

# Reintensifying a post-socialist city

## Brownfield redevelopment as a tool to stop suburban sprawl in the declining cities of Central and Eastern Europe

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**Key words – brownfield redevelopment, suburban sprawl, post-socialist city transformation, shrinking cities, Leipzig, Dessau, Brno**

**Abstract –** Since the collapse of State Socialism 20 years ago, processes of liberalization, privatization and globalization have submitted entire national societies to the economic imperatives of an open market economy, often with dramatic polarizing effects on urban populations (Hamilton et al., 2005). From high-density, mono-centric settlements, dominated by high-rise public housing, vast industrial areas and communal modes of transportation, the CEE cities are being transformed into sprawling, multi-nodal metropolitan areas reaching extreme levels of privatization of housing, services, transportation, and public space (Bodnar, 2001). Problems like social stratification, declining public transport and declining quality of inner city environment, increasing pollution are emerging. There are many signs that the majority of urban changes taking place since the early 1990s are moving the post-socialist cities away from sustainability (Tosics, 2004). Moreover, ‘shrinking’ cities are becoming more expensive to maintain. A ‘decline paradigm’ should be considered, where the focus would be on redeveloping inner city areas, cost-efficient stock development, revitalization, and qualitative development (Müller and Siedentop, 2003).

‘A great opportunity for maintaining the vitality of inner city areas and for improving accessibility to shopping and services for all citizens, while reducing traffic congestion, has been offered by an unlikely ally of large-scale retail developers and investors – the derelict industrial sites present in many parts of the post-socialist city’ (Stanilov, 2007: 93). The exorbitant amount of urban industrial land inherited from socialist times has presented an opportunity for absorbing new development, re-knitting the fragmented fabric of the post-socialist city. The main aim of the paper is to identify the main spatial and functional conditions that support the inner city brownfield redevelopments in CEE countries and forces and roles of public and private initiatives that lie behind successful examples of these processes. The literature on the trends of post-socialist city structural transformations related to suburban sprawl and brownfield redevelopment will be reflected (Andrusz et al., 2011, Hamilton et al., 2005, Kessides, 2000, Stanilov, 2007, Müller and Siedentop, 2003, Musil, 2005, Sykora, 2006). The focus will be on reviewing the main forces that affect suburban sprawl or inner city development and reviewing recommended guidelines of spatial planning in a context of a ‘shrinking’ post-socialist city. Later, the process of brownfield redevelopment in an inner city area will be illustrated by examples in Leipzig (Dressler, 2005, Rink et al., 2011), Dessau (Dressler, 2006) and Brno (Jackson, 2007).

The conclusions will name the main spatial, functional conditions that support brownfield redevelopment, guidelines for strategic planning and a possible approach in relation with author’s thesis.

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## **1 Introduction**

The aim of this paper is to investigate brownfield redevelopment as a tool to reduce suburban sprawl and increase the vitality of inner city areas in the declining cities in CEE countries. The topic is important to address because 'the patterns of spatial organization, which are being established during this fairly limited but critical timeframe of a post-socialist transformation, are likely to set the course of the future development of CEE cities for a long time' (Stanilov, 2007: 5). During the present trend of population decline and expansive urban development in most cities in the region, maintaining and operating the building and infrastructure stock will have to be paid for by fewer and fewer residents. The 'shrinking city' will doubtless be an expensive one. (Musil, 2005). Therefore, there is a need to research ways how to direct the cities in a smarter way to a more compact structure to achieve better operations and more responsive services.

The main research focus is to identify the main spatial/functional conditions and forces that lie behind successful inner city brownfield redevelopments in CEE countries and to illustrate several successful examples of it. Most of the authors agree that the CEE countries are following the same path of a post-socialist transformation at different speeds. For this reason, the emphasis will be given to authors that are analysing the processes of this transformation and roles of the main actors that influence it (Hamilton et al., 2005, Kessides, 2000, Stanilov, 2007, Sykora, 2006, Tosics, 2004, Musil, 2005, Müller and Siedentop, 2003). Understanding the problematic of the transformation itself helps to translate the experience from one country to another.

The structure of the review starts with a detailed description of suburban sprawl and the problems it creates in CEE context. The present planning concept that supports the sprawl and the influence of European Spatial Development Perspective is reviewed next. This section also contains a recommendation of alternative planning concept provided by Eastern German specialists. The process of a brownfield redevelopment, the benefits, conditions and examples of it will be reflected thirdly. The findings of literature will be summarized in the conclusions, where the spatial, functional and strategic guidelines for a brownfield redevelopment will be named. The review will end by a section of recommendations in relation with the author's master thesis.

## **2 Suburban sprawl as an effect of a post-socialist city transformation**

The main direction of urban spatial restructuring could be defined as a transfer of assets, resources, and opportunities from the public to the private realm. Cities that were lacking interest of private investors have set in a prolonged period of economic stagnation, declining population, environmental degradation and withdrawal of state funding (Bachtler and Downes, 1993). Therefore, 'an indiscriminant support for any kind of private development initiatives provided by the new property laws, the state policies of encouraging economic development, and the investment-hungry local governments gave a lot of power to private developers to pursue realization of their investment projects' (Stanilov, 2007: 414). Cities kept on expanding and 'most of the energy of the post-socialist growth has been channeled to the suburban outskirts, where new shopping centres, office parks, and clusters of single family residences have popped up, leaping over the belt of socialist housing estates' (Stanilov, 2007: 8).

'The rising value of real estate in the city centre is one of the factors driving the boom of residential and non-residential construction at the urban periphery. Other determinant forces include the restitution of land, the relaxation of land development controls, and the establishment of an open land market' (Stanilov, 2007: 179). Suburban sprawl is leaving an underdeveloped urban fabric in the historical inner city areas and an equally worsening quality of the built environment in the socialist housing estates (Hamilton et al., 2005). The lower class segment have no possibility to access better housing while the upper class segment of the population has opted for locations in gated low density residences beyond the urban edge (Sykora, 2006). 'Low urban density also means that all services on a per unit basis become more expensive and often communal transport cannot be supported by assembling enough patronage in any given corridor' (Stanilov, 2007: 321).

A major role in the process of non-residential decentralization has been played by the locational preferences of large local and foreign investors. 'Their capital, which presents the majority of investments in the commercial and office property market, has been directed primarily to large-scale projects in the urban periphery because of bigger territories and cheaper land, thus altering the socialist tradition of concentrating non-residential urban functions in the

city center. Local governments, which have been eagerly embracing any kind of foreign investments, have committed significant municipal resources for servicing these new developments' (Stanilov, 2007: 79). With their decisions governed by the logic of chasing the highest profit, investors have shown little interest in developing close links with local communities, thus undermining the prospects for their long-term sustainable development (Robinson, 1996).

The issues that appeared because of suburban sprawl include: the increase in automobile traffic due to the location of new developments in areas poorly serviced by public transit; the subsequent rise in the levels of air and noise pollution; the diminishing access to jobs for the segment of the population without cars; the decline of some urban areas and the growing social polarization; the disappearance of open space at the urban periphery and the increase in public costs for providing infrastructure and services to the outlying areas where the new business establishments are located' (Stanilov, 2007: 82). These problems could not be resolved without active government involvement and there is growing public awareness of the need to strengthen government's role in managing the process of urban development. A need for alternative strategies that would aim to defend public interests is present.

### **3 Current planning processes and a need for new strategies**

During the transformation, creating economic development opportunities was the overriding concern, pushing all other considerations into the background. The overly permissive attitude of local authorities towards new development echoed the philosophy of the state governments of encouraging new investments at all costs, with little concern for assessing potential negative social or environmental impacts' (Stanilov, 2007: 355). Communication among the various professionals involved in urban planning has been difficult. The current triangle (architect, developer, builder) still caters to a 'spatial reality' that is not efficiently connected with issues related to sustainable economic growth, social diversity and justice, and stewardships over natural and environmental resources (Friedman, 2005). 'Currently, not all roles, needs, and interests of the various actors are recognized, even when sometimes they overlap. Private developers and investors, on the

other hand, have become powerful and important players, whose activities in the land development process should be more efficiently regulated (Stanilov, 2007: 407).

The guidelines and models of urban development provided by Western European institutions did not solve the issue, since the majority of EU's pre- and post accession programs and financing have been directed towards transnational corridors and improvements in regional road infrastructure. National policies in the CEE countries have followed blindly this agenda, committing a majority of their limited resources to the implementation of such projects without much reference to local context and needs (Stability Pact Watch Group, 2004). 'The urban dimension of the ESPD is fairly vague in its recommendations and broad in its scope. Some of the most critical issues in the development of the post-socialist cities – urban transport, brownfield development, suburban sprawl, large housing estates – are mentioned only in passing' (Stanilov, 2007: 356).

'The lack of clear vision about how cities should grow, which dominated the early years of the transition period and was used by many private developers to maximize their short term profits, is currently bemoaned not just by the residents, who were left with the short end of the stick, and municipal authorities, who find it difficult to service the chaotically developed urban areas, but by the private investors themselves, who have found out that good urban planning can improve the marketability of their products and, ultimately, increase their profits' (Stanilov, 2007: 13). There is an approach that population decline might be an opportunity. It can open the way to renewal and modernization, it can offer opportunities for quality improvement (e.g., in the residential environment, for open space quality and local recreation, as well as for near-natural landscapes) and provide an incentive to mobilize the endogenous resources of regions through the collaboration of public and private sectors. Declining population can provide opportunity for a dialogue on coping with demographic change and, ideally, a basis for developing a new fundamental societal consensus (Müller and Siedentop, 2003).

In the face of dispersion, the short-distance city or urban region is more difficult to achieve, at least through 'growth'. In the figure 1 we can see that if we take the sustained development postulate seriously, not only the harmonization of economic, social, and ecological developments is more strongly

Growth-oriented planning	Decline-oriented planning
The focus is on growth, spatial planning as "distribution" of quantitative increases (settlement and traffic land, population, jobs, etc.)	The focus is on redevelopment, cost-efficient stock development, stabilization, revitalization, qualitative development (residential environment, infrastructure, traffic, etc.)
Building-law and regional-planning tools directed mainly towards new development of land and new construction; infrastructure development as concession and incentive for investment.	Importance of derelict land, recycling of land and buildings, differentiated reconversion, adaptation of infrastructure to changed needs.
Growth-oriented control (land use and constructional development)	Initiation and organisation of reconversion, rehabilitation, and development with scarce financial resources.
Planning as the basis for distributing growth, separation of spatial functions (home, place of work, etc.)	Planning as management of shrinkage processes, small-scale functional mix.
Order-oriented control of land use and constructional development, designation of settlement land, protection of open areas.	Strategic planning and integrated concepts, consequence assessment, taking account of life cycle of facilities and demographic changes, model projects, use options, activation, contractual arrangements, efficiency.
Intermunicipal competition (residents, industry, etc.), sectoral incentives, intersectoral framework control.	Intermunicipal cooperation, equalization arrangements, multi-level cooperation, intersectoral coordination.

**Figure 1:** Characteristics of growth and decline-oriented planning (Müller and Siedentop, 2003)

focalized than under conditions of growth but also the 'intergenerational effects' of today's decisions: whether and under what conditions future generations can be expected to bear higher per-capita spending. This suggests that, in making decisions on urban expansion, redevelopment, or downsizing, much more attention must be paid in the light of demographic developments to the economic life of facilities and their conditions of use' (Müller and Siedentop, 2003).

#### 4 Reknitting urban tissue by brownfield redevelopment

Brownfield sites in the post-socialist cities have great potential as land reserves for future urban development. The fact that they have not been redeveloped yet is not necessarily a bad thing. With the 'Wild East' phase of urban development approaching its end, one can hope that the post-socialist cities would be better prepared to use these precious land resources more wisely (Dingsdale, 1999). Hence, large sections of the city were zoned for production activities, taking up anywhere from a quarter to a third of the urban territory, a share that is about two to three times larger than the average for Western European cities (Kessides, 2000).

'It is notable that the redevelopment of brownfield sites has been largely driven by market forces rather than initiatives of local governments to

regenerate these urban areas' (Stanilov, 2007: 86). However, independent private sector initiatives are rare and most private financing was attracted to partnerships with the public sector (Kessides, 2000). The OECD report notes that specific roles of the public sector in regeneration projects are to develop the vision of redevelopment for the area, assemble land, commence the reclamation/remediation process, provide significant funds and attract private sector participation—in addition to general policy-making and coordinating functions. The national government have been very supportive players in most regeneration activities, but the local and sub-regional authorities take major initiative in seizing opportunities and forging partnerships (Kessides, 2000).

Strategies of integrated urban regeneration, which include objectives of restoring brownfield sites to economic and social vitality through comprehensive approaches to problems of unemployment, business development, housing and safety affecting the neighbourhood, are found to have the best potential for attracting partnership, finance and community support. Brownfield redevelopment is therefore seen as part of larger efforts to address land use problems throughout the urban area (for example, to control urban sprawl), to improve social cohesion and environmental sustainability, and to create conditions favourable to local economic growth. Use of brownfield areas for housing and mixed-use

development is seen as particularly desirable to re-establish a residential presence in wasted areas and reinforce communities. Turning brownfields into parks through an “ecosystem” approach to regeneration, by incorporating recreational and cultural functions, can also be a viable alternative when viewed through an integrated strategy that considers social, environmental and economic outcomes for the derelict area (Kessides, 2000).

‘The reutilization of such abandoned sites depends on many factors including their size, location, accessibility, ownership structure, condition of their building stock and infrastructure, level of pollution, existing development regulations, the quality of their surroundings, etc.’ (Stanilov, 2007: 159). ‘The redevelopment of the industrial areas has progressed from the districts located closer to the centre, with highest accessibility, and better quality of their built environment to the more remote areas with greater development potential. The former industrial areas have been reutilized for different purposes, but retail, office, commercial, residential and logistics are the most common uses that have replaced the old production facilities’ (Stanilov, 2007: 168).

## 5 Examples of brownfield redevelopment

The sort of collaboration, functional and spatial conversions will be illustrated with two examples of brownfield redevelopment in Eastern Germany and one in Czech Republic. Case projects in Leipzig and Dessau are chosen because in East Germany, between 1989 and 1995, the number of jobs in different industrial branches shrunk between 70 and 90 percent (Nuissl and Rink, 2003). The disuse of vast industrial territories added to the expansive developments in Leipzig and Dessau and the brownfield conversions were aiming to return a more compact form to them. The case in Brno is important as one of the biggest conversions of this kind in CEE countries.

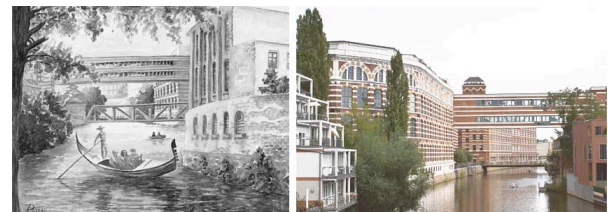
### 5.1 ‘Plagwitz’ in Leipzig, Eastern Germany

In 1988/89, the Plagwitz district was an industrial location providing approximately 20.000 jobs. Between 1990 and 1992, about 80% of the businesses in Plagwitz discontinued their operations due to the drastic decline of outlets in Eastern and Central European markets. In order to address the economic structural change, restore the area’s attractiveness and preserve the building stock of outstanding quality,

Leipzig council integrated the planning area in a comprehensive urban development concept for the entire city (Rink et al., 2011).

The instrument of urban development contracts being drawn up between the council and individual investors was the key factor that played the most important role. Medium sized businesses and start-ups benefit from the central location near the inner city and its excellent connections to the urban and regional transport network. A district and service centre, a hotel, an office park, as well as retail and catering establishments were housed in the buildings of a former yarn factory that is visible in Figure 1. The residential area north of Heinrich – Heine – Canal became a redevelopment area (83 ha) and has largely been renewed and upgraded by measures targeted at the residential environment. Numerous individual projects had an immediate motivation effect for private investors and were hence able to contribute to the acceleration and success of the realization (Dressler, 2005).

By virtue of its intensive planning activities, the council had formulated the guiding idea for a successful realization very early on: preserving the valuable basic urban structure and integrating listed industrial buildings as well as achieving a mixed use along with the corresponding upgrade of the environment (Dressler, 2005).



**Figure 2:** Brownfield redevelopment in ‘Plagwitz’. Before and after (Dressler, 2005)

### 5.2 ‘Dessauer Weg’ in Dessau, Eastern Germany

Faced with deep-seated structural change and its serious repercussions, Dessau Council is opting for the revitalization of industrial sites that have fallen into disuse. Hardly any further locations are available for urban development besides these inner city wastelands as extensive nature and landscape protection areas surround the town’s settlement area. Given this background, the urban policy pursued by Dessau council is predominantly aimed at protecting and creating jobs within the town. In doing so, the council places a particular emphasis on the demand-driven provision of land, coupled with the optimal

exploitation of inner city site potentials (Dressler, 2006).

As part of the urban development in Dessau, large wastelands created by erstwhile industrial locations within the urban settlement area are being dedicated to new uses. The council purchases inner city wastelands. Following their development and parcelling, the sites are marketed at favourable conditions. The remediation of contaminated areas was performed within a relatively short period of time, as was the new development and parcelling because the council is the main shareholder of an industrial estate company (IEC) established expressly for this purpose (Dressler, 2006).



**Figure 3:** Brownfield redevelopment in ‘Dessauer-Weg’. Before and after (Dressler, 2006)

The functional variety of the conversion included large amount of residential area in lofts, commercial, office and cultural functions in former buildings of a warehouse. The redevelopment benefited from the fact that the site is in a central location of the city with good accessibility no pollution. The process was easy since the property ownership belonged to the municipality.

### 5.3 ‘Vankovka’ in Brno, Check Republic

The recent largest Czech brownfields site acquisition occurred in the spring 2007 in Brno. The local authority bought a brownfields site that was vacant since 1989 from a bankruptcy auction. The site located in area of 28 800 m<sup>2</sup> on the edge of historical Brno, right between train and bus stations. It was a policy of the local government to develop the inner city vacant areas to improve the service accessibility in a context of declining population in Brno (Jackson, 2007).

The brownfield was redeveloped in a partnership of the local government, a large investor and smaller and medium-sized retail, business and cultural initiatives. The municipality provided the land, developed the land reconversion plan and the strategy of redevelopment while the large investor reconstructed the buildings for renting. The project was a big success because it raised the image of the

city center, provided a high profit and development space for the investors (Jackson, 2007).

The site was attractive for redevelopment because of the central location, high accessibility, good housing stock condition and low level of pollution. Figure 4 illustrates that the high level of built environment was achieved by connecting the former industrial buildings with an improved public space. The inner galleries are connected to two pedestrian bridges, a large parking garage and green recreational spaces.



**Figure 4:** Brownfield redevelopment in ‘Vankovka’. Before and after (Jackson, 2007)

## 6 Conclusions

Since 1990, ‘planners, who became self-conscious about the legitimacy of their right to regulate urban activities by managing single-handedly the use of space, succumbed to the dominant social impetus of the radicalized post-socialist movement to eradicate all traces of the socialist past’ (Stanilov, 2007: 423). The chances to capitalize on the positive characteristics and spatial opportunities inherited from the socialist city (compactness of the urban envelop, well developed system of public transit, a huge share of land in public ownership) are getting lower. The presently sprawling cities in CEE countries are getting more expensive to maintain by a shrinking population. A ‘decline paradigm’ should be considered, where the focus would be on revitalizing the abandoned inner city areas, cost-efficient stock development, revitalization, and qualitative development (Müller and Siedentop, 2003). The main aim of the paper is to identify the main spatial and functional conditions that support the inner city brownfield redevelopments in CEE countries and forces and roles of public and private initiatives that lie behind successful examples of these processes.

Section 2 of the paper summarizes the main problems of urban sprawl in CEE counties. These problems are: underdeveloped urban fabric in the historical inner city areas and worsening quality of the built environment in the socialist housing estates; the increase in automobile traffic and the retreat of public transit; the subsequent rise in the levels of air and



noise pollution; the diminishing access to jobs for the segment of the population without cars; the decline of some urban areas and the growing social polarization; the disappearance of open space at the urban periphery and the increase in public costs for providing infrastructure and services. The sprawl mainly happens due to the ‘indiscriminant governmental support for any kind of private development initiatives’ (Stanilov, 2007: 414) that usually prefers to invest in projects in the suburban periphery because of the lower land prices, bigger variety of development sites available, restitution of land, the relaxation of development controls and the establishment of an open land market.

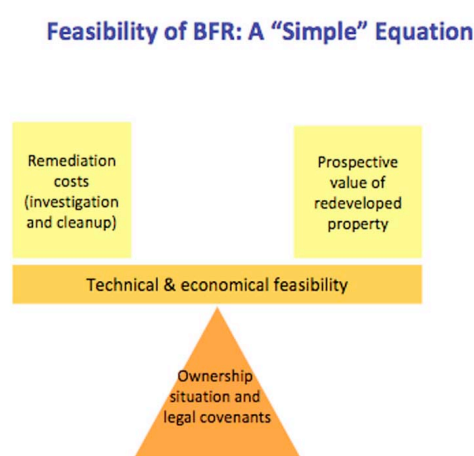
Section 3 stresses that the current ‘spatial reality’ in declining post-socialist cities is not efficiently connected with issues related to sustainable economic growth, social diversity and justice, and stewardships over natural and environmental resources (Friedman, 2005). ‘Private developers have become powerful and important players, whose activities in the land development process should be more efficiently regulated’ (Stanilov, 2007: 407). An alternative planning concept based on a ‘decline paradigm’ is suggested that can open the way to renewal and modernization, offer opportunities for quality improvement and provide an incentive to mobilize the endogenous resources of regions through the collaboration of public and private sectors.

Sections 4 and 5 summarize the successful brownfield redevelopments with main factors that support them. These sections illustrate that brownfield redevelopment is therefore seen in CEE countries as part of larger efforts to address land use problems throughout the urban area (for example, to control urban sprawl, to improve social cohesion and environmental sustainability, and to create conditions favourable to local economic growth). The cases prove that these strategies prove to be successful to revitalize the inner city areas.

The reutilization of such abandoned sites depends on many factors, such as (Stanilov, 2007):

- their size and location;
- accessibility;
- ownership structure;
- condition of their building stock and infrastructure;
- level of pollution;
- existing development regulations;
- the quality of their surroundings.

‘The former industrial areas have been reutilized for different purposes, but retail, office, commercial, residential and logistics are the most common uses that have replaced the old production facilities’ (Stanilov, 2007: 168) The cases show that specific roles of the public sector in regeneration projects are to develop the vision of redevelopment for the area, assemble land, commence the reclamation / remediation process, provide significant funds and attract private sector participation—in addition to general policy-making and coordinating functions. The private sector is the main investor in the process and has to be encouraged that the brownfield redevelopment will be feasible after considering the factors provided in Figure 5.



**Figure 5:** Feasibility of a brownfield redevelopment (Kessides, 2000)

## 7 Recommendations for the graduation project

The authors that analyse the transformations of post-socialist cities, argue that cities in CEE countries with ‘shrinking populations’, should stop expanding and consider a restructuring of the inner city areas. This is an important factor to consider in the graduation project. Instead of strategies based on massive growth of a city that is unlikely to happen, the main concern of the thesis should be on the existing structural transformations to achieve better operations. A good solution for that may be brownfield redevelopments, influenced by previously mentioned processes, actors and conditions.

The knowledge of the topic is extensively analysed in the post-socialist transformation literature. However, there is a gap of applicable practical methods and innovative solutions that should be explored and applied in the graduation project.

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