megközelíthetőséget és hasonlókat), amelyeknél Bécs pozíciója legalább ugyanolyan fontos.



3. ábra: Az öt POLYCE nagyváros profilja

Mind az öt nagyváros eltérő kihívásokkal néz szembe a lakosság növekedését illetően, ha figyelembe vesszük a nagyvárosi területek közelmúltbeli körülményeit. Prágának, és kisebb mértékben Bécsnek és Budapestnek is, stratégiákat és konkrét intézkedéseket kell kidolgoznia annak érdekében, hogy szilárd területi struktúrát biztosítsanak a funkcionális városrégió területén. Ezzel szemben Pozsony és kisebb mértékben Ljubljana területe is potenciállal rendelkezik a lakosság növekedésének feltételeit illetően. Az erre vonatkozó empirikus eredmények alátámasztják ezeket a tényezőket, amelyek pozitív és negatív hatásokkal vannak a városok növekedésével való megbirkózásra, és hangsúlyozzák a szilárd nagyvárosi tervezési stratégia fontosságát:

- A földbérleti díjak, a városi élethez kapcsolódó negatív társadalmi stressz hatás valamint a városszétfolyás képviselik a legfontosabb városi költségeket, és így negatívan befolyásolják a populáció növekedését, ezért ezek a tényezők kulcsfontosságúak a jövőbeli városi fejlődés szempontjából.
- A nagyvárosok vonzerejét fokozó létesítmények, az ipari sokszínűség, a tudásintenzív tevékenységek (kutatási hálózatok) kapcsolati többközpontúsága és a nagyvárosi funkciók (hatalmi funkciók a politikai, gazdasági és kulturális szférában) mind egyértelműen pozitív hatást gyakorolnak a városi agglomerációk méretére.
- E tényezők hatásainak azonosítása szemlélteti a nagyvárosok szilárd területi struktúrájának fontosságát külső hálózatépítés és városszétfolyás csökkentése formájában.
- Ezek a tényezők – szilárd nagyvárosi és tervezési stratégiához kapcsolódva, a megfelelő projektekkel együtt – jelentősebb városi előnyöket és hatékonyságot generálnak, és ugyanakkor csökkentik a fizikai mérethez kapcsolódó költségeket. A városi minőség fejlesztése, a vonzerőt növelő létesítmények és az emberi tőkében gazdag szakemberek odavonulása fokozott vonzerőt és versenyképességet kell, hogy teremtsen, amely támogatja egy szélesebb, sokszínűbb városi világ létrejöttét.



4. ábra: A jövőbeli városi növekedés előfeltételei a POLYCE nagyvárosokban

## További kutatások szükségessége

**A kapcsolati többközpontúság vizsgálata:** A kutatások mélyíthetők a közép-európai funkcionális kapcsolatok szintjén. Az öt POLYCE nagyváros közötti és más európai, vagy azon kívüli városi csomópontokkal való együttműködések és hálózatok kibővített feltárást igényelnek, különösen a gazdasági és társadalmi kapcsolatok vonatkozásában.

**A közepes méretű városok szerepe a kohéziós fejlődésben:** Mivel ez a vizsgálat öt közép-európai nagyvárosra irányult, nem érintettük a közepes méretű városi agglomerációkkal kapcsolatos kérdéseket. Ezek szerepének kutatása a fő nagyvárosok többközpontú hálózataiban szintén fontosnak tűnik, mivel feltételezhető, hogy meghatározó szerepük van a többközpontú, tehát ebből következően a kohéziót előmozdító fejlődésben.

**A nagyvárosi területek lehatárolása:** A lakosság területi eloszlása és az ingázási kapcsolatok csak kiindulópontját képezik a funkcionálisan integrált nagyvárosi területek meghatározásának. Mivel az ilyen jellegű meghatározásokat a különböző érdekeltek már többször szorgalmazták, azonnali feladat lenne megállapodni egy a nagyvárosi területek lehatárolására irányuló közös megközelítésről.

**Kormányzati viták a célzott elemzésekben:** A helyi és regionális szakértők bevonása az ESPON célzott elemzéseibe, figyelembe veszi a kommunikatív tervezési megközelítéseknek tulajdonított jelentőséget. Ennek elismerése nagyra értékelendő, bár a megközelítés bizonyos tekintetben túlságosan korlátozott. A városok vezetősége, mint projektpartnerek szerepe nem mindig eléggé világos, és míg a más érdekeltek bevonására irányuló általános kívánság elfogadott, az ilyen módszertani megközelítések alkalmazására nem elégséges az időkeret. Következésképpen kormányzati vitákat kell folytatni, és meg kell találni a megfelelő arányt a rövid távú eredmények és a mélyebb elemzések között.

# Pameten metropolitanski razvoj

## Uvod

POLYCE analizira pet srednjeevropskih prestolnic in njihovo funkcionalno povezano okolico: Bratislava, Budimpešta, Ljubljana, Praga in Dunaj. Projekt izhaja iz želje udeleženih mestnih uprav po ugotavljanju potencialov medsebojne konkurenčnosti in sodelovanja v medsebojnih odnosih, ter v odnosih z drugimi metropolami. Glavni cilj je primerjalna analiza petih mest in njihovega širšega funkcionalnega območja, na osnovi katere bi prišli do poglobljenih podatkov glede njihovih posebnosti in skupnih značilnosti. Tako bi dobili aktualno podobo danih pogojev za urban razvoj v Srednji Evropi.

V tem okvirju igrata pomembno vlogo analitična koncepta metropolitanizacije in policentričnosti, saj oba veljata kot gonilni sili specifičnega metropolitanskega razvoja. Pristop POLYCE upošteva oba koncepta v kontekstu analiz petih Srednjeevropskih prestolnic, prav tako pa poskuša določiti njihov medsebojni odnos – ugotavljanje do katere mere sta oba koncepta lahko nosilca premišljenega in uravnovešenega metropolitanskega razvoja.

## Izrazoslovje

Analitična koncepta 'metropolitanizacija' in 'policentrični razvoj' sta osnovi za definiranje ciljev in namenov raziskave POLYCE. V sklopu projekta sta koncepta definirana sledeče:

*Metropolitanizacija* je postopek urbane rekonstrukcije, ki jo lahko definirajo različni vidiki:

- Prostorska koncentracija (novih) gospodarskih funkcij ali prebivalstva – slednje velikokrat povzročeno s priseljevanjem (Friedmann, 1986 in 2002; Geyer, 2002)
- Razpolaganje s pomembnimi funkcijami vodenja in nadzora in dobro razvita povezanost (Keeling, 1995)
- Gospodarska rekonstrukcija zaradi povečanja aktivnosti znanja (Krätke, 2007)
- Specializirane funkcije v mestu ali v policentrični aglomeraciji so nesorazmerno razporejene (Kunzmann, 1996; Leroy, 2000; Sassen, 2002; Elissade, 2004)

Policentričnost opisuje obstoj več kot enega pola ali vozla znotraj določenega ozemlja. Koncept ima več (med seboj povezanih) vidikov:

- morfološka policentričnost: hierarhija in struktura vozlišč glede na njihovo velikost in pomen,
- policentričnost v odnosih: tokovi in interakcije med vozli,
- policentričnost in politike vodenja: skupni interesi, opažanja, navdihi, sodelovanje, dopolnjevanja pri sprejemanju odločitev v posameznih vozlih in med njimi.

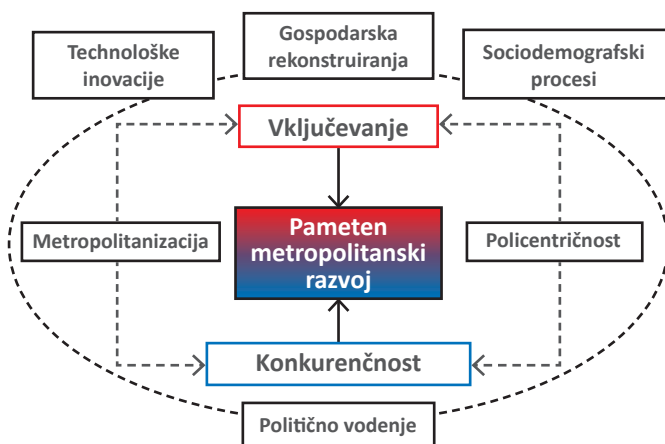
## Izzivi politik

Oba koncepta sta neizogibno povezana s politično bolj uveljavljenima konceptoma konkurenčnosti in vključevanja, ki sta velikokrat omenjena tako na ravni metropolitanskih politik, kot tudi v dokumentih evropskih politik (cf. EC, 2010). Uravnovešenost obeh paradigem naj bi bila odločilnega pomena za tako imenovan 'pameten metropolitanski razvoj'.

Beseda 'pameten' je v preteklih letih postala modna beseda, čeprav njena definicija še ni popolnoma jasna. Medtem ko je prvotno izražala osredotočenost na gospodarske aktivnosti na področju informacijske in komunikacijske tehnologije je potrebno pomen razširiti, če jo uporabljamo v kontekstu urbanega razvoja. Iz tega širšega prostorskega vidika (ki je dejansko tesno povezan s strateškim vidikom)

‘pametni kraji’ – kot jih definira Evropska komisija v strategiji gospodarske rasti Evropa 2020 (EC, 2010) – morajo kombinirati različne funkcije, kot npr. osnivanje na znanju in inovativnosti, zmožnost povezovanja ali vodenja idr. Torej če mesto postane ‘pametno mesto’ iz tega sledi, da ima ‘[...] mesto ambicije za izboljšanje svojih gospodarskih, socialnih in okoljskih standardov in s tem svoje konkurenčnosti v urbani konkurenci’ (Giffinger et al., 2010, p.304 f.). To seveda poudarja pomen ukrepov vodenja, ki vključujejo različne akterje: od lokalnega prebivalstva in gospodarskih akterjev do nosilcev političnih odločitev.

Glavni izzivi metropolitanskega razvoja – ki so prav tako omenjeni v strategiji gospodarske rasti Evropa 2020 (EC, 2010) – so konkurenčen in povezan metropolitanski razvoj. ‘Pameten metropolitanski razvoj’ torej kaže zmožnost soočanja metropolitanske aglomeracije z obema omenjenima izzivoma. Vendar v zvezi s tem lokalni viri ne predstavljajo edinih potencialov. Pameten metropolitanski razvoj prav tako vključuje aktivnosti neodvisnega prebivalstva, ki odloča samostojno, v smislu ozaveščenosti in participacije. Podpira krepitev obstoječih potencialov in pospešuje aktiviranje novih. Tako se pri projektu POLYCE ‘pametne metropole’ razume kot funkcionalno integrirana metropolitanska območja, kjer se odvijajo tako procesi razvoja konkurenčnosti, kot tudi razvoja vključevanja. Pri tem pa je pomembno, da z ustreznimi ukrepi vodenja vzpostavimo ravnovesje med tema dvema vidikoma.



Slika 1: Vpogled v pametni metropolitanski razvoj

## Priporočila za pametne srednjeevropske metropole

V nadaljevanju so v tako imenovanih ‘metropolitanskih agendah’ orisane potencialne aktivnosti za prihodnost vsake prestolnice posebej. Najprej so navedeni splošni razvojni predlogi za posamezno metropolitansko območje, nato pa so na kratko predstavljene aktualni izzivi dotične prestolnice. Agenda je mišljena kot predlog za obetajoče prihodnje aktivnosti petih srednjeevropskih prestolnic. Predstavljajo obširne metropolitanske strategije, še bolj pa strukturirano zbirko možnih aktivnosti. Agende so bile razvite v tesnem sodelovanju z vrsto relevantnih lokalnih in regionalnih deležnikov v vseh petih prestolnicah. Predvsem pa so agende pripravljene na osnovi interaktivne razprave izbranih deležnikov o rezultatih empirične raziskave. Tako torej navedene ideje neizogibno predstavljajo selektivni vidik. Ker pa izhajajo iz razprav deležnikov, ki so osnovane na rezultatih empiričnih projektov, torej zrcalijo empirične analize, ki so bile opravljene med projektom.

## Metropolitanska agenda Bratislave

### Vizija

Metropolitanska Bratislava bi svojo konkurenčnost povečala z jasno utrditvijo položaja na aktivnostih, ki so tesno povezane z znanjem, in sicer v raziskovalnih in razvojnih grozdih. Istočasno pa potrebuje izboljšane pristope čezmejnega vodenja za izvedbo vrste strateških aktivnosti, ki bi podpirale metropolitanski razvoj vključevanja.

### Aktivnosti

Bratislava mora okrepiti svoj položaj in konkurenčnost metropolitanskega območja s pomočjo bolj intenzivnega uvajanja z znanjem povezanih aktivnosti, predvsem z osredotočanjem na relevantne storitve, ter raziskovalne in razvojne grozde.

### Izzivi in ovire

Osrednja geografska lega metropolitanskega področja Bratislave v Podonavju je pomemben potencial, ki ga je treba še raziskati. Za krepitev metropolitanske konkurenčnosti so potrebni načrti in povezane oblike vodenja, pri tem pa mora biti vključeno celotno urbano in regionalno upravljanje. Vključeni akterji se morajo osredotočiti na čezmejno upravljanje, koordinacijo aktivnosti, skupne postopke odločanja in druge pobude, ki omogočajo stalno izmenjavo informacij.

### Pameten metropolitanski razvoj

Infrastrukturni in institucionalni razvoj težita k vključevanju, medtem ko gospodarska specializacija in strategije za oblikovanje ugleda močno podpirajo konkurenčnost med prestolnicami. Treba je upoštevati, da predlagane aktivnosti na področju okoljevarstva in vodenja le na začetku težijo k vključevanju, na daljši rok pa so zmožne izboljšati konkurenčnost metropolitanske Bratislave.

## Metropolitanska agenda Budimpešte

### Vizija

Konkurenčnost Budimpešte je treba povečati s pozicioniranjem metropolitanskega območja kot prestolnice Podonavske regije. Hkrati se mora mesto lotiti bolj uravnovešene porazdelitve gospodarskih funkcij po metropolitanskem območju in s tem doseči teritorialno kohezijo.

### Aktivnosti

Deležniki uspešno ugotavljajo potenciale tega pristopa, ki pokriva več akcijskih področij. Predlagane aktivnosti pokrivajo širok spekter ukrepov, od takšnih, ki se navezujejo na podobo območja, do infrastrukturnih pristopov, aktivnosti vodenja ter okoljskih problematik.

### Izzivi in ovire

Med izzive štejemo administrativno prevlado prestolnice v pretežno monocentrični metropolitanski regiji, z majhnim številom pod-centrov in visoko mero koncentracije metropolitanskih funkcij v jedru. Na vrhu seznama ukrepov so ukrepi na področju infrastrukture in vodenja, ki naj bi ublažili omenjeno dominantno pozicijo, saj bi tako lahko privedli metropolitansko Budimpešto do bolj celostnega razvoja.

### Pameten metropolitanski razvoj

Pristopi v metropolitanskem načrtovanju morajo še bolj upoštevati regionalne potenciale okoliških regij, saj bi tako lahko povečali konkurenčnost mesta v Podonavski regiji, kot tudi bolj celosten metropolitanski razvoj.

## Metropolitanska agenda Ljubljane

### Vizija

**Metropolitanska Ljubljana mora svoj razvoj voditi preko specifične aktivnosti v gospodarstvu in promovirati svojo podobo kot privlačen izobraževalni in raziskovalni center. Treba je okrepiti policentrični razvoj, da bi s tem zagotovili višjo mero razvoja teritorialne kohezije.**

### Aktivnosti

Potrebni so ukrepi za izboljšanje funkcionalnih odnosov znotraj metropolitanskega območja. Pri tem pa morajo biti vključene tudi aktivnosti za doseganje enakomernejše distribucije metropolitanskih funkcij na regionalni ravni. Pomen Ljubljane kot srednje velikega evropskega mesta je privedel do koncentracije specifičnih funkcij v jedru, kar je povzročilo negativne stranske učinke, ti pa morajo biti predmet obravnave politik, da bi s tem preprečili izgubo visokega življenjskega standarda. Nadalje mora Ljubljana stremeti k doseganju višje mere integracije trajnostnega javnega prometa, prav tako pa k izboljšanju metropolitanske vpetosti v mednarodnem kontekstu. Poleg tega je treba obrobno lokacijo znotraj srednjeevropske Podonavske regije dopolniti z boljšimi prometnimi povezavami do preostalih srednjeevropskih podonavskih prestolnic.

### Izzivi in ovire

Glavni izziv mesta je njegova obrobna lokacija na področju srednjeevropske Podonavske regije. V smislu razvoja dejavnosti se Ljubljana strateško usmerja proti srednjeevropski, donavski, alpski in sredozemski makro-regiji.

### Pameten metropolitanski razvoj

Potrebni so metropolitanski pristopi vodenja, ki pospešujejo participacijo lokalnega prebivalstva v postopkih odločanja, kar bi lahko privedlo do višje mere socialne povezanosti. Hkrati bi raznovrstne gospodarske aktivnosti lahko krepile konkurenčnost Ljubljane. Za pameten razvoj so torej zelo pomembni pristopi vodenja, kot npr. institucionalizirano sodelovanje in skladno financiranje, s čimer bi bila v ravnovesju vključevanje in konkurenčni razvoj.

## Metropolitanska agenda Prage

### Vizija

**‘Znanje’ je ključna beseda v metropolitanskem razvoju Prage, pri tem pa se lahko istočasno podpirata konkurenčnost in vključevanje. Cilj je nadaljnji razvoj metropolitanske kulturne podobe Prage, saj je prav ta lahko gonilna sila ekonomske blaginje in socialne kohezije.**

### Aktivnosti

Izmenjava znanja je pomemben cilj metropolitanske Prage na več ravneh. Pomembno bi bilo okrepiti kooperacijo na regionalni ravni in na ravni Srednje Evrope, da bi se tako učili od drugih, delili lastne izkušnje in dobili vpogled na tista področja, kjer se pri metropolitanski politiki vodenja kažejo potenciali za izboljšave. Prav tako je treba podpirati izmenjavo znanja med relevantnimi akterji na regionalni ravni. V tem kontekstu bi lahko skupne kulturne vrednote osrednje Češke aktivno integrirali kot osnovo za razvoj metropolitanske podobe mesta Praga. Te vrednote morajo biti predmet odprte razprave, da bi s krepitvijo skupne metropolitanske identitete zagotovili značilnosti vključevanja.

### Izzivi in ovire

Največji izziv Prage je pomanjkanje obstoječih kooperacij na regionalni ravni. Za odpravljanje obstoječih podedovanih institucionalnih ovir na področju sodelovanja, predvsem med mestom in okoliško regijo, bodo potrebni inovativni pristopi.



### **Pameten metropolitanski razvoj**

Metropolitansko konkurenčnost bi okrepila eksplicitna strategija za pospeševanje izmenjave znanja na več ravneh, poleg tega pa bi lahko pokazala tudi učinke vključevanja. Odstranjevanje neučinkovitih in podpora inovativnih pristopov v metropolitanskem načrtovanju bo dovoljevala integracijo širše skupine akterjev.

## **Metropolitanska agenda Dunaja**

### **Vizija**

**Metropolitanski Dunaj se sooča z iskanjem prave in sočasne mešanice strateških aktivnosti, s katerimi zagotavlja konkurenčnost na evropski ravni in privlačnosti za svoje prebivalstvo. Takšen pristop prav tako vključuje teritorialno kohezijo na regionalni ravni. Na osnovi participativnega pristopa se zelo jasno definirata položaj in funkcija mesta znotraj Podonavske regije.**

### **Aktivnosti**

Središče aktivnosti načrtovanja na Dunaju mora biti izboljšanje prometne dostopnosti na regionalni ravni, predvsem iz vidika izboljšanja regionalnega javnega prometa. Vodilna vloga Dunaja v okoljskem razvoju igra veliko vlogo tako pri gospodarski konkurenčnosti, kot tudi pri trajnostnem metropolitanskem razvoju. Mesto mora še naprej stremeti h krepitvi svojega ugleda kot zeleno mesto (npr. s širše zastavljenim osredotočanjem na okoljevarstveno tehnologijo). Treba bo vzpostaviti pristope vodenja z jasno integracijo socialnih skupin, ki to razvojno pot postavljajo pod vprašaj. V zvezi s tem odločilno vlogo igrajo učni procesi, ki obsegajo skupno sprejemanje odločitev o prerazporeditvi posameznih metropolitanskih funkcijah. Izmenjava znanja v sklopu rednih skupnih prireditev bi utrdila odnose med jedrom in manjšimi centri, s čimer se bi vloga Dunaja v urbanem omrežju znotraj Podonavske regije postala jasnejša.

### **Izzivi in ovire**

Glavni izziv je pomanjkanje integrirane urbane regije na področju institucij in prometa, prav tako pa v prerazporeditvi metropolitanskih funkcij v regiji. V zvezi s tem je treba sprejeti ukrepe za odpravljanje teh ovir in zagotavljanje teritorialno kohezivnega razvoja.

### **Pametni metropolitanski razvoj**

S strategijami za krepitev izmenjave znanja bi dosegli prevladujoč učinek vključevanja, istočasno pa bi s tem krepili ugled Dunaja kot zeleno, okolju prijazno mesto, s čimer bi se podoba Dunaja še okrepila in s tem prispevala k urbani konkurenčnosti.

## **Agenda Srednje Evrope**

*V nadaljevanju so orisane potencialne aktivnosti za prihodnost v srednjeevropski Podonavski regiji. Zastavljene so kot predlogi za obetajoče aktivnosti v petih srednjeevropskih prestolnicah. Tako ne predstavljajo le obširno zastavljenih strategij, temveč predvsem tudi strukturirano zbirko možnih aktivnosti. Kot zgoraj navedene 'metropolitanske agende' je tudi ta agenda bila razvita v tesnem sodelovanju z vrsto relevantnih lokalnih in regionalnih deležnikov v obravnavanih petih prestolnicah. Agenda je predvsem osnovana na interaktivnih razpravah z izbranimi deležniki o rezultatih empiričnega projekta. Navedene ideje torej neizogibno predstavljajo selektiven vidik. Vendar ker izvirajo iz razprav med deležniki na osnovi rezultatov empiričnega projekta, zrcalijo tudi empirične analize, izvedene med izvedbo tega projekta .*



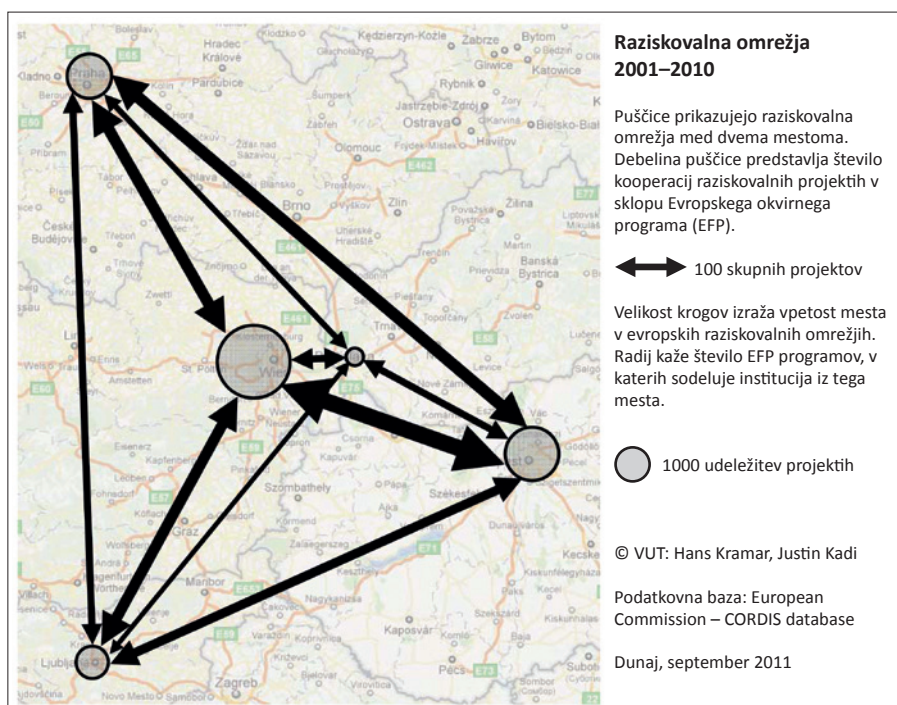
**Skupne strateške aktivnosti petih POLYCE metropol bi okrepile položaj vsake metropole zase in izboljšale različne oblike policentričnih odnosov v srednjeevropski Podonavski regiji. Skupna strateška prizadevanja petih POLYCE metropol se morajo osredotočiti izrecno na vidike teritorialne kohezije znotraj srednjeevropske Podonavske regije. Krepitev policentričnih odnosov bi pomagala pri upravljanju s procesi metropolitanizacije in s tem povezane metropolitanske rasti.**

- Potenciali in prednosti sodelovanja med POLYCE metropolami so posebej veliki na področjih znanja, gospodarstva, upravljanja s prometom in metropolitanskega vodenja.
- Kapital, ki izvira iz teh odnosov (npr. znanje jezika, nove administrativne in strateške zmogljivosti) mora biti med deležniki izpopolnjen. To vključuje (1) izboljšanje stikov in dostopnosti do informacij, (2) preoblikovanje informacij v dragoceno znanje o partnerskih metropolah - rezultat trajnih in sistematskih kontaktov, (3) izboljšanje skupnega lobiranja v EU za interese partnerjev srednjeevropske Podonavske regije.
- Razprave kažejo, da vseh pet metropol poskuša utrditi središčni položaj do sosednjih regij in dežel v svojih geografskih kontekstih. Zato kohezivni teritorialni razvoj v srednjeevropski Podonavski regiji potrebuje nova skupna strateška prizadevanja, s katerimi bi z investicijami v infrastrukturo promovirali aktivnosti za izboljšanje dostopnosti.
- Zgodovinske, socialne in gospodarske povezave med petimi metropolami lahko predstavljajo dobro osnovo za nadaljnje sodelovanje med javnimi institucijami, civilno družbo in zasebnimi podjetji. Te odnose je možno razširiti in poglobiti preko raznih čezmejnih projektih mreženja, ki jih je mogoče sofinancirati prek obstoječih regionalnih programov Evropske Unije: programi Evropskega teritorialnega sodelovanja (ETS), medregionalni kooperacijski program za ustvarjanje vseh vrst omrežij med mesti; program URBACT II za izmenjavo informacij med mesti; transnacionalni program sodelovanja »Srednja Evropa«, ki poleg vseh pet mest pokriva tudi njihova zaledja.
- Ker območje programa pokriva tudi Poljsko, dele vzhodne in južne Nemčije, ter sever Italije, so POLYCE metropole postavljene v širši prostorski kontekst in s tem tudi povezane z mesti kot so Berlin, Varšava, Minhen in Milano, ki pa so bistveni partnerji v tej regiji.
- Aktivnosti strateškega sodelovanja bi morale upoštevati evropsko Strategijo za razvoj Podonavske regije. Vseh pet metropol lahko skupaj igra pomembno vlogo pri vodenju prihodnjega razvoja te strategije. V Podonavski regiji že obstajajo obetajoči pristopi pobudnikov in pomembnih gonilnih sil za specifična področja, vendar je med vsemi petimi mesti potrebna boljša koordinacija.

**Vseh pet POLYCE metropol svojevrstno izstopa glede policentričnosti in vsaka predstavlja pomembnega akterja v srednjeevropskem urbanem omrežju. Vseeno pa nekatere morajo izboljšati svojo notranjo policentrično strukturo, okrepiti svoje povezave v evropskih ekonomskih ali raziskovalnih omrežjih, ali izboljšati svojo povezanost. Različne vrste tokov, omrežij in kooperacij med mesti bi lahko privedle do medsebojne stimulacije in krepitve. Potemtakem bo z boljšim sodelovanjem v sklopu političnih, ekonomskih in socialnih omrežij preko ustreznih političnih ukrepov prav gotovo izboljšalo pogoje za interakcije vseh vrst med POLYCE metropolami.**

- Urbani sistem Dunaja je daleč najbolj funkcionalno integriran med vsemi petimi metropolami. Bratislava je najbolj vpeta v uravnotežen sistem majhnih in srednje velikih okoliških mest, Ljubljana pa je vodilno mesto v širši metropolitanski regiji. Budimpešta, Dunaj in Praga igrajo daleč najdominantnejšo vlogo znotraj svojih metropolitanskih regij.
- Podatki o dnevni migraciji jasno kažejo razlike med funkcionalno integriranim urbanim sistemom Dunaja in urbanimi sistemi v nekdanjih komunističnih državah, kjer prestolnice dominirajo z enosmernimi tokovi dnevni migrantov v jedro in so manjša središča v okoliški metropolitanski regiji hierarhično podrejena.
- Močne (gospodarske) povezave lahko zaznamo med Budimpešto, Prago in Dunajem – vse tri metropole so tudi močno integrirane v širša evropska in globalna omrežja.

- Četudi v Budimpešti, Pragi in na Dunaju opažamo centralne nadzorne funkcije, pa Dunaj izstopa kot lokacija za večje število visoko uvrščenih podjetij in sodeluje v več evropskih raziskovalnih kooperacijah, kot je to mogoče opaziti pri drugih mestih v regiji. Praga je vodilna pri številu podjetij na zavarovalniškem, finančnem in nepremičniškem trgu znotraj regije in kaže tudi močne povezave do drugih evropskih ali globalnih mest.
- Glede na različne velikosti mest se je Bratislava kar dobro odrezala v podjetniških omrežjih znotraj srednjeevropske Podonavske regije in tudi na globalni ravni. Ljubljana igra močnejšo vlogo v evropskih raziskovalnih omrežjih.
- Na povezave na področju podjetniških in raziskovalnih omrežjih med mesti imajo velik vpliv čas vožnje med mesti in etnične povezave, kar kaže na trajen vpliv prometne dostopnosti in zgodovinskih povezav na gospodarske aktivnosti.

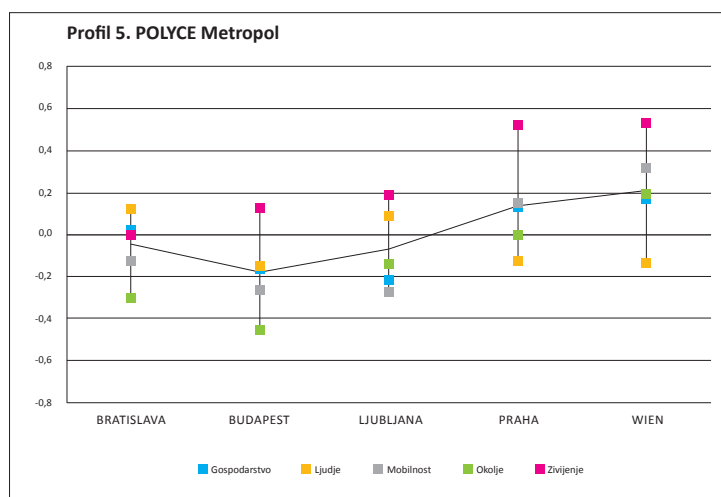


Slika 2: Raziskovalna omrežja med POLYCE metropolami (2001-2010)

**Analizirane srednjeevropske metropole imajo veliko skupno točko: vse nudijo izjemne življenjske razmere. Ta vidik morajo upoštevati tudi skupne pobude, predvsem če proces metropolitancije prinaša rast, ki bi lahko ogrozila te odlične razmere. Poleg tega postane jasno razvidno, da bi lahko vsaka izmed teh metropol igrala drugačno, morda odločujočo vlogo pri ustvarjanju konkurenčnosti srednjeevropskega urbanega sistema v širšem prostorskem kontekstu.**

- Analize kažejo, da se vseh pet obravnavanih metropolitanskih območij dobro izkaže v primerjavi življenjskih razmer. Prav to je edina metropolitanska značilnost, pri kateri vsaka od teh metropol dosega nadpovprečen rezultat v primerjavi vseh 50. evropskih mest.
- Splošno gledano se v primerjavi le Praga in Dunaj odrezeta bolje od povprečja izbranih mest. Med petimi POLYCE metropolitanskimi območji kažeta tudi najboljše rezultate glede gospodarskega razvoja. Vendar več pridobita iz drugih značilnosti, ki kažejo dobre rezultate, kot so visoko ocenjeni življenjski pogoji. Hkrati imata obe metropoli težave na področjih demografije, izobraževanja in nizke stopnje etnične raznolikosti – kar je povzeto pod kategorijo »Ljudje«.

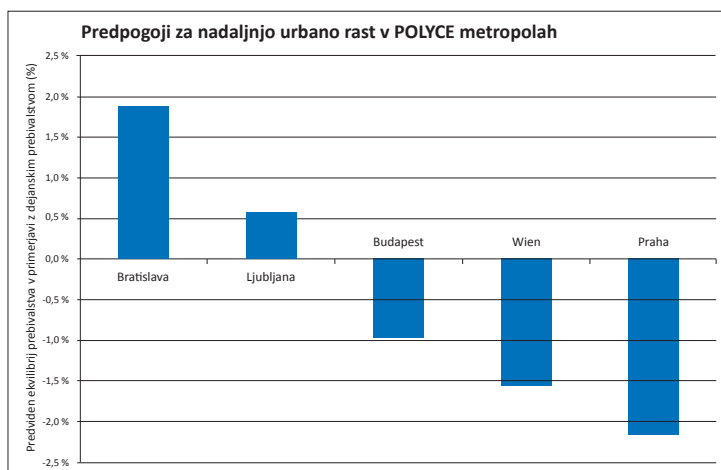
- Bratislava in Ljubljana kažeta opazno dobre rezultate v kategoriji »Ljudje« - kar ju postavlja na pomemben položaj med vsemi petimi POLYCE prestolnicami, predvsem ko gre za pristope pospeševanja izobraževanja in etnične raznolikosti.
- Profil Dunaja kaže njegov pomemben položaj kot vzornega mesta pri okoljskih problematikah. Čeprav nekatera mesta v Severni in Zahodni Evropi Dunaj na tem področju presegajo, pa metropolitansko območje očitno kaže dobre pogoje v primerjavi z njegovimi srednjeevropskimi partnerji. Enako velja za kategorijo »Mobilnost« (ki obsega javni promet, dostopnost in podobne kriterije), kjer ima Dunaj najmanj enak pomen.



Slika 3: Profili petih POLYCE metropol

Vseh pet metropol se sooča z različnimi izzivi glede rasti prebivalstva, če upoštevamo predpogoje metropolitanskih območij. Praha, v nekoliko manjši meri tudi Dunaj in Budimpešta, morajo izdelati strategije in specifične ukrepe za zagotavljanje dobre prostorske strukture v funkcionalnem metropolitanskem območju. Nasprotno pa Bratislava in v nekoliko manjši meri tudi Ljubljana kažeta potencial v predpogojih za rast prebivalstva. Osnovni empirični rezultati kažejo pozitivne in negativne vplive teh faktorjev, ko gre za soočanje z urbano rastjo in poudarjajo pomen dobro zasnovane metropolitanske strategije načrtovanja:

- Najemnine, z urbanim življenjem povezana socialna stiska in širjenje urbanega področja še najbolj izražajo ceno urbanega življenja in s tem negativne vplive na rast prebivalstva. Zato so ti faktorji izjemnega pomena za urban razvoj v prihodnosti.
- Čar urbanega življenja, ki ponazarja privlačnost metropolitanskega območja, industrijska raznolikost, odnosna policentričnost aktivnosti, ki so močno povezane z znanjem (raziskovalna omrežja) in metropolitanske funkcije (funkcije izvajanja moči na političnem, gospodarskem in kulturnem področju) imajo pozitiven vpliv na velikost urbanih aglomeracij.
- Ugotavljanje učinkov teh faktorjev kaže na pomen pametne prostorske strukture metropol v obliki eksterne mreženja in omejitve širjenja urbanega področja.
- Ti faktorji – s povezanostjo pametne strategije metropolitanezacije in načrtovanja ter z ustreznimi projekti – ustvarjajo večje urbane prednosti in učinkovitost, istočasno pa nižajo stroške v povezavi s fizično velikostjo. Z razvojem urbane kakovosti in prednosti urbanega življenja, ter s pridobivanjem kadra s kapitalom, se ustvarja višja stopnja privlačnosti in konkurenčnosti, kar pa podpira razvoj širše in bolj raznolike urbane sfere.



Slika 4: Predpogoji za nadaljnjo urbano rast v POLYCE metropolah

## Nadaljnje raziskave

**Raziskava policentričnih odnosov:** Poglobljene raziskave bi bile potrebne na področju srednjeevropskih medsebojnih funkcionalnih odnosov. Potrebna je obširna raziskava kooperacij in omrežij med petimi POLYCE metropolami in drugimi evropskimi ali globalnimi urbanimi centri, predvsem glede ekonomskih in socialnih povezav.

**Vloga srednje velikih mest v kohezivnem razvoju:** Ta raziskava sloni na obravnavi petih velikih srednjeevropskih metropol, ni pa obravnavala pomena srednje velikih urbanih aglomeracij. Pomembno bi bilo raziskati njihove vloge v policentričnih omrežjih prestolnic, saj je njihova vloga v policentričnem, in s tem tudi v kohezivnem razvoju verjetno zelo pomembna.

**Omejevanje metropolitanskih področij:** Prostorska porazdelitev prebivalstva in tokovi dnevnih migrantov so le prvi korak definiranja funkcionalno integriranega metropolitanskega območja. Ker so različni deležniki že večkrat izrazili potrebo po takšnih definicijah, je odločitev za skupni pristop pri omejevanju metropolitanskega območja prioriteta naloga.

**Razprave o pristopih vodenja v ciljnih analizah:** Integracija lokalnih in regionalnih strokovnjakov v analizah ESPON upošteva pomen, ki ga pripisujejo komunikativnim pristopom v načrtovanju. To spoznanje je visoko ovrednoteno, čeprav je pristop v določenih pogledih preveč omejen. Vloga mestne administracije kot projektnega partnerja ni zmeraj dovolj jasna in čeprav je splošna zahteva po integraciji drugih deležnikov dobrodošla, časovni okvir za implementacijo takšnih metodoloških pristopov ne zadostuje. Iz tega sledi, da so potrebne razprave o političnem vodenju, v katerih bi se obravnavalo prednosti in slabosti kratkoročnih rezultatov in poglobljenih analiz.

# Inteligentný metropolitný rozvoj

## Úvod

POLYCE analyzuje päť stredoeurópskych hlavných miest a ich funkčnosť, ktorá súvisí s okolitými oblasťami: Bratislavu, Budapešť, Ľubľanu, Prahu a Viedeň. Projekt vznikol na základe žiadosti administratív príslušných miest o skúmanie budúcich konkurenčných a kooperačných potenciálov týchto miest navzájom a voči iným metropolám. Hlavným cieľom bolo vykonanie porovnávacej analýzy piatich miest a ich okolia na získanie dôkladných výsledkov o ich špecifikách a zhodných charakteristikách. Malo by to stačiť na načrtnutie najnovšieho obrazu predbežných podmienok na urbanistický rozvoj v strednej Európe.

V tomto rámci prichádzali do úvahy dve analytické koncepcie metropolizácie a polycentricity, pretože na obe sa hľadí ako na hnacie sily konkrétnych ciest metropolitného rozvoja. Prístup POLYCE vzal do úvahy obe koncepcie v súvislosti s analyzovaním piatich stredoeurópskych hlavných miest a pokúšal sa tiež identifikovať ich vzájomný vzťah – čo znamená, do akej miery môžu obe podporovať správny a vyvážený metropolitný rozvoj.

## Terminológia

Tieto dve analytické koncepcie „metropolizácie“ a „polycentricity“ sú základom na definovanie cieľov a výskumných úloh v POLYCE. V rámci projektu sú tieto dve koncepcie definované takto:

*Metropolizácia* je proces urbanistickej reštrukturalizácie, ktorý môže byť definovaný osobitnými aspektmi:

- Priestorová koncentrácia (nových) hospodárskych funkcií a obyvateľstva – táto druhá je často spôsobená prisťahovalectvom (Friedmann, 1986 a 2002; Geyer, 2002)
- Vlastnenie dôležitých riadiacich a kontrolných funkcií a dobre rozvinutého prepojenia (Keeling, 1995)
- Hospodárska reštrukturalizácia spôsobená zvýšením činností zameraných na poznatky (Krätke, 2007)
- Špecializované funkcie sú nerovnomerne rozdelené v rámci mesta alebo v polycentrickej aglomerácii (Kunzmann, 1996; Leroy, 2000; Sassen, 2002; Elissade, 2004)

*Polycentricita* opisuje existenciu viac ako jedného pólu alebo uzla v rámci určitého územia. Táto koncepcia má viacero (vzájomne prepojených) aspektov:

- Morfológická polycentricita: hierarchizuje a štruktúruje uzly podľa ich veľkosti a významu.
- Relačná polycentricita: toky a vzájomné pôsobenia medzi uzlami
- Polycentricita v riadení: vzájomné záujmy, ohľady, inšpirácia, spolupráca, komplementarita v prijímaní rozhodnutí v rôznych uzloch a medzi nimi.

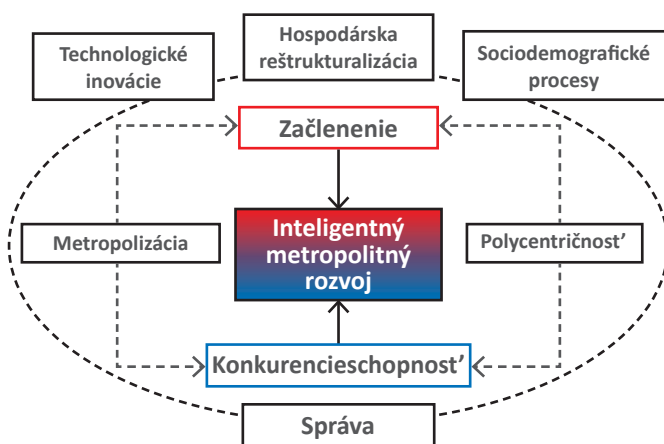
## Výzva politiky

Obe koncepcie sú nevyhnutne spojené s politicky bežnejšími koncepciami konkurencieschopnosti a začlenenía, ktoré sa často citujú nielen na úrovni metropolitnej politiky, ale aj v dokumentoch európskej politiky (porovnaj EK, 2010). Predpokladá sa, že vyváženie týchto dvoch paradigiem je veľmi dôležité pre to, čo sa nazýva „inteligentný metropolitný rozvoj“.

Výraz „inteligentný“ sa počas posledných rokov stal módnym slovom, hoci jeho definícia je stále dosť nejasná. Aj keď bol pôvodne zameraný na hospodárske činnosti súvisiace s informačnými a telekomunikačnými technológiami, potrebuje rozšírenie, keď sa aplikuje na rozvoj miest. Z tejto širšej priestorovej perspektívy (ktorá je skutočne úzko previazaná s perspektívou politiky) „inteligentné miesta“ – ako sú definované Európskou komisiou v Stratégii EÚ 2020 (EK, 2010) – musia

kombinovať rôzne funkcie, napríklad tie, ktoré súvisia s poznatkami a inováciami, prepojením alebo správou. Z toho vyplýva, že stať sa „inteligentným mestom“ znamená „[...] ambíciu mesta zlepšiť svoje hospodárske, sociálne a environmentálne štandardy a následne svoju konkurencieschopnosť v mestskej konkurencii“ (Giffinger et al., 2010, str. 304 a nasl.). Toto však zdôrazňuje dôležitosť opatrení v oblasti správy, ktoré integrujú celý rad činiteľov: od miestnych obyvateľov a hospodárskych činiteľov po tvorcov politiky.

Hlavnými výzvami metropolitného rozvoja – ktoré sú tiež uvádzané v Stratégii EÚ 2020 (EK, 2010) – sú konkurencieschopný a kompletný metropolitný rozvoj. Takže „inteligentný metropolitný rozvoj“ znamená schopnosť metropolitnej aglomerácie zvládnuť obe tieto výzvy. No iba lokálne prostriedky finančného dotovania sa môžu chápať ako možnosti v tejto záležitosti. Inteligentný metropolitný rozvoj zahŕňa aj aktivity samostatne sa rozhodujúcich a nezávislých občanov z hľadiska poznania a účasti. Podporuje upevnenie existujúcich fondov a pomáha aktivovať nové potenciály. Takže v POLYCE sa „inteligentná metropola“ chápe ako funkčne integrovaná metropolitná oblasť, v ktorej prebiehajú procesy konkurenčného a začleňovacieho rozvoja – pričom dôležitým hľadiskom je skutočnosť, že rovnováha medzi týmito dvomi aspektmi musí byť usmerňovaná príslušnými prístupmi riadenia.



Obrázok 1: Chápanie inteligentného metropolitného rozvoja

## Odporúčania pre inteligentné stredoeurópske metropoly

V nasledujúcej časti sú načrtnuté potenciálne budúce aktivity každej metropoly v tom, čo sa nazýva „programy metropol“. Najprv sú navrhnuté všeobecné cesty rozvoja pre každú metropolitnú oblasť a potom sú stručne načrtnuté súčasné výzvy príslušnej metropoly. Programy sú mienené ako návrhy perspektívnych budúcich aktivít pre päť stredoeurópskych metropol. Takže namiesto komplexných metropolitných stratégií reprezentujú štruktúrovaný súbor možných aktivít. Boli vypracované v úzkej spolupráci so skupinou príslušných lokálnych a regionálnych zainteresovaných osôb v piatich metropolách. Programy v prvom rade stavajú na interaktívnych diskusiách o empirických výsledkoch projektov s viacerými vybranými zainteresovanými osobami. Preto predkladané nápady nevyhnutne reprezentujú selektívnu perspektívu. Pochádzajú však z diskusií so zainteresovanými osobami založených na empirických výsledkoch projektov a preto odrážajú empirické analýzy uskutočnené v priebehu projektu.

## Metropolitný program Bratislavy

### Vízia

Metropolitná Bratislava by mala zvýšiť svoju konkurencieschopnosť prostredníctvom jasnej pozície založenej na intenzívnych vedomostných aktivitách v oblastiach výskumu a vývoja. Zároveň potrebuje zlepšiť prístupy cezhraničného riadenia, aby realizovala súbor strategických činností, ktoré podporujú začleňovací metropolitný rozvoj.

### Činnosti

Bratislava by sa mala zamerať na upevnenie pozície a konkurencieschopnosti metropolitnej oblasti tým, že bude intenzívnejšie presadzovať činnosti založené na poznatkoch, koncentrovaním sa na príslušné služby a oblasti výskumu a vývoja.

### Výzvy a prekážky

Centrálne geografická poloha metropolitnej oblasti Bratislavy predstavuje v rámci podunajského regiónu dôležitý potenciál, ktorý sa musí ešte len využiť. Postupy plánovania a súvisiace formy riadenia sú potrebné na upevnenie metropolitnej konkurencieschopnosti, ktorá musí zahŕňať celý rámec mestského a regionálneho spravovania. Zapojení činitelia sa musia zamerať na cezhraničné riadenie, koordináciu činností, spoločné rozhodovanie a iné iniciatívy, ktoré podporujú stálu výmenu informácií.

### Inteligentný metropolitný rozvoj

Infraštruktúrny a inštitucionálny rozvoj smeruje k tomu, aby bol začleňujúci, zatiaľ čo hospodárska špecializácia a stratégie dobrej povesti silno podporujú metropolitnú konkurencieschopnosť. Navrhované environmentálne a riadiace činnosti musia byť chápané tak, že majú tendenciu k začleňovaniu iba v prvom kole, zatiaľ čo schopnosť zlepšovať konkurenčný výkon metropolitnej Bratislavy je na dlhé obdobie.

## Metropolitný program Budapešti

### Vízia

Konkurencieschopnosť Budapešti sa má zlepšiť postavením metropolitnej oblasti do úlohy metropoly podunajského regiónu. Zároveň nesmie zabudnúť pokúsiť sa o vyrovnanerjšiu distribúciu hospodárskych funkcií v metropolitnej oblasti na dosiahnutie teritoriálnej kohézie.

### Činnosti

Základné možnosti tohto prístupu sú dobre viditeľné pre zainteresované strany a zahŕňajú viacero oblastí pôsobenia. Navrhované činnosti zahŕňajú široký rozsah opatrení, ktoré siahajú od činností súvisiacich s dobrou povestou, infraštruktúrou a správou po otázky životného prostredia.

### Výzvy a prekážky

Výzvami sú administratívna dominantnosť hlavného mesta v pomerne monocentrickom metropolitnom regióne s iba niekoľkými miestnymi centrami a silná koncentrácia metropolitných funkcií v mestskom centre. Infraštruktúrne a riadiace opatrenia, ktoré zmierňujú túto dominantnú situáciu, sa nachádzajú na vrchu zoznamu, pretože môžu nasmerovať metropolitnú Budapešť na viac začleňujúci rozvoj.

### Inteligentný metropolitný rozvoj

Metódy metropolitného plánovania musia brať do úvahy regionálne potenciály príľahlých oblastí, pretože tieto by mohli podporiť konkurencieschopnosť mesta v rámci podunajského regiónu a zároveň viac začleňujúci metropolitný rozvoj.



## Metropolitný program Ľubľany

### Vízia

**Metropolitná Ľubľana by mala usmerňovať svoj rozvoj prostredníctvom špecifických činností v hospodárskej sfére a podporovať svoju povest atraktívneho centra vzdelávania a výskumu. Polycentrický rozvoj sa musí upevniť, aby sa zaručil teritoriálne kohéznejší rozvoj.**

### Činnosti

Mali by sa vykonať opatrenia na zlepšenie funkčných vzťahov v rámci metropolitnej oblasti. Toto zahŕňa aj činnosti na dosiahnutie rovnomernejšej distribúcie metropolitných funkcií na regionálnej úrovni. Dôležitosť Ľubľany ako európskeho mesta strednej veľkosti viedla ku koncentrácii špecifických funkcií v mestskom centre vrátane negatívnych vedľajších účinkov, ktoré musia byť zahrnuté do programu tvorcov politiky, aby sa mesto uchránilo pred stratou svojej vysokej životnej úrovne. Okrem toho Ľubľana by sa mala snažiť o viac integrovaný udržateľný systém dopravy, ako aj o zlepšenie metropolitného začlenenia v medzinárodnom kontexte. Okrem toho periférne umiestnenie v rámci stredoeurópskeho podunajského regiónu musí byť kompenzované zlepšením dopravných spojení s inými stredoeurópskymi podunajskými metropolami.

### Výzvy a prekážky

Hlavná výzva pre mesto spočíva v jeho periférnej polohe v rámci stredoeurópskej podunajskej zóny. Zdá sa, že nemá žiadny praktický zmysel, či sa má mesto orientovať na strednú Európu, Balkán alebo Stredomorie.

### Inteligentný metropolitný rozvoj

Sú potrebné také metropolitné postupy riadenia, ktoré podporujú účasť miestneho obyvateľstva na procesoch rozhodovania, čo potenciálne vedie k väčšej sociálnej súdržnosti. Zároveň rozmanitosť hospodárskych činností môže pomôcť posilniť konkurenčnú pozíciu Ľubľany. Riadiace úsilie, ako sú inštitucionalizovaná spolupráca a harmonizované financovanie sú preto veľmi dôležité pre inteligentný rozvoj, ktorý vyrovnáva začleňovací a konkurenčný rozvoj.

## Metropolitný program Prahy

### Vízia

**„Vedomosti“ sú kľúčový výraz pre metropolitný rozvoj Prahy, ktorý môže podporiť konkurencieschopnosť a zároveň aj začlenenie. Cieľom je ďalší rozvoj kultúrnej povesti metropolitnej Prahy, pretože môže slúžiť ako hnacia sila hospodárskej prosperity a sociálnej súdržnosti.**

### Činnosti

Výmena poznatkov je dôležitým cieľom pre metropolitnú Prahu na viacerých úrovniach. Spolupráca musí byť zintenzívnená na regionálnej aj stredoeurópskej úrovni, aby sme sa učili od iných, zdieľali vlastné skúsenosti a hlboko vnikli do tých oblastí, v ktorých sa dá metropolitná politika zlepšiť. Výmena poznatkov medzi príslušnými činiteľmi by sa tiež mala podporovať na regionálnej úrovni. V tejto súvislosti by sa mohli spoločné kultúrne hodnoty stredných Čiech aktívne integrovať ako základ pre rozvíjanie metropolitnej povesti mesta Praha. Tieto hodnoty sa musia otvorene prediskutovať, aby sa zabezpečil začleňujúci charakter upevnením spoločnej metropolitnej identity.

### Výzvy a prekážky

Najväčšia výzva pre Prahu spočíva v chýbaní existujúcej spolupráce na regionálnej úrovni. Toto si bude vyžadovať inovačné spôsoby, aby sa prekonal existujúce, zdedené inštitucionálne prekážky spolupráce, osobitne medzi mestom a regionálnou úrovňou.



### **Inteligentný metropolitný rozvoj**

Zreteľná stratégia podpory výmeny poznatkov na viacerých úrovniach sa môže očakávať pri zvyšovaní nielen metropolitnej konkurencieschopnosti, ale môže mať aj začleňujúce účinky. Vylúčenie neschopností a podporovanie inovačných postupov v metropolitnom plánovaní ponechá priestor na integráciu širšej skupiny činiteľov.

## **Metropolitný program Viedne**

### **Vízia**

**Metropolitná Viedeň čelí výzve nájsť správny pomer medzi strategickými činnosťami, ktoré zabezpečia jej európsku konkurencieschopnosť, a zároveň jej príťažlivosťou pre obyvateľov. Tento prístup tiež zahŕňa teritoriálnu kohéziu na regionálnej úrovni. Pozícia a funkcia mesta v rámci podunajského regiónu sa musí veľmi jasne definovať na základe participačného prístupu.**

### **Činnosti**

Zlepšenie dopravnej prístupnosti na regionálnej úrovni by malo byť základným zameraním plánovacích činností vo Viedni, osobitne s ohľadom na zlepšenie regionálnej infraštruktúry verejnej dopravy. Avantgardná pozícia Viedne z hľadiska environmentálneho rozvoja prichádza k slovu ako podporovateľ hospodárskej konkurencieschopnosti a udržateľného metropolitného rozvoja. Mesto by sa malo ďalej snažiť posilniť svoju povest' zeleného mesta (napríklad rozšírením zamerania na environmentálne technológie). Musia byť iniciované postupy riadenia výslovne integrujúce sociálne skupiny, ktoré spochybňujú cestu tohto budúceho rozvoja. Procesy učenia, ktoré v sebe zahŕňajú spoločné rozhodovanie o pridelení konkrétnych metropolitných funkcií, hrajú v tejto súvislosti rozhodujúcu úlohu. Výmena poznatkov na spoločných podujatiach by sa mala organizovať pravidelne, aby sa zlepšili vzťahy medzi mestským centrom a menšími centrami a aby sa vysvetlila úloha Viedne v urbanistickej sieti podunajského regiónu.

### **Výzvy a prekážky**

Hlavná výzva spočíva v chýbaní integrovaného mestského regiónu z inštitucionálneho a dopravného hľadiska, ale aj v súvislosti s pridelovaním metropolitných funkcií v regióne. Tu je potrebné prijať opatrenia na prekonanie týchto prekážok, aby sa zabezpečil teritoriálne kohézny rozvoj.

### **Inteligentný metropolitný rozvoj**

Môže sa očakávať, že stratégie na podporu výmeny poznatkov budú mať prevažne zahŕňajúce účinky, zatiaľ čo posilnenie povesti Viedne ako zeleného, ekologického mesta by malo tiež prispieť k urbanistickej konkurencieschopnosti zvýraznením povesti mesta.

## **Stredoeurópsky program**

*V nasledujúcej časti sú načrtnuté potenciálne budúce aktivity v stredoeurópskej podunajskej zóne. Sú mienené ako návrhy perspektívnych budúcich aktivít pre päť stredoeurópskych metropol. Takže namiesto komplexných metropolitných stratégií reprezentujú štruktúrovaný súbor možných aktivít. Podobne ako vyššie uvedené „metropolitné programy“ boli vypracované v úzkej spolupráci so skupinou príslušných lokálnych a regionálnych zainteresovaných osôb v piatich metropolách. Program v prvom rade stavia na interaktívnych diskusiách o empirických výsledkoch projektov s viacerými vybranými zainteresovanými osobami. Preto predkladané nápady nevyhnutne reprezentujú selektívnu perspektívu. Pochádzajú však z diskusií so zainteresovanými osobami založených na empirických výsledkoch projektov a preto odrážajú empirické analýzy uskutočnené v priebehu projektu.*

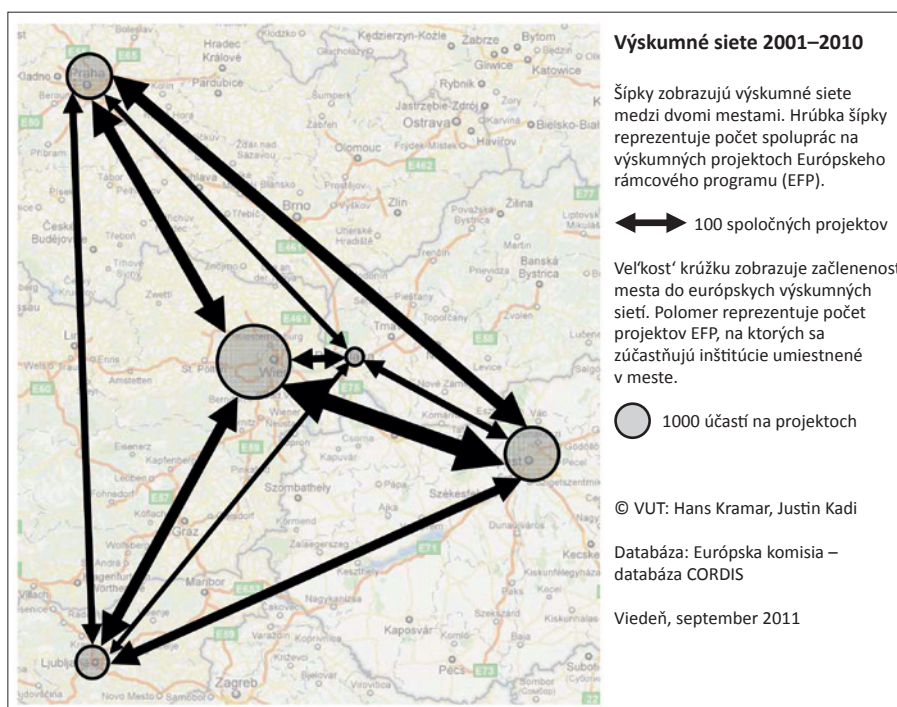
**Spoločné strategické aktivity piatich metropol POLYCE by mali posilniť pozíciu každej metropolu a zlepšiť rôzne formy polycentrických vzťahov stredoeurópskej podunajskej zóny. Spoločné strategické snahy metropol POLYCE sa musia výslovne zamerať na aspekty teritoriálnej súdržnosti v rámci stredoeurópskej podunajskej zóny. Zlepšovanie polycentrických vzťahov môže pomôcť riadiť procesy metropolizácie a súvisiaci metropolitný rast.**

- Potenciály spolupráce a silné stránky medzi metropolami POLYCE sú osobitne silné v oblastiach znalostnej ekonomiky, riadenia dopravy a metropolitnej správy.
- Vzťahový kapitál (napr. jazykové zručnosti, nová administratívna a strategická kapacita) je potrebné medzi stredoeurópskymi zainteresovanými stranami zlepšiť. Toto zahŕňa (1) zlepšovanie kontaktov a dostupnosť informácií, (2) transformovanie informácií na cenné poznatky o partnerských metropolách ako výstup nepretržitých a systematických kontaktných možností, (3) zlepšovanie spoločného lobovania v záujme partnerov stredoeurópskej podunajskej zóny v rámci EÚ.
- Diskusie ukazujú, že všetkých päť metropol sa snaží dosiahnuť pozíciu centra vo svojom vlastnom geografickom kontexte navonok, smerom k susedným regiónom a krajinám. Preto teritoriálny kohézny rozvoj v rámci stredoeurópskej podunajskej zóny potrebuje nové spoločné strategické snahy, ktoré podporujú nielen aktivity zlepšujúce prístupnosť prostredníctvom investícií do infraštruktúry.
- Historické, sociálne a ekonomické väzby piatich metropol by mali byť skutočným základom pre ďalšiu spoluprácu medzi verejnými inštitúciami, občianskou spoločnosťou a súkromnými podnikmi. Tieto vzťahy možno rozšíriť a prehĺbiť rôznymi cezhraničnými projektmi na tvorbu sietí, ktoré môžu byť dostatočne financované v rámci existujúcich programov regionálnej politiky EÚ: programy v rámci cieľa „Európska teritoriálna spolupráca“ (ETC), program spolupráce medzi regiónmi zameraný na podporu všetkých druhov sietí miest; program URBACT II, ktorý je osobitne zameraný na výmenu informácií medzi mestami; program nadnárodnej spolupráce „Stredná Európa“, ktorý pokrýva nielen päť miest, ale aj ich spádové oblasti.
- Pretože oblasť tohto programu zahŕňa Poľsko, východné a južné časti Nemecka a sever Talianska, tento program umiestňuje metropolu POLYCE do širšieho priestorového kontextu, keď ich spája s takými mestami ako sú Berlín, Varšava, Mníchov a Miláno, ktoré sú veľmi významnými partnermi pre región.
- Kooperatívne strategické aktivity by mali brať do úvahy Európsku stratégiu pre podunajský región. Päť metropol môže spoločne hrať dôležitú úlohu pri riadení budúcich ciest rozvoja tejto stratégie. Perspektívne prístupy pôsobenia v úlohe iniciátorov a dôležitých hnacích síl osobitných otázok v podunajskom regióne už existujú, musia však byť dobre skoorinované medzi všetkými piatimi mestami.

**Ak sa vezme do úvahy polycentricita, všetkých päť metropol POLYCE vyniká, čo robí každú z nich dôležitým činiteľom v stredoeurópskej sieti miest. Napriek tomu niektoré z nich musia ešte zlepšiť svoju vnútornú polycentrickú štruktúru, posilniť svoje väzby v európskych hospodárskych alebo výskumných sieťach alebo zlepšiť svoju prepojitelnosť. Odlišné druhy tokov, sietí a spoluprác medzi mestami ich môžu navzájom stimulovať a posilniť. Takže zlepšenie politických, hospodárskych a sociálnych sietí cez príslušné správne opatrenia definitívne zlepši podmienky pre všetky druhy vzájomného pôsobenia metropol POLYCE.**

- Mestský systém Viedne je zďaleka funkčne najviac integrovaným systémom medzi všetkými piatimi metropolami. Dve menšie mestá, Bratislava a Ľubľana sú lepšie začlenené do vyváženého systému malých a stredných okolitých miest. Budapešť, Viedeň a Praha hrajú oveľa dominantnejšiu úlohu vo svojich metropolitných regiónoch.
- Údaje o dochádzaní jasne demonštrujú rozdiel medzi funkčnosťou integrovaného mestského systému Viedne a mestských systémov bývalých komunistických krajín, ktorým dominujú hlavné mestá prostredníctvom jednosmerného dochádzania do mestského centra a hierarchickej subordinácie menších centier v okolitej metropolitnej oblasti.

- Silné (hospodárske) väzby možno rozpoznať medzi Budapešťou, Prahou a Viedňou – všetky tri metropoly sú tiež vysoko integrované v širších európskych a globálnych sieťach.
- Hoci centrálné riadiace funkcie možno nájsť v Budapešti, Prahe aj Viedni, Viedeň vyniká hostením viacerých sídiel vysoko hodnotených firiem a účasťou na viacerých spoluprákach v oblasti európskeho výskumu ako iné mestá v regióne. Praha však má primát, ktorý sa týka počtu vzťahov spoločností FIRE (financie, poistenie, nehnuteľnosti) v rámci regiónu a tiež ukazuje silné väzby na iné európske alebo globálne mestá.
- Ak sa vezmú do úvahy rôzne veľkosti miest, Bratislava podáva dosť dobrý výkon v sieti firiem v rámci stredoeurópskeho podunajského regiónu, ako aj v globálnej mierke. Ľubľana hrá silnejšiu úlohu v sieťach európskeho výskumu.
- Vzťahy medzi mestami z hľadiska firemných a výskumných sietí sú výrazne ovplyvnené dobami cestovania a etnickými väzbami, čo poukazuje na pretrvávajúci vplyv dopravnej dostupnosti a historických vzťahov na hospodárske činnosti.

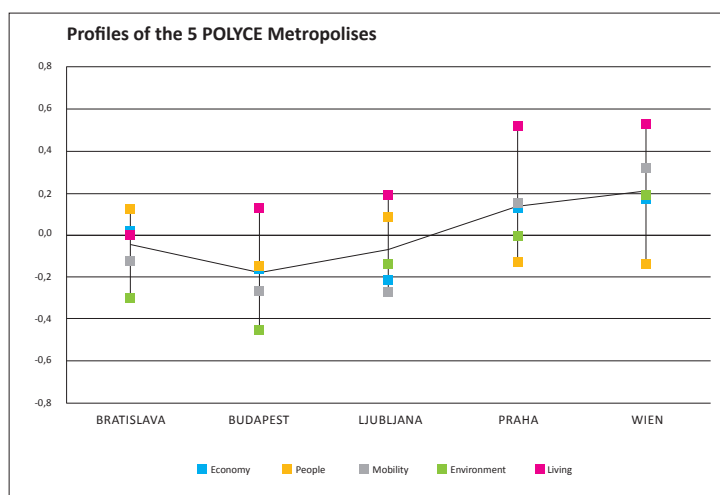


Obrázok 2: Výskumné siete medzi metropolami POLYCE (2001 – 2010)

Analyzované stredoeurópske metropoly majú jednu pozoruhodnú spoločnú vec: všetky poskytujú výnimočné životné podmienky. Spoločné iniciatívy musia brať tento aspekt do úvahy, najmä ak procesy metropolitizácie zahŕňajú aspekty rastu, ktorý by mohol ohroziť tieto pozoruhodné predpoklady. Okrem toho sa stáva jasným, že každé z týchto piatich miest môže zohrávať odlišnú, snáď rozhodujúcu úlohu ako generátor konkurencieschopnosti stredoeurópskeho mestského systému v širšom priestorovom kontexte.

- Analýza ukazuje, že všetkých päť skúmaných metropolitných oblastí dosahuje dobré výsledky z hľadiska životných podmienok. Je pozoruhodné, že toto je jediná metropolitná charakteristika s nadpriemerným hodnotením vzorky všetkých 50 porovnávaných európskych miest.

- Celkovo iba Praha a Viedeň dosahujú lepšie výsledky ako priemer vybraných miest. Medzi piatimi metropolitnými oblasťami dosahujú najlepšie výsledky z hľadiska hospodárskeho rozvoja. Stále ešte viac profitujú z ďalšej charakteristiky prosperity, ktorou sú vysoko hodnotené životné podmienky. Zároveň obe trpia slabými stránkami v oblasti demografie, vzdelávania a nízkej etnickej rôznorodosti – čo sú oblasti, ktoré sú čiastkovo zhrnuté v kategórii Ľudia.
- Bratislava a Ľubľana dosahujú naopak pozoruhodne dobré výsledky v oblasti Ľudia – čo je skutočnosť, ktorá umiestňuje tieto dve metropoly do dôležitej pozície v rámci miest POLYCE, najmä v súvislosti s tými postupmi, ktoré podporujú vzdelávanie a etnickú rôznorodosť.
- Profil Viedne ukazuje jej dôležitú pozíciu ako modelu pre environmentálne záležitosti. Hoci iné severoeurópske a západoeurópske mestá v tomto ohľade Viedeň prekonávajú, metropolitná oblasť zjavne vykazuje niektoré cenné podmienky spomedzi svojich stredoeurópskych partnerov. To isté platí pre Mobilitu (ktorá zahŕňa verejnú dopravu dostupnosť atď.), kde je pozícia Viedne aspoň rovnako dôležitá.

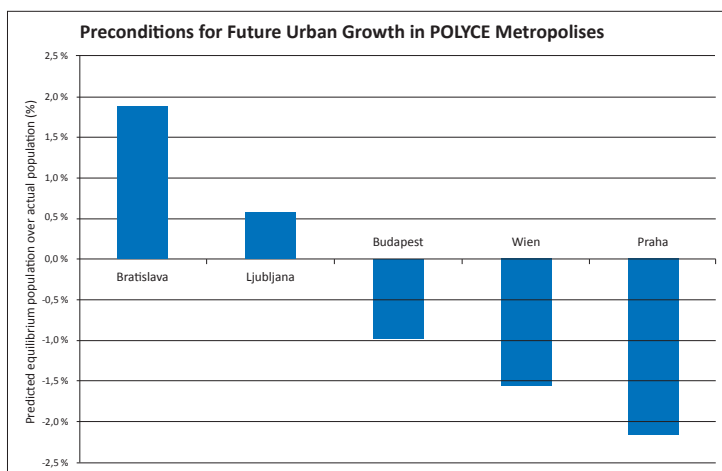


Obrázok 3: Profily metropol POLYCE

**Všetkých päť metropol čelí rôznym výzvam, ktoré sa týkajú rastu populácie, keď sa vezmú do úvahy nedávne predbežné podmienky metropolitných oblastí. Praha a v menšej miere Viedeň a Budapešť by mali vypracovať stratégie a špecifické opatrenia na poskytovanie osvedčenej priestorovej štruktúry vo funkčnej metropolitnej oblasti. Naopak, Bratislava a v menšej miere Ľubľana vykazujú potenciál vo svojich predbežných podmienkach na rast populácie.** Nižšie uvedené empirické výsledky ukazujú tie faktory, ktoré majú pozitívne a negatívne vplyvy na zvládnutie mestského rastu a zdôrazňujú dôležitosť dôkladnej metropolitnej stratégie plánovania:

- Prenajímanie pozemkov, sociálna tieseň súvisiaca s mestským životom, ako aj živelný rast miest naznačujú najdôležitejšie mestské náklady a tým negatívny vplyv rastu populácie. Takže tieto faktory sú veľmi dôležité pre urbanistický rozvoj v budúcnosti.
- Občianska vybavenosť, ktorá spôsobuje atraktivnosť metropol, priemyselná rôznorodosť, relačná polycentricita v činnostiach založených na poznatkoch (výskumné siete) a metropolitné funkcie (mocenské funkcie v politickej, hospodárskej a kultúrnej oblasti) majú zreteľný pozitívny vplyv na veľkosť mestských aglomerácií.
- Identifikovanie účinkov týchto faktorov preukazuje relevantnosť zdravej priestorovej štruktúry metropol vo forme vytvárania vonkajších sietí a znižovania živelného rozrastania.

- Tieto faktory – spojené so zdravou metropolitnou a plánovacou stratégiou s príslušnými projektmi – vytvárajú väčšie urbanistické výhody a účinnosť, hoci zároveň znižujú náklady, ktoré súvisia s fyzickou veľkosťou. Rozvíjanie urbanistickej kvality, občianska vybavenosť a príťahovanie veľmi dôležitých odborníkov vytvára zvýšenú príťažlivosť a konkurencieschopnosť, čo opäť podporuje širšie, viac diverzifikované mestské prostredie.



Obrázok 4: Predbežné podmienky pre ďalší urbanistický rast v metropolách POLYCE

## Potreba ďalšieho výskumu

**Skúmanie relačnej polycentricity:** Výskum môže byť prehĺbený na úroveň stredoeurópskych funkčných vzájomných vzťahov. Spolupráca a siete medzi piatimi metropolami POLYCE a s inými európskymi alebo globálnymi mestskými uzlami si vyžaduje rozšírené skúmanie, ktoré sa týka najmä hospodárskych a sociálnych väzieb.

**Úloha miest strednej veľkosti pre kohézny rozvoj:** Keďže tento výskum bol založený na skúmaní piatich veľkých stredoeurópskych metropol, otázky týkajúce sa dôležitosti mestských aglomerácií strednej veľkosti neboli dotknuté. Skúmanie ich úlohy v polycentrických sieťach veľkých metropol sa zdá byť dôležité, pretože pravdepodobne majú rozhodujúci záujem na polycentrickom a následne kohéznom rozvoji.

**Vymedzenie metropolitných oblastí:** Priestorová distribúcia populácie a vzťahy dochádzajúcich osôb je iba počiatočný bod pri definovaní funkčnosti integrovaných metropolitných oblastí. Hoci potreba takých definícií bola zdôrazňovaná niekoľkokrát rôznymi zainteresovanými osobami, dohodnutie spoločného prístupu k vymedzeniu metropolitných oblastí by malo byť okamžitou úlohou.

**Diskusie o správe v cielených analýzach:** Zapojenie miestnych a regionálnych expertov do cielených analýz ESPON berie do úvahy dôležitosť, ktorá je pripisovaná komunikatívnym prístupom v plánovaní. Toto poznanie je veľmi oceňované, hoci postup je v niektorých ohľadoch veľmi limitovaný. Úloha administratív mesta ako partnerov projektu nie je vždy dostatočne jasná a hoci je všeobecná požiadavka na zapojenie iných zainteresovaných osôb vítaná, časový rámec na realizáciu takýchto metodologických postupov nie je dostatočný. Takže diskusie o správe by sa mali vykonávať, pričom by sa prediskutovala výmena medzi krátkodobými výsledkami a hĺbkovými analýzami.



# Report

The following pages comprise the Main Report of the Final Report of POLYCE. It is to sum up the main findings of the research, giving readers a comprehensive overview of results and recommendations. Texts written in *italics* are meant to give the reader more methodological background information about how to read the following section. Detailed descriptions of the project's approach, methodology and specific results are given in the Scientific Report of the Final Report.

# 1 Introduction

In 2002, John Friedmann (p. XV) concluded that 'Almost the whole world will coexist in a single global urban network, driven by worldwide competition.' This underpins a shift in the understanding of the role of cities. They can no longer be regarded as single and independent elements. Their economic importance and development potentials cannot arise from their regional 'hinterlands' alone. Rather, cities are part of a network of different forms of relations, where competition and cooperation become decisive.

Looking at the development perspectives of the urban system in Europe – and, more specifically, Central Europe –, it is easy to identify the reasons for an increasingly competitive context. The allocation of investments and economic activities across different types of cities follows distinct characteristics on the basis of comparative advantages that cities are able to provide. Under conditions of globalisation, 'world city formation' is the process by which the global economy impinges upon cities and transforms their social, economic and physical dimensions in relation to their role in the global urban hierarchy (Friedmann, 1986; Sassen, 1991). The emergence of specialised city systems is defining new roles for particular cities or groups of cities in the global urban hierarchy. Those cities integrated into the 'functional city systems' (i.e. cross-border inter-regional urban networks) are also undergoing the process of world city formation - affecting urban form, structure and development. Besides, the issue of competitiveness has gained increasing importance in recent years (Parkinson, 2003; Begg, 1999). The fall of the Iron Curtain and the process of integration changed the conditions for urban development, especially for cities in Central Europe. New opportunities and perspectives for economic activities arose in the context of the integration process, providing new market potentials and new patterns of mobility of labour forces and capital (Rodriguez-Pose, 2002).

Hence the pressure of competition has increased with globalisation and European integration. Cities lost their centrality and dominant central functions at the regional and national levels and became part of the new urban hierarchy at an international level. Consequently, cities need to re-orient their development perspectives – a fact that is particularly true for capital cities experiencing processes of metropolisation. They are required to redefine and re-elaborate place-based strategies that are suitable for increasing their territorial capital with specific assets (Camagni, 2007; 2009; Giffinger et al., 2010).

Thus the stakeholders of the five POLYCE capitals emphasised the importance of a research effort that would take these changing conditions into account. They expressed the need to elaborate recommendations that support their work in managing the changing contexts of European metropolitan development processes. This implies:

- providing an environment for agglomeration growth, sustaining the unique cultural and historical heritage of international importance
- strengthening relevant networks to create prosperity, better living conditions and long-term, stable workplaces
- supporting a network-like metropolitan structure by implementing effective governance approaches
- increasing cooperative efforts with capital cities in Central Europe, in particular in the areas of business, research, culture and urban planning
- enabling and enforcing strategic metropolitan planning that supports EU Cohesion Policy
- improving cooperation and establishing polycentric structures that lead to more cohesion in macro-regions
- supporting territorially cohesive development in Central Europe and the Danube Region
- learning from and supporting each other through the exchange of information and experience, promoting common interests and developing common projects



## 1.1 Objectives

*The project idea is to analyse recent trends in metropolitan and polycentric development. Evidence-based policy recommendations will be elaborated to foster a territorially cohesive development for the five single metropolises as well as for the Central European territory as part of the wider Danube Region.*

It is POLYCE's main objective to identify the importance of the mutual links between the processes of metropolisation and polycentric development, and the challenges and perspectives of future urban development. Empirical research addresses structural, functional and strategic relations based on competition or cooperation, targeting the five metropolises with their territories and the CED-zone. The following questions are addressed empirically:

- What is the relation between metropolitan size and preconditions for demographic growth? Do metropolitan functions and polycentricity have a decisive impact on demographic growth? What is the meaning of polycentric relations for metropolitan development at different spatial levels?
- What are the characteristics of polycentricity? What do the polycentric systems of the metropolitan level and the CED-zone look like? What are the specific assets/factors driving or hindering polycentric development? Is there a mutual relation between metropolisation and polycentricity?

*Analytical methods based on quantitative information from official statistical sources and officially acknowledged and published ESPON data sources are applied to answer these questions. The results are used in discussions with stakeholders to answer policy-related questions on the challenges of smart metropolitan development.* The term describes the balanced and territorially cohesive development between the strengthening of metropolitan competitiveness and social inclusion according to the EU Agenda 2020 (EC, 2010). Hence questions target the policy level as well:

- What do the metropolitan profiles of the five POLYCE metropolises look like? Do they present any decisive similarities or differences among each other as well as among a wider sample of European metropolises? Which development factors have a potential for metropolitan distinction?
- Are polycentricity and metropolisation important issues of strategic endeavours in local governance approaches of the five metropolises? How to strengthen the current position of the five major cities as metropolises? Which activities are of importance in supporting smart metropolitan development?
- Which activities are necessary to strengthen polycentric development in the CED-zone? How can the polycentric system in CE be enhanced? What can we learn from project results for the strengthening of territorially cohesive development in the Danube macro-Region?

*Furthermore, policy relevance will be achieved through the discussion and assessment of processes of metropolisation and polycentric development under the perspective of competitive and inclusive metropolitan development.* Besides, evidence-based recommendations foster learning processes that strengthen cooperative and strategic planning endeavours within metropolitan areas and between European metropolises.

## 1.2 Basic Concepts

### 1.2.1 Metropolisation

Metropolisation is regarded as a process of comprehensive urban restructuring based on a city's ability to compete with others and to gain specific metropolitan functions. *For governance approaches*

in the metropolitan territory, it is important to understand a 'metropolis' as an area where functional, structural and strategic issues intersect administrative borders. Specific aspects of the process of metropolisation are:

- a spatial concentration of (new) economic functions and population having an effect on the metropolitan growth and spatial extension of a city through immigration (Friedman, 1986 and 2002; Geyer, 2002)
- becoming a node in global networks of material and immaterial flows, exercising command and control functions, and providing excellent connectivity between them (Keeling, 1995)
- the emergence of knowledge-intensive economic activities in specialised branches of production or service (Krätke, 2007)
- a high concentration of metropolitan functions in the urban agglomeration (BBSR, 2010)
- the allocation of specialised and specific functions as driving forces of economic and demographic development within the metropolis or in a polycentric form within the agglomeration (Kunzmann, 1996; Leroy, 2000; Sassen, 2002; Elissade, 2004)

### 1.2.2 Territorial Capital

Territorial capital is assumed to influence the ability to compete with other metropolises in a successful way. It consists of different location-related endowment factors and potentials and specific forms of cooperative endeavours with a strategic planning character. In combination, they provide assets as competitive advantages for the attraction of metropolitan functions (Camagni, 2009). Basic endowment and function-related elements are natural features, the material and immaterial cultural, technical and social heritage, while infrastructures and endowment-related qualities of distinct places are understood as infrastructures. Basic relational elements are 'untraded' interdependencies (like customs, informal rules, understanding) or specific environments (such as institutions, rules and practices, common strategies and policies) (Storper, 1997). Camagni (2009, p. 123) identifies nine different goods which characterise a territory's capital under the aspect of materiality and rivalry.

### 1.2.3 Polycentricity

The debate on the concept of polycentricity already emerged in the European Spatial Development Perspective (ESDP) (CEC, 1999) and is still well-represented within and beyond the ESPON Programme (ESPON 1.1.1, 2005; Waterhout, 2002; Tatzberger, 2008). Any system of centres in a functionally integrated urban system is hierarchically organised, but with tendencies towards higher monocentricity or higher plurality between more centres. The latter is usually associated with polycentricity. From a normative point of view, polycentricity in terms of higher plurality between centres in an integrated urban system is viewed as creating better conditions for efficient, cohesive and sustainable development compared to a monocentric form (CEC, 1999; ESPON, 2005; Kragt, 2006). ESPON 1.1.1 distinguishes between two types of polycentricity, i.e. morphological and relational. The former refers to the existence of more than one spatial pole in a given region. The latter refers to relations between spatial poles.

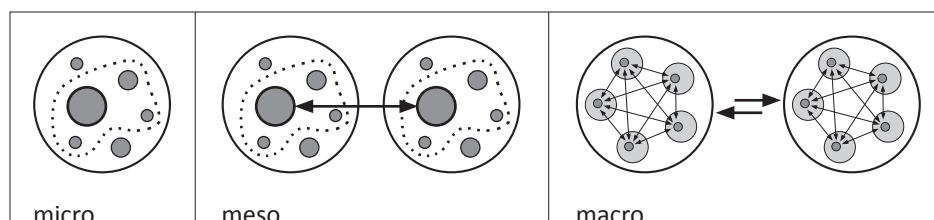


Figure 4: Scales of polycentricity

*Polycentricity in POLYCE is analysed at three spatial levels including both morphological and relational polycentricity (Figure 4): the metropolitan regional micro scale, the Central European interregional meso scale and the European/global macro scale of interrelations.*

- *On the micro scale, morphological polycentricity is analysed on the one hand (based on number of jobs and population). On the other hand, relational polycentricity is analysed (based on commuter flows).*
- *On the meso and macro scales, relational polycentricity is analysed (based on travel times, ethnic and historic relations, FIRE firm networks, research networks and Google Web search queries).*

*Recommendations will refer to two spatial levels:*

- *the five metropolises (core cities with their functional metropolitan areas)*
- *the Central Europe - Danube global integration zone (CED-zone)*

### **1.3 Structure of this Report**

The report starts with the Central European perspective by dealing with the findings on the Central European polycentric system. 'How can relations between the five POLYCE metropolises be analysed?' and 'What is this system composed of?' are the questions that will be dealt with in this section. The process of metropolisation in European metropolises is addressed afterwards. An econometric model is used to identify factors influencing urban growth and metropolisation, trying to identify which metropolises have a positive or negative balance between urban size and given circumstances.

Zooming in on the five POLYCE metropolises will then allow for a comparison between them. What are their distinct characteristics, and what specificities do the local polycentric structures present? The report then goes into detail about each of the five metropolitan areas. Based on European indicators, it will reveal the metropolitan profiles of these territories and show the fields in which each of them performs best and which challenges they might face. It will highlight the polycentric structure of the respective metropolis, both in itself and as opposed to other European urban agglomerations, as well as current planning approaches to the concepts of metropolisation and polycentricity. Finally, stakeholders' perceptions are taken into account, assessing not only the validity and importance of empirical results, but also yielding valuable insights into recent challenges of the respective metropolis. This provides an outlook on potential future activities and ideas for prosperous metropolitan development.

These ideas are collected and subsumed under the title of 'metropolitan agendas' - an instrument to provide local stakeholders and politicians with ideas for potential future activities of each POLYCE metropolis. By distilling the research output across a wider spatial level, and in conjunction with the project findings, this results in a Central European agenda for the territory of the CED-zone, embedding the project and its main findings in EU policy.

Finally, general conclusions not only provide an overview of the project results but also offer more guiding recommendations for policy action and future research.

## 2 Central European Polycentric System

POLYCE tries to develop and apply the concept of polycentricity, which was already tackled by related projects (e.g. METREX: Network of European Metropolitan Regions and Areas, METROBORDER: Cross-border Polycentric Metropolitan Regions) over the last decade. Although it tries to reflect and to adopt the basic understanding and terminology of these projects, the concepts and results of POLYCE cannot be directly related and compared to the approaches developed by these earlier projects due to the following reasons:

- POLYCE has a different spatial scale, concentrating only on five metropolises in the CED-zone.
- POLYCE tries to gain empirical insight into the relational aspect of polycentricity, which is hardly tackled in related projects.
- POLYCE places specific emphasis on metropolisation and polycentricity, which differs both from the network-building approach of METREX and the cross-border focus of METROBORDER, which concentrated on two case-study regions in Western Europe.

POLYCE provides insights into the institutional and structural relations both between the five cities and with other cities outside the CED-zone. According to the definitions given in ESPON 1.1.1, institutional (or political) relations rely 'on co-constructions, co-operation, and on the willingness of territorial agencies to work together on joint projects and strategies' (ESPON 2005, pp. 46), whereas structural relations are constituted by the interplay between actors, including transport, financial, migration or information flows.

*Due to poor availability of relational data, it was not possible to cover all aspects of these two dimensions of relational polycentricity.* The challenge, however, is to provide relevant data which provide some evidence on the relations between the five cities (meso level) and with the 'rest of the world' (macro level).

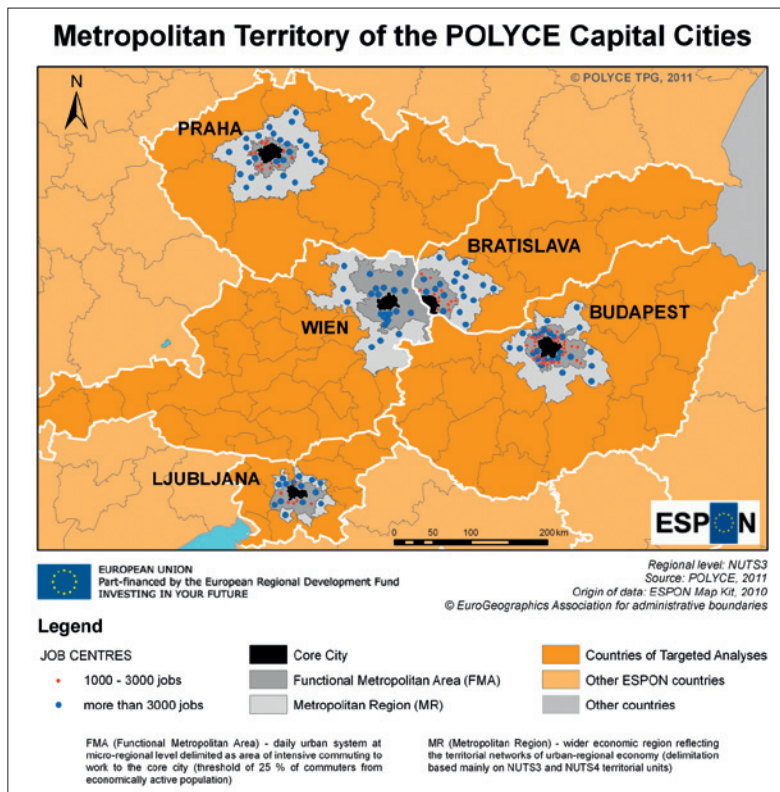
*For analysing polycentricity, three spatial delimitations are differentiated (see Figure 10):*

- *Core City (CC) - capital cities in their administrative delimitation*
- *Functional Metropolitan Area (FMA) - daily urban system at micro-regional level, delimited as areas of intensive commuting to work<sup>1</sup>*
- *Metropolitan Region (MR) - wider economic meso-region reflecting the territorial networks of a city's economy*

As the analysis focuses on relations between all five POLYCE cities, there is no explicitly deeper investigation of the links between the cities of Wien and Bratislava, despite their close economic and institutional ties evolved over recent years. This is also due to the fact that transnational data that go beyond the data used for the analysis are still rather scarce. Currently, there is an EU-financed project underway at Wien University of Technology (TRAFFIC MODEL AT-SK) that collects data on mobility behaviour between the two cities, which will provide a useful data source for future analyses.

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<sup>1</sup> The delimitation of the FMA is based only on the intensity of commuting to work. Due to the lack of other relevant statistical data, this single indicator, which does not fully reflect the whole complexity of relations, has to be used as a proxy for all kinds of interactions.



Map 2: Metropolitan territory of the POLYCE capital cities

## 2.1 Flows & Interactions between Central European Metropolises

Since spatial distances and accessibilities strongly determine economic activities, it is necessary to consider travel times as an important determining factor of actual flows and interactions between different cities. An overview of the average travel times between the five cities documents the central location of Wien and Bratislava within the CED-zone, expressed by the shortest travel times to the other partner cities. Additionally, the close vicinity of the two 'twin cities' implies excellent mutual accessibility. By contrast, Praha and Ljubljana as the northern and southern outposts of the region are less connected to the other partner cities, which means much longer travel times (especially by train). The distances between Wien, Budapest and Bratislava are short enough to allow one-day trips for business meetings both by car and by train. The distances between this central triangle on the one hand and Praha and Ljubljana on the other hand are long enough to allow reasonable and competitive air connections. Moreover, rail connections between the five cities are characterised by varying quality of rail infrastructure, with a huge need to catch up in some areas. Most connections have a satisfactory supply of direct trains and a reasonable travel speed between 75 and 95 km/h, which is, however, still very low in relation to comparable polycentric regions in Western Europe. In spite of the low travel speed, the five POLYCE cities are still well connected to the MEGAs in the 'pentagon'. In order to remain competitive with air traffic, rail infrastructure in the CED-zone will need strong improvements in the near future.

Since economic, social and institutional interaction is always embedded in an existing network of established relations and traditions, ethnic and historic ties between two cities (common history, culture, language, etc.), which are reflected by inter-city migration flows, are a main influencing factor of any interaction. When comparing the nationalities of citizens in the five POLYCE countries, Austria's role as an immigration country becomes evident: contrary to the four partner states, which did not access the European Union until 2004, Austria has been an attractive destination for migrants over

the past 50 years, which may be considered a potential for establishing international networks and cooperation ventures. Despite some remarkable ethnic relations (Slovakia and Czech Republic, Slovakia and Hungary), migration between the five partner states seems to be rather weak, with only Austria hosting a significant number of people from the neighbouring states. The enhancement of common networks and cooperation ventures will definitely increase these numbers as a sign of close social and economic interaction on the one hand while proving a positive precondition for the further deepening of mutual relations on the other hand.

## **2.2 Embeddedness in Company & Research Networks**

As has been repeatedly argued, one way of understanding cities under conditions of accelerated globalisation is by analysing the intensity and reach of their external linkages and by identifying their position in a global network of cities (see Taylor, 2004). Building on the conceptual work on the global city (Friedmann, 1986; Sassen, 1991), one strand of research devoted to this endeavour that analyses inter-city linkages based on FIRE firm locations (Taylor and Walker, 2001) was established in recent years. Recent data of the Globalization and World City Research Network (GaWC), which provides the locations of 100 FIRE firms in 315 global cities, reveal that within the CED-zone, Praha, Budapest and Wien are much better connected through international FIRE firm networks than Bratislava and Ljubljana. This pattern is replicated in the relations between the individual cities, with Budapest, Praha and Wien having by far most relations with each other but much fewer with Ljubljana and Bratislava. Looking at relations with all other European cities and with cities overseas, Praha again takes the lead and shows the strongest degree of embeddedness, followed by Wien and Budapest. Although the importance of intra-regional relations within the CED-zone hardly differs for the five cities, Wien and Praha are a little less dependent on relations with the other POLYCE cities, thus underlining their greater embeddedness in firm and company networks in Europe and overseas. Regarding the importance and spatial range of company locations, it becomes evident that the two smaller capitals (Bratislava and Ljubljana) are dominated by other cities in these networks, which might be caused by their comparatively small size and low functionality in global competition, whereas Wien, Budapest and Praha hold important control functions in these firm networks. Wien in particular seems to cope successfully with its role as a central economic player in the region hosting more highly ranked company locations than its rivals.

When considering research cooperation of the five cities in EU Research Framework Programmes (based on the CORDIS database), Wien seems to be excellently integrated into European research networks. Compared with Budapest and Praha, which are both about the same size, Wien takes part in significantly more research projects than these two direct opponents, which might probably be attributed to established networks and cooperation ventures with Western EU member states. Surprisingly, Ljubljana is not far behind Praha but stays far ahead of Bratislava despite being much smaller with regard to population and employment. In addition, the Slovenian capital is one of the few cities which have increased their project participations from the first to the second half of the decade, although the number of projects was reduced due to bigger project dimensions. Taking the nationality of the respective lead partner into account, the results underline the dominant role of Wien in EU research projects: a share of almost 30% of projects led by Austrian institutions suggests that Wien (as the centre of most research institutes) plays a central role in many scientific networks. The number of research cooperation projects between the five POLYCE cities points towards especially strong scientific ties between Wien and Budapest, which are both comparably less connected with Praha. Bratislava, which is lagging behind in total project participations, is rather weakly integrated into research networks with other European partners. Wien seems to be in a much more comfortable situation, because in spite of the high number of cooperation projects with the partner cities, it is much better integrated into 'external' research networks than the other cities.



To obtain some rough indication on social relations between the five cities, the frequencies of Web searches regarding one of the cities as searched from another of the project cities were examined. The analysis indicates that Wien is the most important node in the CED-zone and the main destination for searches from Ljubljana and Budapest, while Wien's population distributes its attention almost evenly between Praha, Bratislava and Budapest. The relatively small number of incoming search connectivity for Ljubljana indicates its peripheral position within the region. Praha has stronger linkages to Wien than to Bratislava, which is in its turn more strongly connected to Praha than to Wien. Furthermore, the results express the varying degrees of relevance of the other cities in the CED-zone compared to other European cities. Strikingly, Wien does not only attract more attention from the five POLYCE cities than Praha, Bratislava, Budapest and Ljubljana, but also more than London, Paris and Barcelona.

The data indicate that these different aspects of relational polycentricity are not independent of each other: even though the technological revolution in the telecommunications sector offers new opportunities for exchanging information and knowledge, there is slight evidence that both travel times between the five cities and ethnic ties between the home countries have a significant influence on the number of company and research networks. Furthermore, it may be assumed that different kind of flows, networks and cooperation ventures between cities are connected in some way and therefore stimulate and strengthen each other.

### 2.3 Intra-Metropolitan Polycentric Structures Compared

In addition to looking at relations between the five metropolises, it is of interest to compare specific similarities and differences of the POLYCE cities and their metropolitan areas in terms of their internal polycentric structure as well. Population, jobs, and commuting relations between job centres were therefore analysed at the levels of core city (CC), metropolitan area (FMA) and metropolitan region (MR).

CCs, FMAs and MRs significantly differ in size. The different systems of administrative boundaries in the three similarly-sized cities of Budapest, Praha and Wien exert an effect in metropolitan regions of strongly varying size in terms of their number of municipalities (Budapest: 284; Wien: 507; Praha: 1,149). This indicates unequal conditions concerning the polycentric structure but is also an important influencing factor of inter-communal collaboration that must be taken into account.

Looking at the metropolitan regions in terms of population and jobs, Budapest has the largest population in the sample. Wien concentrates the highest number of jobs, while Budapest and Praha are almost equal in this respect. In this context, the number of jobs per 100 inhabitants is a useful indicator. Only Bratislava and Praha present a ratio better than 1:2, with Ljubljana and Wien slightly behind, and Budapest scoring worst.

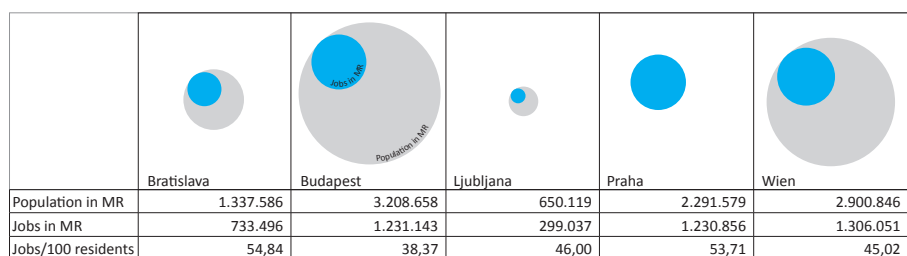


Figure 5: Ratio of jobs to population in POLYCE metropolitan regions

While the three big cities dominate their MRs in population and jobs, concentrating more than half of the population and over 60% of all jobs of their respective MR in the core city, the two smaller capitals present a less pronounced dominance. In this respect, Bratislava shows the weakest dominance with 33% of the population and 43% of jobs in the MR within the administrative boundaries of the capital city. Thus Budapest, Wien and Praha are characterised by enormous morphological monocentricity in terms of job centres in their MRs. Although Bratislava and Ljubljana are also by far the largest centres in their MRs, their dominance is less overwhelming.

Besides, relational polycentricity was analysed as well by evaluating reciprocal work commuter flows between centres in the respective FMA and MR. Striking differences between Wien with high levels of commuting reciprocity (approaching 60%) and the other cities (close to 20-40%) were revealed. This indicates a high degree of functional relational polycentricity in Wien's MR. Only Praha's FMA shows more than 40% of reciprocal flows in 2001, which reflects the residential and job suburbanisation initiated in the second half of the 1990s. Unfortunately, up-to-date information, which would reflect the situation around 2010, is not available. It is likely that the share of reciprocal flows would be quickly increasing due to rapidly developing suburbanisation. The situation around 2000 clearly demonstrates the difference between the more open, functionally integrated and organic urban system of Wien's metropolitan region and the urban systems of the former communist countries, which are still dominated by capital cities and their labour markets through unidirectional commuting to the core city and hierarchical subordination of centres in the metropolitan region to the core city.

The aggregate view on all relations between job centres in MRs and FMAs clearly shows the difference between Wien, where hierarchical unidirectional flows virtually do not exist, the regions of Praha, Budapest and Ljubljana, where hierarchical relations still dominate (accompanied by the first signs of developing reciprocal linkages between selected centres), and Bratislava, with only 23% of reciprocal flows in the MR and even less in the FMA.

When comparing measures and indicators of morphological and relational polycentricity, it becomes clear that they do not correspond. For instance, the FMA of Wien is highly dominated by its core city in morphological terms, yet the region shows high levels of functional relational polycentricity. By contrast, Ljubljana's metropolitan area is much less dominated by the core city itself, indicating a predisposition for functional polycentricity. However, the level of reciprocity and relational polycentricity is still low in Ljubljana's metropolitan region. Thus both indicators – i.e. of morphological and of relational polycentricity - must be taken into account.

## **2.4 Polycentricity in Policy, Planning and Decision-making**

The Territorial Agenda of the European Union specifies that cities which act as regional centres should cooperate within a polycentric model of urban and regional development. The object of the ESPON POLYCE study is a specific region of territorial co-operation within Europe, i.e. the area where Central Europe and the Danube Regions overlap. The region consists of Austria and the former socialist countries of the Czech and Slovak Republics, Hungary and Slovenia. Under socialism, the development of national urban systems was an integral part of central planning. The national settlement structure was conceived as a hierarchically organised system of central places with a balanced division of roles between individual levels of national, regional and local centres. Issues of balanced development within an urban system were implicitly present in socialist policies. This also included the intra-urban level with the development of neighbourhood centres accompanying the city core and the planning of urban agglomerations with centres secondary to the main core(s). While this settlement planning system was radically rejected in the Czech and Slovak Republics and Hungary, the Slovenian case shows continuity from pre-1990 to recent developments. A new issue that appeared on the agenda for all countries and their capital cities after the dismantling of the Iron Curtain and the rapid development of internationalisation was the competition for investments, labour, companies, organisations, etc.



within the unified European space. In the former socialist states, macro-economic reforms and faith in the free market dominated the 1990s. The role of planning to regulate spatial development began to be recognised only since the turn of the century and especially since accession to the EU. The new agenda of territorial development views polycentric settlement and regional systems as guarantors of balanced, functional and effective growth.

In ESPON POLYCE, we understand the polycentric urban system as a functionally integrated socio-spatial entity. It consists of multiple urban nodes whose development is influenced by governance strategies that recognise, consider and support the future enhancement of mutual interests, complementarities, synergies and potentials for collaboration. In ESPON POLYCE, we thus focused on two levels of polycentricity in policy, planning and decision-making:

1. position of a capital city region within the Central European Danube Region and Europe;
2. position of a capital city region within the national urban and regional system, and internal polycentric organisation within the capital city region.

#### **2.4.1 Position of capital city regions within national systems, the Central European Danube Region and Europe**

Is the position of the capital city region or the capital city itself within the Central European and Danube Region and the European space recognised and specified in capital city documents, national government documents and documents of regional and municipal governments of centres in a given metropolitan region? All five metropolises (Wien, Praha, Budapest, Bratislava, and Ljubljana) are major nodes and key command and control centres in their respective national urban and regional systems, playing the role of gateways between home country and external world. All capitals pay attention to trans-European transport networks (TEN-T) that link them into the wider European space and especially to Western Europe. The capitals differ in their explicit attention to the enhancement of their international positioning. Wien and Budapest clearly pronounce their ambitions to play the role of a supranational centre. Budapest aims to strengthen its role as the capital of the Danube Region and a gateway city to South-eastern Europe and the Balkans. Wien claims to be an economic centre of South-eastern Central Europe. Instead of cooperating in wider regions, Wien, Praha, and Budapest see themselves as direct competitors for business investments and functions. In the case of Ljubljana and Praha, the aspirations for a supranational role are not defined as clearly. Specific attention must be paid to the relation between Wien and Bratislava due to their geographic proximity. Bratislava understands that joining its fate to Wien can enhance its international position. Both capitals see potential in common growth of the 'Twin Cities' Wien-Bratislava as a core of the Central European Euroregion (Euroregion Mitte - Euroregión Stred). The **Centrope** initiative with its motto 'We grow together – together we grow' clearly defines Wien and Bratislava as the nuclei of a wider region involving parts of Austria, Slovakia as well as the Czech Republic (Brno) and Hungary (Győr).

#### **2.4.2 Internal polycentric organisation of capital city regions and their position in national urban and regional systems**

What is the position of the capital city region or the capital city itself within the national urban and regional system? Is there a strategy or plan of polycentric organisation within the metropolitan region? Is polycentricity recognised as an important normative concept? Are there other concepts of urbanisation or urban system management in the metropolitan region? Is the collaboration between cities in the metropolitan region institutionalised? Are there coordinating institutions at the metropolitan region level? Is there a metropolitan strategy of urban system development that is approved by the metropolitan government or regional/provincial governments? Or is there a form of cooperation based on bottom-up coordination among municipalities in the metropolitan area?

The Praha and Wien metropolitan regions suffer from a lack of coordinated spatial planning. The core cities and their FMAs / MRs are split up into independent regions (Praha and Central Bohemia) or federal provinces (Wien, Lower Austria and Burgenland). The recent Austrian Spatial Development Concept ÖREK (2011) recognises polycentric structures and the Urban Development Plan for Wien 2005 (STEP 05) focuses on decentralised concentration as a key principle for strengthening the international competitiveness of Wien. The Urban Development Plan for Wien emphasises the need for mutual voluntary cooperation between the city of Wien and the surrounding federal provinces. Yet while the planning and policy documents of Austria's federal provinces discuss the interregional cooperation of micro-regions, they do not, however, consider Wien.

Praha strives for the coordination of its spatial development with the surrounding Central Bohemian Region. The Regional Development Programme for Central Bohemia admits that Praha is the natural centre of the settlement/regional agglomeration that economically, historically and culturally connects the Central Bohemian Region with the City of Praha. However, these priorities have not been met, and the issue of the urban system and its hierarchic or polycentric organisation is not systematically discussed and implemented. The cooperation between the Central Bohemian Region and Praha is most developed in the area of public transport, with the aim of a region-wide integration of all transport services into a single tariff system through the commitment and cooperation of the municipalities of the Central Bohemian Region with the City of Praha.

The Hungarian National Spatial Development Concept declares a need to balance Budapest's dominance in the national settlement structure by strengthening the position of the regional poles (cities of approx. 100,000-200,000 inhabitants). There are several strategic and spatial planning documents that influence and govern the development of the Budapest metropolitan region by operating on three spatial levels: Central Hungarian Region, Budapest Agglomeration and Budapest City. The development of a polycentric spatial structure is not a major issue. Budapest's metropolitan region is seen as a network of micro-regions with autonomous service centres rather than partners of the core city. The Spatial Development Concept and Strategic Programme for the Budapest Agglomeration (2007) distinguishes a three-tier system of sub-centres in the wider metropolitan area and proposes that the coordination between the core city and its agglomeration should be managed by the Budapest Agglomeration Development Council, which, however, has only limited decision-making powers.

The Spatial Development Conception of Slovakia (2001) does not address the issue of polycentricity. The more recent National Strategic Reference Framework of the Slovak Republic for 2007-2013 deals with polycentricity at the national level in terms of transport infrastructure connecting regional centres. At the level of the metropolitan region, Bratislava dominates its administrative region characterised by rural settlements and small towns and intense daily commuting to work, schools and services. There is a priority for the deconcentration of employment towards suburban municipalities. The impact of the City of Bratislava transcends the boundaries of the Bratislava Region and extends into parts of the neighbouring Trnava Region. However, there is no inter-regional cooperation on settlement development between the two regional governments of Bratislava and Trnava.

Despite Ljubljana being the largest urban centre in Slovenia, it is home to only about 15% of the country's population. The Slovenian urban network and settlement system is the most polycentric among ESPON POLYCE countries. The Spatial Development Strategy of the Republic of Slovenia (2004) promotes the polycentric urban development of Slovenia through 51 centres of (inter)national, regional and inter-municipal importance, which are the key employment and service centres of Slovenia. Ljubljana and the Central Slovenian Region do not enjoy a special position in the framework of national regional policy and programming activities. The Regional Development Agency of the Ljubljana Urban Region supports integrated regional development based on the hierarchy of central places in the region rather than metropolitan polycentrism. The Spatial Plan of the City Municipality of Ljubljana (2010) pays attention to the threat of a possible decline of the city centre and urban sprawl by using the concept of decentralised concentration, emphasising the development of larger number of small centres.

# 3 Metropolisation and Growth of Central European Metropolises

## 3.1 Costs & Benefits of Urban Development

Different cities can assume different sizes according to the specificities of their contexts. The question arising in this respect is: 'What are the determinants of equilibrium city size?'<sup>2</sup>

A simple urban growth model was set up to provide a framework for empirical analysis. The model is rooted in the literature summarised in Fujita (1989) and proceeds from the work of Camagni et al. (1986) to Capello and Camagni (2000). Efficient city size depends heavily on the internal productivity and competitiveness of the activities and functions encompassed by the single cities. An agglomeration of a few low-order activities may be supported by a limited number of inhabitants, while a cluster of advanced activities needs and feeds a wider urban population, overcoming the increasing urban costs with superior productivity. The starting point is hence the assumption of the following implicit urban cost and benefit functions:

$$C = f(\text{size, rent, malaise, sprawl}) \quad \text{and} \quad B = f(\text{size, amenities, diversity, density, metropolisation, policentricity})$$

The choice of arguments for cost and benefit functions is based on the literature summarised above. In particular, the literature usually finds a non-compact urban form to represent a cost for dwellers (e.g. Jacobs, 1961; with, however, a notable exception in Glaeser and Kahn, 2004) and equally identifies the possible consequences of an over-concentration of people in large urban areas as a general distress effect. This last cost of agglomeration listed is here labelled as 'malaise'. On the benefit side, the quality of urban amenities (Carlino and Saiz, 2008), sectoral diversity (Jacobs, 1969), density effects and the innovative notions of metropolisation and polycentricity are included as arguments adding to the understanding of urban benefit functions.

In both equations, urban size represents both a cost and a benefit for the city. Size is therefore a dual concept, representing a joint source of positive as well as negative externalities for city dwellers. This assumption is the key to resolving the model and obtaining an estimable function. In order to arrive at an estimable function assessing the relative importance of different urban size determinants, we assume full spatial equilibrium, so that marginal costs equal marginal benefits. The assumption of spatial equilibrium, which allows for closing the theoretical model underlying the empirical results of this analysis, has been often questioned for the European case. However, recent findings on the impact of the mobility of researchers as well as on other forms of proximity fostering inter-regional and inter-urban relations in the EU context have been thoroughly explained by the ESPON KIT project.<sup>3</sup> This condition is represented in Figure 6. Eventually, we obtain:

$$\ln(\text{size}) = \frac{1}{\alpha - \kappa} \ln\left(\frac{\gamma}{\alpha}\right) + \frac{\zeta}{\alpha - \kappa} \ln(\text{amenities}) + \frac{\vartheta}{\alpha - \kappa} \ln(\text{diversity}) + \frac{\chi}{\alpha - \kappa} \ln(\text{density}) + \frac{\mu}{\alpha - \kappa} \ln(\text{functions}) + \frac{\nu}{\alpha - \kappa} \ln(\text{networks}) + \frac{\beta}{\alpha - \kappa} \ln(\text{rent}) - \frac{\delta}{\alpha - \kappa} \ln(\text{malaise}) - \frac{\psi}{\alpha - \kappa} \ln(\text{sprawl})$$

where size represents equilibrium size of the city equalising urban costs and urban benefits - the basis of this part of the project analysis.

<sup>2</sup> The definitions of the theoretical concepts and notions of metropolisation and polycentricity behind this approach follow Chapter 1.2 of the present report. By 'city' we mean the urban agglomeration in the sense of a functionally integrated metropolitan area crossing administrative core-city borders.

<sup>3</sup> The Politecnico di Milano, who holds the main responsibility for carrying out this part of the project, is the Lead Partner of the ESPON KIT project.

The empirical test of the model is based on a set of 59 Larger Urban Zones, EUROSTAT's definition of the concept of a Functional Urban Area. This choice is mainly motivated by data availability, since the data set merges information from two main sources (EUROSTAT and the ESPON project 'Future Orientations for Cities'). Indicators are described in full detail in the Scientific Report, Chapter 3.

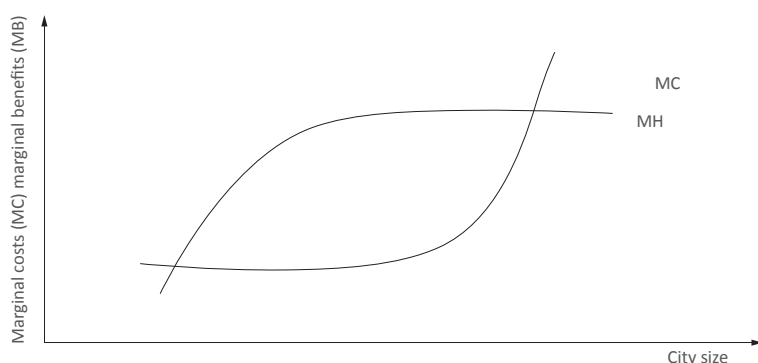


Figure 6: Marginal costs and benefits for city size

## 3.2 Preconditions of Metropolitan Growth

The econometric results of estimating the main model (Figure 42 of the Scientific Report) show remarkable closeness to theoretical ex-ante expectations. If the spatial equilibrium assumption does hold, and people are more or less free to move and look around for better life conditions, these estimates provide a reliable first-layer assessment of urban size determinants in the European urban system. In particular, results show:

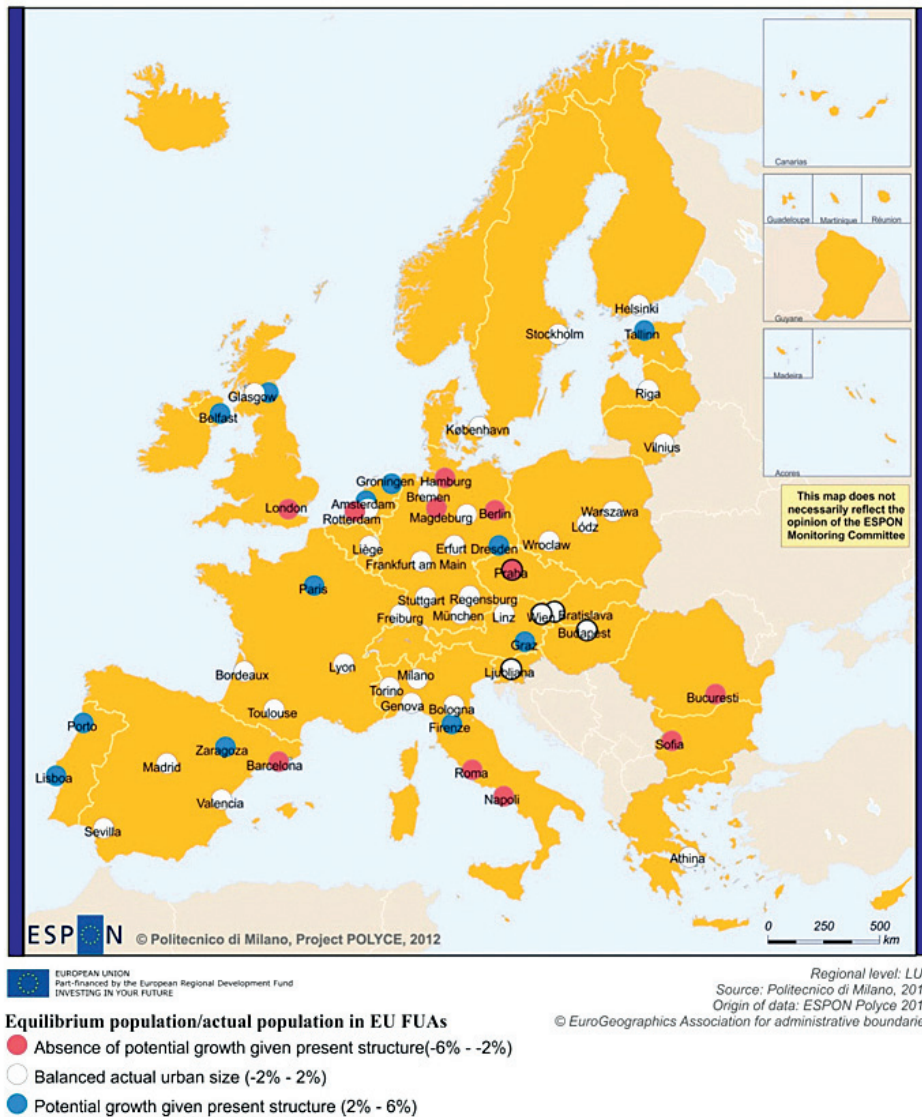
- Land rent is the single highest cost for urban dwellers, which is reflected in the highest parameter estimate within our framework.
- A relevant provision with urban amenities, with the highest parameter estimate being associated with this benefit variable, also explains equilibrium city size. Amenities and industrial diversity alone explain about 25% of the total linear variance.
- Relational polycentric urban development is associated with a larger city size.
- Cities with a denser presence of power functions also attain a larger size.
- Finally, the presence of administrative and power functions typical of a city hosting high-ranking financial functions also contributes to equilibrium city size.

More generally, these elaborations demonstrate the relevance of a sound spatial structure of metropolises in the form of external networking and the reduction of sprawl. All above-named elements, linked to sound urban planning, generate higher urban benefits and efficiency while at the same time reducing the cost associated with physical size. Developing urban quality, urban amenities and attracting human capital-rich professionals is required to generate enhanced attractiveness and competitiveness, once again supporting a wider, more diversified urban realm. A potentially beneficial and virtuous cycle of urban development may be triggered along these lines.

Confronting actual urban size in the sample with the virtual equilibrium size of cities (Map 3) reveals the following: most European cities are close to the predicted equilibrium, which indicates good preconditions for further urban growth. Among POLYCE cities, Bratislava and Ljubljana as well as Wien and Budapest show only marginal positive or negative residual growth potential. In addition, there are two smaller groups of cities with important deviations:

- those with strong positive residual growth potentials, indicating that preconditions may allow for further urban growth. This is predominantly the case for medium-sized cities.
- those showing negative residual growth potentials, indicating that recent preconditions might not be adequate for further urban growth. This is mostly the case for large cities. Praha, as one of the POLYCE stakeholder cities, belongs to this last group.

## Potential Population Change in EU Metropolitan Areas



Map 3: Potential population change in EU metropolitan areas<sup>4</sup>

<sup>4</sup> The metropolitan areas illustrated in this map represent the city sample of 59 Large Urban Zones (LUZ) as indicated by the Urban Audit and used in this analysis for testing the empirical model. It should be noted that this is therefore not a comprehensive list of metropolitan regions as indicated for example in the ESPON SGPTD project.

Empirical results allow for the identification of city-specific variability: some cities show an actual population that is lower or higher than the equilibrium city size predicted by the model. Differences can be explained by good or bad governance, thereby suggesting future strategies for more efficient urban planning and sound economic and social 'visions'. However, residual growth possibilities, given the negative impact estimated for the sprawl measure, suggest that cities expected to grow in the coming years may look for denser urban forms, thereby increasing efficient use of the already urbanised space.

For the five POLYCE cities, results show marginally different potentials. While the three bigger metropolises of Budapest, Praha and Wien seem to have reached their growth potentials, Bratislava and Ljubljana present higher potentials regarding the framework needed for a future population increase. Thus they need to take these differences into account in their planning endeavours when trying to steer urban development towards future growth.

# 4 Central European Metropolitan Profiles

*Metropolitan profiles of a sample of European cities (defined as agglomerations within functional metropolitan areas) were elaborated for two reasons:*

- *to determine how each of the five POLYCE metropolises performs in the European urban system*
- *to depict their metropolitan appearance, i.e. their common and distinct potentials as a basis for strengthening their competitiveness and initiating cooperative actions*

## 4.1 Comparing POLYCE City Metropolitan Profiles

The profiles show that each POLYCE metropolis is facing its specific challenges, while at the same time all can draw upon certain strengths that could potentially foster their distinctiveness. Across the five characteristics (Economy, People, Mobility, Environment, Living), all metropolises except Bratislava perform best in living conditions. In any case, both the Bratislava and Ljubljana metropolitan areas are doing exceptionally well in the field of 'People', even outscoring Wien and Praha. All five metropolises have living standards that are above the sample's average, which is one of their most important commonalities. Interestingly, only the economic performance of Bratislava's metropolitan area can contribute positively to the profile. In the three bigger metropolises, this value nearly equals the respective overall score while presenting a clearly negative tendency in Ljubljana.

The metropolitan areas of Wien and Praha are almost similar concerning their high values with respect to living conditions, while both show a weakness concerning the population factor, which subsumes demographic structure, qualifications, life-long learning and the metropolitan appearance of the city. Environmental issues seem to be a specific problem for the metropolitan areas of Bratislava and Budapest. Interestingly, only the performance of the metropolitan area of Wien is above average in this respect, but still does not contribute positively to the high overall score. Altogether, the metropolitan area of Wien is situated in the top quarter of all cities analysed. Yet its profile differs from those of other well-performing metropolises. The majority of the Scandinavian and Western European metropolises analysed that finds themselves on top of the list (e.g. Stockholm, Copenhagen, Helsinki, Munich or Brussels) are showing far better results in the fields of 'Economy' and 'People', while all have worse scores in terms of 'Environment'. Hence, Wien embodies clear differences regarding its metropolitan development, indicating that it boasts specific potentials for positioning within the European urban system.

Budapest's and Praha's metropolitan areas instead present a different picture. While the Czech metropolis also performs well at the European level (its only clearly below-average characteristic is 'People'), Budapest's metropolitan performance shows an inferior tendency. Like the other four POLYCE cities, the metropolitan area benefits from its high living standards but suffers from problems in the other fields, especially 'Environment'.

The two smaller metropolises of Bratislava and Ljubljana by contrast both produce good results in the field of 'People'. Interestingly, only in the Bratislava metropolitan area it is not 'Living' conditions that make up the best category of the profile, but 'People'. For both cities, 'Environment' and 'Mobility' seem to be problematic fields. Especially for 'Mobility', this is in contrast with the two best-performing metropolises, i.e. Praha and Wien.



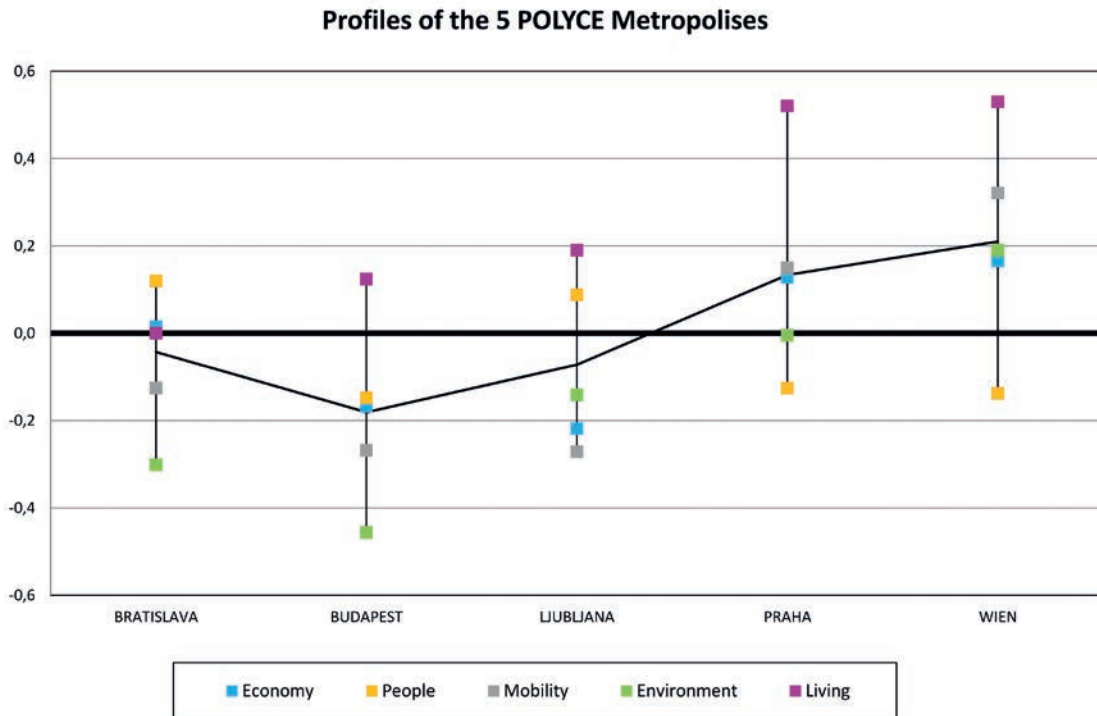


Figure 7: Profiles of the five POLYCE metropolises

## 4.2 Similarities & Differences of POLYCE City Metropolitan Profiles

Similarly to the investigation of urban growth patterns, two types of metropolises can be distinguished as well: Budapest, Praha and Wien with heterogeneous characteristics, wide-spreading above and below the sample's average on the one hand, and Bratislava and Ljubljana, which offer a very compact profile in all categories on the other hand. While the metropolises of Wien and Praha show an overall above-average performance, the metropolitan areas of Ljubljana, Bratislava and Budapest score below mean values.

This overview shows clearly that all five POLYCE metropolises can play different roles in the Central European urban system. Thus the metropolises of Bratislava and Ljubljana have the highest potentials in the fields related to 'People' of the five; however, this is still the overall worst performing category of the POLYCE metropolises.

As expected, economic activities are a more distinct characteristic of some Western European and Scandinavian metropolises, but still Wien and Praha are competing here with metropolises like Berlin, Milan and Brussels, to name only a few.

Concerning environment-related issues, Wien is the only POLYCE metropolis that currently performs well in the European sample, also outscoring Copenhagen and Stockholm. Nevertheless, environmental characteristics are not the strong suit of the POLYCE metropolitan areas.

The most important commonality of all five is indeed the fact that they all have high living standards above the sample's average - a promising potential for common future activities that must be taken into account by policymakers, planners and the like.



### 4.3 Competitiveness & Inclusion in POLYCE Metropolises

The identification of metropolitan profiles allows for a policy-oriented discussion of smart metropolitan development, which aims at balancing competitive and inclusive development. Competitiveness is characterised by high standards of economic performance, knowledge-intensive, innovative and creative activities and international embeddedness (i.e. accessibility and attractiveness for international businesses and congresses). On the other hand, inclusion aims at equal opportunities accessible to all. It allows for participation in processes of change regardless of individual circumstances and ensures that all people can cope with changing circumstances towards the goal of a cohesive society. Concerning these two variables, findings show as follows:

- According to the results, Wien is the most competitive POLYCE metropolis while still suffering from labour market problems (high unemployment rate) and less R&D funding until 2006. In Bratislava, Budapest and Ljubljana, economic performance, international embeddedness, (public) investments and international accessibility need to be improved in order to enhance their competitiveness in comparison with Wien, Praha or other European cities.
- The share of foreigners in Wien and Praha is higher than in other metropolises with comparable economic performance and competitiveness. Still, there is some deficit in human capital potential in Wien and Praha due to a small share of highly educated workers and only little participation in life-long learning activities. The reverse applies to Ljubljana and Bratislava.
- Although environmental indicators reveal some deficits in all POLYCE metropolises, the profile shows a much more positive outcome concerning Wien's environmental situation, which is likely to be an asset in comparison with other metropolises. Environmental management should be improved in other POLYCE cities to become a competitive advantage and provide high quality-of-living standards.

Hence international accessibility and business embeddedness, an educated labour force as well as good environmental and living conditions for residents and visitors are in fact the most important competitive assets of European (and POLYCE) metropolises. Regarding inclusive development in POLYCE metropolises, the results reveal some challenging outcomes:

- Good economic performance, which indicates economic wealth, paired with unemployment and lower income levels points to deficits in cohesion. This is a potential threat to some POLYCE metropolises, particularly Wien, but to any other European city as well. In other POLYCE metropolises, the economic transformation and development trends of the past 20 years have produced lower unemployment rates and more diverse jobs in the private sector as well as new business ventures.
- Structural differences in economic activities within POLYCE city regions are evident, especially in Budapest and Bratislava. These disparities are increasing due to a concentration of economic activities and better-paid jobs in the capital cities. The recent economic and financial crisis has had direct effects on the increase of unemployment and the decline of real and disposable incomes, with direct impact on the decline of economic and social cohesion in POLYCE metropolises.
- Structural deficits also relate to metropolitan regional infrastructures. The public transport systems of the POLYCE metropolises show deficits in the metropolitan regions, although satisfaction with the facilities in the core cities is rather high (e.g. in Praha and Wien). The situation could also be improved in Budapest and Ljubljana with better public transport facilities in the urban regions. The availability of ICT in a metropolis is another important indicator of inclusion and territorial cohesion, which – despite great efforts in the past ten years – still needs to be further improved.

# 5 Metropolitan Reports

This chapter presents five short reports on the most relevant project results from the perspective of the five POLYCE metropolises. Its primary purpose is to provide a concise overview of specific characteristics of the five metropolises that were identified in the course of the analysis. Each city is described with a view to existing planning strategies dealing with polycentricity and metropolisation, the current metropolitan profile, the polycentric structure and the perception of urban development by selected stakeholders. On the one hand, this results from quantitative analyses (metropolitan profile, polycentric structure) and, on the other hand, from qualitative assessments of selected aspects (existing planning strategies, stakeholder perceptions). The integration of an analytically-oriented quantitative approach with a governance-oriented qualitative approach is meant as a starting-point for the development of evidence-based policy strategies for the five metropolises. *The analysis is focused on the metropolises and therefore, unless stated otherwise, the results presented relate to the wider territory of a functionally integrated metropolitan area, and not just to the core city.*

*Two further clarifications are necessary. First, the presented data on metropolitan profiles are the product of an analysis of European data sets available for the five cities. It was attempted to use the most recent available data. Nonetheless, in some cases the need for comparable data for all five cities has made it necessary to draw on older data sets. The profiles include data on local and regional levels; thus they represent metropolitan rather than city profiles. Second, the presented stakeholder perceptions draw on two sources, a survey among a set of 12-15 stakeholders per city and a stakeholder workshop with 15-25 participants per city. Necessarily, the results are selective and not representative of a larger population. However, they still represent an insight into the perception of urban development issues by a group of relevant experts in the five cities.*<sup>5</sup>

## 5.1 Metropolitan Report Bratislava

Bratislava's development is influenced by the immense changes undergone over the past years as the result of the political turnabout in the late 1980s. The change in the political arena has influenced the administration of the country, the local economy and culture as well as the physical structure of the city and region of Bratislava. The process of spatial transformation escalated in the past ten years with the spread of the suburbanisation process to Austria and Hungary. This particular development has become a recent challenge for planners of the Bratislava metropolitan area. Nevertheless, Bratislava's unique position - asymmetric within Slovakia, but close to the neighbouring countries - opens up possibilities for creating a vital metropolitan territory.

### 5.1.1 Metropolitan planning strategies of Bratislava

The city and region of Bratislava have several strategic and planning documents at the national, regional, cross-border regional and local levels. Polycentricity, polycentric development and the issue of metropolisation are always presented as a strategic goal of the main documents. Although the issue of polycentricity and polycentric development is not mentioned explicitly in any of the existing documents, it is always tackled marginally, mainly in non-binding documents. One of the problems of unsatisfactorily evolved polycentricity within the metropolitan region is the inefficient transport system as seen in contrast to Bratislava as a job and market centre as well as in conflict with the polycentric housing system accompanied by the provision of the necessary services.

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<sup>5</sup> More detailed information on the methodological approach and data sources for the results presented can be found in the Scientific Report.

At the national level, two documents are relevant for the development of Bratislava City and Bratislava Region. The Spatial Development Conception of Slovakia 2001 is a long-term strategic document approved by the government and divided into several chapters (Bratislava is presented as a component of the European area). The National Strategic Reference Framework of the Slovak Republic for 2007-2013 (NSRR) directly deals with polycentricity at the national level in terms of transport connections. This document also notes that the Bratislava Region is peripherally located within the Slovak Republic.

The Economic and Social Development Programme of the Bratislava Self-Governing Region for 2007-2013 acknowledges that Bratislava itself is absolutely dominant in the Bratislava Self-Governing Region with respect to the population growth rate as well as being the economic hub of the territory, its transport node, etc. The strategic objective for the programme period 2007-2013 focuses on increasing competitiveness based on sustainable development. Conversely, the Operational Programme for the Bratislava Region (OPBK) implements and elaborates the strategic priorities of the NSRR in greater detail. It states that the Bratislava Region uses its development potential only in part when compared with developed regions of other EU countries. Bratislava as the main settlement within its region and the capital city of Slovakia is a multipurpose centre of regional and nationwide (partly international) significance. Both documents are crucial for the regional development of the Bratislava Region.

The unique position of Bratislava and its region provides sufficient possibilities for international cooperation mainly within the Central-European space. Most international projects are being implemented together with Austria, Hungary and the Czech Republic. Projects such as the **Centrope** – Regional Development Reports address future visions for the cross-border region. The Central European Euroregion document introduces analytical and conceptual material for development of the ‘Twin Cities Wien-Bratislava’ region as the core of the Central European Euroregion. The main assumptions for the development of a ‘Central European Region’ are joint territorial planning, aligned infrastructure construction, supranational organisation in the field of management and public transport as well as cooperation in the education sector. JORDES and KOBRA, both INTERREG III projects, present an analytical study of the geo-economic region Wien-Bratislava-Győr and also deal with the objective of achieving greater cohesion of Bratislava City with the neighbouring Austrian territories.

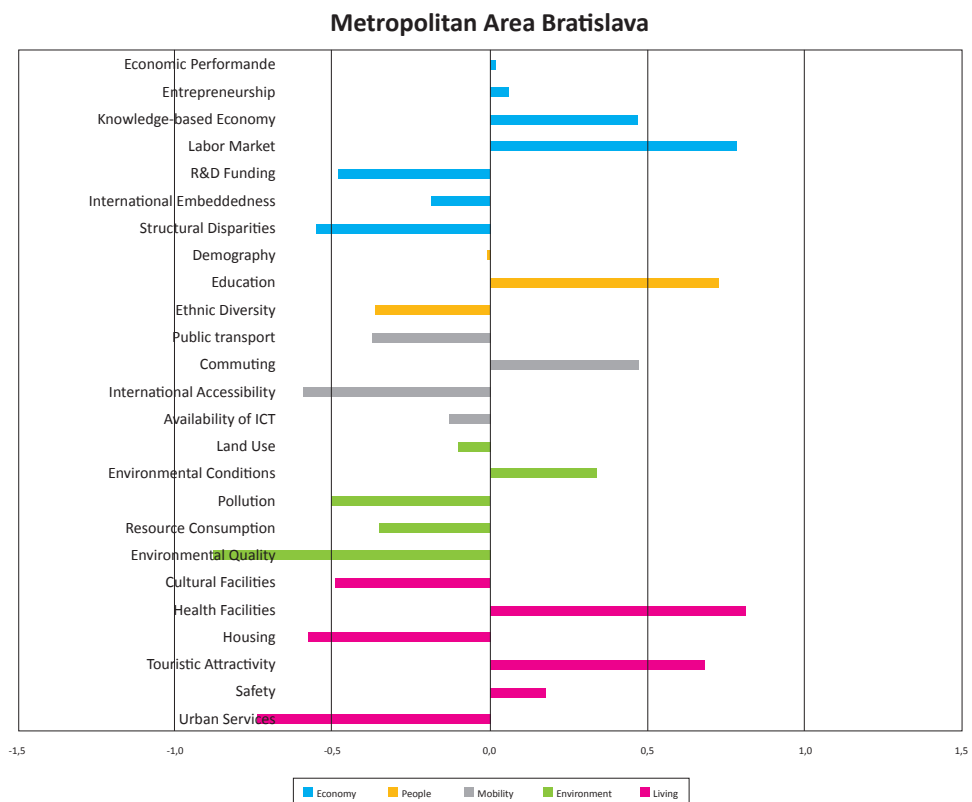
### 5.1.2 Bratislava’s metropolitan profile

Bratislava performs better than the average of 50 European cities; however, we have identified several characteristics where Bratislava is lagging behind, mainly with regard to the assessment of environmental quality (Environment), international accessibility (Mobility) and urban services (Living). When comparing Bratislava with the other four POLYCE cities Budapest, Ljubljana, Praha and Wien, the greatest number of similarities is perceived in comparison with Ljubljana. This specific resemblance to Ljubljana can be explained by the very similar size of these cities as well as by the similarity of the two cities’ administrative histories (before the 1990s, Bratislava and Ljubljana were not national capitals), affecting overall city development.

- Living: in this category, the performance is strongly contradictory for several characteristics. On the one hand, Bratislava is viewed as an attractive metropolis for tourists; on the other hand, the state of the art regarding cultural facility management is significantly lagging behind (poor support, mainly of a financial nature, of cultural facilities caused by a lack of money and interest). The other contradiction is between very good provision and accessibility of health facilities and a lack of affordable housing and the negative assessment of urban services. Overall, Bratislava is considered a safe metropolis for living.
- People: in this category, Bratislava performs rather well, mainly due to the stable population of the city and region. Strong suburbanisation, perceived mainly in the mid-1990s, has slowed down in the past few years, with a rather stable population and

even showing a slight recent increase. Along with Ljubljana, Bratislava scores positively in the field of education. This is mainly due to the core city's function as the national capital, housing universities and supplying the labour market with a significant number of workers with higher education.

- **Economy:** the results shown for this category are fully in accordance with, and a logical consequence of, the physical position of Bratislava. Positive values for the knowledge-based economy reflect the results for education (People) and the overall image of the city. Strategic documents represent Bratislava as a centre of the knowledge-based economy in the Central European region, followed by the lowest unemployment rates in the whole country. The negatively performing factors are R&D funding, international embeddedness (due to strong gravitation towards Wien) and structural disparities.
- **Environment:** the overall performance here is rather negative, even though the Bratislava metropolitan area has great potential due to its attractive environmental conditions. Other categories such as land use, pollution, resource consumption and especially environmental quality perform negatively.
- **Mobility:** for many years already, public transport is perceived as one of the weakest points of the city itself. The low standard of public services, followed by an increase of transport prices and the cancellation of public transport lines, trigger a negative attitude of citizens towards public transport. Conversely, sufficient facilities for commuting to the city are provided. The negative values for international accessibility are the result of several decisions made in the past, e.g. postponement of the construction of a motorway to Budapest and Wien, a lack of high-speed train connections to other European cities and the proximity to Wien with its airport.



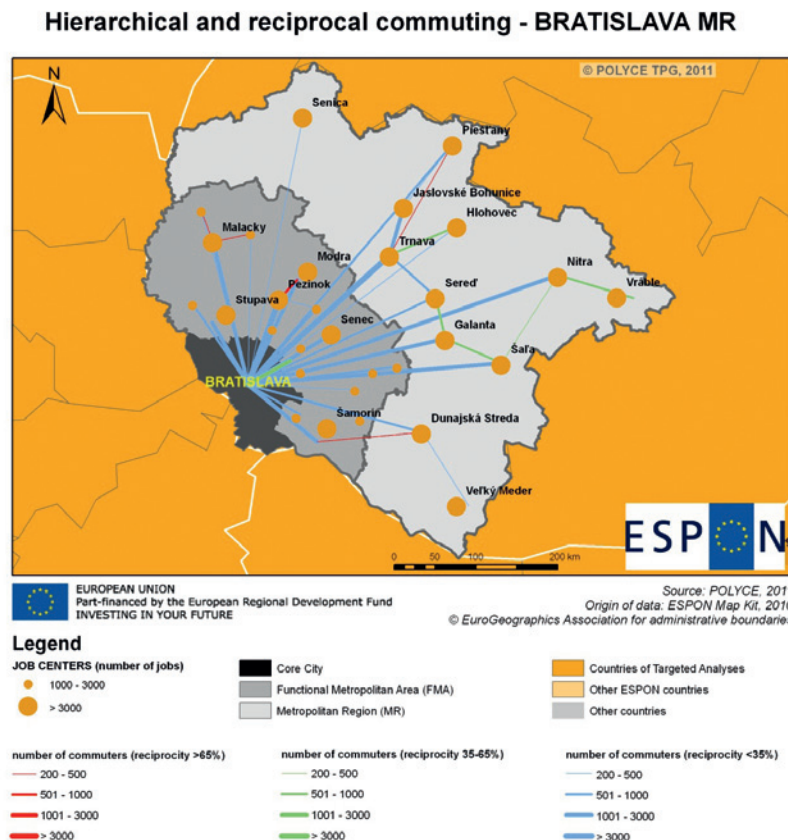
**Note:** The represented deviations from the sample's average result from selected indicators that may not draw a comprehensive picture of each factor's performance within the metropolitan area. Underlying indicators comprising these factors are listed in the annex to this report (chapter 10.1: 'Metropolitan profiles: underlying structure').

Figure 8: Profile of Bratislava metropolitan (factor level)

### 5.1.3 Polycentric relations

The core city of Bratislava is identical to its administrative boundaries from south and south-west, neighbouring with Austria and Hungary. Therefore the relations of polycentricity of the core city and its functional metropolitan area and furthermore of the metropolitan region are presented only with respect to the inland part of Slovakia. It is important to stress that this analysis is based on data available from the 2001 census. For this analysis, only city centres with more than 1,000 and more than 3,000 jobs were considered. Reciprocity of flows is categorised into three groups; under 35%, 35-65% and above 65% of reciprocity of commuting with the core city of Bratislava.

This picture is based only on the official statistics and does not express the real status quo. Distortions are caused by strong suburbanisation trends mainly within Bratislava's metropolitan area and intense commuting within the whole metropolitan region not taken account of in official statistics. From this observation, it is obvious that many official residents of Bratislava own more than one dwelling. The common practice is to live in the suburban areas while renting a dwelling in the core city and then to commute on a daily basis. This feature cannot be shown in statistics due to the analytical approaches applied. By looking more closely at the metropolitan area of Bratislava, we will be able to trace reciprocity flows only for cities providing more than 1,000 jobs. This can distort the overall perception of commuting reciprocity. The functional metropolitan area consists of many communities functioning as satellites for Bratislava where actual reciprocity flows are equal to those shown, but which were not considered for this analysis. The metropolitan area is not defined by the administrative boundaries of any NUTS 2 region but consists of several NUTS 3 regions relevant for polycentric relations. In this area, only job centres above 3,000 workplaces are considered.



Map 4: Commuter flows between job centres in the Bratislava metropolitan region

The only really misleading message of this analysis is the absence of polycentric relations towards the so-called “fourth quadrant” of Bratislava. Based on the statistics, neither Austria nor Hungary nor Slovakia provides data on the volume of commuting from the suburbs of Bratislava located in neighbouring countries. When talking about the metropolitan region and functional metropolitan area, we have to emphasise that information on the reciprocity mainly with the core city of Wien is lacking. There are many students and employed citizens commuting to Wien on a daily basis. Due to the lack of statistical information, we are unable to state whether this also takes account of neighbouring cities located in Austria, Hungary and the Czech Republic.

#### **5.1.4 The Bratislava metropolitan area in stakeholders’ perceptions**

Bratislava is predominantly considered a centre of research and education, a dynamically growing historical city and a centre of finance and business. Despite an industrial past, the city was not considered as industrial in the survey. The results indicate that the mainstream perception of the city is related to its historic heritage and recent economic development (before the crisis). According to the opinions of the respondents, Bratislava is predominantly perceived as an expensive, yet attractive and safe city. The social climate was considered to be indifferent and competitive – a rather critical perception of this field. Positive connotations – ‘tolerant’ and ‘cooperative’ – were mentioned less frequently. These statements point towards a lot of conflict potential with low social cohesion (individualistic and business-driven climate).

It seemed that respondents leaned toward the belief that the successful economic development of Bratislava in recent years was not sufficiently backed by research, development, innovations, etc. The societal dimension is perceived with greater scepticism: in particular, social integration and international orientation/open-mindedness were viewed as rather mediocre. By contrast, social mobility was rather high; it seems that respondents took into consideration the sizable share of employers from other Slovak regions active in Bratislava’s business landscape. Environmental, infrastructural and institutional dimensions met with heavy criticism. Specifically, the sustainability of land use, green mobility, the quality of public services and e-governance were considered weak points of Bratislava. The quality of the abovementioned services was viewed as poor.

#### **5.1.5 Towards a metropolitan agenda for Bratislava**

The eccentric position of Bratislava within Slovakia provides new possibilities towards the neighbouring countries. The city profile has been reformulated several times so far. However, the city’s position is still insufficient and not well profiled. New forms of governance are needed to strengthen the competitiveness of Bratislava within the metropolitan region. This will entail changes of the city and region management. Actors involved in the process should focus on cross-border management, the coordination of activities held in the metropolitan region, common decision-making, regular meetings, sharing of common databases and all activities supporting a continuous exchange of information. Past projects and activities have concentrated on the unique position of the capitals Bratislava and Wien and the technical infrastructure so as to provide an adequate connection of centres. In the future, Bratislava should focus predominantly on the physical structure viewed as its administrative territory, with different municipalities within the metropolitan area. The strength and potential of this specific space lies in its competitiveness in connection with Bratislava and Wien and at the same time enables the inclusion of this area into the existing territory. The development of this space should strengthen the position and competitiveness of Bratislava within the knowledge-based economy while concentrating on relevant services and R&D clusters.



## 5.2 Metropolitan Report Budapest

The post-socialist period brought about a further increase in the regional-economic imbalances within Hungary. Budapest and its metropolitan area as the economically most advanced region of Hungary with gateway functions became the absolute winner of the transformation process. Its dominance in economic, political and cultural terms clearly increased over the past two decades. Policies aimed at improving the regional balance within Hungary have been on the agenda since the change of regime. However, the implementation of these policies has had only limited results so far.

### 5.2.1 Metropolitan planning strategies of Budapest

Facilitating metropolisation and polycentric development is a definite policy goal of Hungarian planning. Polycentric development is rather more deeply anchored in the spatial vision of the country than metropolisation. Counterbalancing the dominance of Budapest has been a long-standing policy goal of spatial planning. This implies that enhancing polycentric development is a widespread and accepted concept in Hungary and penetrates policies at different decision-making levels.

Polycentricity at the national level is conceived as an aspiration to counterbalance the weight of Budapest by strengthening the position of regional poles within a radius of 150-200 km from Budapest (e.g. Szeged, Pécs, Debrecen, Miskolc). The National Spatial Development Concept places emphasis on strengthening the role of regional centres and their cross-border co-operation with major cities in the neighbouring countries as well but does not focus on polycentricity on a larger (e.g. Central European) scale. At the regional level, metropolitan polycentricity is defined as the cooperation among 'metropolitan hubs embracing a 60-km radius around Budapest. The Integrated Urban Development Strategy of Budapest supports spatial de-concentration of business and administrative functions, thus enhancing increased metropolitan competitiveness. Here, the metropolitan region is defined on a functional basis and exceeds the statistical boundaries of the Budapest agglomeration (Budapest FUA) and also of the NUTS 2 region (Central Hungary). According to the Strategy, fostering polycentricity demands increasing interconnectedness of the centres in the wider metropolitan zone that creates the spatial framework of the agglomeration economy of 3.5 million people. Improving polycentric development locally is defined in the agglomeration's development programme through a territorially balanced structure of local value production, as it is based on (overlapping) employment catchment areas of the metropolitan centres.

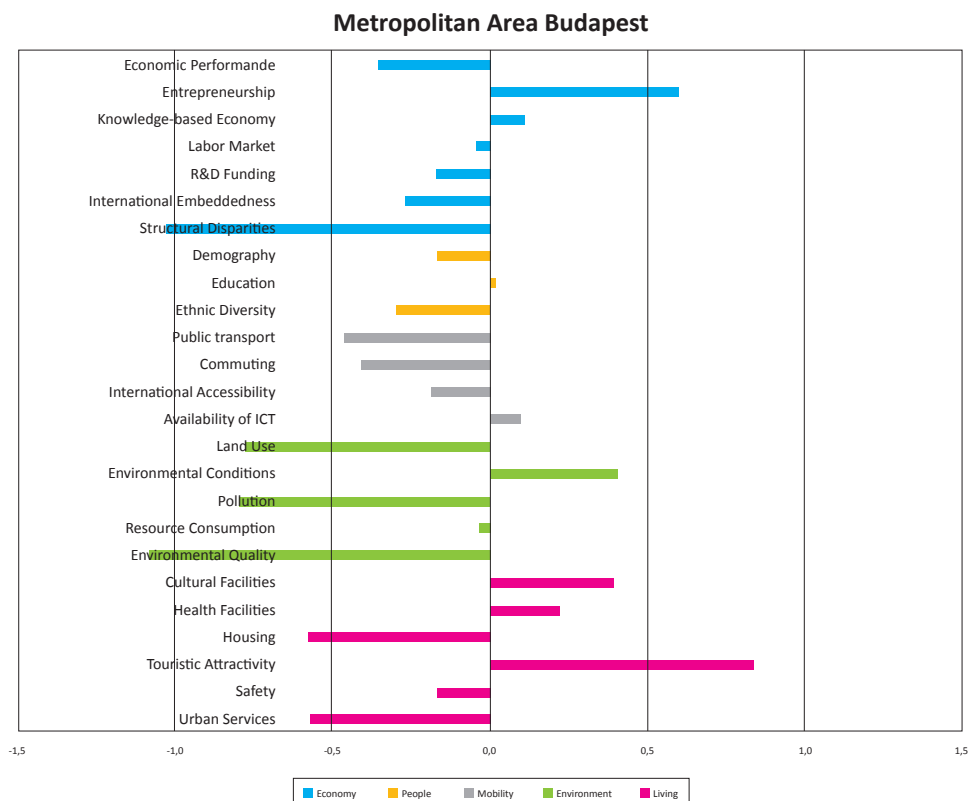
The concept of metropolisation is as widely used in Hungarian planning documents as polycentric development but considers only the space around Budapest. The National Spatial Development Concept set the medium-term goal of a 'competitive metropolitan region of Budapest', to be achieved by the following measures:

- strengthening the international business functions and European relations of Budapest as a gateway city to South-eastern Europe and the Balkans
- utilising the advantages of the high-tech industries, knowledge-based economic activities and highly qualified labour force of the city
- strengthening the international tourist hub character of the city
- developing a liveable city and metropolitan region through comprehensive environmental management and planning and the revitalisation of brownfield sites
- rehabilitating densely built-up neighbourhoods and increasing the size of green spaces
- developing a balanced and well-functioning agglomeration around Budapest by preventing urban sprawl, strengthening sub-centres and modernising transport links
- enhancing inter-municipal cooperation through joint institutions

## 5.2.2 Budapest's metropolitan profile

The city exceeds the average of the 50 metropolises of the sample only in the field of living conditions, whereas lagging behind in terms of the other four characteristics. This handicap is especially strong with regard to environmental conditions.

- Living: the greatest strength of Budapest seems to be the quality of urban services (education and health, housing, etc.). The city scores well for cultural and health facilities, with a poorer performance regarding safety and housing conditions.
- People: concerning this characteristic, Budapest is the worst performer among the POLYCE metropolises investigated. The metropolitan profile shows problems with an ageing and shrinking population, the latter caused by suburbanisation (a process that has slowed down in recent years, with a migration surplus since 2008).
- Economy: Budapest has a strong position regarding entrepreneurship (meaning a high proportion of new businesses, low level of bankruptcy and high density of headquarters), innovation and institutions involved in R&D activities.
- Mobility: the metropolitan performance here is poorest in the fields of public transport and commuting. Despite recent developments and the extension of Budapest Airport, the international accessibility of the agglomeration is lagging behind the European average.
- Environment: environmental concerns score above the European average, which is mainly due to the attractiveness of natural conditions. Considering other factors, however, Budapest is less advantaged - a fact especially true for environmental quality (cleanliness of the city), level of pollution and land-use criteria.



**Note:** The represented deviations from the sample's average result from selected indicators that may not draw a comprehensive picture of each factor's performance within the metropolitan area. Underlying indicators comprising these factors are listed in the annex to this report (chapter 10.1: 'Metropolitan profiles: underlying structure'):

Figure 9: Profile of Budapest metropolis (factor level)



### 5.2.3 Polycentric relations

By population size, Budapest has the largest metropolitan area among POLYCE cities. Concerning the jobs available, Budapest's core city also shows the highest concentration of workers (856,000) among these five. This fact seems even more important since the city's metropolitan region is far smaller than those of Wien and Praha. According to the spatial distribution of population and jobs, Budapest's metropolitan area is firmly monocentric. The number of jobs in the core city by far exceeds the number of inhabitants. Comparing Budapest with Praha and Wien reveals a similar distribution of population and jobs in the functional metropolitan area, while Budapest presents the highest value at the metropolitan regional level.

A difference between morphological and relational polycentricity is also a striking feature of the metropolitan region of Budapest. The Budapest metropolitan region is characterised by a large number of small and medium-sized cities enhancing the economic vitality. Conversely, the core city as a primary residential area and job centre dominates the whole region in unequal fashion. This implies that the Budapest metropolitan region - similarly to that of Ljubljana - harbours great opportunities to establish a polycentric functional urban structure counterbalancing the dominance of the capital.

The volume of mobility in Budapest is the greatest among POLYCE cities, and its commuter flows exceed that of the second-ranked, Wien, by 50%. Not more than a third of these trips are made between metropolitan centres. The rest is directed exclusively to Budapest, implying an extraordinary level of spatial mismatch in residential and job functions. This is another characteristic of the very hierarchically organised metropolitan region of Budapest, where the massive outflow of residents was not followed by a suburbanisation of services and industry. This has resulted in a mismatch in the spatial distribution of population and jobs and a very high level of commuting directed almost exclusively to the core city.

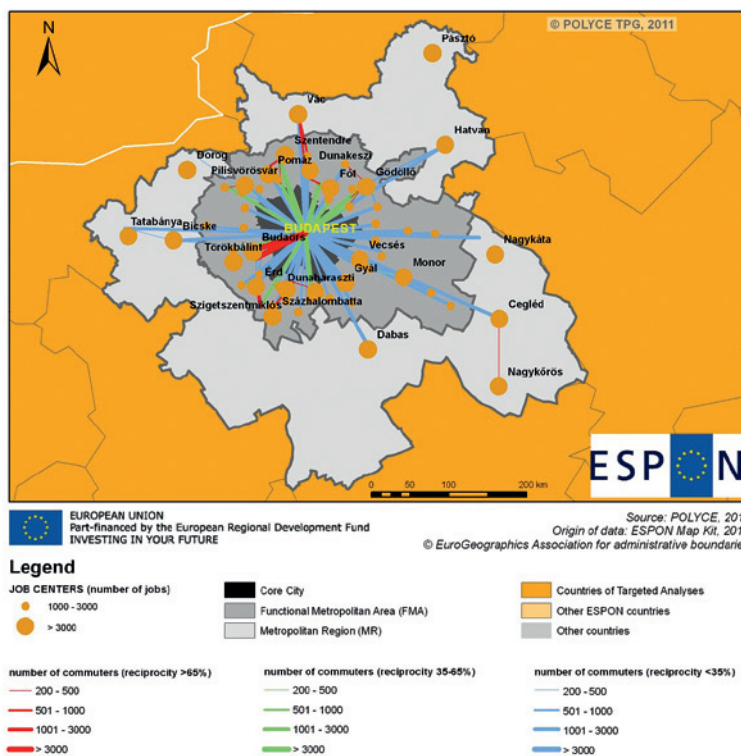
Relations between Budapest and other POLYCE cities hold no surprises. Wien and Bratislava are easily accessible via rail and road networks - the distances are short enough to allow one-day trips for business meetings. Nevertheless, travel speed (between 80 and 95 km/h) is still very low in relation to comparable polycentric regions in Western Europe. Trips to Praha without an overnight stay can only be made by plane. Ljubljana, which is badly connected by both rail (more than 8 hours) and air traffic (no direct flights), can reasonably be accessed by car only (4.5 hours).

Compared with other European countries, Hungary shows a rather low share of foreigners (1.8%) with only 1% originating from other EU countries, which might be viewed a handicap for establishing international networks and co-operation ventures. Regarding the CED-zone, the area hosts an almost negligible number of people from the neighbouring states (less than 0.1%), which is evidence of the fact that the country has not yet succeeded in establishing new connections and relations despite existing historic ties. The enhancement of common networks and co-operation projects will probably increase these numbers as a sign of closer social and economic interaction on the one hand and hopefully help to deepen mutual relations on the other hand.

Considering the city's embeddedness in international company networks, Budapest finds itself in a competitive situation with Praha and Wien, which are approximately on the same level. These three cities are also strongly connected with each other, with the most robust ties between Praha and Budapest. This result might be related to the fact that Wien is relatively less dependent on relations within the CED-zone and more strongly oriented towards networks in Europe and overseas. According to its importance as a company hub, Budapest hosts more high-ranking firm locations than Praha, but significantly fewer than Wien, which indicates that Budapest seems to cope quite well with its role as an economic centre of the region with important control functions.

A comparison of participations in EU Research Framework Programme projects likewise shows that Budapest seems to be rather well integrated into European research networks. Compared with its two direct opponents, which are both about the same size, Budapest participates in fewer research projects than Wien but in more than Praha. In these networks, a 13% project share is led by Hungarian institutions, which is significantly less than in Wien, but more than in the three other cities. The numbers of collaborations with the four partner cities point towards especially strong ties in scientific research between Wien and Budapest, which are both comparatively less connected with Praha. Additionally, Budapest seems to be in a comfortable situation because, in spite of more project co-operation ventures with the partner cities, the share of project participations within the CED-region is not higher than in Praha.

### Hierarchical and reciprocal commuting - BUDAPEST MR



Map 5: Commuter flows between job centres in the Budapest metropolitan region

## 5.2.4 The Budapest metropolitan area in stakeholders' perceptions

According to project findings, Budapest's importance is based predominantly on its function as a capital city and business centre. It accommodates the seats of international organisations and companies and concentrates large parts of national research and education capacities. It is perceived as a historical city, a fact corresponding to Budapest's role as a destination of international tourism (which, according to the estimation of local stakeholders, is among the most promising sectors of growth).

The performance of the local economy contributed significantly to Budapest's success in the last five years, while social tensions in the city have increased. This has been accompanied by a massive deterioration of the physical infrastructure and ecological capacity. The performance of public services such as education or healthcare is a widely debated issue, although this was assessed more positively

by stakeholders. Institutional endowments proved to be the most unfavourable and devastating dimension for local development capacities. Both, the administrative system and the inadequate political environment, have been criticised. Mismanagement and overlapping political competences have contributed significantly to the modest performance of Budapest in the last five years.

Urban development trends and future potentials of Budapest were perceived positively. However, there are several threats (increasing social inequalities, bureaucracy and corruption) that hamper development prospects. The strengths of Budapest are related more to its location, natural characteristics and historical as well as cultural richness. Its weaknesses derive from unclear roles in the city's management, a lack of strategic coordination in development and public management issues amongst the municipalities, a lack of cooperation and the severe inequalities in society.

Stakeholders stressed that finding an urban niche in Central Europe is very difficult, since the development of these cities proceeded in the frame of the same cultural domain for centuries. It was suggested that distinctiveness could be found in cultural assets that are rooted in the period of the Austro-Hungarian monarchy and have contributed to the competitiveness of Budapest ever since. Also, cooperation possibilities that are not rooted in common cultural and historical traits have been suggested, like joint destination marketing for the Central European capitals.

A consensual finding was to acknowledge that rivalry would weaken the position of Budapest. Therefore active cooperation among metropolitan centres is required to make better use of cooperative synergies.

### **5.2.5 Towards a metropolitan agenda for Budapest**

A novel metropolitan-scale planning and development institution could become an asset in Budapest's development path, as the present territorial structure around Budapest shows a patchwork pattern without any cohesion. The highly centralised unitary political system of Hungary did not favour the concept of polycentricity or any decentralisation of decision-making in the past. Polycentric development at all levels should be enhanced through active cooperation among metropolitan centres and better utilisation of cooperation synergies.

The dynamic economic, cultural and tourism sub-centres around Budapest (small and medium-sized cities like Gödöllő, Budaörs, Szentendre, Vác) seem to hold potential in this respect, while planning measures have not been taking particular account of associated aspects yet. This refers to metropolitan transport with related services like park-and-ride facilities as well.

Furthermore, Budapest needs to intensify its relations with cities in the wider metropolitan catchment area - cities situated at a distance of 80-100 km (e.g. Tatabánya, Székesfehérvár, Dunaújváros, Kecskemét) - and with capitals of neighbouring countries like Bratislava, Wien and even Zagreb and Belgrade. In connection with Central European city networks, Budapest should emphasise its unique character (e.g. the peculiarities of Hungarian culture or the image of the city as a spa centre), which should as well be part of official city marketing and branding.

## **5.3 Metropolitan Report Ljubljana**

Over the past 20 years, Ljubljana has been exposed to the international challenges of globalisation, Europeanisation and internal transformation. The independence of Slovenia from the former Yugoslav Federation in 1991 was an important trigger for the formation of the capital city, resulting in strengthened administrative, financial and business functions as well as enhanced cross-border links with other cities in Europe, including cities in former Yugoslavia. As a result, the City Municipality of

Ljubljana and the (statistical) region of Central Slovenia (known as Ljubljana Urban Region since 2002) became the most important locations of economic activities in Slovenia, while at the same time aiming to preserve the environment, social cohesion and quality of life for local citizens.

Due to the lack of administrative regions (provinces) in Slovenia, the cooperation between the City Municipality of Ljubljana and the 25 other municipalities in the Ljubljana Urban Region is not sufficient for an effective implementation of different horizontal and vertical strategies.

### **5.3.1 Metropolitan planning strategies of Ljubljana**

It is evident that Slovenia is one of the most polycentric European countries (ESPON 1.1.1, 2004), which is a direct consequence of spatial development and regional policies since the end of the 1960s. Consequently, all new strategic planning documents formulated at various spatial levels refer to further polycentric development of the settlement system, with an emphasis on sustainability and territorial cohesion.

The Spatial Development Strategy of the Republic of Slovenia (2004) is further promoting the polycentric urban development of Slovenia by defining 51 centres of (inter)national, regional and inter-municipal importance as well as (potential) functional urban regions. The Regional Spatial Development Concept for the Ljubljana Urban Region (2010), which is managed by the Regional Development Agency of the Ljubljana Urban Region established earlier, fills the gap between the national and municipal planning levels until administrative regions (provinces) in Slovenia are made reality. The goal is to '[...] achieve a high level of global competitiveness and high-quality living by encouraging creativity and co-operation.'

At the local level, the Spatial Development Plan of Ljubljana (2010) with (land-use) plan(s) based on the Vision of the City of Ljubljana by 2025 (2007), and the Sustainable Urban Development Strategy and Spatial Development Concept of Ljubljana (2002) are currently in force. All pursue the following goals:

- realising the 'ideal city' with optimum city size for living, working and recreation
- realising the 'sustainable city' with preserved natural environment and cultural heritage
- realising the 'Slovenian ' and a competitive European capital city

The principal goal of spatial planning documents is 'smart city growth', emphasising the urban growth and revitalisation of Ljubljana as a city of art, culture and knowledge. The plan focuses on quality of life for local citizens, preservation of local identity, enhancement of city competitiveness and use of information technology - all fostering the process of metropolisation of the city. At the same time, it attempts to counteract undesirable development trends, such as suburbanisation and urban sprawl, decline of the city centre and loss of urban identity due to the expansion of market forces and cityscape globalisation.

Concerning metropolisation, the following projects named in the strategic documents of the city are of specific interest: the new sports centre 'Stožice', the new university and technical library, a new medical centre and the improvement of transport infrastructure. Furthermore, Ljubljana is promoted as a gateway city with a central position in the (potential) EU region Alpe-Adria-Pannonia. Strengthening the innovative, competitive and attractive position of Ljubljana is mentioned as well. The geostrategic location of the city needs to be enhanced by strengthening the links and networks with other capital cities in the EU and other city regions in Central Europe, South-eastern Europe and the Mediterranean.

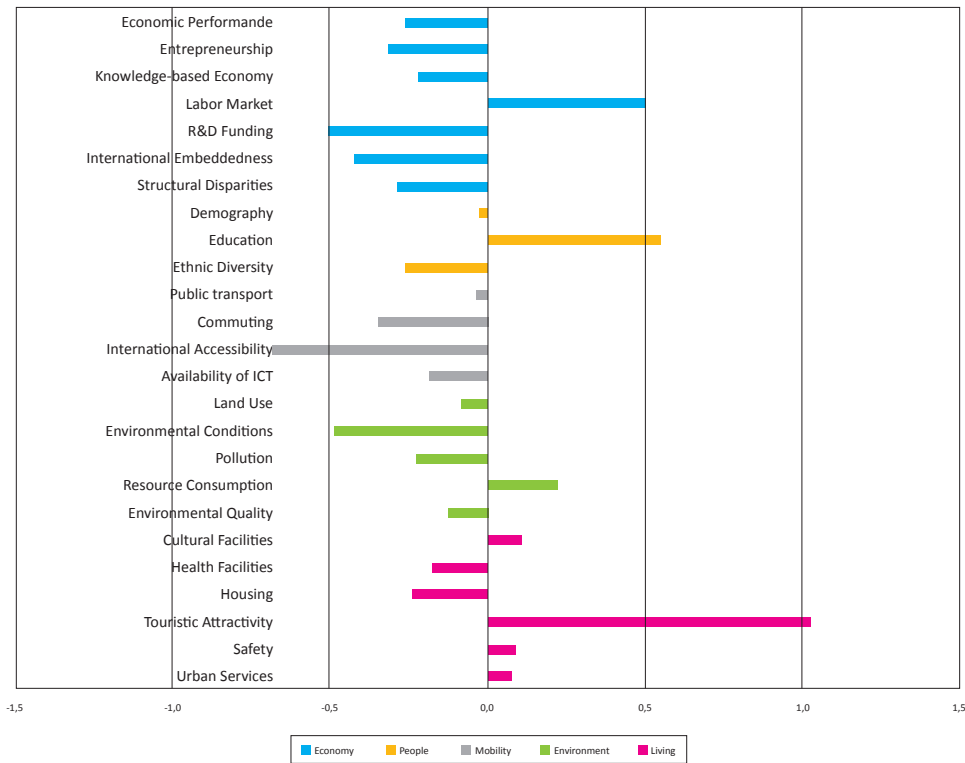
### 5.3.2 Ljubljana's metropolitan profile

Ljubljana ranks slightly below the average of the 50 cities compared. Its metropolitan profile is similar to that of Bratislava but differs from those of Wien, Praha or Budapest. Compared to the European sample, Ljubljana shows positive values with regard to 'Living' and 'People' but negative ones for the other three characteristics.

- Living: decisive factors for the high score are the quality of urban services, tourism attractiveness and, in this context, cultural facilities. Nevertheless, the metropolitan area is not performing well for all characteristics of this category. Housing (due to a high share of small dwellings) and an unsatisfactory supply with medical doctors are the negative influencing factors.
- People: the high value results mainly from the factor of education (composed of the ratio of persons with tertiary education, the number of students and participation in life-long learning), while ethnic diversity is still a challenge to face in future activities.
- Economy: the well-performing factors here are the labour market (mainly due to a low unemployment level), while negative values derive from low ERDF and regional policy funding, weak international embeddedness (small number of headquarters of transnational firms and their subsidiaries in the region) and entrepreneurship.
- Environment: Ljubljana scores rather well for the factors of land use and resource consumption (amount of collected solid waste, protected natural and green areas), while the overall score for 'Environment' is not contributing positively to the overall profile of the metropolis. This is mainly due to negative scores for some natural conditions and air pollution, which are obviously problematic in the city.
- Mobility: the negative values for 'Mobility' can be explained by the rather inferior performance in international transport accessibility. Taking the low connectivity and smaller capacity of Ljubljana Airport into consideration, it becomes clear why the city is not doing so well in this respect. Moreover, commuting has a low score compared to other POLYCE cities, due to the higher number of daily commuters to the city of Ljubljana.

When compared with the other four POLYCE metropolises, Ljubljana is rather competitive due to its low unemployment rate, high educational level and environmental preconditions. Attractiveness for visitors and tourists and quality of urban services are two additional potentials. The city's competitiveness might be stepped up by improving the international embeddedness in European urban networks, which implies strengthening its attractiveness for foreign investments and companies, innovative activities, foreign citizens, inter-city accessibility and regional mobility. Inclusion could be fostered first and foremost by providing more affordable housing for rent and purchase as well as by means of health service measures.

### Metropolitan Area Ljubljana



**Note:** The represented deviations from the sample's average result from selected indicators that may not draw a comprehensive picture of each factor's performance within the metropolitan area. Underlying indicators comprising these factors are listed in the annex to this report (chapter 10.1: 'Metropolitan profiles: underlying structure').

Figure 10: Profile of Ljubljana metropolis (factor level)

### 5.3.3 Polycentric relations

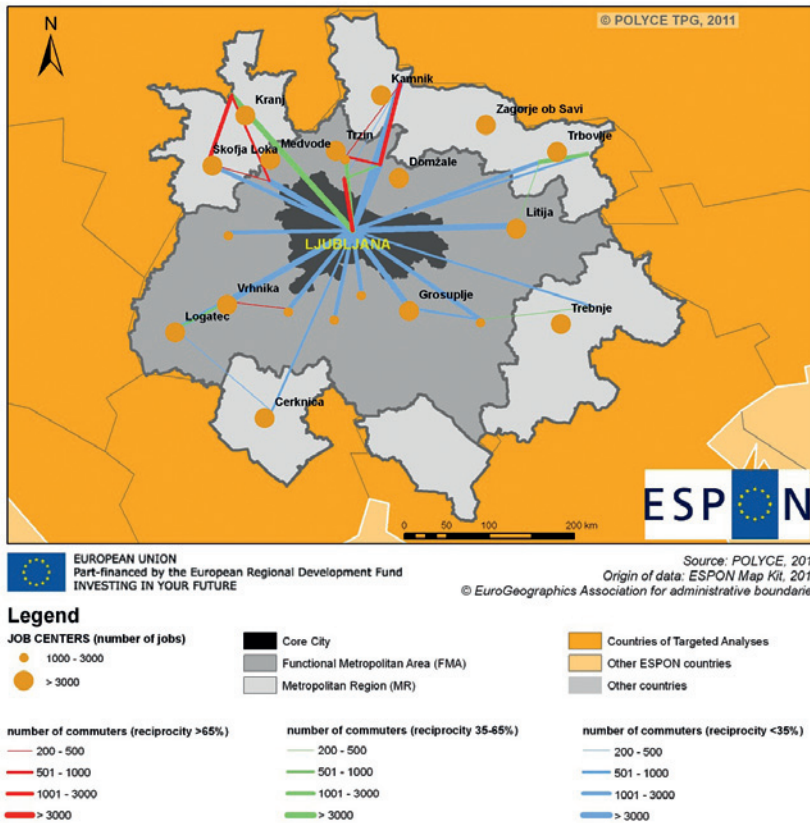
The Ljubljana metropolitan region shows a large concentration of jobs and services in the core city, which might also be explained by a decline of (well-paid) jobs in other urban centres in the region. This is contrary to expectations arising from the polycentric development policy in Slovenia explained above. Negative effects of this higher concentration of jobs in the city of Ljubljana include intense daily commuting and, consequently, more pronounced pollution and traffic congestion in the city.

The share of foreigners is mostly made up of citizens from former Yugoslavia; only few come from other POLYCE countries. A larger number of people of Slovenian origin can only be found in Austria. Most business links and connections (i.e. FDI, subsidiaries of foreign firms, export-import links, etc.) in the Ljubljana metropolitan region come again from Austria, with only very few from other POLYCE countries. Research connections between Ljubljana and the other four cities are better with respect to the participation of local universities, research institutes and other eligible partners.

When contrasted other POLYCE metropolises, Ljubljana is very badly connected by rail, taking into consideration the slow average speed of trains (60 km/h). Overall, the international polycentricity of the metropolis Ljubljana is rather weak except for some links to Wien, which highlights the need for improvements in the near future.



## Hierarchical and reciprocal commuting - LJUBLJANA MR



Map 6: Commuter flows between job centres in the Ljubljana metropolitan region

### 5.3.4 The Ljubljana metropolitan area in stakeholders' perceptions

According to the stakeholders participating in the citywide survey, the strengths of Ljubljana are obviously to be found in the city's geostrategic location in (Central) Europe, its cultural and historical heritage and related high attractiveness for tourism and economic activities.

Between 1999 and 2009, Ljubljana experienced intense economic growth and urban development. The city and urban region performed particularly well as a highly attractive business location but, conversely, seemed to struggle with a decline in social cohesion. The implementation of new transport and infrastructure projects, in particular the improvement of integrated and green public transport, was named as an important future perspective for the city's regional development. Potentials are also seen in the renovation of old buildings and in the accelerated renewal of brownfield areas. Both the strengths and weaknesses of Ljubljana are related to city endowments and to horizontal and vertical policy and decision-making as well as management activities (infrastructures, services, etc.) both within the city and between different municipalities in the Ljubljana metropolitan region.

According to stakeholders' statements, the newly suggested and not yet implemented development projects seem inconvenient due to the lack of financial resources since 2009. Instead, the respondents wished for more public participation in city planning, more efficient city and regional management and the implementation of 'soft' policies in city and regional development.

Notwithstanding the administrative and bureaucratic obstacles, Ljubljana's attractiveness as a cooperation partner is often stressed. Ljubljana should enhance its cooperation links and networks with other POLYCE metropolises (except Wien) as well as with nearby city regions in the Alps-Adriatic cross-border region and Western Balkans. Cooperation in research and education, the enhancement of cultural and economic links, and the participation in city and professional networks are some potential ideas named in this respect. Improving connectivity to other cities in Central and South-eastern Europe is obviously a main goal to be achieved soon, so that cooperative actions can be implemented more easily.

### **5.3.5 Towards a metropolitan agenda for Ljubljana**

The discrepancy between the morphology of the metropolitan settlement system and the functional relations between metropolitan centres and sub-centres is one main challenge that needs to be tackled. Reasons for this might be deferred planning initiatives and local government reforms of the past. The strong inter-municipal competition for the provision of new housing, shopping, business and infrastructure facilities is not conducive to an improvement of this situation.

Ljubljana's importance as a European middle-sized city led to a concentration of specific functions in the core city of a large metropolitan region, inducing negative side-effects such as intense daily commuting by car, with traffic congestion and environmental pollution in the city. These negative impacts must be on the agenda of policymakers in upcoming years to prevent the city from losing its high living standards.

Poor links and connections of Ljubljana to other metropolises are one major point of criticism. The rather low international embeddedness of Ljubljana in European urban networks as well as the small number of foreign headquarters and subsidiaries might originate from this.

Far-ranging improvements are needed regarding metropolitan governance approaches, encompassing cooperation of municipalities and various stakeholders, participation of the local population in decision-making processes, improvements in social cohesion and more city cooperation in (Central) Europe. Furthermore, accessibility is a topic to take up as well. An integrated and sustainable transport system and improvements of the city's international embeddedness are likewise desirable.

## **5.4 Metropolitan Report Praha**

Praha dominates the settlement and regional system of the Czech Republic. The city accounts for 12% of the country's population, 15% of jobs and over 25% of the GDP. Praha has a special status, as it is both municipality and region, enclosed by the Central Bohemian Region.

Like other post-communist cities, it has been under intense dynamic transformation of the urban morphology and land use structures as well as urban politics. Urban landscapes formed under socialism had to be adapted to new conditions shaped by political, economic and cultural transition. The main transformations of the spatial pattern of Praha include the commercialisation and expansion of the urban core, the dynamic revitalisation of some sections of the inner city, transformations of socialist housing estates and the radical transformation of the outer city and urban hinterland through sprawl-like suburbanisation.

Local politics and planning have been reformulated according to the principles of market economy and democratic decision-making. Some market-driven urban reconfigurations present major challenges, requiring new forms of urban management that are not yet perfectly implemented.



### 5.4.1 Metropolitan planning strategies of Praha

Praha has retained the centralised principle of a single plan encompassing the whole city jurisdiction. Some major centres taking over citywide functions are proposed in compliance with the principle of polycentric development in the Land Use Plan of the City of Praha (1999, as well to be found in the draft for the new plan 2009). This is in line with the Strategic Plan for Praha 2008, which likewise declares the objective of developing a polycentric city structure. In this respect, it is a follow-up to the Strategic Plan of 2000, which already tried to identify important sub-centres to meet several functional concerns. At the moment, the development of expansion sites for the city centre is underway, but suburban shopping sites mushroomed fast as well in other non-planned sites, and the outer-city secondary centres have only been partly completed.

There is no common strategy at the metropolitan region level. The last concrete attempt towards a single, coordinated plan for Praha and Central Bohemia dates back to 1975. The Planning and Building Act (2006) requires that all (legally binding) territorial plans at the local as well as at the regional level be coordinated with neighbouring communities and regions with regard to infrastructures that cross the borders of the relevant territories. This at least prevents some discontinuities but cannot influence problems like suburban sprawl and therefore demands more comprehensively coordinated development.

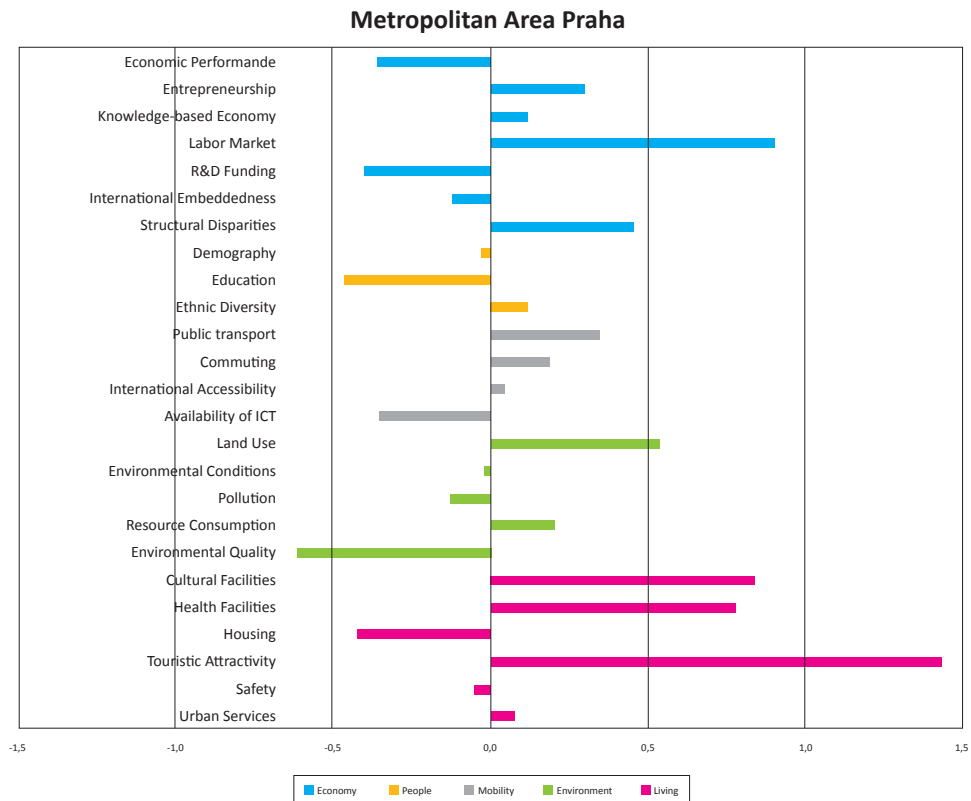
Conversely, the Regional Development Programme of the Central Bohemian Region (2006) envisions its territory as being a dynamically growing, economically powerful and competitive region with strong and mutually beneficial relations and ties to the city of Praha. The vision calls for a region-wide integration of all transport services into a single tariff system to boost the use of public transport. In fact, the Praha-based Regional Operator of Praha Integrated Transport (ROPID) serves a great part of Central Bohemia. In this way, the pragmatic reality advanced the ideas of strategic documents. However, neither of the two regional administrations is seeking institutional support in the coordination of their development, which is a main challenge in Praha's future metropolitan development.

### 5.4.2 Praha's metropolitan profile

Praha ranks second in the sample of POLYCE cities in terms of living quality, urban mobility, quality of physical environment and economy. Only its demographic structure scores rather poorly in comparison with the bigger sample of European metropolises.

- Living: the 'Living' quality of Praha is particularly strong among POLYCE cities concerning health and cultural facilities, while the city scores below average for housing and safety. Interestingly, opinions of residents, expressed by Urban Audit survey-based indicators, show great dissatisfaction with pollution, with how (public) money is spent (similarly to other post-communist cities) and criticises the quality of green spaces.
- People: in terms of demographic indicators, Praha can be classified as a typical Central European city with a stable population and high share of single-family and senior households. Most recent data show fluctuations in population development, thus the data from particular years may not be telling the whole story.
- Mobility: Praha as well as its metropolitan region are well accessible within the ESPON space. The satisfaction of Praha residents with public transport is worse than in Wien but better than in other POLYCE cities. However, in 2008 the transportation outputs of the public transport systems in Praha and Budapest were the highest in Central Europe.
- Economy: recent data on post-communist cities may be distorted by the preceding history of economic transformation. The post-communist capitals enjoyed an economic boom in the decade between the mid-1990s and mid-2000s - the bigger, the deeper the preceding decline during the transitional period had been. The Urban Audit data on GDP

per capita suggests that Praha is lagging behind Wien, Bratislava and Ljubljana, while EURO STAT data from 2008 rank Praha tenth all over Europe and ahead of Wien. This indicates that Praha's economic performance is in the meanwhile much better than illustrated by the older indicators used for the analysis. Still, Praha hosts a low number of companies quoted on the national stock exchange, but both the city and the metropolitan region have very low unemployment rates, which contributes positively to their economic profile. Unlike the other metropolises and metropolitan regions, Praha presents quite small disparities between the city and the surrounding region.



**Note:** The represented deviations from the sample's average result from selected indicators that may not draw a comprehensive picture of each factor's performance within the metropolitan area. Underlying indicators comprising these factors are listed in the annex to this report (chapter 10.1: 'Metropolitan profiles: underlying structure'):

Figure 11: Profile of Praha metropolis (factor level)

### 5.4.3 Polycentric relations

The structure of Praha's metropolitan region is rather polycentric due to its proximity to relatively large urban centres such as Mladá Boleslav, Kolín, Kladno, Beroun and Přeborn. Hence, also the number of job centres within the metropolitan region is comparable to that of Wien and offers good preconditions for the development of relational polycentricity. Praha of course exceeds the other urban centres in the region in terms of population and jobs but is still not as advanced in job decentralisation as for instance Wien.

The investigation of commuter flows shows that Praha's urban system still tends to be rather monocentric. The core city has a strong position in the regional urban system, as the majority of flows is oriented to or from Praha, while there are only a few tangential relations between other sub-centres. Though this dominant role is slowly diminishing, the monocentric pattern remains. Compared to the case of Wien, Praha has a substantially lower level of relational reciprocity in the commuting system. However, recent developments (since 2000) related to job decentralisation in the metropolitan region are based on more reciprocal ties, hence moving Praha towards a more polycentric organisation.

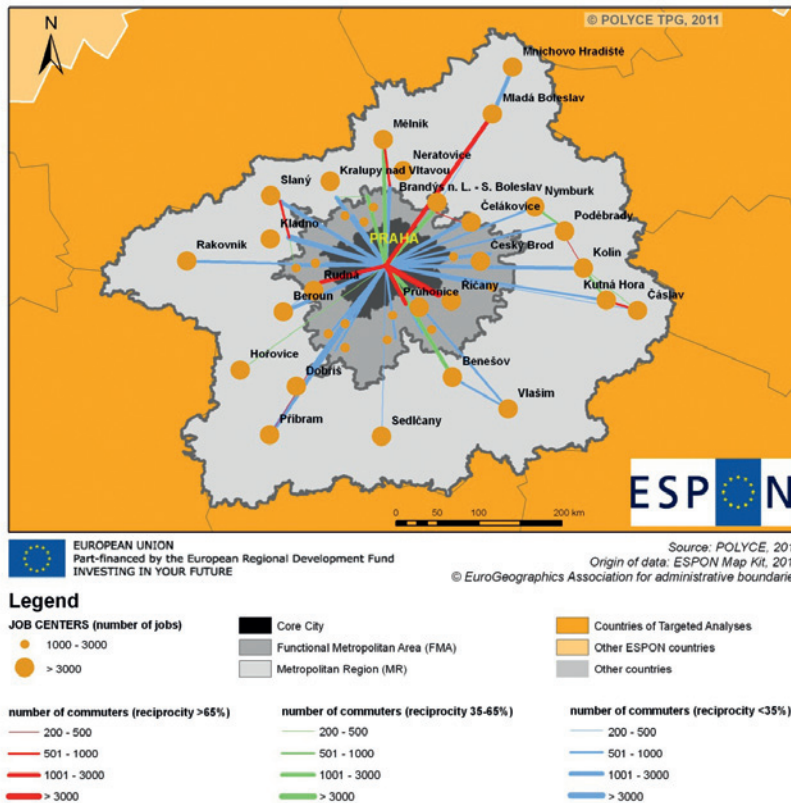
Due to its location in the north-west of the CED-zone, Praha is not perfectly accessible from the other four partner cities. The distances are not short enough to allow one-day trips to the other cities by car or train and can only be accomplished by plane. Although Praha is well connected to European rail networks and there are more than ten acceptable daily train connections to Wien, Budapest and Bratislava, the average travel speed (between 75 and 80 km/h), is still very low vis-à-vis comparable polycentric regions in Western Europe. The most unattractive connection concerns Ljubljana, which cannot be directly reached by plane and requires a travel time of seven hours by car or eleven hours by train.

Since economic, social and institutional interaction is always embedded in an existing network of established relations and traditions, it is influenced by ethnic and historic relations between cities and countries (common history, culture, language, etc.). The relatively high share of foreigners (3.4%) in the Czech Republic may partly be attributed to Slovak citizens living in their former home-country. Apart from this population group, the country hosts an almost negligible number of people from the neighbouring states in the CED-region, which shows that the country has not yet succeeded in keeping its historic connections in Central Europe alive. Contrary to Hungary and Slovakia, the Czech Republic is home to a significant number of people from non-EU Member States, which may be considered an opportunity for establishing international networks and cooperation projects.

Considering the city's embeddedness in international company and firm networks in the FIRE (Finance, Insurance and Real Estate) sector, the analysis of the GaWC data set reveals that Praha finds itself in a competitive situation with Budapest and Wien, which are approximately on the same level. These three cities are also strongly interconnected, with the strongest ties between Praha and Budapest. In total, Praha hosts the most locations of both European and global FIRE firms. However, according to the importance of company location, Praha accommodates fewer highly ranked locations than Wien and Budapest, which indicates that Praha is well integrated into both European and global networks but often is not the first choice of FIRE firms wishing to establish headquarters in the CED-region.

The comparison of participations in EFP (EU Research Framework Programme) projects reveals that Praha's integration into European research networks is lagging behind Budapest and Wien and has not been able to improve its position over the past five years. Of all projects involving research institutions from Praha, a share of only 9% is led by Czech institutions (presumably mostly located in the capital), which also underlines the country's relevant situation, which calls for improvement. The number of collaborations with the four partner cities shows that Praha is quite independent of research cooperation ventures within the CED-region, which can be interpreted as a wasted opportunity on the one hand but also as a sign of a more global orientation of research on the other hand.

## Hierarchical and reciprocal commuting - PRAHA MR



Map 7: Commuter flows between job centres in the Praha metropolitan region

### 5.4.4 The Praha metropolitan area in stakeholders' perceptions

Stakeholders characterize Praha as an attractive city with a notable historical heritage, making it an important tourist destination. In this conjunction, the revitalisation of various sites and districts, mostly within the inner-city belt of historical suburbs, was singled out as being of high importance. However, transport infrastructure projects turned out to be the major issue among all activities discussed. In particular, poor coordination between purpose-built metropolitan sub-centres (mostly office and shopping sites) and the public transport system was repeatedly mentioned. In the inner city, vast brownfields and their sensible, thoughtful conversion to urban use are major challenges for spatial development.

Discussants identified Praha's poor institutional capacity, specifically problems with administration, unsatisfactory citizen participation and a lack of will and ability to cooperate. The lack of a spatial concept for Praha and the metropolitan region, poor city management, widespread clientelism and corruption were also mentioned as challenges for metropolitan policy. Some responses reflected the existing difficulties with finding appropriate partners for Praha in the Central Bohemian Region. No particular example of established institutional collaboration between Praha and a Central Bohemian municipality was identified.

#### **5.4.5 Towards a metropolitan agenda for Praha**

Praha and the surrounding metropolitan region may be classified as winners in the transition and transformation towards market economy. They are well equipped with 'hard' infrastructure and attract educated people from the country as well as from abroad. This makes the Praha metropolitan region a leading region in the Czech economy and at the same time a fully compatible and competitive partner in the metropolitan network of Central Europe.

While recent projects have focused mainly on the 'hard' infrastructure, desired future project ideas are balanced between 'hard' and 'soft'. Improving the institutional capacity of city and regional management turned out to be of high importance for Praha. Desirable changes can be summarised as follows:

A clear management and planning strategy for an active and strong city and region is needed. This implies governance measures such as transparent decision-making, structured management of development at the regional and city levels and coordination between Praha and the Central Bohemian Region. A knowledge economy strategy and relevant policies in the field of research should be implemented to support higher education and technological innovations. Finally, culture must be taken into account as an engine of urban change. The care for cultural values is of decisive importance in this respect.

The cooperation of Praha with other metropolises should focus on a common policy of promoting tourism and major sports and cultural events. Specific importance is attached to knowledge exchange. Praha would appreciate learning from other cities about their experience in the fields of citizen participation, development control and mobility behaviour.

### **5.5 Metropolitan Report Wien**

For almost two decades, Wien has been confronted with different challenges of economic and socio-demographic restructuring, which is mainly due to transformation processes on a higher spatial level. The decrease of barriers, in particular the fall of the Iron Curtain, and the EU integration process of Austria and other Central and Eastern European countries caused a shift of Wien's role in the European territory (Giffinger & Hamedinger, 2009), which triggered a political reorientation of the Austrian capital towards becoming a Central European node (Municipal Department of Urban Development and Planning of the City of Wien, 2005). The referenced processes also fostered a clearer perspective on urban strategies, mainly owing to predicted urban growth<sup>6</sup> and high standards in environmental and living conditions (Municipal Department of Urban Development and Planning of the City of Wien, 2005). This process seems to be reflected in several quality-of-life studies ranking the city among the best in a global sample – a circumstance that the city only recently chose as a basis to undertake efforts under the "Smart Cities" initiative. Hence Wien's biggest challenge lies in the conservation and improvement of its high environmental and living standards despite continuing urban growth.

#### **5.5.1 Metropolitan planning strategies for Wien**

The concepts of polycentricity and metropolisation are widely acknowledged by policymakers in Wien. There is a wide range of policies that explicitly deal with both concepts and integrate them into

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<sup>6</sup> 'Wien waechst wieder' ('Wien is growing again') is a popular quote from the city's Urban Development Plan of 2005, which is often cited by political stakeholders as an important precondition in the discussion of the city's urban future.

planning strategies. At the regional level, polycentricity is primarily discussed in the context of sustainable spatial development, while most attention at the European level is drawn to the integration of Wien into a wider European city network. Policies at the regional level can be classified into four categories:

- development of new, well-connected centres
- revitalisation of existing centres
- development of industrial clusters
- institutional coordination of spatial development policies

These policies are to contribute positively to a more balanced settlement system in the Wien Region and to more sustainable patterns of regional spatial development – aspects that institutions like the Metropolitan Area Management Wien-Lower Austria (SUM) and the Eastern Austrian Planning Association (PGO) are already trying to take into account. Only recently, PGO completed the preparation of a strategy for the development of the Eastern Austrian Region (SRO). Also, the most recent strategic document of the Austrian Conference on Spatial Planning (ÖROK) presents plans to develop a common agglomeration policy for Austrian agglomeration regions (ÖROK, 2012). At the European level, the emphasis of polycentricity policies is on the intensification of transnational cooperation and coordination of spatial development. These policies aim at improved positioning of Wien in the European polycentric system and at a more balanced European city system. Apart from the capitals of other Austrian federal provinces, it is in particular cities like Brno, Győr and Bratislava – all part of the related **Centrope** initiative – that are to be part of this city system.

The discussion of metropolisation deals primarily with Wien's position as a hub to Central and Eastern Europe and with the city's role as a centre of culture, tourism and business. At the regional level, policies favouring metropolisation are linked to the improvement of regional accessibility, the development of new urban growth poles and the promotion of knowledge-intensive businesses. At the European level, the improvement of international accessibility, the positioning of Wien as a European metropolis and the cooperation with Bratislava for a common international positioning of the region are at the core of the strategies proposed.

## 5.5.2 Wien's metropolitan profile

Wien including its functional metropolitan area presents a rather specialised metropolitan profile indicating its specific assets for positioning within the European urban system. The city is performing exceptionally well in the field of 'Living' and in environmental, economic and mobility-related matters. Still, the heterogeneity of its metropolitan profile is notable: the enormous variation of characteristics between those scoring best and those below average is in line with the profiles of the two other big POLYCE metropolises Budapest and Praha. Due to its good overall performance, Wien finds itself in the top quarter of the 50 metropolises assessed, proving that it has certain comparative advantages within the European urban system. However, research also reveals an obvious weakness concerning cosmopolitan appeal, demographic structure and education - all subsumed under the 'People' category. A look at the factors and indicators behind these characteristics allows for a more in-depth view:

- Living: based on its cultural heritage, the large social housing segment and high standards of social and health services, all factors underline the good performance in metropolitan living conditions not only within the city, but also within the metropolitan region.
- Mobility: ICT availability, international accessibility and commuting are well-organised. Public transport instead is beset by deficits mainly resulting from high monthly pass prices – a circumstance already taken into account by local policymakers by reducing the prices for annual (€ 365.- instead of € 449.-) and monthly (€ 45.- instead of € 49.50) passes in May 2012. Services for commuters across city borders and into neighbouring areas seem

to be unsatisfactory, although relevant studies (Mayerhofer et al., 2010) point out high standards in the organisation of public transport within the city – a fact underlined by great satisfaction with the urban public transport system on the part of inhabitants.

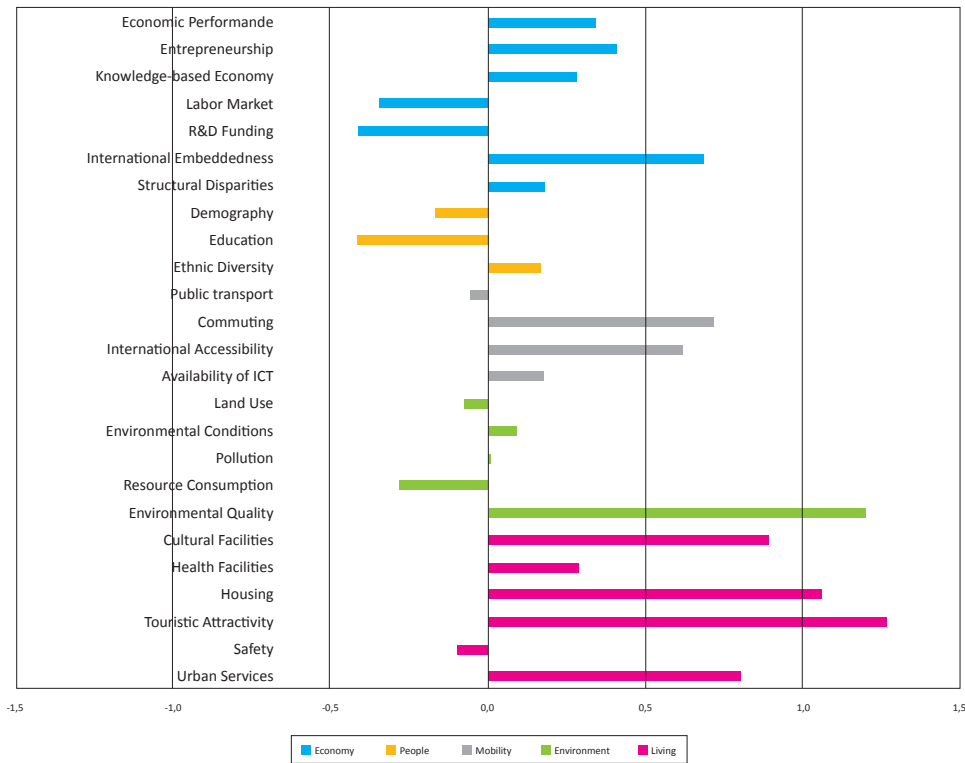
- Environment: whereas the assessment of environmental conditions within the metropolitan area shows a positive result, resource demand (meaning water consumption and amount of collected solid waste) in particular is problematic when compared to other European cities. Demographic and economic growth will be challenging for metropolitan governance in this regard, particularly with a view to sustainable land use. This topic is already subject to discussion in Wien's strategies, as expressed by several projects aimed at tackling this issue.
- Economy: embeddedness concerning company headquarters functions and economic performance (expressed by GDP and GVA) may be named as outstanding factors. Conversely, striking deficits in R&D funding and labour market concerns diminish an excellent development in the 'Economy' category. Ongoing processes of economic restructuring and challenges of metropolitan growth extending far beyond city borders explain the specific deficits. These findings correspond with the increase in productivity, stagnating economic wealth and the labour market problems mentioned in other studies of the city's competitiveness (Mayerhofer et al., 2010).
- People: Wien is performing far below European average in this section due to deficits in educational standards. Socio-demographic indicators at the metropolitan level and foreign inhabitants and their integration status likewise present weak scores. With Wien's history as a 'melting pot' in mind, this result sounds rather surprising. Possible reasons lie in insufficient migration and integration concepts applied by the political-administrative system in Austria. However, Wien is currently undertaking efforts towards integration and diversity management to overcome this problematic situation.

Wien's competitiveness is mainly fostered by its good economic performance and international embeddedness, while weaknesses concerning labour market issues, too little R&D investments and deficits in human capital have a limiting effect. International accessibility and living conditions are in fact the most important assets of Wien as a metropolis. Although resource demand and land use are factors that urge for improvement, even environmental standards show an above-average result and are likely to be an asset in comparison with other cities.

However, the contrast of economic performance with high unemployment rates and low income levels seems to be critical from the viewpoint of inclusive metropolitan development. Also, the insufficient integration of migrants is a strong deficit in this respect. By contrast, the public transport system holds the potential for territorially inclusive development of the metropolis. The same is true for living and environmental conditions, i.e. health and social services, housing and cultural facilities. Still, intra-metropolitan disparities in economic terms between city and region need to be addressed critically, as they are increasing above the European average.



### Metropolitan Area Wien



**Note:** The represented deviations from the sample's average result from selected indicators that may not draw a comprehensive picture of each factor's performance within the metropolitan area. Underlying indicators comprising these factors are listed in the annex to this report (chapter 10.1: 'Metropolitan profiles: underlying structure').

Figure 12: Profile of Wien metropolis (factor level)

### 5.5.3 Polycentric relations

Wien has the biggest metropolitan region and functional metropolitan area of the five POLYCE cities, while the core city is comparatively smaller than Budapest and Praha. The reason for this is the project's spatial delimitation of areas based on commuter relations, which obviously involve a much greater space than in the other metropolitan areas. Nevertheless, Wien turns out to be a strongly monocentric region with the highest population concentration in the core city, which does not strongly deviate from values for the other two big cities, while Ljubljana and Bratislava can hardly be compared due to their significantly smaller size.

The analysis of commuters shows a totally different picture. In Wien, commuter flows are much less directed towards the core city. The share of reciprocal flows (oriented in opposite directions) in 2001 was much higher than in the other cities. This result clearly demonstrates the difference between the more open and functionally integrated region of Wien and urban systems in former communist countries, which are more strongly dominated by capital cities and their labour markets. Although Wien appears to be a highly monocentric urban system from a morphological point of view, it actually shows a high degree of polycentricity in relational terms.

Due to its central location within the CED-zone, Wien is characterised by high accessibility of the other Central European cities, with relatively short travel times by road and rail. The immediate vicinity of the 'Twin Cities' Wien and Bratislava implies very good accessibility of the Slovak capital, and cross-border relations with secondary cities such as Brno and Győr seem to be increasing as well. Distances to Budapest and Praha are short enough to allow for one-day trips for business meetings, whereas travelling to or from Ljubljana without an overnight stay can only be done by plane. The relations to



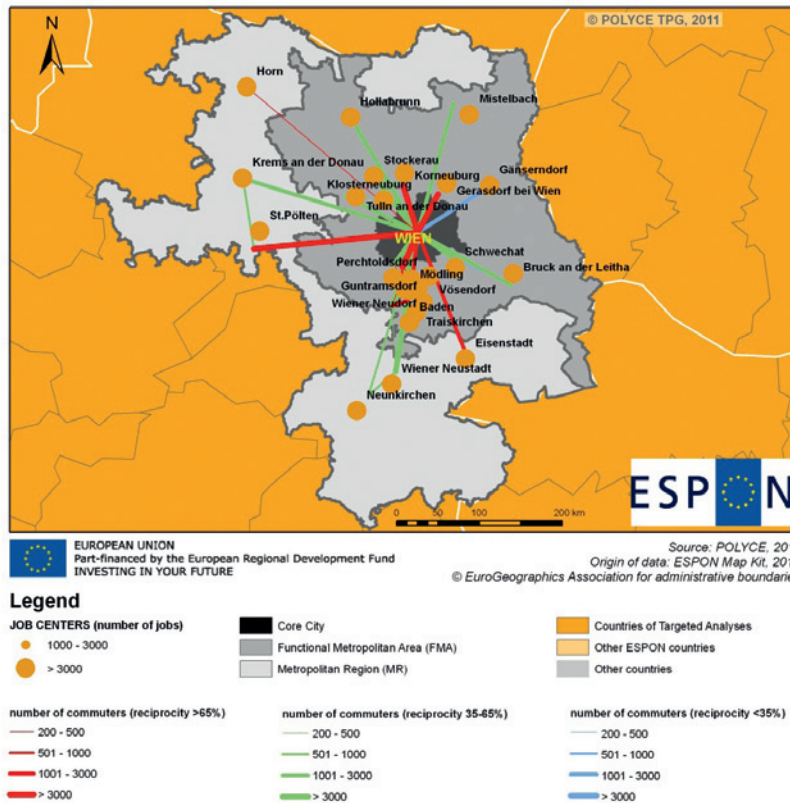
all four partner cities present an acceptable supply of train connections with at least ten trains per day in both directions. Travel speed, however, is still very low vis-à-vis comparable polycentric regions in Western Europe.

Since economic, social and institutional interaction is always embedded in an existing network of established relations and traditions, it is influenced by ethnic and historic relations between cities and countries (common history, culture, language, etc.). The share of foreigners proves Austria's role as an immigration country. Contrary to the four partner states, Austria has become an attractive destination for migrants over the past 50 years. Consequently, it is the only country with a remarkable foreign population share (10%), which may be considered as an asset for establishing international networks and cooperation ventures. Within the CED-region, only Austria hosts a remarkable number of people from the neighbouring states, which shows that the country has been able to keep its historic connections alive. Hence Wien is still attractive for immigrants, although deficits of integration are regarded as an important challenge by the stakeholders.

Wien finds itself in a competitive situation with Praha and Budapest concerning embeddedness in international firm and company networks. These three cities are approximately on the same level. They are also strongly interconnected, although the strongest ties are between Praha and Budapest. This result might be related to the fact that Wien is less dependent on relations within the CED-zone and orienting itself towards networks in other parts of Europe and overseas. With regard to the importance of Wien as a company location, the Austrian capital hosts significantly more highly ranked locations than its rivals, which indicates that Wien seems to cope successfully with its role as an economic centre of the region with main control functions.

The city seems to be well integrated into European research networks. It does best at participation in research projects, which might be attributed to established networks and co-operation ventures with Western European EU Member States. The number of collaborations with the four partner cities indicates that there are especially strong ties in scientific research between Wien and Budapest, which are both comparably less connected with Praha. Additionally, Wien seems to be in a comfortable situation, because in spite of numerous cooperation projects with the partner cities, the city is less dependent on them, since the share of all project participations is lower than in the other cities.

## Hierarchical and reciprocal commuting - WIEN MR



Map 8: Commuter flows between job centres in the Wien metropolitan region

### 5.5.4 The Wien metropolitan area in stakeholders' perceptions

In the view of a number of selected local stakeholders, Wien is perceived as an attractive, unique and safe place that benefits from its historical heritage and its related role as a tourist destination. There is strong disagreement on whether the city is affordable or expensive. According to the stakeholders, Wien is performing well in terms of infrastructure provision, economic development and environmental quality. In the view of the respondents, this positive performance is, however, threatened by problems related to social integration.

Projects or activities that have positively influenced urban development in recent years are the improvement of public transport, the commencement of the Wien Main Station project and the **asperm** Wien's Urban Lakeside development project. Contrary to these positive aspects, the loss of public spaces in parts of the city, the failure of several large-scale urban development projects and the lack of programmes to ensure the ongoing spatial integration of different groups in the city were perceived negatively. The high quality of life and the performance of the local economy are seen as specific strengths of the city. Conversely, weaknesses lie in a lack of integration, low energy and resource efficiency as well as a lack of innovative economic activities. In the view of the stakeholders participating in the survey, the most promising activities for the future development of the city are the completion of large-scale urban development projects (Wien Main Station, **asperm**), the fostering of integration as well as the strengthening of cooperation with surrounding regions. The city is considered to be a very attractive partner for cooperation, mainly due to its experience with cooperation, geopolitical location and well-functioning administration. Cooperation with cities in the metropolitan

region of Wien is regarded essential in the fields of infrastructure development and transport, coordination of spatial development, economic development and environmental issues. For cooperation with cities outside the metropolitan region, the fields of R&D, energy, knowledge transfer, cluster networks, transport and infrastructure are regarded as necessary.

The discussion of the analytical results with local stakeholders revealed a number of points. Relating back to the results of the stakeholder survey, integration is considered one of the greatest challenges ahead for Wien. Integration is thus not only understood as ethnic but also as social integration of different groups in the city. Sustainability in ecological as well as in economic and social terms is seen as the second big challenge that the city will face in the near future. A third outcome of the discussion was surprise among several stakeholders about the relatively low competitiveness, revealed by the empirical analysis, of Wien in comparison to other European cities. Regarding Wien's role as a metropolis, the stakeholders agreed that metropolisation is a process the city is continuously confronted with. However, in many ways policies could engage with this process more actively and try to build strategies on it. A polycentric structure is considered a desirable policy goal among stakeholders, but also a useful term for lobbying. These inconsistent and sometimes even contradictory definitions of polycentricity are hard to compare, making policy use of the term even more difficult. There was consensus that potential future policies dealing with polycentricity and metropolisation need to differentiate between a regional and a European level.

#### **5.5.5 Towards a metropolitan agenda for Wien**

A city's self-esteem and identity might be seriously twisted on its way to becoming a metropolis. In this respect, Wien has to look for a broad strategy that includes those who are questioning this specific future development path. This effort must be put into practice through metropolitan governance measures, implying common decision-making about the allocation of specific metropolitan functions. Objectives, costs and benefits of project initiatives need to be elaborated together by the relevant partners in the region. This might reveal new potentials, enhance existing assets and support a metropolitan identity that builds upon common positive experiences. On a greater spatial scale, this calls for 'Central European governance' beginning with knowledge exchange and thus the physical exchange of officials between individual administrative sectors in the respective cities for short periods of time. In conjunction, joint events focusing on the exchange of information and good practice should be periodically organised. Such efforts support trust and help sharing experiences of stakeholders, enhancing functional and strategic relationships between metropolises and smaller cities. Besides, improvements at the level of public transport infrastructure and related services are called for, as they boost connectivity within the region and underpin the striving for greater territorial cohesion.

# 6 Metropolitan Agendas

Governance initiatives are necessary for strengthening smart metropolitan development, which refers to balanced development in social, economic and political terms. This objective becomes particularly important in complex political-administrative settings like metropolitan regions, where conflicting interests regarding competitive and inclusive development come together. This asks for horizontal as well as vertical governance approaches. They need to include specific partners from the cultural, educational and social spheres and from regions and cities from neighbouring countries in order to enhance and strengthen the relational capital of all actors involved as a precondition for smart and territorially cohesive metropolitan development.

*The metropolitan agendas presented in this chapter are meant as suggestions for promising future activities of the five Central European metropolises. Rather than comprehensive metropolitan strategies, they thus represent a structured collection of possible activities. The agendas do not picture a detailed set of planning measures but instead propose possible future development paths for the five cities. They were developed in close collaboration with a set of relevant local and regional stakeholders in the five metropolises. Above all, the agendas build upon interactive discussions of the empirical project results with a number of selected stakeholders. This open setting allowed for the development of innovative ideas that might give valuable input to policymakers in developing future metropolitan strategies and planning approaches. Necessarily, the number of stakeholders involved was limited. Therefore the collected ideas inevitably represent only a selective perspective. However, they originate from stakeholder discussions based on empirical project results and therefore reflect the empirical analyses conducted in the course of the project.*

*For providing an easily accessible overview, the five metropolitan agendas are not only described in the text. They are also listed in a table indicating the activities resulting in the respective agenda, the actors most probably needed for implementing this agenda and the supposed effects the relevant activity might have on the aspects of competitiveness and inclusion of the metropolis. Tables include the following fields of activity: Spatial Structure (STRUC), Infrastructure (INFRA), Economic Activities (ECONO), Environment (ENVIR), Living Conditions (LIVIN), Image & Identity (IMAGE) and Governance (GOVER). Checkboxes on the right hand indicate the activity's contribution to competitiveness or inclusion. Crosses in the left-hand columns of the right-hand margin stand for a strong positive influence on metropolitan competitiveness, while crosses in the right-hand columns embody a strong positive influence on metropolitan inclusion.*

## 6.1 Metropolitan Agenda Bratislava

Most of the activities named for Bratislava refer to infrastructure, environment or governance, while only a few ideas related to spatial structure, economy, living conditions or image. The most prominent field of action is infrastructure, for which an adequate connection of centres to high-ranking infrastructure is postulated. Furthermore, multimodal regional transport networks need to be provided. Referring to environmental matters, the awareness and efficiency of energy use in urban development needs to be enhanced. Moreover, the quality of local recreational areas needs to be strengthened and protected by means of adequate measures.

In order to improve institutional conditions for future politics, new forms of governance have to be established in the whole metropolitan region. Here a special emphasis lies on a concerted development strategy for cross-border spatial development and proper platforms (e.g. common databases, Internet forums, regular meetings) for permanent information exchange of the actors involved.

With regard to spatial structure, the distribution of metropolitan functions across different municipalities within the metropolitan area has to be considered against the background of changing economic and social conditions, which will require clear-cut positioning and specialisation of the existing (sub-) centres in their functional and economic orientation. In order to meet the requirements of the knowledge economy, this specialisation should be directed at establishing knowledge-intensive services and R&D clusters. All these measures and strategies aim at sharpening the identity and image of Bratislava, fostering its unique profile and competitiveness. The clearer the image of the metropolis is defined and communicated, the better the perspective of Bratislava regarding its economic development. The citizens of Bratislava and its metropolitan region should be involved to participate in this process.

While some infrastructural and institutional measures have a tendency towards being inclusive, the activities related to economic specialisation and image strategies are only very strongly fostering metropolitan competitiveness. What is interesting, though, is the fact that solely infrastructure provision measures can be interpreted as being of a truly inclusive character, while most environmental and governance measures must be understood as having an inclusive tendency only in the short run, with the ability of improving the competitive behaviour of Bratislava.

Field of action	Activity	Actors	Fostering comp. - incl.			
<b>STRUC</b>	Effective distribution of metropolitan functions by clear positioning and specialisation of (sub-) centres	Core city and regional municipal administrations, regional planning bodies	X			
<b>INFRA</b>	Connect new and existing centres to high-ranking infrastructure (e.g. new Central Bus Station)	Core city and regional municipal administrations, regional planning bodies, national ministries, infrastructure provision bodies	X		X	
	Provide multimodal regional transport network	Core city and regional municipal administrations, regional planning bodies, public transport providers, infrastructure provision bodies			X	
	Expand road infrastructure in the south to strengthen the polycentric structure	Core city and regional municipal administrations, regional planning bodies, national ministries			X	
<b>ECONO</b>	Foster economic specialisation by establishing knowledge-intensive services and R&D clusters	Core city and regional municipal administrations, research institutes, universities, R&D businesses	X			
<b>ENVIR</b>	Improve energy awareness and energy efficiency in urban development (e.g. 'green' transport systems)	Core city and regional municipal administrations, regional planning bodies, green technology businesses, research institutes	X		X	
	Strengthen and protect quality of local recreational areas (e.g. vineyards, bike lane network)	Core city and regional municipal administrations, regional planning bodies	X		X	
<b>LIVIN</b>	Improve quality of living conditions (accessibility, social housing, public transport, public services)	Core city and regional municipal administrations	X			X
<b>IMAGE</b>	Sharpen metropolitan identity and image with participatory methods	Core city and regional municipal administrations, regional planning bodies, marketing agencies, universities, research institutions	X		X	
<b>GOVER</b>	Joint cross-border spatial development strategy for Bratislava Region	Core city and regional municipal administrations, regional planning bodies, national ministries, marketing strategy, research institutions, planning bureaus	X			X
	Develop platform for information and knowledge exchange	Core city and regional municipal administrations, regional planning bodies, private planning bureaus	X		X	

Figure 13: Metropolitan agenda Bratislava: activities, actors, implications

## 6.2 Metropolitan Agenda Budapest

In the stakeholders' opinion, Budapest's most important field of activity must be the metropolitan infrastructure. Alongside some specific local measures, activities should tackle the metropolitan character of Budapest by improving the regional high-ranking infrastructure. In this context, institutional activities concerning the coordination of mobility and transport issues are demanded. Further coordination must be undertaken in the city concerning its development strategies and the planning approaches of Budapest's districts. Economic activities should foster the development of metropolitan regional centres in research and development, while numerous commercial, business and logistics centres near the airport are claimed as harbouring some potential for the future – even if the latest bankruptcy of the national aviation company could threaten their market position.

Interestingly, Budapest's metropolitan agenda places some emphasis on the Danube and related projects. While environmental measures have to tackle poor water and environmental quality, the river should play an important role in tourism and marketing activities of the city. This might be of vital importance to some actors in the Budapest metropolitan region with respect to the city's positioning in the Danube Region.

Generally, governance activities only seem to have an inclusive character, which stresses the stakeholders' impression of a lack of collaboration in the metropolitan territory of Budapest. Improving the scant green space as well as contributing to a sustainable city by implementing waste management programmes on a metropolitan scale are other approaches that demonstrably support inclusive growth. While tourism-related and, more generally, economic activities are aiming at the competitive profile of the city, infrastructural measures draw a more complex picture, with airport and motorway expansions equally impacting Budapest's competitiveness. What is interesting is the fact that - as in other cities - economy-oriented measures as named do not contribute to inclusive metropolitan development. The same is true for image-related activities. While marketing is targeted, no identity-oriented, inclusive measure can be found on the list. By contrast, this is also true for the field of environmental activities, where no measure thematises metropolitan competitiveness. Therefore Budapest's metropolitan development needs to take these gaps into account - either as part of the profile or by defining aims and activities that are able to tackle both sides of what makes up smart metropolitan development.

Field of action	Activity	Actors	Fostering comp. - incl.			
STRUC	Establish novel city centres in the suburbs and at the metropolitan periphery (Köki Terminal, Tópark)	Core city and regional municipal administrations, private investors, public transport providers		X		X
	Expand Budapest Airport capacity (Budapest Airport Terminal 2)	Private investors	X			
INFRA	Improve suburban railway service	Public transport provider				X
	Improve P+R capacities and intermodal nodes	Public transport providers, core city and regional municipal administrations				X
	Improve sewerage in the southern agglomeration to make full use of the central sewage treatment plant's capacity	Core city and regional municipal administrations			X	
	Expand M0 to western section	Core city and regional municipal administrations, national ministries		X		X
	New Danube bridge (pedestrian/cycle crossing in the downtown area, residential and business bridge at Albertfalva)	City administration, private investors				X



Field of action	Activity	Actors	Fostering comp. - incl.				
ECONO	Promote R&D clusters (e.g. Bio-Info-Medical Innovation Park, Q2 Science Park, Aquincum Institute of Technology, etc.)	City administration, research institutes, universities, private business actors	X				
	Promote investment in, and clustering of, economic activities around Budapest Airport and M0 zone (manufacturing, logistic, trade and retail)	Private investors, city administration	X				
ENVIR	Improve Danube water quality by attaining the maximum capacity of the central sewage treatment plant	City administration				X	
	Improve environmental quality of the Ráckeve-Soroksár Danube branch	Central Danube Valley Water Authority				X	
LIVIN	Encourage tourism development at the waterfront of the Ráckeve-Soroksár Danube branch (e.g. water sports)	Core city and regional municipal administrations, private investors, tourism agency	X				
IMAGE	Market Danube riverside as a priority area (e.g. Castle Garden Bazaar)	Core city and regional municipal administrations, Central Hungary Regional Development Agency	X				
GOVER	Establish National Transport Holding by involving Budapest Transport Company	National government				X	
	Ongoing reconciliation of local development strategies in Budapest Agglomeration Development Council	Core city and regional municipal administrations, Budapest Agglomeration Development Council					X
	Establish alliance of Budapest districts	Municipal administrations		X			X

Figure 14: Metropolitan agenda Budapest: activities, actors, implications

### 6.3 Metropolitan Agenda Ljubljana

Stakeholders' recommendations for Ljubljana comprise most fields of action but concentrate particularly on issues of governance. Facing trends of urban sprawl, a predominant aim is the development of a sustainable spatial structure. This includes the construction of new and the revitalisation of existing centres not only within, but also in the suburban areas of Ljubljana. These (sub)-urban centres should be connected to the core city through high-ranking infrastructure and, especially, an improved public transport system. Consequently, these activities touch upon the urban structure and infrastructure at the same time and need to be organised by actors from the City Municipality of Ljubljana and other municipalities in the urban region or Central Slovenian statistical NUTS 3 region, but also from the national level and by public transport providers. At the regional as well as at the transnational level, Ljubljana is keen to take up infrastructure-related initiatives. For instance, alternative energy exploitation on the rivers Sava and Ljubljanica and transnational tourism routes along these rivers are planned. Regarding improvements of international accessibility, measures have already been taken as well (e.g. corridor TEN-T X).

Economic activities have to target knowledge-intensive sectors, in particular research and development and teaching services. However, there are no efforts undertaken concerning economic clustering, while Ljubljana's role as a university city is of high importance. Along with these activities, the image of Ljubljana should be developed and modified towards that of a city of innovation and



sustainable urban-regional development. Proposed activities regarding the environmental sector are equally in line with the expected image change: environmental quality standards and recreational areas should be protected or even improved. Of course, corresponding activities should include actors from the economy and politics of different levels (municipalities, national ministries) and must be steered by planning bodies at the urban-regional level.

Cooperation between the core city and other municipalities should be strengthened or even institutionalised based on a corresponding (statistical) Central Slovenian (functional) metropolitan region. This might improve information on urban-regional trends. In any case, common governance efforts for the metropolitan area of Ljubljana will need a harmonised funding system for joint activities.

While most of the proposed activities seem to have both competitive and inclusive effects, particularly those activities related to economic functions might strengthen Ljubljana's competitive position. Hence governance efforts like institutionalised cooperation and harmonised funding are very important for smart and balanced development, as they support territorially inclusive development.

Field of action	Activity	Actors	Fostering comp. - incl.			
<b>STRUC</b>	Develop new and revitalise existing centres and sub-centres	Core city and regional municipal administrations, regional development agencies, private sector	X		X	
<b>INFRA</b>	Connect new and existing centres to high-ranking infrastructure (new railway and bus stations)	Core city and regional municipal administrations, regional development agencies, national ministries, public transport providers, private sector	X			X
	Use infrastructure development to strengthen polycentric structure (links from Ljubljana Airport to other urban centres)	Core city and regional municipal administrations, regional development agencies, national ministries, public transport providers	X			X
<b>ECONO</b>	Promote development and clustering of service and R&D sectors	Core city and regional municipal administrations, regional development agencies, private business actors, private sector	X			
	Develop Ljubljana as a university location (e.g. new University Library)	Core city and regional municipal administrations, regional development agencies, national ministries, universities	X			
<b>ENVIR</b>	Strengthen and protect quality of local recreational areas (e.g. bicycle lane networks)	Core city and regional municipal administrations, regional development agencies	X		X	
<b>LIVIN</b>	Preserve natural and cultural heritage areas and local identity in the city region and promote tourism	Core city and regional municipal administrations, regional development agencies, tourism organisations, heritage organisations, private sector	X		X	
<b>IMAGE</b>	Promote Ljubljana as a smart, innovative and sustainable city region	Core city and regional municipal administrations, regional development agencies, marketing agency, research institutes, private sector	X		X	
<b>GOVER</b>	Develop platform for information and knowledge exchange	Core city and regional municipal administrations, regional development agencies, national ministries, private sector	X			X
	Institutionalise cooperation between core city and other municipalities of the region (i.e. establishment of administrative regions)	Core city and regional municipal administrations, regional development agencies, national ministries	X			X
	Harmonise statistical (administrative) regions	Core city and regional municipal administrations, regional development agencies, national ministries			X	
	Joint project funding shared between municipalities, state, EU funds	Core city and regional municipal administrations, regional development agencies, national ministries, private sector	X			X

Figure 15: Metropolitan agenda Ljubljana: activities, actors, implications

## 6.4 Metropolitan Agenda Praha

According to the stakeholders questioned, Praha should focus its activities primarily on the fields of governance and infrastructure. In the field of infrastructure, the newly proposed measures address public transport, which should balance the current ambitious projects related to the improvement of the road infrastructure network. The governance-related activities raised by the stakeholders suggest that coordination should be high up on the city's agenda. Coordination of spatial development at the regional level, but also of public transport and service provision is considered an important future activity for which more open, comprehensive and coordinated spatial and sectoral planning is needed. Measures that foster information and knowledge exchange among relevant actors could be a first step to achieve such closer collaboration. In the field of economy, a focus should be on research and development activities and knowledge-intensive services in a more general sense. A sustainability-related activity that is considered promising is to secure energy supply for the country by increasing the capacity of natural gas storage tanks. Finally, in terms of image creation, the efforts should be focused on enriching Praha's identity by combining it with the identity of the metropolitan region, possibly by making use of the existing local cultural heritage and natural assets. Of course, most of the proposed new activities will have multiple effects on several fields of action.

A multitude of actors is needed for the implementation of these activities. They have to span different sectors and spatial scales, including the local, regional and in some cases also the national level. In particular, the scalar dimension seems to be of importance for the realisation of an inclusive and competitive metropolitan region. Most of the proposed activities require not only local but also regional and even national actors. This again points to the necessity of close coordination of actors on a regional scale.

Overall, the proposed activities may be expected to contribute both to Praha's competitiveness and inclusiveness. From the perspective of competitiveness, the promotion of R&D activities as well as image-related activities may be expected to have the greatest effect. Conversely, it is the coordination of public transport as well as governance-related activities that might foster the inclusiveness of the FMA.

Field of action	Activity	Actors	Fostering comp. - incl.			
<b>STRUC</b>	Link planned intense urban use to capacity of public transport	Core city and regional municipal administrations, planning bodies, public transport providers		X		X
<b>INFRA</b>	Focus transportation investment on public transport	Core city and regional municipal administrations, public transport providers		X		X
	Coordinate public transport at regional level (Central Bohemia)	Core city and regional municipal administrations, national ministries		X		X
	Improve quality, capacity and supply of rail services at regional level	Core city and Central Bohemia Regional Authority, public transport providers, Ministry of Transport		X		X
<b>ECONO</b>	Promote R&D and knowledge-intensive activities	City administration, research institutes, universities	X			
<b>ENVIR</b>	Increase energy safety (increased capacity of natural gas storage tanks)	National ministries, energy providers			X	
<b>LIVIN</b>	Provide public services and other improved facilities of everyday use for residents within walking distance	Core city and local municipal administrations, planning offices			X	X
<b>IMAGE</b>	Enrich the cultural identity and image of Praha through the identity and image of Central Bohemia	Core city and regional municipal administrations, regional development agency, tourist agencies	X			X
	Market local cultural heritage (e.g. Czech cuisine)	Regional development agency, tourist agencies, tourist businesses	X			X

Field of action	Activity	Actors	Fostering comp. - incl.			
GOVERN	Develop multi-level and multi-sectoral governance framework	All levels of governance		X		X
	Coordinate development of Praha and Central Bohemian Region	Core city and regional municipal administrations		X		X
	Information and exchange platform for metropolitan region	Core city and regional municipal administrations, local planning bureaus, research institutes		X		X
	Coordinate public service provision to maximise accessibility and supply	Core city and regional municipal administrations, regional planning bodies				X
	Coordinate public transport development with settlement structure	Core city and regional municipal administrations, public transport providers, regional planning bodies			X	

Figure 16: Metropolitan agenda Praha: activities, actors, implications

## 6.5 Metropolitan Agenda Wien

Obviously, most of the proposed activities for Wien are related to the field of infrastructure. Interestingly, there are no activities that are mainly concerned with the spatial structure of the city, albeit infrastructure measures indirectly also constitute interventions in the city's spatial structure.

The proposed infrastructure activities mentioned and discussed during the stakeholder workshop in Wien are fairly diverse and range from a general improvement of accessibility to specific measures to connect the city to particular functions in the metropolitan region. They target both more traditional modes of transportation (e.g. car) and more alternative ones (public transport, bike), although the share of public transport in the modal split is comparably high already, particularly in the core city. An integrated public transport information system could be a useful tool in supporting these improvements. Within the Centrope initiative, this is already an agreed goal to be realised. In the field of economy, the focus is on knowledge creation and exchange. This should comprise not only private actors but also exchanges between governmental and private actors. Environment-related activities suggest to further focus attention on environmental technologies and governance issues, a field in which Wien has already shown some success in the past but needs further initiatives to meet the challenges of sustainable resource management and land use development. Activities in the field of living conditions should aim at changing mobility patterns and diversity strategies. In terms of image, Wien needs to further position itself on the one hand as green and sustainable and on the other hand as multicultural, open and diverse. Finally, the focus of governance activities is on developing long-term strategies for the future metropolitan development of Wien and on fostering knowledge exchange at a regional level. This has in part already been incorporated into metropolitan policy. In particular, activities fostering debates about a metropolitan region as such are already at the forefront of Wien's policy, as the city is responsible for coordinating the related priority in the EUSDR Action Plan (Priority Area 10 action: 'To build Metropolitan Regions in the Danube Region'). Debates about smart urban development have, at least partly, been initiated as well. The most recent ÖREK strategy presents "smart cities" as one key task for the next years (ÖROK 'Development of an agglomeration policy for all of Austria').

It comes as no surprise that the practical implementation of such activities calls for a variety of actors, including governmental and private actors located at both the local and the regional level. The latter point especially appears to be crucial, namely that the participation of, as well as the cooperation with, regional actors is of high importance for the realisation of a metropolitan, regionally inclusive development. Hence a specific governance approach incorporating specific interests of actors from different administrative sectors and spatial levels as well as existing initiatives (such as SUM, VOR or

PGO dealing with the coordination of urban development on a regional scale) should be implemented. The good efforts already undertaken in processes such as the SRO elaboration (strategy for spatial development of the Eastern Austrian region) should be maintained. Also, the most recent strategic document of the Austrian Conference on Spatial Planning (ÖROK) that presents plans to develop a common agglomeration policy for Austrian agglomeration regions should be brought forward (ÖROK 'Development of an agglomeration policy for all of Austria'). As a next step, evidence-based policies should be elaborated by drawing on relevant information and knowledge about the most recent trends and challenges of development within the metropolitan area.

The proposed activities may be expected to contribute predominantly to either the competitiveness or the inclusiveness of the city of Wien. More concretely, measures in the field of infrastructure provision as proposed in particular may be expected to be fairly inclusive in their effects. By contrast, it is the provision of specific infrastructure links (to airport and business parks), the promotion of environmental technologies and specific, image-related activities that are expected to exert a strong effect on the city's competitiveness. Finally, measures in the field of governance are likely to be fairly inclusive in their effects or at least to balance the respective effects in a smart way.

Field of action	Activity	Actors	Fostering comp. - incl.					
<b>STRUC</b>								
<b>INFRA</b>	Improve intra-regional accessibility	Regional planning bodies, infrastructure provision bodies, public transport providers						X
	Develop regional public transport system	Regional planning bodies, national ministries, public transport providers	X					X
	Expand road infrastructure to the north	Core city and regional municipal administrations, national ministries, infrastructure provision bodies, regional planning bodies	X			X		
	Expand and improve bike lane network	Core city and regional municipal administrations, regional planning bodies						X
	Expand motorway links to airport (A4 between Wien and Wien airport)	National ministries, infrastructure provision bodies, regional planning bodies	X					
	Connect business parks with regional public transport network	Regional planning bodies, public transport providers	X				X	
<b>ECONO</b>	Develop new feasibility study and transport funding models for urban mega-projects	Core city and regional municipal administrations, research institutes, public transport providers, infrastructure provision bodies					X	
	Develop regional information and knowledge exchange platform	Core city and regional municipal administrations, local planning bureaus, research institutes					X	
<b>ENVIR</b>	Foster the implementation of environmental technologies	Core city and regional municipal administrations, national ministries, research institutes, green technology businesses	X					
<b>LIVIN</b>	Bring about change in mobility behaviour	Core city and regional municipal administrations, national ministries, regional planning bodies	X			X		
	Define and communicate strategies for equal opportunity and diversity	Core city and regional municipal administrations, national ministries	X					X
<b>IMAGE</b>	Strengthen the position of Wien as a green city	Core city and regional municipal administrations, green technology businesses, marketing agencies	X					
	Improve cosmopolitan appeal	Core city and regional municipal administrations, national ministries						X

Field of action	Activity	Actors	Fostering comp. - incl.			
GOVER	Develop concerted metropolitan policy (common urban growth management at metropolitan level; institutional definition of metropolitan agglomeration)	Core city and regional municipal administrations, regional planning bodies, national ministries		X		X
	Develop regional information and knowledge exchange platform	Core city and regional municipal administrations, local planning bureaus, research institutes		X		X

Figure 17: Metropolitan agenda Wien: activities, actors, implications

# 7 A Central European Development Agenda

## 7.1 The European Context: Embedding POLYCE in European Policy

An examination of existing strategies, policies and networks at the European or transnational level indicates that there are many different documents or initiatives that might provide a framework for the development of common agendas and projects of the five Central European metropolises aimed at increasing cohesion of the Central European macro -region and improved competitiveness in a wider context.

### 7.1.1 EU Cohesion Policy

EU Cohesion Policy is the main instrument for pursuing the EU's economic, social and territorial cohesion objectives. It accounts for the second-largest share of the EU budget, encompasses several funds and is aligned with the EU's overarching growth and employment strategy. The debate on the post-2013 Cohesion Policy mainly deals with:

- focusing the policy on a limited number of EU priorities aligned with Europe 2020, notably research and innovation, low-carbon economy, human capital
- requiring a more visible and effective performance by improving the monitoring and evaluation of the Operational Programmes
- a different alignment of funding instruments
- achieving more strategic coherence between relevant policy areas through e.g. joint strategic planning or programming of all EU funding
- strengthening the territorial dimension, including territorial cooperation, by defining macro -regions and functional areas as a base for planning/intervention
- reviewing administrative procedures, with potential differentiation of management and control requirements and other simplification measures (EP, 2011: 17)

A shift from the traditional cohesion policy concept as a redistributive mechanism towards the 'allocative' perspective of a place-based policy with developmental mission is at the core of the EC Cohesion Policy after 2013. The Fifth Cohesion Report of the European Commission (EC, 2010) emphasised a functional and flexible approach. Depending on the issue, the appropriate geographical dimension ranges from a macro-region, such as the Baltic Sea or the Danube Region, to metropolitan and cross-border regions or a group of rural areas and market towns. Such a flexible geography is better able to capture the positive and negative externalities of concentration, improve connections and facilitate cooperation and thus is more effective in furthering territorial cohesion.

### 7.1.2 European Union Strategy for the Danube Region

In 2010, the European Commission adopted the EU Strategy for the Danube Region following a request from the Member States. This is a comprehensive strategy covering several Community policies and aimed at the creation of a 'macro-region'. The strategy takes the form of a Communication and an Action Plan, which will be reviewed regularly. The Danube Region, which covers parts of eight EU Member States (Germany, Austria, Hungary, Czech Republic, Slovak Republic, Slovenia, Bulgaria and Romania) and six non-EU countries (Croatia, Serbia, Bosnia and Herzegovina, Montenegro, Ukraine and Moldova) is facing complex challenges, which require better coordination and cooperation in the following priority areas:

- to improve mobility and intermodality
- to encourage more sustainable energy
- to promote culture and tourism, people to people contacts
- to restore and maintain the quality of waters
- to manage environmental risks
- to preserve biodiversity, landscapes and the quality of air and soils
- to develop the knowledge society: research, education and ICT
- to support the competitiveness of enterprises
- to invest in people and skills
- to step up institutional capacity and cooperation
- to work together to tackle security and organised crime

Most priority areas mentioned relate to the POLYCE themes. The strategy comprises the action ‘To build Metropolitan Regions in the Danube Region’, which should initiate a platform of existing and emerging metropolitan regions in order to establish a framework for learning and development of common ideas in all areas relevant to metropolitan development. City networks should promote cooperation and the exchange of information and experience among relevant actors (e.g. administrative experts, municipal and regional parliaments). There is a scope for knowledge exchange of agglomeration development strategies, which will enhance dissemination of good practices and identify promising fields of cooperation among public authorities and businesses. Priority Area 10 (‘Capacity Building’) could be of specific importance to the POLYCE cities, as Austria and Slovenia are jointly coordinating this Priority Area.

### **7.1.3 Europe 2020 Strategy**

The EU’s Europe 2020 Strategy for smart, sustainable and inclusive growth was launched by the European Commission in March 2010 and approved by the Heads of State and Government of the EU Member States in June 2010. The strategy identified four priorities:

- smart growth – improving performance in education, research and digital society;
- sustainable growth – building a more competitive low-carbon economy, protecting the environment, green technologies and production methods, efficient smart electricity grids, harnessing EU-scale business networks and improving the business environment;
- inclusive growth – more and better jobs, investment in skills & training, modernising labour markets and welfare systems, ensuring the benefits of growth reach all parts of the EU;
- economic governance – closer EU surveillance of economy, actions to safeguard the stability of the Euro area and to repair the financial sector.

Within the framework of the Europe 2020 Strategy, the internal market, global competitiveness, cohesion and environmental issues, in particular the decarbonisation of transport, are objectives that will require balanced solutions. In order to monitor how the priorities are being accomplished, the strategy sets five EU-wide common headline targets in the fields of employment, research and development/innovation, energy/climate change, education and poverty/social exclusion. All Member States have translated these targets into individual indicators for their national reform programmes. In that way, the priorities of the Europe 2020 Strategy should be reflected in planning strategies and also in strategic projects at all territorial levels.

### **7.1.4 EU Territorial Agenda**

The original document of the Territorial Agenda of the EU (CEC, 2007) was the first step towards the institutionalisation of territorial cohesion that became a shared responsibility among EU and Member



States. The amendment of the Territorial Agenda for 2020 identified promoting polycentric and balanced territorial development as a “key element of territorial cohesion to foster territorial competitiveness of the EU. Cities should form innovative networks to improve their global competitiveness and promote sustainable development. Polycentric development is necessary at the macro-regional, cross-border and national and regional levels. Polarization between capitals, metropolitan areas and medium sized towns should be avoided and policy should contribute to reducing territorial polarization and regional disparities by addressing bottlenecks to growth in line with Europe 2020 Strategy” (Territorial Agenda for 2020).

### 7.1.5 Visegrád Group

The Visegrád Group, also called the Visegrád Four or V4, was established in 1991 as an alliance of the Czech Republic, Hungary, Poland and Slovakia for the purposes of cooperation and furthering their European integration. The ‘Common spatial development document’, which was prepared for a meeting of ministries in 2010, mainly pursues two goals:

- delineation of development poles, development axes and transport networks on the territory of V4+2 (Romania and Bulgaria) countries and the detection of their no-continuations
- proposal for further works on the Common spatial development document – common approach towards the withdrawal of barriers in spatial development of V4+2 countries; further cooperation of V4+2 countries in the field of spatial development

The document is not explicitly related to polycentricity and metropolisation but will presumably contribute to polycentric development at the Central European macro-regional level.

### 7.1.6 Trans-European Networks

The idea of Trans-European Networks (TEN) emerged by the end of the 1980s in conjunction with the proposed Single Market. The construction of Trans-European Networks is considered a key element of the Internal Market, of economic growth and employment and of economic and social cohesion. According to these objectives, the Community develops guidelines covering the objectives, priorities and projects of common interest for transport (TEN-T) and energy (TEN-E). The third sector of telecommunications (eTEN) was finished in 2006 and is followed by the ICT Policy Support Programme. Many projects of common interest have benefited from financial support through the TEN budget and the Structural Funds or from loans by the European Investment Bank (EIB).

According to the Union guidelines for the development of the trans-European transport network (Decision No 661/2010/EU), all TEN-T projects have to be assessed for their socio-economic impact and their impact on the environment, including their impact on trade and the free movement of persons and goods between Member States, on territorial cohesion and on sustainable development. Whereas the effects on polycentric development are not explicitly specified, an impact on spatial patterns is obviously expected. The Decision identified the following priority links, to be initiated in 2010, that relate to the POLYCE space:

- railway axis Paris-Strasbourg-Stuttgart-Wien-Bratislava, including the Salzburg-Wien section (2012) and the Wien-Bratislava (2010) cross-border section
- Rhine/Meuse-Main-Danube inland waterway axis, including the Wien-Bratislava cross-border section (2015) and the Sap-Mohács section (2014)
- Athens-Sofia-Budapest-Wien-Praha-Nuremberg/Dresden rail link, with the Budapest-Wien cross-border section (2010); railway Břeclav-Praha-Nuremberg (2010), with Nuremberg-Praha as cross-border section; railway axis Praha-Linz (2016)

- railway axis Gdańsk-Warsaw-Brno/Bratislava-Wien, consisting of the connections Gdańsk-Warsaw-Katowice (2015), Katowice-Břeclav (2010) and Katowice-Žilina-Nové Mesto (2010)
- motorway axis Gdańsk-Brno/Bratislava-Wien, with the motorways Gdańsk-Katowice (2010), Katowice-Brno/Žilina (2010) and the cross-border section of the motorway Brno-Wien (2009)
- railway axis Lyon-Trieste-Divača/Koper-Divača-Ljubljana-Budapest-Ukrainian border (2015)
- Motorway of the Sea of south-east Europe; link between the Adriatic and Ionian Seas and the Eastern Mediterranean with Cyprus (2010)

### 7.1.7 Centrepe

**Centrepe** is a joint initiative of the Austrian Federal Provinces of Wien, Lower Austria and Burgenland, the Czech Region of South Moravia, the Slovak Regions of Bratislava and Trnava, the Hungarian Counties of Győr-Moson-Sopron and Vas as well as the Cities of Bratislava, Brno, Eisenstadt, Győr, Sopron, St. Pölten, Szombathely and Trnava. It was founded in 2003 in order to create a Central European Region where cross-border cooperation is rooted in all areas of life. To work towards the attainment of this goal, **Centrepe** pursued four specific development goals until 2012: knowledge region; human capital; spatial integration; culture and tourism.

### 7.1.8 Cities for Cohesion

This initiative, which was established to respond to the EU Green Paper on Territorial Cohesion, deals with the urban dimension of cohesion policy, insisting that the macro-regional approach should be applied in cohesion policy. The cities and metropolitan regions involved in the network (Wien, Praha and 14 non-POLYCE cities) sought increased cooperation across regional and national borders through governance, which should be encouraged by the EC through the EU Structural Funds. Furthermore, the territorial impact of all EU policies that contribute to territorial cohesion should be given more consideration.

## 7.2 Comparative Analysis of POLYCE City Agendas

All POLYCE cities have formulated their spatial policies in strategic plans, making polycentric development a cornerstone of the spatial concept in these strategies. While infrastructure projects are the most common activities to pursue polycentric development, comparatively fewer projects are oriented towards environmental, cultural or quality-of-living issues. The recommendations for new projects typically extend, update and enrich the existing strategies by addressing newly emerging issues and challenges that were also raised by recent EU documents (e.g. Europe 2020). Some projects in particular target new or improved facilities for the knowledge economy or aim at enhancing metropolitan governance. Furthermore, some new infrastructure projects complement the existing ones by more environment-friendly modes. The following similarities and differences that are shared among the POLYCE cities can be identified:

- The challenges of suburban sprawl outside the core city need to be tackled. Suburban areas should be better structured and provided with jobs, infrastructures and services (Budapest, Ljubljana, and Praha).
- Infrastructures connecting the city and metropolitan area with facilities serving specific functions (e.g. science and business) are important to strengthen the competitive position (all cities).

- Infrastructure improvements should target environment-friendly modes, while the urban and regional motorway network should be expanded to improve overall accessibility. The same is true for rail networks and airport connections (Ljubljana, Wien, Praha).
- City and regional development must be coordinated (Bratislava, Ljubljana, Praha).

In all cities, infrastructure strategies consider the entire metropolitan area, while other issues often neglect the regional dimension. This can be explained by an administrative division between the cities and surrounding regions in the cases of Wien, Praha and Ljubljana, which pushes the coordination between the metropolitan city and its regional hinterland to the supra-regional, i.e. national level. Consequently, all metropolitan regions seek for some kind of institutionalised cross-regional coordination. Apparently, the most pronounced and structured approaches of coordination exist in Wien, which has the longest tradition of suburbanisation across city limits. The existing strategic projects in all POLYCE cities are rather aimed at increasing the competitiveness of the city/metropolitan region, while the projects for improved accessibility within the cities and metropolitan regions should enhance metropolitan integration and cohesion. The results of the POLYCE research suggest that public awareness of insufficient coordination within the metropolitan regions is increasing in all metropolises.

### 7.3 Common Activities of POLYCE Metropolises

The macro-regional dimension is pronounced in all strategies. They reflect the specific position of a particular metropolis along European development axes and within the wider European space. The dimension of the CED-zone is not explicitly mentioned. Recommended actions therefore start from the recognition of their specific potentials and challenges and also reflect inconsistencies between existing strategies:

- The strategic projects for Bratislava and Wien reflect the unique position of the 'Twin Cities', aiming at strengthening the Wien-Bratislava axis.
- The contributions of Budapest and Ljubljana emphasise cooperation in the implementation of the overall Danube Strategy, in the case of Ljubljana mostly in the fields of education and research collaboration.
- The recommendations given in Praha emphasise a 'soft' dimension of collaboration with education, culture and tourism, balancing existing strategies and projects for high-ranking transport infrastructures.

*The following table shows recommended aims and examples of activities (major projects, policies, strategies) that are considered as important for polycentric and metropolitan development within Central Europe, namely in the metropolitan regions of the POLYCE capitals.*

Field of action	Aim	Activity	Spatial entity	Actors	Fostering comp. - incl.			
STRUC	Enhance cross-border polycentric development of spatial structure	'Spatialisation' of Centrepe (Wien-Bratislava-Győr-Budapest axis )	BRA, BUD, VIE, Brno, Győr	Regional planning bodies, national gov't's, city admin's, planners		X		X
	Coordinate national spatial planning strategies	Coordinate development axes of national importance (extending V 4+2)	AT, CZ, HU, SK, SI	National gov't's, regional planning bodies, city admin's, planners		X		
		Implementation of CED-zone development strategy	All POLYCE states and metropolises	National gov't's, regional planning bodies, city admin's, planners		X		
INFRA	Improve connectivity of capital cities	Develop high-ranking infrastructure between POLYCE metropolises	All POLYCE states and metropolises	National gov't's, regional planning bodies, transport provision bodies, city admin's		X		X
		'Interrail' for Central Europe	All POLYCE states	Public transport providers		X		X
	Improve (rail) access to metropolitan airports	Improve (rail) access to metropolitan airports	LJU, PRA, VIE	Public transport providers, regional planning bodies, city admin's, planners	X			
		Improve public transport network	BRA, LJU (implicitly also other metropolises)	City and regional admin's, planners, regional planning bodies				X
ECONO	Facilitate information flows for knowledge economy	Contact points for knowledge economy infrastructure and business sector	All POLYCE metropolises	City admin's, education and research facilities, business sector	X			
	Implement media cooperation of the five POLYCE cities	Common magazine '5' for the five POLYCE cities	All POLYCE metropolises	City admin's, publisher, planners, cultural institutions		X		X
		Common TV platform for Eastern Europe ('ARTE East')	All POLYCE states and metropolises	Media company, regional administrations		X		X
	Foster higher education and R&D capacity	CEEPUS - exchange programme for university students in Central Europe and the Balkans	All POLYCE states and metropolises	Higher education facilities, CEEPUS administration		X		X
ENVIR	Strengthen transnational bio-corridors	Alps-Carpathian Bio-corridor, Danube Bio-corridor	AT, HU, SK, SI	National gov't's, regional planning bodies, city and regional admin's, planners			X	
	Increase energy safety and substitutability of energy carriers	Implement joint energy supply strategies	All POLYCE states (linked to EUSDR priorities and V4 activities)	Energy suppliers, planners, city and regional admin's	X			
LIVIN	Promote culture as a driving force of prosperity	POLYCE city cultural exchange	All POLYCE metropolises	Cultural institutions, city admin's		X		
IMAGE	Implement joint tourism and marketing strategies	Market CE cities as a joint and interconnected tourist destination	All POLYCE metropolises	Regional development agencies, tourist agencies, city admin's		X		
		Establish informal city network (EUROCITIES, Metrex, Open Cities, ...)	All POLYCE metropolises	Chambers of commerce, city admin's		X		X

Field of action	Aim	Activity	Spatial entity	Actors	Fostering comp. - incl.		
GOVER	Implement a common platform of POLYCE cities	Identify further potentials for specialisation and cooperation	All POLYCE metropolises	<b>City and regional admin's</b> , chambers of commerce		X	X
		Common representation of Central European topics at EU level	All POLYCE metropolises	<b>City and regional admin's</b> , chambers of commerce	X		
	Coordinate spatial planning	POLYCE planning network	All POLYCE metropolises	<b>Regional planning bodies</b> , planners, city and regional admin's		X	X
	Encourage PPPs at Central European level	Support CED-zone companies to participate in PPPs	All POLYCE metropolises	<b>City and regional admin's</b> , chambers of commerce, business sector		X	

Note: Key actors or potential initiators of an activity are printed in bold

Figure 18: Central European agenda: aims, activities, actors, implications

The shared strategies and projects mostly derive from existing programmes and initiatives, namely the EU Strategy for the Danube Region, **Centropo** and the V2+4 Initiative. As such, some of them may not involve all POLYCE metropolises. This makes recommendations of shared POLYCE activities quite open and flexible to actual circumstances. The activities proposed cover all fields of action; some expand beyond the scope of power and responsibility of the POLYCE partners: activities dealing with (macro-regional) spatial structures, infrastructures, environment and energy have to be tackled by national governments and ministries, or even the EU.

The actions that can be effectively undertaken by actors at the city and/or regional level deal with rather 'soft' development factors: knowledge, living conditions and culture, image and identity, governance. **Unlike the 'hard' investments in physical structures and infrastructures that are often already part of the existing strategies and plans, 'soft' investments in human capital, knowledge and identity should be the focus of activities in a potential POLYCE network.** Typically, they require involvement of both public and private actors as well as the cooperation of various institutions. The key role for certain activities in the field of spatial structure is assigned to the national governments (in the case of Wien to the Austrian federal provinces), which are responsible for the management and coordination of spatial change. Existing variations in administrative patterns and responsibilities will require further capacities in order to overcome formal discontinuities.

## 7.4 Recommended Shared Activities

The potentials for cooperation among the POLYCE metropolises were specifically identified in the fields of knowledge economy, management of transportation and metropolitan governance. Cooperation and institutional capacity of administration and spatial planning are prerequisites for the recommended activities, which assigns prime importance to all governance-related issues. In that field, two essential objectives which lie within the responsibility of administrations of the cities and their metropolitan regions were identified:

- **Incorporating a common POLYCE platform** – inspired by the G4 network of the Dutch metropolitan cities of Amsterdam, The Hague, Rotterdam and Utrecht. The first task of the platform, which should include the cities, regional administrations and development agencies, will be to clarify potentials for specialisation and cooperation and, consequently, to set the agenda for shared strategies of the POLYCE cities. The platform is to represent

the shared interests of the POLYCE network vis-à-vis EC institutions and should join relevant European initiatives (e.g. Cities for Cohesion). In the process of establishing the POLYCE platform, the experiences of the Centrope initiative should be considered, keeping in mind, however, that this refers to a different model of polycentricity and spatial scale.

- **Exchange of experience in coordinating regional governance** – both within the regions and among them. Since conditions differ between the five metropolitan areas, the experience made in coordinated planning should be transferred from Wien and Bratislava to the other partners during the initial stage. The organisational pattern for individual metropolitan regions should be adjusted to specific local conditions. Inter-metropolitan cooperation should start from informal networks (e.g. by organising regular meetings of stakeholders) and develop into a more robust structure. At the national level, the network should be linked to the Visegrád Group and extended to Austria and Germany within the framework of the Danube Region.

The POLYCE metropolises should act as facilitators of information exchange and business contacts within the network. As shown in the table above, many of these activities cannot be realised by public institutions but need participation of the private sector. Still, public actors can incite or foster projects by providing financial or organisational support. The collaboration of administrative units and private businesses in public-private partnerships seems to be a possible way to integrate a variety of relevant actors and to pool all available resources. This approach seems to be of high importance in the fields of knowledge economy, sustainable energy, living conditions and culture as well as marketing. The recommendations mentioned above mainly include 'soft' activities to boost awareness by means of information, media, culture and education. The effects of these efforts are expected to yield externalities for the economy, especially in the fields of tourism, energy safety and environmental quality. The table above suggests some examples but is by no means exhaustive.

The 'hard' infrastructure activities affecting accessibility of the Central European metropolitan zone have to be planned and implemented at the supra-regional level by coordinating national spatial planning strategies and (in the case of Wien and Bratislava) cross-border polycentric development. The designated activities will have multiple effects on various themes and fields of action. They will contribute both to the internal cohesion and integration of the five metropolitan regions and to the competitiveness of the Central European zone. Besides, the networking process itself will strengthen the links among the POLYCE metropolises by inducing collective learning, the exchange of experiences and the identification of best practices.

# 8 Conclusions

*The basic objectives of POLYCE are defined in the introduction to this report (Chapter 1.1). Two main goals were pursued with this research:*

- identify the importance of the mutual links between the processes of metropolisation and polycentric development
- elaborate on the challenges and perspectives of future urban development

## 8.1 Strengthening Metropolitan Positioning and Cohesive Territorial Development

### **Polycentricity - its differentiated understanding and importance for cohesive metropolitan development**

- The analysis of the five metropolises shows clear differences in morphological and relational polycentricity and a specific pattern of functional relations in terms of research and firm and company networks. This underlines the distinctive characters of the five metropolitan regions and the unequal intensity of interaction and cooperation between them.
- Functional polycentric relations between the metropolises do exist (in terms of research and intercompany relations) but differ strongly across cities. From the stakeholders' perspective, cities moreover view their function and position regarding polycentric development in different ways: Wien and Bratislava are perceived as occupying a clear twin-city situation in which agglomeration issues (size, settlement structure, good internal accessibility, functional economic relations) are regarded as very important. At the same time, stakeholders in Praha, Bratislava and Budapest see the position of their metropolises in a different geographic context (Praha: Germany and Berlin; Ljubljana: gateway and research centre towards the Western Balkans and other macro-regions; Budapest: gateway to the new EU Member States and other Eastern European countries).
- According to the stakeholders, hardly any strategic polycentric relations exist in the region except for strategic endeavours between Wien and Bratislava based on the Centrope initiative, which has recently focused on intensifying research cooperation. As a result of the lack of strong common polycentric links between all five metropolises, infrastructure-based accessibility between them is somewhat unevenly developed. Whereas Bratislava and Wien boast rather high standards of accessibility by private and public transport systems at the international level (because of their central position within this 'polygon'), Ljubljana and Praha are not as easily accessible.

### **Metropolitan growth and its preconditions**

- A micro-economic analysis of urban growth factors revealed clearly that (1) a small group of factors are determining the costs and benefits of metropolitan size and that (2) metropolitan power functions as well as polycentricity do have a positive impact on metropolitan size. In other words, metropolitan functions and polycentricity have a decisive positive impact on demographic growth of metropolitan areas and not just of the core cities, whereas trends of urban sprawl were identified as having a negative impact.



- The five metropolises show different polycentric preconditions in morphological and functional terms. Therefore polycentric preconditions play different roles for metropolitan growth in the five metropolises.
- Less developed polycentric structures in the metropolitan regions of Budapest, Praha and Wien go along with findings on urban sprawl as a risk and potential cost factor. Hence a lack of polycentric development will negatively influence further demographic or economic growth. However, it is not evident that this risk can also be regarded as a barrier for the establishment of further metropolitan functions.
- Different strategic approaches to strengthen polycentric development in the five metropolitan functional agglomerations are in place. The quality of infrastructure and transport organisation differs due to varying institutional settings and concomitant approaches to inter-municipal collaboration. Moreover, it may be assumed that the improvement of infrastructure (in particular of public transport systems) is not of equal importance for all five metropolises.

### **Metropolitan profiles indicating challenges and opportunities of smart metropolitan development**

- Metropolitan profiles were elaborated to highlight differences and similarities between the metropolises. This approach allows for the comparison of one metropolis with selected others as well as for the comparison with the 'average metropolis'. Metropolitan profiles were developed on the aggregate level of five development characteristics with underlying factors that are in their turn defined by groups of relevant indicators.
- Differences between metropolitan profiles are also readily observable in a comparison of the five POLYCE metropolises. They indicate (1) that processes of urbanisation, economic restructuring, socio-demographic change and metropolisation are having different effects on the metropolitan level and that (2) high quality of living characterises all of them. At the same time, there is a clear specialisation in other fields of metropolitan development, indicating specific assets for positioning and future strategic endeavours. Underlying factor values show convincingly that the metropolises differ in their competitive and social inclusion features.
- Strengths and weaknesses in the various fields of urban development were discussed with stakeholders in order to identify possible future perspectives of smart development. These discussions revealed that smart metropolitan development must be actively supported by suitable measures and activities. The differentiated agendas for the five metropolises demonstrate the comprehensiveness of this discussion and finally its importance for strengthening competitive and inclusive development. Very specific bundles of activities (agendas) were elaborated for the five metropolises with the objective of steering and strengthening smart, territorially cohesive development.

## **8.2 Strategic Recommendations**

### **8.2.1 Strategic endeavours supporting smart metropolitan positioning and growth of the five metropolises**

**A metropolitan agenda should be based on the delimitation of a metropolitan area and its metropolitan region according to their morphological and functional polycentricity. The empirical study for the five cases showed that no adequate approach has been defined yet, which was deemed acceptable from neither an analytical nor a strategic point of view. Future empirical research as well as strategic endeavours should concentrate on these spatial entities.**

- A new approach to bridge deficits in existing approaches delimitating metropolitan entities was elaborated by the POLYCE team. It is based on distinct important approaches of former ESPON studies and at the same time makes use of more recent data and a clearer understanding of spatial metropolitan development.

**The importance of polycentric development within metropolitan regions and functional metropolitan areas should be put forward in strategic discussions and relevant endeavours based on identified deficits. In order to apply for financial support in an effective manner, cities with their respective stakeholders should aim at a redefinition of programme areas in the forthcoming financing period.**

- Empirical evidence shows more or less polycentric structures in the five metropolitan regions, but to a different extent and with differentiated meaning (morphological, functional). Hence preconditions for metropolitan development and its steering possibilities differ greatly. In order to strengthen inclusive development, a more polycentric approach must be discussed in greater detail and in a place-specific manner. No uniform recommendation is possible. However, in all five cases it was emphasised that polycentric approaches and respective activities for urban-regional cooperation have to be comprehensively developed. In the case of Wien, this was viewed as less urgent because of already existing specific approaches for urban-regional cooperation.
- With regard to relational polycentricity at the micro (intra-regional) level, the development of networks between the core cities and their surrounding areas can be financially supported by existing “Convergence” or “Regional Competitiveness and Employment” objective programmes. In some cases, however, programme areas do not correspond to Functional Metropolitan Areas or even Metropolitan Regions, which might prove a serious obstacle for many integrative initiatives. In recognising this fact, the cities should reconsider the spatial delimitations of the programme areas in the forthcoming financing period and assign greater importance to functional relations than to administrative borders.

**A basic agenda consisting of strategic endeavours and activities steering the process of metropolisation and polycentric development in the metropolitan region as elaborated above is a precondition for territorially cohesive development. The five metropolises need an evidence-based strategy that is tailored to their specific conditions of growth, existing assets and identified potentials. Stakeholders and researchers should collaborate in continuous fashion by discussing research findings and recent trends from their respective analytical and socio-political perspectives.**

- Research findings show that the preconditions for metropolitan growth as well as the process of urban restructuring leading to specific profiles are rather different for the five metropolises when viewed in comparison, expressing specific conditions of metropolitan development in the context of growing competition.
- Discussions with stakeholders revealed that opinions differ in some crucial aspects, yet without any clear understanding of these aspects so far. Hence the need for intensified collaboration in order to elaborate a strategic agenda for smart metropolitan development that balances competitiveness and social inclusion within each metropolitan region is very obvious.

**Metropolitan agendas need to be place-based and must encompass not only the core city but at the very least the respective functional metropolitan area or even the metropolitan region as well. These agendas seem necessary in order to take into account relevant strategic endeavours towards competitiveness and inclusion across the whole territory.**

Strategic discussions and recent approaches are rather different across the five metropolises. Through its strong administrative-political position as a federal province in its own right, Wien has already initiated multifaceted traditional planning as well as strategic initiatives aiming to steer metropolitan

development or to position itself in a European context. At the same time, stakeholders from the remaining metropolises emphasise a more or less obvious necessity of strategic efforts for discussing and implementing polycentric development in the respective metropolitan regions.

### **8.2.2 Strategic endeavours for polycentric development in the CED-zone as part of the Danube Region**

**The relational capital between stakeholders (planners, stakeholders in culture, city marketing, tourism management and others) should be strengthened through improved conditions for cooperation and the development of common objectives (vision). Cities should start to organise meetings in the form of workshops and small conferences of interested metropolises (Central Europe, Danube Region), thereby providing opportunities for cooperative initiatives and empowering academic or strategic networks.**

- Very obviously, some specific proposals are less related to concrete multilateral activities to implement functional relations in the economic sphere but emphasise the necessity to improve the relational capital (language, new administrative or strategic capacities) between actors from the five stakeholder metropolises: this includes (1) improving contacts and accessibility to information, (2) transforming information into valuable knowledge about partner cities as an output of continuous and systematic contact channels, (3) producing a broader basis of fact and (4) improving the common interests of partners in the CED-zone within the wider Danube Region.

**Information exchange deficits should be tackled through more structured elaboration and exchange of information on metropolitan development and corresponding activities at the micro, meso and macro levels. Possibilities for common strategic discussions should be created and activities for better positioning and lobbying effectively supported.**

- Empirical results showed that functional and strategic polycentricity (as a support of territorial cohesion in the CED-zone) is not yet on top of the agenda of stakeholders. In particular, the improvement of accessibility through infrastructure investments should feature more prominently on the agenda of the five metropolises and be directed towards the TEN policy priorities (corridor definitions and respective planned activities at the European level).
- Discussions even showed that different focuses and strategic activities are regarded as highly important. All metropolises view themselves as prime centres or hubs in their own geographical contexts vis-à-vis outside neighbouring regions and countries. Not surprisingly, metropolitan profiles show strong differentiation as a productive starting-point for further efforts for positioning. Obviously, territorially cohesive development within the CED-zone calls for new and more strategic endeavours than activities merely improving accessibility through infrastructure investments.

**Bilateral strategic activities should be fostered in a multifaceted way. In particular, metropolises should activate and enforce their links to other medium-sized cities in order to strengthen the city network in Central Europe but even in the European context.**

- Strategic efforts should concentrate on a more specialised cooperative approach between Bratislava and Wien because of their geographical situation, which has already led to manifold relations but only to few common strategic activities in the framework of, or in addition to, the Centrope initiative. Other strategic activities mentioned will not necessarily include all five metropolises but may rather be limited to bilateral collaboration. The purpose and challenges of the Centrope region must be pinpointed to be able to discuss relevant challenges of this metropolisation process. In the course of this discussion,

the advantages and challenges of a polycentric network-based approach to cohesive development have to be identified and further medium-sized cities like Brno, Győr, etc. included into this approach. Empowering these medium-sized or even small cities through capacity building is a precondition because larger cities would otherwise be dominating this process, thereby endangering the idea of polycentricity and cohesion.

- From a more general perspective, the tight historical, social and economic ties between the five metropolises could be a proper base for further cooperation between public institutions, society and private businesses. These relations can be extended and deepened by various cross-border networking projects, which could well be subsidised under existing EU Regional Policy programmes: in the current period (2007-2013), the programmes under the 'European Territorial Cooperation' (ETC) objective can still be exploited for feasible cooperative initiatives. Since the majority of existing cross-border cooperation programmes do not cover the capital regions, the development of bilateral relations might be supported by the interregional co-operation programme, which aims at fostering all kinds of city networks. In that context, the URBACT II programme, which is especially directed at the exchange of information between cities, should be considered. Furthermore, the CENTRAL EUROPE transnational cooperation programme, which covers not only the five cities but also their hinterlands, could be a suitable platform for cooperation projects addressing all relevant issues. Since the programme area also includes Poland, eastern and southern parts of Germany and northern Italy, this programme places the POLYCE cities in a wider spatial context by connecting them to cities such as Berlin, Warsaw, Munich and Milan, which are highly relevant partners for the POLYCE region. Therefore the five cities and their national governments should seriously aim at maintaining and strengthening the CENTRAL EUROPE cooperation programme in the forthcoming financing period and try to act as the core of this dynamic region.

#### **Cooperative activities of the five metropolises should serve as good practices for strategic projects together with other metropolises in the Danube Region.**

- Strategic activities should be based on the EUSDR (EU Strategy for the Danube Region) starting from the five metropolises as part of the Danube Region. Obviously, a promising and stimulating attitude of the five to act as important drivers and initiators of specific development issues is already in place. However, the five stakeholder cities see their responsibility as embracing a wider European Danube Region context.
- For instance, capacity building is already a main topic of Ljubljana and Wien under the Strategy for the Danube Region. However, this should be reinforced as an example and starting-point for further activities involving other cities and metropolises like Belgrade.

## **8.3 Options for Further Research**

### **8.3.1 Data limitations**

The results presented above and in the Scientific Report indicate that empirical research in specific fields of metropolisation and polycentricity is constrained by the lack of relevant data. These data limitations are an obstacle for tackling some of the questions of this project empirically.

- **Availability of cross-border relational data:** data availability as the basis for empirically analysing relational polycentricity is rather poor. There is no sufficient source of information on capital flows (e.g. Foreign Direct Investments), migration (at the regional level) or the transport of goods. The data used in this field of research (GaWC, CORDIS, Google) may be

considered ambitious efforts to define proxies but are far from providing a comprehensive picture of inter-urban relations and do not seriously allow making significant statements on changes over time.

- **Intra-metropolitan scale of metropolisation and polycentricity:** here the availability of reliable data is much better due to national data sources. Therefore numerous relevant indicators describing the regional conditions can be defined at the micro level. The problem, however, lies in the different survey methods of these data, which partly limits their comparability.
- **Harmonisation of databases:** a fundamental step toward harmonising metropolitan data from different sources has already been taken by EUROSTAT in launching the Urban Audit database and organising data in the ESPON database. These efforts should be continued by defining general guidelines for data collection, preparation and presentation, which should be applied to all further activities of data production and collection.
- **Harmonisation of territorial concepts:** harmonising the existing territorial concepts used by Urban Audit and in different ESPON projects is urgent to make data comparable. The goal of these efforts should not only consist in improving data availability for further research but especially in preparing a suitable source of information that can easily be accessed by stakeholders, decision-makers, investors or other relevant actors. The HyperAtlas, which is based on the multi-scalar territorial analysis concept, can be seen as a promising example of such an analytical tool allowing metropolitan actors to obtain comparable information on their city/region on different spatial scales.

### 8.3.2 Issues of further research

Due to the abovementioned data limitations and the limited timeframe of the present Targeted Analysis, many questions could only be tackled on a superficial level, which means that there are still many remaining potential activities for future research.

First, the issue of relational polycentricity on all spatial scales needs further investigation. The description and analysis of all kinds of flows, cooperation ventures and networks both between the five POLYCE cities and with other European or global cities can definitely be extended and deepened in order to explore existing social and economic ties and obtain evidence on driving forces and mutual interrelations. In this context, the question of the relative importance of the POLYCE network in comparison with other networks should be approached in greater detail: as long as relations with the other POLYCE cities play a rather negligible role, the idea of fostering an integrated region must be basically called into question.

It was ascertained during the implementation of the project that medium-sized cities seem to be an important connecting element of the Central European metropolises analysed within the scope of this research. The assumption is that they might play an important role concerning territorial cohesion, particularly when related to concepts of polycentricity. Therefore an in-depth research of the role of medium-sized cities as supporters or even as the foundation of polycentric European urban networks is suggested.

Regarding the delimitation of metropolitan areas, more sophisticated methods could be applied to measure morphological structure and functional relations within metropolitan regions: the spatial distribution of population and employment on the one hand and the analysis of commuter flows on the other hand could presumably be extended to other factors so as to obtain a more stable picture of functionally integrated metropolitan areas and regions. Additionally, the indicators used in the metropolitan profiles should be more oriented towards 'soft' location factors (e.g. cooperative networks, governance approaches, relational capital), which go far beyond traditional economic or demographic conditions.

The role of the city administrations as project partners should be defined more precisely from the outset, as it has not always been clear to what degree they are obliged to provide the research group with institutional information, organisational support or empirical data. Furthermore, the participation of non-governmental organisations or institutions should be intensified to gain access to a broader range of opinions, goals and interests in the whole process. In this context, a trade-off between the scope and depth of research could be discussed: although extending the investigation to more participating cities would reduce the accuracy of the results, it would improve the comparative aspect of the research.

Time pressure was a general problematic factor in conducting this research. This point is even weightier when processes integrating a variety of local stakeholders are a methodological precondition. As is widely acknowledged, implementing such governance approaches is a long-term and therefore time-consuming task. In that sense, targeted analyses would need far more time if integrative approaches are to be prevented from routinely failing to go into sufficient depth.

## 9 Figures

<b>Figure 1</b>	Understanding smart metropolitan development .....	13
<b>Figure 2</b>	Profiles of the five POLYCE metropolises .....	19
<b>Figure 3</b>	Preconditions for further urban growth in POLYCE metropolises .....	20
<b>Figure 4</b>	Scales of polycentricity .....	72
<b>Figure 5</b>	Ratio of jobs to population in POLYCE metropolitan regions.....	77
<b>Figure 6</b>	Marginal costs and benefits for city size.....	82
<b>Figure 7</b>	Profiles of the five POLYCE metropolises .....	86
<b>Figure 8</b>	Profile of Bratislava metropolis (factor level) .....	90
<b>Figure 9</b>	Profile of Budapest metropolis (factor level).....	94
<b>Figure 10</b>	Profile of Ljubljana metropolis (factor level) .....	100
<b>Figure 11</b>	Profile of Praha metropolis (factor level) .....	104
<b>Figure 12</b>	Profile of Wien metropolis (factor level) .....	110
<b>Figure 13</b>	Metropolitan agenda Bratislava: activities, actors, implications .....	115
<b>Figure 14</b>	Metropolitan agenda Budapest: activities, actors, implications .....	116
<b>Figure 15</b>	Metropolitan agenda Ljubljana: activities, actors, implications .....	118
<b>Figure 16</b>	Metropolitan agenda Praha: activities, actors, implications .....	119
<b>Figure 17</b>	Metropolitan agenda Wien: activities, actors, implications .....	121
<b>Figure 18</b>	Central European agenda: aims, activities, actors, implications .....	128

## 10 Maps

<b>Map 1</b>	Research networks between POLYCE metropolises (2001-2010) .....	18
<b>Map 2</b>	Metropolitan territory of the POLYCE capital cities .....	75
<b>Map 3</b>	Potential population change in EU metropolitan areas.....	83
<b>Map 4</b>	Commuter flows between job centres in the Bratislava metropolitan region .....	91
<b>Map 5</b>	Commuter flows between job centres in the Budapest metropolitan region.....	96
<b>Map 6</b>	Commuter flows between job centres in the Ljubljana metropolitan region .....	101
<b>Map 7</b>	Commuter flows between job centres in the Praha metropolitan region.....	106
<b>Map 8</b>	Commuter flows between job centres in the Wien metropolitan region .....	112



# 11 Annexes

## 11.1 Metropolitan Profiles: Underlying Structure

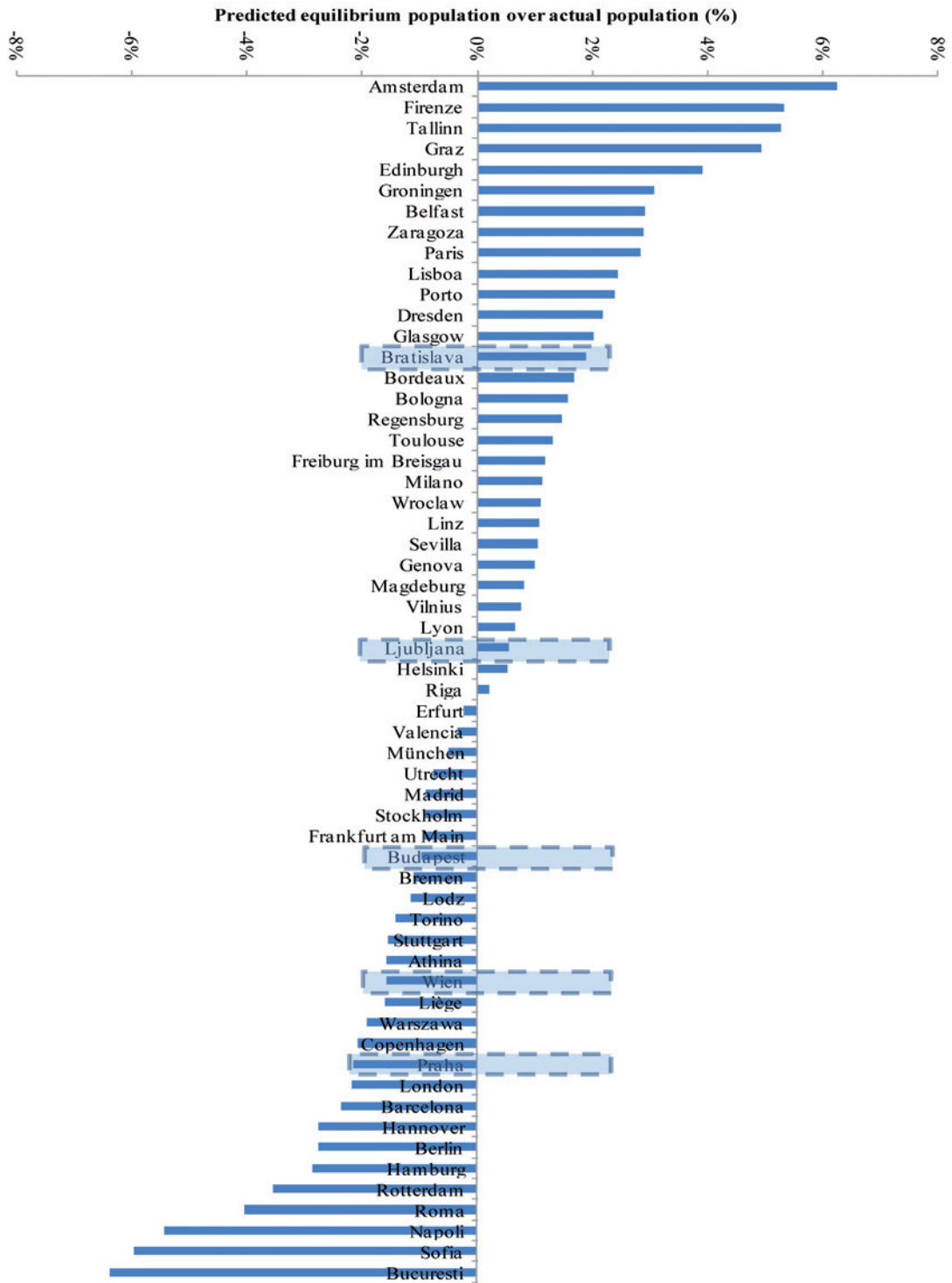
	FACTORS	INDICATORS	spatial level	data source
ECONOMY	Economic Performance	GDP (PPS) per capita	regional	FOCI/Eurostat
		Difference between GDP (PPS) per capita according to EU average	regional	FOCI/Eurostat
		Difference between GDP (PPS) per capita according to EU average 1995-2006	regional	FOCI/Eurostat
		Total GVA of LUZ	regional	FOCI/Eurostat
		Total GVA per capita in LUZ	regional	FOCI/Eurostat
		GVA NACE (J-K) in total GVA (%)	regional	FOCI/Eurostat
		Disposable income	regional	ATTREG/Eurostat
	Entrepreneurship	New businesses registered	local	UA
		Companies gone bankrupt	local	UA
		Companies with HQ in the city quoted on stock market	local	UA
		Number of congresses held in region	regional	ATTREG/ICCA
		Private sector employment	regional	ATTREG/Eurostat
		Self employed	regional	FOCI/Eurostat
	Knowledge-based Economy	R&D expenditure of GDP	regional	FOCI/Eurostat
		Scientific and technical employment	regional	FOCI/Eurostat
		Creative class	regional	ATTREG/Labour Force Survey
		Patent applications	regional	EUROSTAT
	Labor Market	Unemployment rate in LUZ	regional	FOCI/Eurostat
		Unemployment rate LUZ/national	regional	FOCI
		Public sector employment	regional	ATTREG/Eurostat
		Perception to find a good job (survey)	local	FOCI/UA
		Difficulty paying the bills at the end of the month (survey)	local	FOCI/UA
	R&D Funding	ERDF funding	regional	ATTREG/Eurostat
		Regional policy funding	regional	ATTREG/Eurostat
	International Embeddedness	Number of headquarters of transnational firms	regional	FOCI/ORBES
		Foreign subsidiaries owned by HQ located in MEGA	MEGA	FOCI/ORBIS
		Foreign subsidiaries owned by HQ located in MEGA (%)	MEGA	FOCI/ORBIS
	Structural Disparities	Change of disparities in the development level between the metropolis and its region	regional	FOCI
		A synthetic view of the structural differences between the metropolis and the region for the three principal sectors.	regional	FOCI
		Structural similarity changes in metropolis-region	regional	FOCI

	FACTORS	INDICATORS	spatial level	data source
PEOPLE	Demography	Population of LUZ	local	FOCI/UA
		Population density of LUZ	local	FOCI/UA
		Average growth of LUZ	local	FOCI/UA
		Life expectancy	regional	ATTREG/Eurostat
		Elderly population in LUZ	local	UA
		Demographic dependency: (<20 + >65) / 20-64 in LUZ	local	FOCI/UA
		One-person households in LUZ	local	UA
		Net in-migration rate	regional	ATTREG/DEMIFER
	Education	Active population with tertiary diploma in LUZ	regional	FOCI/EUROSTAT
		Population qualified at levels 5-6 ISCED in region	regional	ATTREG/Eurostat
		Students at universities in CC	local	UA
		Students at universities in region among 15-24 age groups	regional	ATTREG/Eurostat
		Participation in life-long-learning	regional	EUROSTAT
	Ethnic Diversity	EU nationals	local	FOCI/UA
		Non-EU nationals	local	UA
		Erasmus students	regional	ATTREG
Foreigner here are well integrated (survey)		local	FOCI/UA	
MOBILITY	Public Transport	Public transport network per inhabitant	local	UA
		Public transport ticket	local	UA
		Satisfaction with public transport (survey)	local	FOCI/UA
	Commuting	Inbound/outbound commuters per inhabitant	local	UA
		Journey to work by car in CC	local	UA
		Register cars in LUZ	local	UA
		Time of journey to work in CC	local	UA
		Road accidents	local	UA
	International Accessibility	Potential ESPON accessibility	regional	ESPON 1.2.1
		Accessibility of MEGA	MEGA	FOCI/OAG
		Air transport of passengers	regional	EUROSTAT
		Air transport of freight	regional	EUROSTAT
	Availability of ICT	Households with Internet access (at home)	regional	EUROSTAT
		Households with broadband access	regional	EUROSTAT
		Satisfaction with public internet access	local	FOCI/UA
Satisfaction with internet access (at home)		local	FOCI/UA	

	FACTORS	INDICATORS	spatial level	data source
ENVIRONMENT	Land Use	Land area of LUZ	local	FOCI/UA/EEA
		Total area of CC divided by total area of LUZ	local	FOCI/UA/EEA
		Share of built-up area of LUZ	local	FOCI/UA/EEA
		Increase of built-up areas in LUZ 1990-2000	local	FOCI/UA/EEA
		Increase of built-up areas in LUZ 2000-2006	local	FOCI/UA/EEA
		Growth rate of residential areas in LUZ 1990-2000	local	FOCI/UA/EEA
		Growth rate of residential areas in the LUZ 2000-2006	local	FOCI/UA/EEA
		Share of new industrial, commercial and transport in new built-up areas in LUZ 1990-2000	local	FOCI/UA/EEA
		Share of new industrial, commercial and transport in new built-up areas in LUZ 2000-2006	local	FOCI/UA/EEA
	Sealed area per inhabitant in CC	local	FOCI/UA/EEA	
	Environmental Conditions	Sunshine	local	UA
		Rainy days	local	UA
		Cold temperature	local	UA
		Warm temperature	local	UA
		Tourism Climatic index in warm months	regional	ATTREG
	Pollution	Summer smog	local	UA
		Particulate matter	local	UA
		Fatal chronic lower respiratory diseases	regional	EUROSTAT
	Resource Consumption	Consumption of water	local	UA
		Collected solid waste	local	UA
		Regional generation / treatment of municipal waste pc	regional	EUROSTAT
		Green space	local	UA
		NATURA 2000	regional	ATTREG/EEA
	Environmental Quality	Resources are spent in a responsible way (survey)	local	FOCI/UA
		This is a clean city (survey)	local	FOCI/UA
		Air pollution is a big problem here (survey)	local	FOCI/UA
		Noise is a big problem here (survey)	local	FOCI/UA
		Satisfied with green space (survey)	local	FOCI/UA

	FACTORS	INDICATORS	spatial level	data source
LIVING	Cultural Facilities	Cinema attendance	local	UA
		Cinema capacities	local	UA
		Museums	local	UA
		Museums visits	local	UA
		Theatres	local	UA
		Theatre attendance	local	UA
	Health Facilities	Hospital beds in CC	local	UA
		Hospital beds in region	regional	ATTREG
		Doctors	regional	ATTREG/Eurostat
		Number of hospital discharges of in-patients per capita	local	UA
	Housing	Average living area per person in LUZ	local	UA
		Owner-occupied dwellings in CC	local	UA
		Owner-occupied dwellings in LUZ	local	UA
	Touristic Attractivity	Tourist overnights	regional	ATTREG/Eurostat
		Foreign overnights in hotels	regional	ATTREG/Eurostat
		Non-resident arrivals	regional	ATTREG/Eurostat
		Tourist overnights in CC	local	UA
		Monuments and tourist sights	regional	ATTREG/TCI
	Safety	Crime rate per inhabitant	local	UA
		Car thefts	local	UA
		Homicides	local	FOCI/UA
		Suicides	local	FOCI/UA
	Urban Services	Satisfied with hospitals (survey)	local	FOCI/UA
		Satisfied with doctors (survey)	local	FOCI/UA
		Satisfied with cinemas (survey)	local	FOCI/UA
		Satisfied with cultural facilities (survey)	local	FOCI/UA
		Easy to find good housing at reasonable price (survey)	local	FOCI/UA
		Satisfied with schools (survey)	local	FOCI/UA
		Feel safe in this city (survey)	local	FOCI/UA
		Satisfied with sport facilities (survey)	local	FOCI/UA
Satisfied to live in this city (survey)		local	FOCI/UA	
<i>synthetic indicator of satisfaction</i>	local	FOCI/UA		

## 11.2 Equilibrium Size of Metropolises





# POLYCE Final Conference

June 1st, 2012

Vienna University of Technology

## AGENDA

12.00	<b>Start of Final Conference</b> Moderation: <b>Sibylla Zech</b>	14.30–15.00	Coffee Break
12.00–13.00	Reception of Guests & Buffet	15.00	<b>Plenary Discussion</b>
13.00	<b>Opening Session</b>	15.00–16.15	<b>Recommendations for Smart Central European Metropolises – lessons learned</b> <b>Milan Turba</b> , City of Prague <b>Eva Balašová</b> , City of Bratislava <b>Ivan Stanič</b> , City of Ljubljana <b>Kurt Mittringer</b> , City of Vienna <b>Žaklina Gligorijević</b> , City of Belgrade  Open Discussion
13.00–13.15	<b>Welcome speech</b> <b>Rüdiger Maresch</b> , Member of the Vienna city council	16.15–16.30	<b>Perspectives to the Future</b> <b>Kurt Mittringer</b> , Municipal Planning Department, City of Vienna <b>Žaklina Gligorijević</b> , Urban Planning Department, City of Belgrade <b>Rudolf Giffinger</b> , POLYCE project leader, Vienna University of Technology <b>Michaela Gensheimer</b> , ESPON representative, Luxembourg
13.15–13.30	<b>How can cities and regions profit from ESPON?</b> <b>Michaela Gensheimer</b> , ESPON representative, Luxembourg	16.30	End & Networking
13.30–14.30	<b>Metropolitan development in Central Europe – idea, targets and outcomes of the POLYCE project</b> <b>Rudolf Giffinger</b> , Vienna University of Technology <b>Nataša Pichler-Milanovic</b> , University of Ljubljana <b>Ludek Sykora</b> , Charles University in Prague  Questions & answers		

## Wien: Humankapital liegt brach

Studie vergleicht fünf zentraleuropäische Städte

Gudrun Springer

Wien – Wiens größte Stärke: Die Lebensqualität, gefolgt von Fragen der Mobilität (Erreichbarkeit der Stadt, Zufriedenheit mit Öffis). Im Bereich Humankapital schöpft die Hauptstadt ihr Potenzial dagegen nicht aus: Bei Bildung und Integration hapert es. Jetzt gibt es eine Studie, die sich die Bereiche Mobilität, Umwelt, Humankapital, Wirtschaft und Lebensqualität auch in Bratislava, Budapest, Ljubljana und Prag angesehen hat und diese vergleicht. Stadt- und Regionalforscher Rudolf Giffinger präsentierte am Freitag mit Städtetevertretern die Ergebnisse des Projekts, deren Leitung die TU Wien innegehabt hat.

Mittels Befragungen und in Workshops mit Akteuren der Raumplanung, Politik und Medien wurde untersucht, wo die Stärken und Schwächen der Ballungsräume liegen. Wien schnitt von den fünf zentraleuropäischen Städten am besten ab: Im Ranking der 50 europäischen Städte belegt es Rang 11 (Amsterdam hat die

besten Werte, Schlusslicht ist Sofia). Prag hat ähnliche Werte wie Wien, steht nur bei Umweltschutz und Mobilität etwas weniger gut da. Knapp unter dem europäischen Mittelwert liegt Bratislava, das aber vor allem im Bereich Humankapital punkten kann, z. B. wegen seiner Gesundheitsversorgung und der Beliebtheit bei Touristen. Der Wert wäre noch besser, wenn mehr in Kultur investiert würde und die Zahl leistbarer Wohnangebote größer wäre.

Ljubljana steht in dem Ranking ein paar Ränge vor Budapest, das im 50-Städte-Vergleich Rang 43 einnimmt. Von den fünf untersuchten Kommunen fehlten am Freitag in Wien nur Vertreter aus Ungarn. „Das hat mich am meisten überrascht“, resümierte Vladimír Schmalz von der Stadtverwaltung Prag. Sein slowakischer Kollege Michal Muránsky meinte, er habe nicht damit gerechnet, dass man so aussagekräftige Daten erhalten werde. Künftig sollen die Städte mehr kooperieren, lautete der Tenor der Veranstaltung. Wie, war aber noch unklar.

### In Kürze: Termine

#### Nachbarmetropolen in Wien im Gespräch

Bratislava, Budapest, Ljubljana, Prag und Wien haben vor zwei Jahren das Forschungsprojekt namens „Poly-CE“ gestartet – ein Metropolentwicklungsjahr, das die strategische Position der fünf Städte innerhalb Europas und ihre Synergien untersucht. Zudem werden unterschiedliche Pfade der Metropolentwicklung aufgezeigt. Ein internationales Konsortium von zentraleuropäischen Universitäten lieferte dazu die Grundlage, die Leitung übernahm die TU Wien, die am 1. Juni auch Schauplatz der Abschlusskonferenz sein wird. Zahlreiche Wissenschaftler, Politiker, Stakeholder

und Experten nehmen an den Diskussionen teil.

WEITERE INFORMATIONEN UNTER  
[www.polyce.eu](http://www.polyce.eu)

#### Wiener Städtebauprojekte in München zu sehen

Wie ambitioniert die Wiener an ihrer Stadt bauen, welche Zukunftsszenarien hier Thema sind und welche Geschichte dahintersteht, wird aktuell bei einer großen Ausstellung im Münchner PlanTreff gezeigt. Im Mittelpunkt von „Stadt bauen. Beispiele für und aus Wien“ steht die Seestadt Aspern. Wien stellt sich dabei auch Beispielen aus Hamburg, Stockholm, Malmö und München selbst.

WEITERE INFORMATIONEN UNTER  
[www.muenchen.de/plantreff](http://www.muenchen.de/plantreff)

Announcement: Die Presse, May 30, 2012, Page 6f

Article Der Standard, Sat/Sun, June 2/3, 2012, Page 12

# Conference Participants

- Peter Bahleda** Institute of Management of the STU in Bratislava  
**Karol Balas** SB PARTNERS, s.r.o., Slovakia  
**Eva Balašová** Bratislava City Hall  
**Pál Baross** City of Budapest  
**Valerie Batiajew**  
**Niklaas Baudet von Gersdorff**  
**Lajos Boros** Budapest  
**Ewa Ciecierska** University of Vienna  
**Anne Deichsel**  
**Christiane Demcisin**  
**Tobias Dietrich** Wirtschaftsagentur Wien  
**Marek Dinka** Magistrát hlavného mesta SR Bratislavy  
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**Christina Lengauer**  
**Wolfgang Loibl** AIT Austrian Institute of Technology GmbH  
**Karel Maier** Czech Technical University in Prague, Faculty of Architecture  
**Rüdiger Maresch** Vorsitzender des Ausschusses für Stadtentwicklung, Verkehr, Klimaschutz, Energieplanung und BürgerInnenbeteiligung, Wien  
**Karin Markvica**  
**Peter Mayerhofer** WIFO – Austrian Institute of Economic Research  
**Christina Miller**  
**Josef Morkus** City Development Authority Prague  
**Ondřej Mulíček** Masaryk University in Brno, Faculty of Science  
**Michal Muránsky** Vorsitzender des Komitees für Stadtentwicklung, Stadtverwaltung Bratislava  
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**Tibor Schlosser** City of Bratislava  
**Vladimír Schmalz** Vorsitzender des Komitees für Stadtentwicklung, Stadtverwaltung Prag  
**Karin Schmidt** Projektleiterin des Schulprojektes Hauptbahnhof Wien  
**Claudio Schön**  
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**Michal Šourek** Prague's MSG Holding a.s  
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**Johannes Suitner** Vienna University of Technology, Center of Regional Science  
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**Denisa Zlatá** Slovak Governance Institute



# Impressions from the Final Conference

Luděk Sýkora  
(Charles University, Prague)



Rudolf Giffinger  
(Vienna University of Technology)



Iván Tosics  
(Metropolitan Research Institute,  
Budapest)



Audience



The political representatives of the polyce cities (left to right):  
Michal Muránsky (City of Bratislava), Miran Gajšek (City of Ljubljana),  
Rüdiger Maresch (City of Vienna), Vladimír Schmalz (City of Prague)

Panel discussion (left to right): Ivan Stanič (City of Ljubljana), Eva Balašová (City of Bratislava), Sibylla Zech (Vienna University of Technology), Milan Turba (City of Prague), Žaklina Gligorijević (City of Belgrade)



The polyce project team (left to right): Miha Konjar (University of Ljubljana), Marek Dinka (City of Bratislava), Justin Kadi (Vienna University of Technology), Christina Simon (Vienna University of Technology), Michal Muránsky (City of Bratislava), Anna Höller (ÖIR GmbH), Miran Gajšek (City of Ljubljana), Paul Grohmann (City of Vienna), Nataša Pichler-Milanović (University of Ljubljana), Rüdiger Maresch (City of Vienna), Johannes Suitner (Vienna University of Technology), Rudolf Giffinger (Vienna University of Technology), Vladimír Schmalz (City of Prague), Johannes Steiner (jost.con.sult)

Left to right: Michaela Gensheimer (ESPON Coordination Unit, Luxembourg), Rüdiger Maresch (City of Vienna), Sibylla Zech (Vienna University of Technology)

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