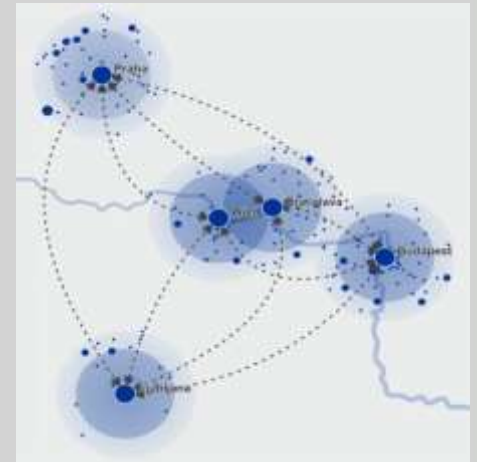# POLYCE - Metropolisation and polycentric Development in Central Europe

presented at
Urban Policy - Challenges, Experiences, Ideas
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Warsaw

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Objectives & Partners

1. **Relation between metropolisation and polycentric development**
2. **Practical knowledge**
3. **Recommendations for future urban development**

Transnational Project Group

- Vienna University of Technology
- University of Ljubljana
- Slovak University of Technology
- University of Szeged
- Czech Technical University in Prague
- Charles University in Prague
- Centre for Populations, Poverty and Public Policy Studies (CEPS)
- Politecnico di Milano

Lead Stakeholder: City of Wien
Department of Urban Development and Planning

City of Bratislava
Department for Spatial Systems Coordination

City of Ljubljana
Department of Spatial Planning

City of Praha
City Development Authority

City of Budapest
Studio Metropolitana Nonprofit Ltd.

Analytical Framework

Quantitative, indicator based research

- **Modelling urban size and metropolisation**
  - Cost & benefit functions regarding size (n = 59 metropolises)
- **Metropolitan profiles**
  - Characteristics describing urban development (n=50 metropolises)
  - Discussing their meaning as strengths and weaknesses
- **Polycentric structures:** Morphological & relational
  - Describing and assessing polycentric features

Qualitative perception based research

- **Actor survey**
  - Assessing urban development trends
- **5 workshops: discussion and expertise on thematic fields**
  - Elaborating perspectives, activities, metropolitan agendas
- **Comparison of agendas and planning documents**
  - Joint activities, programmes, cooperative activities
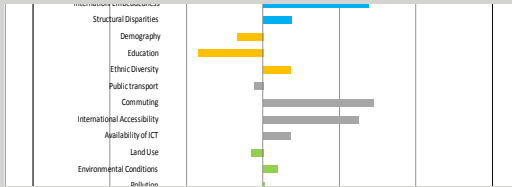
POLYCE Results: one year after

Polycentric development

- its meaning for urban size
- Understanding in context of metropolitan development
- the assets of 5 CE cities

Metropolitan and polycentric development

- A mutual relation?

Polycentricity and strategic efforts

- Between experiences and visions

Policy conclusions and recommendations

- A procesual logic on polycentric development
- Finding the balance: strategy versus illusion

Urban size and polycentric development
    Meaning of metropolitan and polycentric features on urban size

Polycentric and metropolitan development
    Polycentric features as assets
    Metropolitan profiles and characteristics as assets

    Elaborated by different groups of the POLYC-team

Urban size and metropolisation: findings

## Positive impact on European agglomerations

- Metropolitan power functions
- Micro-level polycentricity as an important precondition

Results for POLYCE metropolises

Preconditions indicating chances and risks for future growth

- Bratislava, Ljubljana: potential for further urban growth

- Wien, Praha: increasing risks through growth

New publication on this topic: Camagni, R., Capello, R. and Caragliu, A. (2012)

Preconditions for Future Urban Growth in POLYCE Metropolises
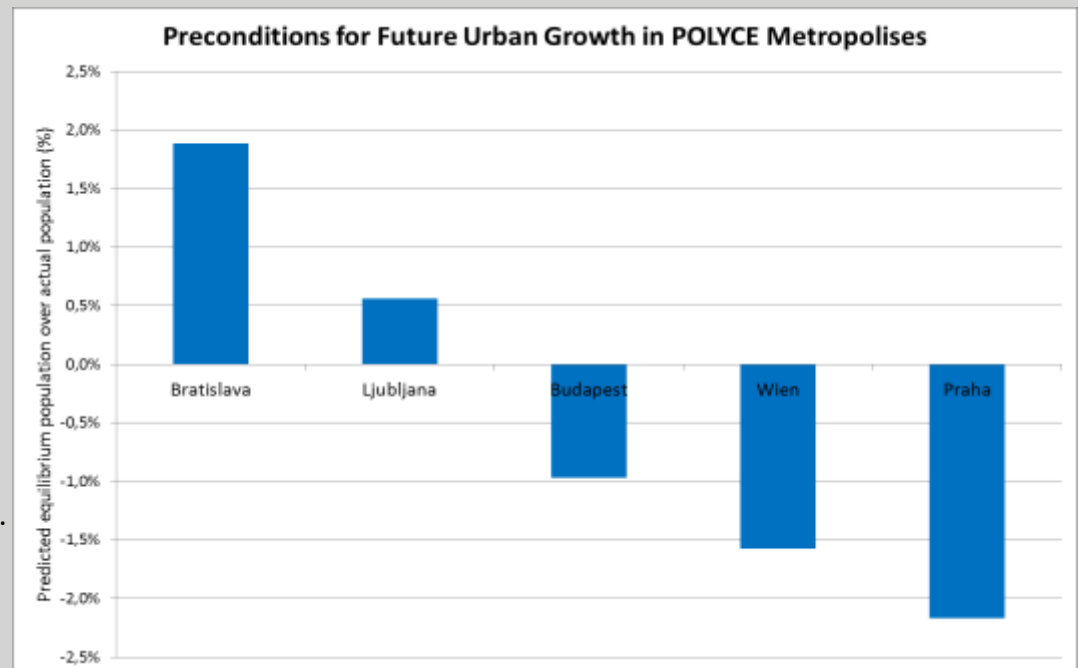
Understanding of polycentricity in context of metropolisation

Polycentric urban system

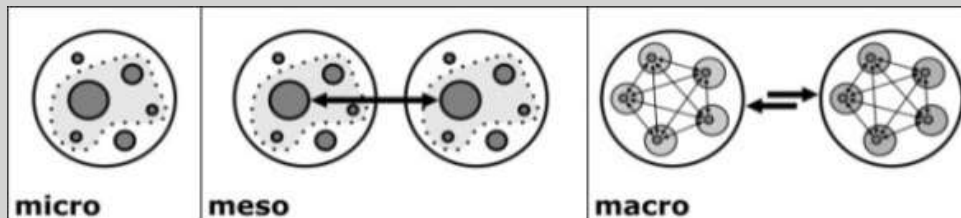Several urban nodes (=cities) linked through functional relations

Polycentricity in governance approaches

Enhancement of mutual interests, complementarities, synergies and potentials for collaboration

Morphological, functional and strategic relations

Intra-urban: micro level
Inter-urban: meso or macro level

Core City (CC)
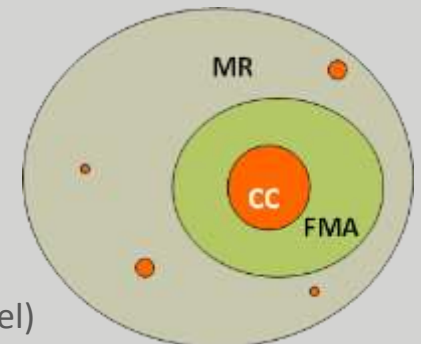Capital cities in their administrative delimitation

Functional Metropolitan Area (FMA)
Daily urban system (area of intensive commuting to work)

Metropolitan Region (MR)
Wider economic region reflecting the territorial networks of a city's economy (meso level)

p••lyce

Polycentric features as assets

- Unequal in morphological & functional polycentric development

- Predominantely, national command and control centers

- Metroplises as gateways

- Vienna, Prague and Budapest: competitors for business investments

- Vienna-Bratislava as an important core of CED-region improving the polycentric conditions

- Higher-ranked functions rather situated in Vienna than in Prague and Budapest

- Ljubljana as the remote outpost of the region (more connected to Mediterranian and Balkans)
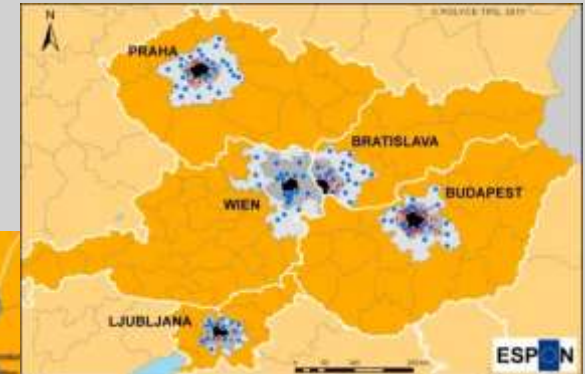
Metropolisation: profiles and benchmarking

Different aspects of the process
- Concentration of (new) economic functions and population
- Node in global networks
- Knowledge intensive economic activities
- Allocation of specialized functions as driving forces
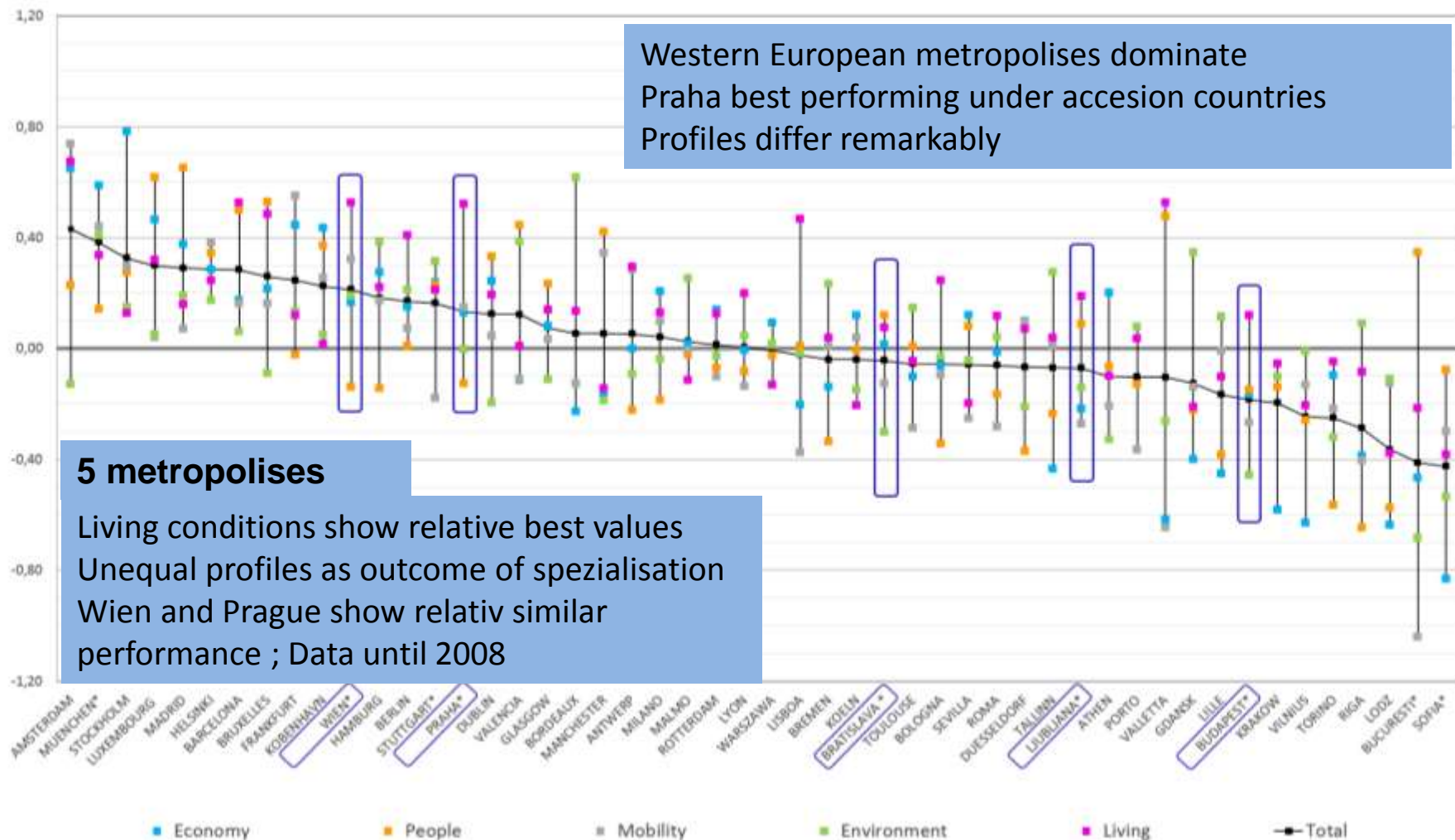→ Leading to similar characteristics?

Research questions:
- What do the metropolitan profiles of the five POLYCE metropolises look like? Are they similar or different/heterogeneous?

Details of empirical research
- 50 metropolises, 123 indicators → 25 factors → 5 key characteristics
- Data reflect the situation before year 2008

Metropolitan Profiles: benchmarking

Western European metropolises dominate
Praha best performing under accesion countries
Profiles differ remarkably

5 metropolises

Living conditions show relative best values
Unequal profiles as outcome of spezialisation
Wien and Prague show relativ similar
performance ; Data until 2008

Legend: Economy · People · Mobility · Environment · Living · Total

Metropolitan profiles: assets in a place based evidence

Results of 50 metropolises

- Top metropolitan profiles: *Amsterdam, Munich, Stockholm…..*

→ **Best and worst performing fields of urban development vary across metropolises**
→ **cities show individual or at least group specific profiles;**

Assets for 5 POLYCE metropolises

- There are differences between POLYCE metropolitan profiles- with some similarities : (i) Vienna / Prague, (ii) Bratislava / Ljubljana, (iii) Budapest;
- High quality of living characterizes all of them - a common asset

→ **a clear specialization in specific fields of metropolitan development, indicating specific assets**

Metropolitan and polycentric development
A mutual relation between characteristics and level of metropolitan and polycentric development?

Elaborated by Rudolf Giffinger, Johannes Suitner

Important features of metropolitan development

- Average population growth
- Share of active population with tertiary diploma:
- Number of HQs of transnational firms:
- Accessibility of metropolitan region

Types of metropolises

T1 - robust metropolises with good accessibility:

- Average population growth and number of HQs; very good accessibility
- *Amsterdam, Berlin, Bremen, Brussels, Cologne, Frankfurt, Hamburg, Lille, Manchester, Milan, Munich, Prague, Rome, Stuttgart, Vienna*

T2 - fast-growing, transforming metropolises with lack of accessibility:

- fast-growing highly-skilled population; below-average accessibility; disperse in terms of HQs; international integration not as advanced as for Type 1
- *Athens, Barcelona, Bordeaux, Copenhagen, Dublin, Helsinki, Luxembourg, Lyon, Madrid, Seville, Stockholm, Toulouse, Valencia, Warsaw*

T3 - poorly embedded metropolises, lagging in economic restructuring:

- below-average accessibility and HQs; population growth and human capital below Europ. average, but not significant
- *Cities: Bologna, Bratislava, Budapest, Gdansk, Krakow, Lisbon, Ljubljana, Lodz, Porto, Riga, Tallinn, Torino, Vilnius*

T4 - extreme case metropolis:

- extraordinarily high number of HQs; poor accessibility
- *Glasgow*

Exploring mutual relation: 3 types with polycentricity

Obviously and despite some general trends:

- metropolisation provides comparable cities classified in Types 1,2, and 3;

Comparing polycentric features for about 43 metropolises across the three types

- Distinct features of polycentric development show their selected importance for certain types;
- Polycentric preconditions on the micro-, meso- and macro level are only selective important factors influencing metropolitan development;

→ **a general trend and interrelation that would be significant across all types of metropolises could not be detected**

→ **Very obvious for micro- and macropolycentric development for 5 CE metropolises**

- on micro level between CC and region
  - type-1-cities: little disparities, type-3-cities: strong disparities
- On macro level relations/network between cities
  - type-1-cities promising preconditions; type-3-cities: strong deficits

Polycentric development and strategic efforts: perceptive-assessing
Indicator based place evidence
versus
stakeholders' perceptions and visions

Elaborated by POLYCE team

Stakeholders' perception of strategic endeavors

Polycentricity

- Competition between local authorities for business and infrastructure investments

- Vienna and Budapest: ambitions to play the role of a supranational center
- Vienna more outward West oriented, Budapest hub to South-East
- (unequal) lack of coordinated spatial planning at metropolitan level

→ **differentiated understanding and assessment for metropolitan development**

→ **from stakeholders' perspective: cities consider polycentric development through their function and position in different ways**

- Vienna and Bratislava are seen in a clear twin-city-situation
- stakeholders in Praha, Ljubljana and Budapest see the position of their metropolis in a specific geographic context → hub

→ **In general, a deficite of common polycentric vision and activities**

perceptive-assessing approach

Attitudes on strategic approaches to repositioning

- **Type 1**: **cohesive development activities in mind**
  - Prevailing infrastructural measures
  - Knowledge-based economy and growth management are most important metropolisation activities

- **Type 3**: **more competition-oriented attitudes**
  - Suggested activities indicate competitive behaviour
  - But, focused territory often is core city

Perception against place evidence

Confronting evidence with perceptive assessments of stakeholders

congruencies and discrepancies between activities suggested by stakeholders and indicator-based evidence on polycentric metropolitan development

Type 1

- In general, Agendas and evident structures converge rather well
- But, comparably well-integrated city-regions perceived as inhomogeneous
- Hence, micro and macro polycentric development: **already regarded as an asset to be enhanced**

Type 3

- Less convergence in Agendas and evident structures
- Although evidence shows relatively weak metropolitan assets, metropolisation is only partly regarded as challenge
- Potential of macro-polycentric development is not (yet) sufficiently perceived
- Micro-polycentric development perceived as essential, while meso- and macro-polycentric development is under-emphasized, **realistic vision but not realized**

Policy conclusions and recommendations

A procesual logic on polycentric development
Finding the balance: Illusion versus strategy as an asset

Elaborated by Rudolf Giffinger & Johannes Suitner

Conclusions in strategic perspective

Metropolitan size and its preconditions

→ **Even relatively well developed polycentric structures in the metropolitan regions of Praha and Wien go along with findings on urban sprawl as a risk and potential cost factor.**

→ **A lack of polycentric development in future will negatively influence metropolitan development through negativ external effects (costs)**

Metropolitan profiles and city types are indicating challenges and chances of metropolitan development

→ **Metropolitan Profiles , different types of metropolises and the stakeholders' discussion are identifying rather specific assets for positioning.**

→ **Hence, strategic endeavors should be differentiated according to place based or type specific evidence in order to avoid illusions**

Conclusions in strategic perspective

Type-1-cities Prague and Vienna

- Already show clear assets in micro and macro polycentric conditions

→ **Nontheless, stakeholders perceive future polycentric development more important than competitive metropolitan development**

→ **In front of recent growth, this perception is realistic, but remains probably an illusion if metropolis is not strengthened in its competitiveness and the allocation of metropolitan functions is not promoted in particular**

**Type-3-cities Bratislava, Budapest and Ljubljana**

- Already show specific assets in metropolitan features but not at all in micro and macro polycentric conditions

→ **Despite this weakness, stakeholders perceive polycentric development less important than future com-petitive metropolitan development**

→ **In front of deficits in recent development, this perception is realistic, but remains probably an illusion if polycentric development (micro and meso) are not promoted in addition**

Planning and policy challenge: a procesual view

Polycentric metropolitan development

- Intrinsic logic of the process

  - polycentric features have a certain meaning for metropolitan development

  - Hence, it needs realistic strategies integrating status of metropolitan and polycentric development in which existing assets and deficits are perceived as realistic as possible
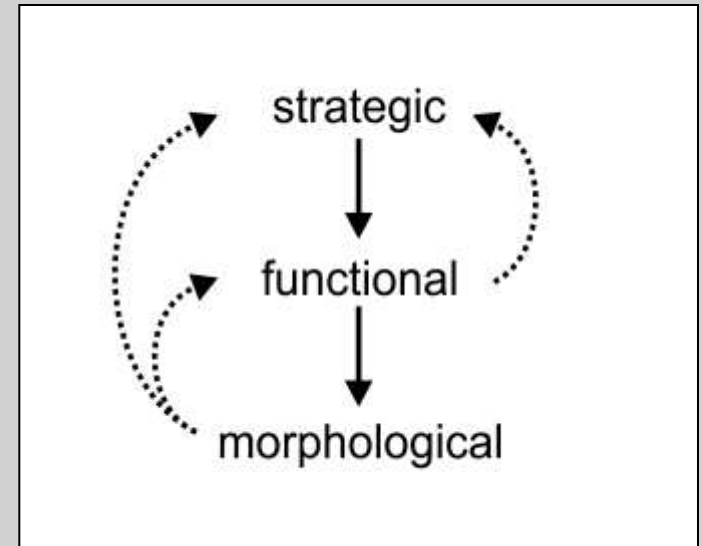
Policy-advice: need of place based approaches

→ **more place-based research and evidence-based strategy discussions are needed**

→ **No general policy and planning approach possible to foster all European metropolises for same outcome**

→ **Polycentric concepts (EU, national) should be adapted to certain city types in a place-based way**

Camagni, R., Capello, R., Caragliu, A. (2012). One or infinite optimal city sizes? In search of an equilibrium size for cities. In: *The Annals of Regional Science, DOI 10.1007/s00168-012-0548-7*, 21.12.2012

R. Giffinger, H. Kramar: "*European Smart Cities: City profiles supporting effective planning strategies*"; The Parliament Magazine, 360 (2012).

R. Giffinger, N. Pichler-Milanovic:
"*Le citta Europee di medie dimensioni in competizione per la crescita: smart, sostenibilli, inclusive?*"; Bimestrale di Informazione - Degli Architetti, Pianificatori, Paesaggisti, E Conservatori, Lombardi (eingeladen), Marzo - Aprile (2012), 488.

Kramar, H. and Kadi, J. (2013) Polycentric City Networks in CEE: existing concepts and empirical findings. In: Geographia Polonica (forthcoming)

Rudolf Giffinger and Johannes Suitner (2013) Identifying polycentric Structures of metropolitan Regions: Concepts, Methods and selected Findings. Paper presented at IRPET-seminar, 7th of June, 2013, FLORENCE; Italy. Publication forthcoming.

Many Thanks for Your Attention

Further information
http://www.interact-eu.net/danube_region_projects/polyce/327/5491
http://www.espon.eu/main/Menu_Projects/Menu_TargetedAnalyses/polyce.html
http://www.polyce.eu/