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# Aspern Explained: How the Discursive Institutionalisation of Infrastructure Planning Shaped North-Eastern Vienna's Urban Transformation

Astrid Krisch and Johannes Suitner

**Abstract:** This paper investigates planning and development processes of networked infrastructure systems from an institutional perspective. It applies theories of ASID (agency, structure, institutions, and discourse) and discursive institutionalism to unveil simplistic structure-agency imaginaries of infrastructure planning. The concept of discursive institutionalism puts emphasis on ideas that are discursively constructed by agents, forming the basis for collective action. This allows understanding of (1) the idealised structure of society, (2) the envisioned future city, and (3) the disciplinary self-conception of “good planning” as key intermediary instances of development and change. Through the case study of the Aspern area in north-eastern Vienna, the paper explores the origins of material urban transformations from cropland to strategic development site by focusing on the discursive institutionalisations of infrastructure planning since 1954. It points to institutionally stable phases of infrastructure planning as well as critical transitions in the planning system – all shaping Aspern’s subsequent development. Retracing this process through content analysis, interviews and archival research serves as an explanation to the multi-layered interdependencies of the entailing realisation of a small-scale urban development project. Herewith, the research contributes to a better understanding of the impact of planning discourse on urban development and the discursive institutionalisation of infrastructure planning.

## 1 Introduction

“Study a city and neglect its sewers and power supplies (as many have), and you miss essential aspects of distributional justice and planning power.” (Star 1999: 379)

Public perception of urban change is oftentimes biased by a simplistic conception of how the planning-development relation works.

Planning experts with comprehensive knowledge of current and future contextual structural influences instruct physical changes to the cityscape to solve pressing urban problems and adapt the city’s built environment and functional pattern to the challenges ahead. Taking an institutionalist stance, however, the practice of regulating city-building must be viewed as the result of an institutionalisation process (Sorensen 2015, 2018). Institutionalised practices and discourses that constitute a territorial planning system can hardly be bypassed (*ibid.*). Planning and development conceptions like the one described above must thus be discarded as simplistic imaginings of structure-agency interactions (cf. Jessop, Sum 2006; Jessop 2008). Instead, the act of planning must be understood as a practice embedded in a specific functional subsystem and characterised by a historically specific institutional order (Servillo, Van den Broeck 2012; Moulaert et al. 2016). Throughout the history of modern planning, neither has the planner’s expertise, comprehensive knowledge, or his general role within this act been uncontested, nor can we consider ‘context’ an empirically sufficient explanation for urban change. On the contrary, the solidification of certain time- and place-specific ways of doing planning, the goals, norms and rules of the game, as well as the structural constraints and opportunities for material transformations are important influential variables to consider in this regard (*ibid.*).

We focus on the transformation of urban infrastructure networks as easily discernible materialised expressions of the less obvious institutional and regulatory practices of planning that shape the production of urban space (Swyngedouw 1993). Understanding infrastructure planning is crucial to grasping the interrelations between the organisation of society, the ideal type city and the self-conception of planning with the actual physical transformation of space.

Infrastructure in this paper refers to more or less stable networks which determine the

*Astrid Krisch* holds a master degree in spatial planning from TU Wien and works as a research and teaching assistant at the Institute of Spatial Planning. Her recent research focused on critical analysis of social and technical infrastructure planning, ranging from cultural planning, water infrastructure to digital platforms and data infrastructure. Currently she is working on her PhD, where she investigates the connection between urban planning and infrastructure development from an institutionalist perspective.

*Johannes Suitner* is a spatial planner with expertise in Urban and Regional Development, Human Geography, Cultural Political Economy, Planning Theory and Planning History. In his recent research he has been analysing trends in European metropolitan development, the evolution of Vienna’s planning system, and the impact of social innovation processes on regional path-creation. He is a published researcher on polycentric metropolitan development, strategic planning, city image, urban imaginaries, and Vienna’s historical and cultural transformation.

mobility and interaction of people, goods and ideas (cf. van Laak 2018). We define technical networked infrastructures such as transport, water and wastewater networks, energy and telecommunication networks as material constructs that influence and are influenced by economic, political and social practices. Previous research has often focused on the effect of infrastructure networks on national economies, reducing their role to that of an underlying physical structure of economic processes and economic growth (Frischmann 2011). With the exception of studies on large technical systems (LTS) (cf. Bikker et al. 1987; Mayntz, Hughes 1988; Hughes 1993; Coutard 2002), the deterministic view of infrastructure networks as technocratic constructs has dominated academic debates. The complex issues of inter-linked infrastructure networks and the ways they “are involved in the social production and reconfiguration of urban space [...] tend to be ignored” (Graham, Marvin 2001: 30). Only recently, a post-structuralist perspective came to fruition that regards infrastructure as embedded in complex sociotechnical, political and cultural systems, having contingent effects in different places at different times (Graham, Marvin 2001; Graham, McFarlane 2015; Easterling 2014; van Laak 2018). It recognises infrastructure networks as systems that are not only interlinked within different infrastructural systems, but also function as “sociotechnical hybrids”, highlighting their relational character (Graham, Marvin 2001; Star 1999; Harvey 2012; Steele, Legacy 2017; Barlösius 2019). In addition to their technical function of organising space and society, their socio-political and cultural importance is emphasised as part of the collective construction of cultural meaning (Dourish, Bell 2007). Infrastructure networks are materialised social relations creating technical and habitual interdependencies, thus becoming the very “organisation principle to everyday life” (Kirsch 1995: 541).

Moreover, just as infrastructures are socially constructed, cities are infrastructural constructions (Graham, Marvin 2001). Cities function as sociotechnical processes, where “economic, social geographical, environmental and cultural change [...] is closely bound up with changing practices and potentials for mediating exchange over distance through the construction and use of networked infrastructures” (*ibid.*: 10). Thus, infrastructure networks are central to urban planning, which can also be regarded as a socio-technical practice (Loepfe, Eisinger 2017).

However, infrastructure networks often serve as a legitimisation strategy for a certain philosophy of planning, to legitimise political arguments, from economic progress and growth, and economic and cultural competition between cities, to technological and technocratic feasibility visions (van Laak 2018). The process of infrastructure development is often obscured through the entanglement within highly technical and technocratic institutions, thus oftentimes legitimising technologised planning visions. Consequently, infrastructure development is increasingly opaque and elusive, feeding into keeping and enforcing political, economic, social, cultural or technocratic interests (van Laak 2018; Graham, Marvin 2001). Through their long-lasting nature, infrastructure networks consolidate a specific vision of the ideal-type city on different levels, displaying changing dynamics of global political economies and societies (Graham, Marvin 2001). Infrastructure is thus a materialisation of spatial-discursive strategies implemented through multi-level governance structures (Bues 2018).

Massey (1993) refers to “sociotechnical geometries of power” in this regard, the combination of infrastructural, economic and institutional-regulatory practices being a historical product for the production and organization of space (Swyngedouw 1993: 310). The history of infrastructure became a particularly significant object of investigation because it “becomes visible as a reformulation that feeds back specific ideas about the future into an urban imaginary” (Vyjayanthi 2015: 40). Infrastructure in this sense can be understood as the outcome of processes of negotiation between different institutions, defining specific compromises at specific times. It is therefore an urgent issue concerning many disciplines beyond urban and planning studies (van Laak 2018).

Hence, we consider infrastructure to be an important variable for better understanding the urban planning – urban development connection and the institutional and regulatory process influencing small-scale urban transformation. There are three important determinants for institutionalising infrastructure development: the ideal structure of society, the ideal type city, and the envisioned function of planning in safeguarding their materialisation. Our paper thus raises questions about the impact of planning concepts and visions on spatial development. It contributes to the growing literature viewing infrastructure networks as politically and socially constructed and questions the simplified perception of infrastructure plan-

ning as a technical act. In order to enhance the understanding of the planning-development nexus and the multi-layered interdependences of small-scale urban development projects, we employ an institutional approach. We therefore propose a framework that draws on the meta-theoretical concept of ASID (agency, structure, institutions and discourse) (Moulaert et al. 2016) and discursive institutionalism (Schmidt 2008, 2012; Carstensen, Schmidt 2016), and apply it to the case of infrastructure planning and development in Aspern, Vienna. Since the body of literature on the development of infrastructure networks suggests an increase in fragmentation of previously mostly integrated and standardised infrastructure systems (cf. Graham, Marvin 2001; Marshall 2013; Easterling 2014; van Laak 2018), the analysis of Vienna's northeast allows for the uncovering of similarities and differences of the city's infrastructure development in comparison to global dynamics. We show how infrastructure development ideals and moments of change in Vienna's urban development shaped the time- and place-specific path of Aspern's transformation into its current form. Each phase is characterised by a distinct formation of ideas, agents, and discursive interactions, all leading to collective action to influence Vienna's north-eastern infrastructure development and, consequently, its overall urban transformation.

We begin with an introduction of the theoretical discussions of institutionalist perspectives on planning and, in particular, the concept of discursive institutionalism, which set the framework for explaining how small-scale urban development projects are discursively institutionalised through infrastructure planning. After introducing the institutional context of spatial planning in Vienna, we employ the concept of discursive institutionalism to the specific case of Aspern's urban transformation process. We retrace important points in history to unveil the shifts and continuities in the development of infrastructure networks. The paper concludes by outlining its contribution to the discursive institutionalist approach to planning studies.

## **2 Discursive Institutionalism as a Strategic-Relational-Institutionalist Perspective on Infrastructure Planning and Urban Change**

Studies tackling the complex relationship between the institutional subfield of planning, the

process of infrastructure development and urban change demand a robust theoretical framework that enables categorisation and detailed analysis of dimensions and their interrelations. Aiming for a historical explanation of small-scale urban transformation as the result of discursive institutionalisations of infrastructure, we employ an institutionalist perspective that allows us to uncover how the solidification of ideas in the planning system influences urban change (cf. Schmidt 2012). This makes particular sense considering the variety of arguments suggesting a close vicinity between infrastructure development and institutionalisation processes (cf. Star 1999; Graham, Marvin 2001; Steel, Legacy 2017).

We thus frame our concept through the ASID heuristic by Moulaert et al. (2016), a meta-theoretical model for analyses of socio-economic development. Incorporating a wide array of theories from development-, regulation- and state theory to evolutionary economics and new institutionalism, ASID emphasises how institutional dynamics and spatialised regulation influence development (*ibid.*). ASID takes the role of strategic action, the power of discourse, the influence of institutional formations and the constraining and facilitating force of structure into account as mutually related factors of urban development, thus helping to explain time- and place-specific development paths and potential path-dependencies. ASID thus provides a valuable basis when it comes to "making sense" of locally specific urban transformation processes and the local "planning conditions" that inform it. The four dimensions of agency, structure, institutions and discourse provide useful categories for systematically reviewing the layers that constitute the institutional subfield of planning at a certain time in a certain place, while the analysis of particular strategic-relational formations at the intersection of the four dimensions can aid in explaining how and why change occurred. The archetype process as conceptualised within ASID assumes that individual or collective agents strategically employ discourse to maintain or transform institutions and ultimately influence structure, while at the same time structural forces, institutional settings and hegemonic discourse regulate the strategic action of those actors (*ibid.*).

The understanding of development and change as proposed by ASID implies three important points for the conception of infrastructure: (1) The planning and materialisation of infrastructure is a deeply political process characterised by power, negotiation and strategy. Its

instigation thus depends on the strategic agency of certain individual or collective actors. (2) Infrastructure development is historically contingent. It is dependent on and influenced by an existing institutional landscape in the subfield of urban infrastructure planning and the structure of existing infrastructure networks that it is meant to complement or replace. The interdependencies between planning and development thus are key to urban transformation if we look at it from an infrastructure perspective. (3) Infrastructure development is related to, inspired and influenced by multiple layers and scales of action. Phases of stability as well as incremental or radical change to the institutional landscape of urban infrastructure planning and the actual materialisation of infrastructures thus must be considered the result of interrelated and interdependent activities and events embedded in certain social and institutional formations. The notion is that infrastructure is always relational, i.e. linked to other facilitating or constraining forces and events (cf. Moulaert et al. 2016; Sorensen 2015, 2018).

However, being a meta-methodology, ASID must be blended with middle-range theories (*ibid.*). To make the institutional formations of infrastructure planning and development applicable, we use the concept of discursive institutionalism to capture how planning ideas become institutionally fixed and thus influence urban development.

The concept of discursive institutionalism emerged as a critique of and addition to other forms of new institutionalism, which often overemphasised institutions while underrepresenting agency, ideas and discourses (Davoudi 2018; Granqvist et al. 2020). While other forms of new institutionalism leave us with “unthinking” actors, subordinating agency to structure, discursive institutionalists have recently stressed the importance of ideas and discourses (Schmidt 2008, 2012). The analytical approach

of discursive institutionalism allows for understanding of political processes of organising space and the cultural construction of meaning by taking both ideas and institutional settings into account. Discursive institutionalism “helps to overcome the structure-agency divide and, thereby, to explain the dynamics of change by lending insight into how actors in different institutional contexts with new ideas may overcome entrenched interests, institutional obstacles and cultural impediments to change” (Schmidt, Radaelli 2004: 207). Discursive institutionalism therefore serves as an analytical approach in political science to trace how ideas are tied to action.

We define institutions as public norms (Salet 2018) which condition systemic arrangements between individual and collective actors and their ideas. The main argument of discursive institutionalists is that ideas are carried through agents, which form the basis for collective actions through discursive argumentations and interactions (Figure 1). Ideas, agents, discursive interactions and collective action all function through their institutional context, which acts as the setting in which ideas have meaning, discourses have communicative force and actions make a difference (Schmidt 2012). Making ideas the centre of attention in discourse aligns with a constructivist perspective, which usually focuses social processes and power relations (Davoudi 2018). On the local scale of urban transformation and change, the continuities of institutions through discourses as well as mismatches of critical ruptures throughout history become evident. Taking ideas on different levels of urban politics into account thus meets the challenge of exceeding the borders of active planning processes and includes superordinate layers.

For Schmidt (2012), the institutional context is the pivotal juncture where actors generate ideas as representations (how agents say what

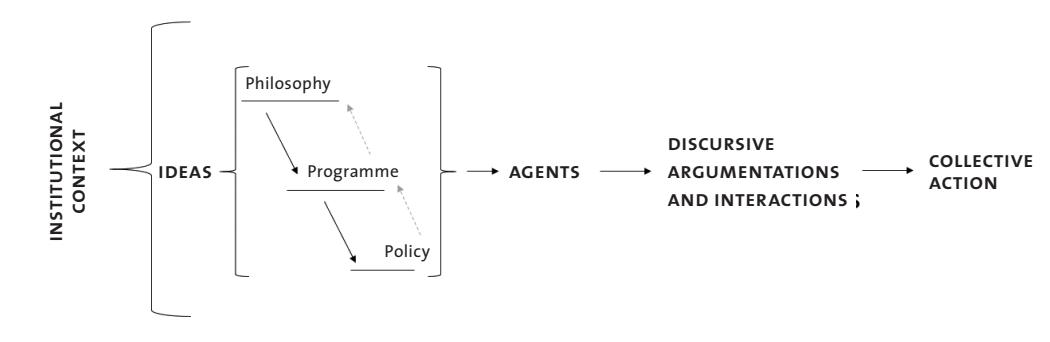


Fig. 1: Building blocks of discursive institutionalism.  
(Source: own adaptation following Schmidt 2012)

they are thinking of doing) and communicate them through discursive interactions (to whom the actors say what they are thinking of doing). Thus, the institutional context determines where and when actors say what they are thinking of doing.

Schmidt (2008) analytically differentiates ideas based on their type (cognitive and normative), level of generality (policy, programme and philosophy) and form (e.g. narratives, frames, collective memories, stories, and images). In this paper, we focus particularly on the different levels of ideas. At the deepest level of generality, philosophies act as background and organising ideas, values and principles of societies which are almost solely contested in times of crisis (Granqvist et al. 2020). Programmatic ideas on the second level define problems and issues regarded relevant for solving, which are implemented through immediate policy ideas as instruments or methods dealing with specific problems or issues (Schmidt 2008).

Agents act as carriers of ideas, forming different constellations and communicating their ideas in their specific institutional context (Schmidt 2012). However, institutions are not only constructed by agents, but also structured by discourse. Thus, discourse functions as an institutionalised structure of meaning and forms an interactive social process.

For investigating infrastructure planning, ideas and discourses in their specific institutional contexts are essential in order to understand their influence on stability and change and how they shape political behaviour and outcomes and thus, urban space. Davoudi (2018: 72) argues, that in the context of the rich history of planning ideas, “discursive institutional analyses of change and stability in planning policies, practices and institutions can be particularly insightful”. Moreover, Sorensen (2015) states, that especially for infrastructure planning, where path-dependencies are cru-

cial, the analysis of institutions helps in understanding stable phases and critical transitions within the planning system. Discursive institutionalism, hence, is a fruitful methodological approach for investigating infrastructure planning. We thereby contribute to the conceptual framework of discursive institutionalism that is not yet extensively empirically researched and provide empirical evidence for its application. Following arguments of Schmidt (2008, 2012) and her conceptualisation of different levels of ideas, the section below focuses on the process of how the envisioned structure of a “good” society (i.e. the philosophy or worldview), makes a “good” structure of urban space necessary (i.e. the programmatic idea), which is based on “good” planning (i.e. the policy solution, such as strategic plans or planning instruments as expressions of the self-conception of the planning profession). How these ideas came to life and persisted or changed through time sheds light on institutionally stable phases of infrastructure planning and critical transitions in the planning system, which shaped our case study’s subsequent development.

### *3 Discursive Institutionalisation of Infrastructure Planning: The Case of North-Eastern Vienna*

To illustrate how discursively constructed infrastructure planning has influenced urban change and how spatial transformations instigate institutional change, the paper examines Aspern, an urban neighbourhood in Vienna, and its spatial transformation since the 1950s. The area of investigation is located on the outskirts of Vienna in the northeast of the city and is part of the 22nd district, the largest district in Vienna in terms of area and population (Figure 2). The landscape has been shaped by agriculture for a long time and by correspondingly situated vil-

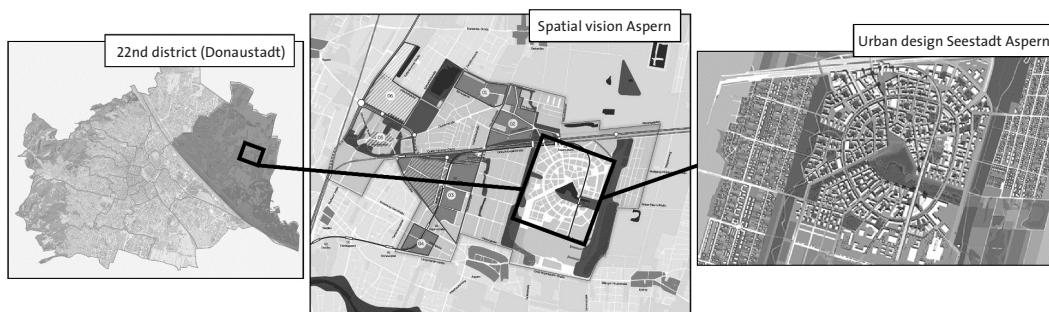


Fig. 2: Location of the Aspern area in the urban and local context.

(Sources: City of Vienna 2020; MA 21 2013; Tovatt Architects & Planners AB 2020)

lages, such as Kagran, Aspern and Eßling, and is rather sparsely populated compared to the rest of the city. The 21st district (Floridsdorf) and 22nd district (Donaustadt), colloquially called Transdanubia, are both located on the left side of the Danube River, which separates them from the city centre. Thus, urban planning processes have long neglected developments in both districts (Suitner 2015). However, since 2010, the new local development area of "Seestadt Aspern" has been under construction. With an area of around 240 hectares, the project is one of the largest urban development areas in Europe, aiming to create housing and jobs for around 50 000 new residents (Tovatt Architects & Planners AB 2020).

This paper redraws the historic development of infrastructure networks in Aspern as the result of decisions at the intersection of technology, economy, politics and society. The concept of discursive institutionalism serves as a discourse-based explanation of how and when ideas prevail through historically determined constellations of agency within specific institutional relations, influencing urban development and change. We therefore blend public policy analysis – understood as the study of how actors, ideas and institutions in planning relate (cf. Dunn 2012) – with critical discourse analysis (cf. Fairclough 2010) of planning policies related to the subfield of infrastructure development, to uncover the discursive formation of social, urban and planning ideals and their transmission into material urban infrastructures. We employ a multi-scalar approach embedding Viennese urban planning in an international context and linking it with developments in the local context of Vienna's northeast and the site-specific Seestadt Aspern urban development project.

The empirical data consists of documents related to the infrastructure planning process on different administrative levels for the Seestadt Aspern development project, interview data and archival data. We collected relevant strategic documents for analysing the planning discourse since the integration of the 22nd district into the city of Vienna in 1954. Moreover, we conducted problem-centred interviews with experts in Viennese planning history and administrative officials. Lastly, we used archival research in order to trace locally specific developments based on zoning and land-use plans from the municipal department 21. The analysis of the data follows the principles of content analysis (Kohlbacher 2006; Mayring 2004; Schreier 2012). We categorised the data themat-

ically based on the image created for the ideal structure of society, the ideal structure of the city and the ideal planning process and agents all relating to infrastructure development. These categories were connected to the actual spatial transformation on site and site-specific rationalities and interpretations of the Seestadt Aspern development project and the surrounding area.

Our analysis builds on the collective action within the discursive institutionalisation of infrastructure planning, which we regard as the materialisation of infrastructure development and urban change in Aspern. We connect collective action to the underlying ideas and discourses mediated through agents of infrastructure planning, which form specific institutional relations through their discursive interactions. This enables the depiction of the institutional context that constrains or facilitates change in infrastructure planning (see Table 1).

The institutional precondition for today's urban development in Aspern is the administrative incorporation of Donaustadt as Vienna's 22nd of 23 districts in 1954 following an uncertain time during and after the Second World War. At that time, the area was predominantly used for agriculture and accommodated only small settlements as this part of the city was only poorly connected to the district centres by public transport networks. Part of the settlements were informal and illegal – so-called "Brettl-dörfer" –, created in the interwar period as a bottom-up strategy against malnutrition and homelessness of the Viennese population and built without connection to water, gas or electricity. This informal development is exceptional in its breadth for a European metropolis in the 20th century. It was repeated on a reduced scale after the Second World War and continues to shape the spatial structure of the outskirts of Vienna to this day (Hauer, Krammer 2018).

In the 1950s and 1960s, the focus of urban planning was inner development due to the stagnating population. Urban growth gravitated mostly to the north and south, not the northeast (Eigner, Resch 2001; Klusacek et al. 2008). However, the incorporation of Donaustadt as the 22nd district of Vienna represents a critical point in Aspern's history as it formed the basis for its future urban development.

The social welfare state was the predominant philosophy, which was underpinned by social urban planning as the programmatic idea of how to realise the ideal urban structure of Vienna (Pirhofer, Stimmer 2007). However, this period created very little urban change in the

eastern part of Transdanubia because planning at that time was predominantly concerned with reconstructing residential housing, as 13% of housing was destroyed during the war (Hauer, Krammer 2018). Although many visions from technocratic planning experts emerged, they were mostly incompatible with the social welfare ideas and thus were not incorporated into any policies. The head of Vienna Urban Planning from 1948–1958, Karl Brunner, described the informal settlements as a hindrance to orderly urban expansion, which he saw as problematic for coordinated urban planning in line with the visions of technocratic experts (Brunner 1952). Instead, he proposed a radical design of a satellite town near the area where today's Seestadt Aspern urban development project is being constructed. The following head of Vienna Urban Planning, Roland Rainer, developed a comprehensive vision for Vienna's future development, of which, however, only the traffic concept was implemented in rudimentary form (Rainer 1961).

Thus, the agents of the strong local state pushed through their ideas of social urban planning and reconstruction, while technocratic experts' visions were left behind. Post-war modernist ideas had very little influence on Aspern's development, as the envisioned projects were implemented in other parts of the city at that time (for example, Großfeldsiedlung in Floridsdorf) (Suitner et al. 2018).

Thus, the transformation of the eastern part of Donaustadt took until the 1970s, where the airfield Aspern was closed in 1977 and flight operations stopped due to the opening of the second runway at the airport in Schwechat (Wien Geschichte Wiki 2019a). Moreover, the General Motors factory was built at the former Aspern airfield, which opened in 1982 and initially employed 1500 people (Wien Geschichte Wiki 2019b). However, the factory was far away from residential housing, which is why the city actively pursued transport development to connect the workers to the inner parts of the city. Moreover, in 1975, the largest shopping mall in Vienna was opened in Kagran, not far away from Aspern, which changed the functional structure of the district (Wien Geschichte Wiki 2019c). In 1983, the extension of the Vienna water pipeline to Eßling was started and in 1986 the sewerage system to Eßling was built (Schwindsackl 2009).

The underlying philosophy of the 1970s and 1980s was influenced by the shift from Fordism to Post-Fordism, which led to consumerism, the retail sector's wide-ranging makeover, and in-

creasing inequalities – also in Vienna, and particularly between the southern and north-eastern parts. However, the ideal passed on by local states of promoting equal living conditions was reflected in a new programmatic idea for the ideal city. To compensate Vienna's monocentricity, which put increasing pressure on the inner city, a hierarchical functional model including axes and centres was implemented (MA 18 1985). 'Future urban expansion and the redevelopment of underused areas should only take place in settlement axes along main public transport lines' (*ibid.* 1985: 32)<sup>1</sup>. Access by public transport to connect urban centres along development axes became a mandatory requirement for urban expansion. One of the axes ran through Aspern, connecting it to 22nd district's established urban centre, Kagran, and a neighbouring town centre, Eßling. These programmatic ideas were communicated through comprehensive plans, such as the masterplan for transport in 1970 (MA 18 1970) and the first urban development plan in 1984 (MA 18 1985), and were complemented with small-scale development plans, for example, the development plan for the 22nd district in 1972 (MA 18 1993). The masterplan for transport suggested the development of extension levels for the underground, one of them leading to Aspern. This planned U7 was to be built on the existing tramline, which at that time already connected Aspern to the centres of the 22nd and 21st districts (MA 18 1970: 115).

However, the ambitious ideas of connecting Aspern to Vienna's public transport system initially failed due to infrastructure costs and the increasingly complex actor structures. Although the 1970s and 1980s represented a new form of planning through comprehensive and communicative modes of development, the increasing complexity of projects and actors involved thwarted the success for the most part. Urban planning in Vienna was strongly influenced and institutionalised in Red Vienna (Mattl 2000). Issues such as water, energy and housing were strongly separated from the planning of transport infrastructure and accordingly took place in other development phases. For the Aspern area, this meant that although water and energy networks were already constructed in parts in the beginning of the 1980s, the development of public transport networks was entangled in complicated political negotiation processes in the 1990s. The planning of a new underground line, for instance, depends not only on decisions from municipal actors, but also nationwide actors, since the under-

ground is partly financed through the federal government. Hence, the most essential development measures for water and energy were implemented rather promptly, whereas the lack of efficient transport routes combined with insufficient job supply have been recurrent debates in Aspern's development path until today.

In 1992, the city of Vienna acquired the properties of the Aspern airfield, creating the basis for on-site developments (Wien Geschichte Wiki 2019a). At the same time, population in Vienna was growing again, thus making active acquisition of land for urban development necessary. However, informal settlements in the area were an ongoing dilemma of urban planning in Vienna at that time, and were, for the most part, subsequently legalised by the Vienna Allotment Garden Act 1992. The infrastructural development of these settlements was carried out long after the initial construction of the properties, and is still ongoing in parts of the settlements today. For coordinated urban development, these settlements meant the withdrawal of large, connected areas of land for the foreseeable future through them being turned into private residential areas (Hauer, Krammer 2018). Thus, the acquisition of the former airfield by the city was an important opportunity to maintain the capacity of public urban planning to act.

With the fall of the Iron Curtain in 1989, the new underlying philosophy was to promote Europeanisation, integration and growth. Competition between cities and states was the driving force for development, strengthened by the programmatic idea of the European city model combined with the concept of "New Urbanity" for urban expansion (Hatz 2009). Planning's self-conception gradually shifted towards planning as an entrepreneurial task with "valuable" projects of urban development (Novy et al. 2001; Delphine, Tejo 2019). As such, Aspern as a new urban quarter in the northeast of Vienna became the flagship project for the city with the alleged possibility to function as a bridge to the new Europe (Suitner 2015).

Urban expansion projects were supported by new agents of urban management (Zakhour, Metzger 2018), routed in the institutionalisation processes of the 1970s and 1980s: the Wien Holding, founded in 1974 as an umbrella organisation for mostly infrastructure companies, which reflected future intersections between state and market within the governance system for urban development; the WWFF (Vienna business development fund) founded in 1981, which acquired properties for compa-

nies in search of suitable development sites and was supported by public subsidies; the WBSF (Vienna land provision and urban renewal fund) founded in 1984, which acted relatively flexible under private law but was financed by the city government; and the urban development commission founded in 1985 to represent all departments and political parties to discuss urban development policy issues (Pirhofer, Stimmer 2007). These complex constellations of actors represented the consensual planning model in Vienna. The acquisition of the airfield in Aspern is an expression of these intersections between different agents and reflects an institutionalised form of planning, where the philosophy of a provident state for future development is expressed in the programmatic idea of buying land itself in order to be able to develop a new urban quarter under its own conditions.

Shortly after the acquisition of the airfield, the City of Vienna, together with the WWFF and with the participation of the urban development commission, carried out an urban planning procedure for the development of the airfield. The resulting master plan by Rüdiger Lainer covered about half the area of the expansion plans of today's Seestadt Aspern. 10 000–12 000 residents and 6000 jobs were to be accommodated in the new district (City of Vienna 2019a). However, the plan was not put into practice due to its incompatibility with the lack of infrastructural linkage of Aspern to the rest of the city.

Hence, in the 1990s, construction of transport routes was the main focus to prepare urban development in Aspern. The S80 railway and highways such as the A23 and A22 were expanded to the north-east of Vienna to connect the area to the rest of the city (MA 18 1994). The construction of transport infrastructure accumulated at that time to construct high-ranking transport links to connect and upgrade the area between the Danube and north-east of Vienna and thus prepare for future urban development. With Europeanisation, integration and growth being the dominant drivers at that time, an efficient traffic connection became an 'imperative prerequisite' (MA 18 1994: 124) for urban expansion, particularly for future development at the former Aspern airfield. The policy to reach this programmatic idea of the consensual planning model – an institutionalised practice since the first urban development plan 1984 (MA 18 1985) – continued in the urban development plan of 1994 (MA 18 1994) and small-scale policies for Donaustadt (MA 18

1998a, 1998b). The latter called for closing the gap of infrastructure provision in the north-east and criticised Transdanubia's lack of functional integration. The urban development plan (STEP 94) focused particularly on the efficient organisation of the city through de-hierarchisation and poly-centrality. Building upon the urban development plan a decade before, development axes were promoted to concentrate and efficiently steer infrastructure development and costs (MA 18 1994: 121). The discourse critically points to past settlement development in Transdanubia since the 1970s, as it has largely neglected the centre-axis concept from STEP 84 and contributed to urban sprawl (*ibid.*: 50). The plan also defines selected development priorities as sub-centres of the city that are exemplary for the formulated development goals, one of them located in the area of today's Seestadt Aspern. The goal for this development area was to promote "attractiveness" and "urbanity" as early as possible" (*ibid.*: 100) and to organise the construction through a development agency, which was founded in 2003.

Although the vision for urban development in Aspern had existed since the 1970s, it took 20 years to finally initiate the necessary transport links as prerequisites for the subsequent transformation process. The complex constellation of agents and ideas, which manifested in the 1980s through different organisations relevant for development processes, and the lack of infrastructure provision, thwarted the success of various development ideas such as the first master plan for Aspern. The complex division of responsibilities, especially in transport infrastructure, led to the construction of transport links mostly for road traffic, whereas public transport was caught up in difficult negotiations between national and municipal agencies. Although the 1994 urban development plan promoted the expansion of the S80 railway, connecting Aspern to the other side of the Danube River, the complicated negotiations with the Austrian railways, ÖBB, led to a rejection of the idea of linking Seestadt Aspern to the public transport network via railway. Instead, the federal government and the city reached an agreement to bear the costs of the subway extension. Thus, the city-owned infrastructure companies were restructured to meet the demands of modern urban development. In 1999, the restructuring resulted in the foundation of the "Wiener Linien" Vienna public transport company as a subsidiary of Wiener Stadtwerke (Vienna public utilities) (Wien Geschichte Wiki 2019d, Wiener Linien 2020).

Only the decision for the development of the U2 underground line as a necessary precondition for infrastructure development and future urban development at the airfield led to the subsequent urban change in the 2000s.

The construction of today's Seestadt Aspern took until 2010 to begin (Wien Geschichte Wiki 2019a). An important prerequisite was the expansion of the canal network to Aspern from 2009–2013 and the construction of a new and improved collection sewer with a pumping station in 2013 to make the settlement in the rather flat land of Donaustadt possible (City of Vienna 2019b). This was one of the last steps in a series of essential underground networked infrastructures that served as an important precondition for urban development in Aspern. In 2010, the U2 underground line was expanded to Aspernstraße and, in 2013, finally to Seestadt, thus connecting the new urban quarter to the centre of Vienna via high-quality public transport (Wien Geschichte Wiki 2019e). Moreover, the small-scale functional integration of the two districts north of the Danube was further intensified through the newly expanded tram line 25, which has connected the 22nd to the 21st district since 2012 and the tram line 26 between the centre of the 22nd district and the eastern part of Donaustadt in 2013 (Tramway-forum 2019).

The philosophy of urban planning and development shifted at the beginning of the 21st century towards management-oriented urban planning, focusing on quality of life, sustainability, participation, and cooperation. The changed geopolitical situation of the imminent eastward expansion of the EU in 2007 was seen as both an opportunity and a necessity for the development of north-eastern Vienna. The supporting policy, the STEP 05 urban development plan, reinforced this value system with a focus on monitoring and evaluation of urban development projects and an explicit actor-centred orientation. The STEP 05 recognised the overall unbalanced infrastructural equipment of Vienna south and north of the Danube: "The example of the former airfield in Aspern shows the unbalanced structure north of the Danube, where intensive residential development, but only little provision of workplaces and central infrastructural facilities has been taking place for decades. In accordance with the principle of a balanced urban structure, an improvement of the situation should be sought here" (MA 18 2005: 172). Despite this awareness and explicit orientation towards infrastructural provision in the north-east of Vienna, the later development of Seestadt

as a predominantly residential area does not succeed in counteracting this imbalance.

Seestadt Aspern reflects a new planning philosophy, which incorporates place-making and management-oriented planning strategies to cope with increasing uncertainty and complexity. This zeitgeist of planning as an attempt to steer urban development by discursively preparing the direction and design of structural transformations through place-making is consolidated by the programmatic idea of the city's structure as a polycentric agglomeration, where the construction of the underground serves as a successful model and legitimization for urban development. Currently, it legitimises a more-than-optimistic vision of the development of eight potential centres in addition to the six existing ones in the strategic planning for the eastern part of the 22nd district (MA 21 2013). For Seestadt Aspern, the master plan was created as the guiding policy. However, it not only reflects the underlying planning philosophy and programmatic idea of the future city, but simultaneously influences planning orientation and future visions for Vienna, since Seestadt Aspern has turned into a prestige planning project that is "too big to fail".

Moreover, the development of Seestadt Aspern also reflects the shift from government to governance as the complex interactions between diverse groups of actors show (for example, national infrastructure agency, municipal infrastructure agency, political ministries, regional authorities, urban development commission, development agency, etc.). The Wien 3420 Aspern Development AG was founded in 2003 to support and manage the development of Seestadt Aspern in consultation with the city of Vienna, reflecting a management-oriented planning direction. These different agents are involved in forming policies concerning the development in Aspern: the STEP 05 urban development plans in 2005 (MA 18 2005) and STEP 2025 in 2014 (MA 18 2014), the Smart City Strategy in 2014 (Magistrat der Stadt Wien 2014) and, most importantly for Seestadt Aspern, the master plan in 2006 (City of Vienna 2019a), which all promote Aspern as an independent sub-centre within the city. STEP 05 promotes the former Aspern airfield as a "centre of regional importance" (MA 18 2005: 186) and legitimises this claim by arguing for future job creation, large spatial reserves and good transport links to the city centre and the surrounding areas. STEP 2025 solicits Aspern as a "Smart City Lab", which "offers excellent development

prospects" (MA 18 2014: 76). The Smart City Strategy talks about Aspern becoming a "multifunctional and attractive part of Vienna [...] grounded in the latest findings in energy efficiency, building standards and forms of use" (Magistrat der Stadt Wien 2014: 85).

In 2012, the master plan for Seestadt was refined, a detailed plan for the development of the northern section and a separate plan for the public spaces at Seestadt was developed (Wien 3420 aspern development AG 2019a). In 2017, the latest update of the masterplan was published (Wien 3420 aspern development AG 2019b). The preparation of the site-specific plans was influenced not only by the discursive abilities of politically legitimised agents, but also by counter-hegemonic dynamics. In their efforts to occupy public land with an alternative living concept in mobile caravans, a group of activists initiated a discussion on the appropriation of public space in Seestadt Aspern (Gänseblümchen 2020, urbaniZm 2013). On the one hand, this resulted in the creation and adaptation of a policy strategy for the use of public space in Seestadt, while on the other hand, it also initiated a process with Wien 3420 aspern development AG for interim uses of brownfield sites during construction. Thus, counter-hegemonic projects influenced the policy directions of the urban development project and the implementation of their infrastructural needs.

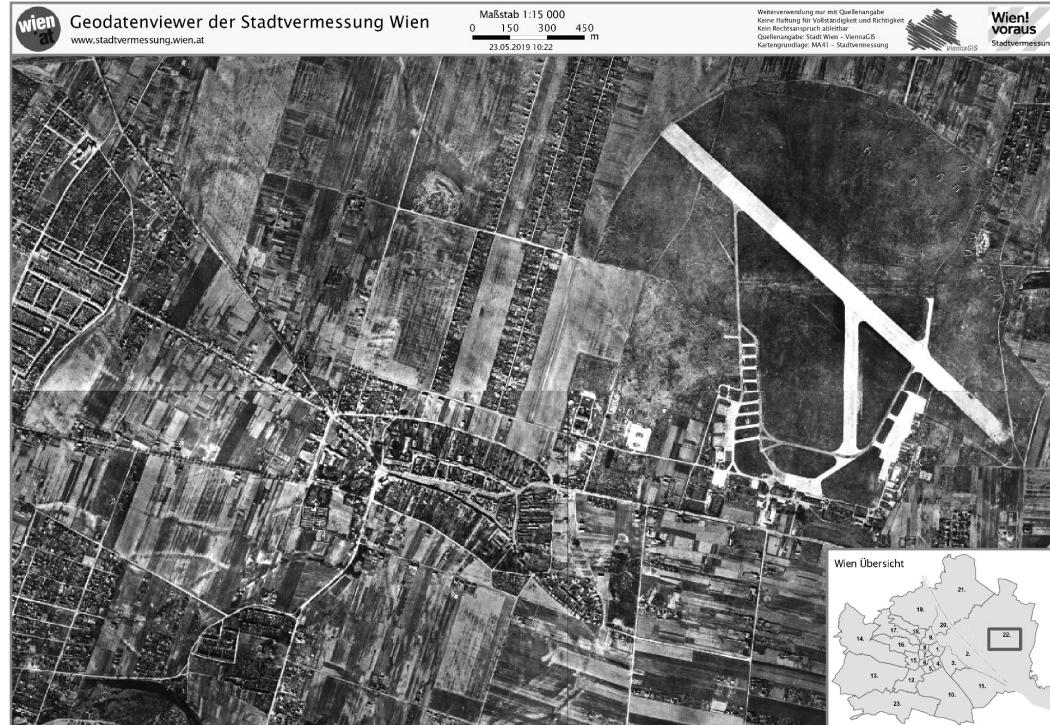
Seestadt Aspern is a reflection of planning between state and market, which manifests in an almost textbook spectrum of "good planning practices": artistic displays, assemblies, subsidised housing, district management, participation processes, passive energy offices, timber high-rise construction, and much more. Moreover, the functional integration through local infrastructure networks is the mandatory prerequisite for urban expansion in Aspern. However, the original characteristics of the old town centres and structures are being ignored. Instead of population growth and housing needs strengthening the existing town centres of Aspern or Eßling, the development of a new district is being pushed to meet the needs. As a result, the area around the former airfield is clearly different from the newly constructed Seestadt.

Since 2017, a quarter of the Seestadt Aspern project has already been completed (*ibid.*; see Figure 3). By 2028, the project will accommodate more than 20 000 people and almost as many jobs (City of Vienna 2019a), making Vienna's northeast one of the most promising devel-

opment areas of the city. However, resentment and resistance towards the increasing traffic load despite upgraded public transport options is on the rise. Thus, the recent transfer of federal road competencies is allowing the City of

Vienna to construct part of the federal highway B3d under its own sphere of influence. This will be followed by the Aspern urban road in 2021, which will necessitate full development of the Seestadt area (City of Vienna 2019c).

Aerial photograph 1956



Orthophoto 2017



Fig. 3: Physical transformation of the Aspern area (1954-2017).  
(Source: City of Vienna 2019d)

Tab. 1: Discursive institutionalisation of infrastructure development in Aspern's urban transformation since 1954.  
(Source: own conception)

Ideas (Philosophy; Programme, Policy)	Agents	Discursive Interactions	Collective Action
Social welfare state	Strong local state Technocratic planning experts	Visions created by technocratic experts were incompatible with social welfare ideals	1954 incorporation of Donaustadt incl. the Aspern area as a district of Vienna
Social urban planning Reconstruction			
-			
Infrastructural inequalities between the southern and the north-eastern parts of the city → shift in planning towards a functional model of axes and centres → public transport as the connection			
Consumerism Provident state	Slow shift towards planning as urban management	1970 masterplan for transport, STEP 84 and "Donaustädter Bezirksentwicklungsplan" 1972 promoted axes Kagran-Groß-Enzersdorf through efficient public transport	1977 closing of the Aspern airfield 1982 opening of the GM factory in Aspern
Functional urban model	Decentralised modes of urban planning Diversity of actors	Visions were mostly incompatible with high infrastructure costs	
Comprehensive urban development plan combined with small scale development plans			
Competitive planning → valuable projects → Aspern as a flagship project failed due to lack of infrastructure provision			
Competition	Expert urban planning procedures	Development plan for the airfield by Rüdiger Lainer → incompatible with lacking infrastructural preliminary work	1992 acquisition of the Aspern airfield by the city of Vienna
European city model combined with "New Urbanity" for urban expansion	WWFF 1981 WBSF 1984 Urban development commission 1985		
Entrepreneurial urban planning → "valuable" urban development projects			
Provident state → acquisition of former Aspern airfield as signal of assertiveness of urban planning → development of transport infrastructure as main focus			
Europeanisation, integration and growth	Amendment of the building code 1992	STEP 94, small-scale district development plans for the 21st and 22nd districts promoted compensating for the lack of provision in infrastructure and Transdanubia's lack of functional integration	Construction of transport infrastructures in the 1990s (e.g., S80, A23, A22)
Efficient transport connection as mandatory prerequisite for urban expansion	Wiener Linien 1999 Wiener Stadtwerke as listed public company 1999		
Consensual planning model			
From government to governance → city-owned infrastructure companies provided necessary infrastructural provision → creation of Aspern as independent sub-centre			
Place-making and management-oriented planning to cope with uncertainty	From government to governance -> complex interactions between diverse group of actors (e.g., national infrastructure agency, municipal infrastructure agency, political ministries, regional authorities, urban development agency, activists, etc.)	STEP 05, STEP 2025, Smart City Strategy, master plan for Seestadt Aspern 2006 to promote Aspern as an independent sub-centre within the city	2009–2013 expansion of canal network to 22nd district 2013 construction of Aspern collection sewer with pumping station 2010–today construction of Seestadt 2012 tram line 25 2013 U2 underground 2013 tram line 26
Consolidated polycentric city model Underground as a successful model for urban development			
Seestadt master plan			

#### 4 Discussion & Conclusion

This paper adopts an institutional perspective for the study of small-scale urban development within multi-scalar planning politics. We thus apply a branch of knowledge that is already established in planning theory, but which is still largely lacking empirical applications (Davoudi 2018; Sorensen 2015). We argue that discursive institutionalism provides a useful framework for studying the impact of planning ideas, visions and discourses and investigating the complex constraining and facilitating forces of structure and agency in the realm of infrastructure planning and small-scale urban development.

As Aspern's urban transformation has shown, different phases of stable development and critical ruptures can be identified, which either facilitate, decelerate or constrain change (see Table 1). The concept of discursive institutionalism enables us to retrace how projects, which are manifest realities today, are based on different levels of ideas from past times that resulted from very different motives. We have shown which ideas of infrastructure planning were actually implemented and which failed, hence demonstrating the impact of planning ideas.

The first stable period in Aspern's transformation began with the incorporation of Donaustadt as the 22nd district of Vienna, which represents a facilitating structure for subsequent developments and its institutional framework. The hegemonic position of the strong local state and its ideas of social urban planning and reconstruction, however, mismatched with the ideas of technocratic experts, thus providing structure and agency to maintain spatial transformations in other parts of the city. This development phase can therefore be described as stable in its lack of spatial transformation processes.

The second phase of infrastructure development in Aspern was influenced by the provident understanding of urban planning in Vienna from the 1960s until the 1980s, which created the basis for today's development. The 1970s saw quite radical changes that were first established in the centre of the 22nd district and slowly radiated to its eastern parts thereafter. The acquisition of the former airfield by the city in the 1990s can be interpreted as a delayed result of the provident philosophy, illustrating the impact of public urban planning. The period between the 1960s and the 1990s was a phase full of rebuilding, reorganisation and restructuring,

which, however, triggered few spatial transformation processes in Aspern. However, the power of discourse became undeniable in the 1980s and heralded a new, stable phase of infrastructure development through the first urban development plan, which defined public transport networks as mandatory prerequisites for urban expansion. Infrastructure costs and complex actor structures, however, thwarted the ambitious objective for another 20 years. Nevertheless, the organisational structures created in the 1970s and 1980s set this change up and provided the basis for Aspern's physical transformation.

The third phase began with a gradual shift towards planning as an entrepreneurial task – focused on supply-oriented approaches and strategic competition. Supported by institutional frameworks through different agencies, Aspern gained discursive power as the new flagship project. Facilitating structures in this process were the initiation of the necessary transport links, which culminated in the development of the U2 underground line, financed by municipal and federal agencies. However, even in this stable development phase, the unbalanced infrastructural provision in the north of the Danube uttered by the STEP 05 constrained the development path. The development of high-quality infrastructure as a prerequisite to urban development is an irrefutable goal in Vienna's planning discourse today and provides a facilitating force for legitimating urban expansion. This planning ideal is discursively institutionalised through complex interactions between diverse groups of actors and the development of different strategic plans and policies, manifesting in Seestadt Aspern's construction as well. While urban planning in Vienna is traditionally paternalistic and, thus, top-down, the project of Seestadt Aspern itself influenced the underlying philosophy of planning's self-conception by its mere size. The project's master planning approach, its public-private financing structure and the well-orchestrated image- and place-making campaign all reflect the emergence of management-oriented urban politics and flexible governance in Vienna at the turn of the century.

Discourses are an essential part of these physically manifested visions in Vienna, leading to the conclusion that urban change is, above all, determined by the governmental institutionalisation process of the negotiation of infrastructure development and hardly ever by counter-hegemonic projects. However, as the informal settlements of the interwar period and to some extent in the 1950s have shown, there

is a parallel development path of infrastructure provision. In this case, the decisive factor for urban change was not the discourse, but the persistence of the building structures and the permanence of the appropriation, which influenced change in planning institutions and the provision of infrastructure retrospectively. The settler movements can be interpreted as early forms of counter-hegemony in the Aspern area, which also brought about institutional changes. The more recent example of the activists in Aspern – “Wagenplatz Gänseblümchen” – shows that, even today, counter-hegemonic movements have, in part, had an impact on institutionalised planning and here, for example, have been able to bring about changes in discourse through the appropriation of public space.

By employing the concept of discursive institutionalism, we were able to explain how Aspern developed from agricultural land and former airfield into one of Europe's biggest urban development projects. By analysing a long period of time since the 1950s, we were able to trace the historical genesis of a district in its complexity and show how planning ideas become institutionally fixed and thus influence urban development.

Particularly in a setting with traditionally strong institutions, such as Vienna, the concept of discursive institutionalism proved to be useful as it allowed a differentiated view of the complexity of spatial development processes, hence making it an interesting methodological framework for the planning research community. This paper has provided empirical evidence for the applicability of the concept of discursive institutionalism as an analytical tool in urban planning research. Particular temporal decelerations and accelerations of infrastructure development are put in their respective institutional context, allowing a broader perspective that goes beyond reiterations of the simplistic structure-agency imaginary.

### Notes

1 All translations by the authors.

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Astrid Krisch  
TU Wien  
Institute of Spatial Planning  
Research Unit Public Finance  
and Infrastructure Policy  
Augasse 2–6  
1090 Vienna, Austria  
astrid.krisch@tuwien.ac.at

Johannes Suitner  
TU Wien  
Institute of Spatial Planning  
Research Unit Urban and  
Regional Studies  
Operngasse 11  
1040 Vienna, Austria  
johannes.suitner@tuwien.ac.at