

THE BROWNFIELDS DEVELOPMENT PROCESS
A Comparative Study Including Cities from the Visegrad Four and Pittsburgh, Pennsylvania

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Abstract

A comparative study was performed to begin to understand the similarities and differences between brownfield issues, obstacles and solutions in the Visegrad Four (V4) cities of Katowice (Poland), Košice (Slovak Republic), Miskolc (Hungary) and Ostrava (Czech Republic). Brownfield development progress in Pittsburgh, Pennsylvania was addressed to the extent that lessons learned in the US can be transferred to the V4 countries. These five cities were selected on the basis of similar industrial heritage; primarily that of steel production and coal mining.

The comparative study was based on data collected in a questionnaire developed by The Brownfields Center and the City of Ostrava and subsequently distributed to the Technical University of Ostrava, Technical University of Košice, Technical University of Miskolc, and the Technical University of Gliwice (near Katowice) for completion.

The 4 key points suggested by the study are:

- Brownfield development is not the 'secret' to economic development, but rather a component that must be considered in perspective of other priorities.
- City involvement is important and so is the availability of public funds and other incentives.
- Brownfield development success is primarily based on motivation, patience and persistence.
- Brownfield development can occur in the absence of a regulatory framework, however, progress may be accelerated within a structured regulatory framework.

Introduction

The ongoing cooperation between the cities of Ostrava, Košice, Miskolc, Katowice and Pittsburgh have resulted in a long term project titled "Returning Old Industrial Properties to the Local Economies of Central and Eastern Europe." The project is intended to strengthen the cooperation and exchange of experiences between the US and the Visegrad Four (V4) countries, as well as, to support the cooperation amongst the cities in V4. The first phase of the project was the "Opening Brownfield Revitalization Seminar", held in Ostrava in December 2001. The seminar concluded that a Comparative Study of the five cities in terms of current conditions surrounding brownfields revitalization should be performed. The participants included the Technical Universities of Ostrava, Košice, Gliwice (near Katowice) and Miskolc and the Brownfields Center at Carnegie Mellon in an advisory capacity.

Methodology

In order to obtain the required information, a proposal of indicators for comparison and mapping of brownfields in the cited cities was developed by the Department of Economic Development of the Municipal Authority of the City of Ostrava, The Brownfields Center at Carnegie Mellon in Pittsburgh and the Technical University of Ostrava. The Comparative Study was designed to include the city of Pittsburgh along with Katowice, Miskolc, Ostrava, and Košice. Accordingly, a four-part questionnaire was constructed to collect information at the national, regional and local levels of the Visegrad Four and the USA. The final part of the questionnaire involved case studies from the five cities.

The questionnaire is titled “The Comparative Study in the Field of Brownfields Regeneration, Problems, Obstacles and Solutions,” with the goal of evaluating the challenges faced by the partner cities in exploiting brownfield redevelopment potential. The questionnaire includes data on geographic area, population, statistical, social and economic characteristics of the cities, as well as, existing and potential government or European Union (EU) financial support geared toward development, both brownfield and greenfields. (Please note that the summary is based solely on the data provided by the partners.)

Comparison of National Information

Although the USA is by far the largest of the five countries compared and it has the largest population, it has the lowest population density (Table 1). Based on this data alone, it is difficult to begin rational comparisons between the USA and countries of the V4: the land area of all countries combined would be only 5.5 percent of the area of the USA. Where the V4 countries range in size from 49,034 square kilometer (sq km) (Slovakia) to 312, 695 sq km (Poland) and population ranges from 5.4 million (Slovakia) to 38.6 million (Poland), population densities are relatively the same, generally ranging from 110 to 130 persons per square km.

Table 1: National Information

Country	<u>Czech Republic</u>	<u>Hungary</u>	<u>Poland</u>	<u>Slovakia</u>	<u>USA</u>
Land Area (square km.)	78,366	93,000	312,695	49,034	9,626,091
Population (millions)	10.2	10.2	38.6	5.4	281.5
Population Density (person / square km.)	130.2	109.7	123.4	110.1	29.2
Number of Regions	14	7	16	8	52
Number of Regions with Unemployment over 10%	4	0	16	5	0
Number of Regions with GDP below EU Average	13	7	16	7	0

Economic conditions in the partner countries are somewhat reflected in Table 1 where the total number of regions in the country, number of regions with unemployment rate over 10% and number of regions with GDP below EU average are summarized. Based on unemployment and GDP, Poland suffers with the worst economy followed by Slovakia, Hungary and the Czech Republic.

Comparison of City Information

The partner cities that participated in this study demonstrate many similarities. The cities have an industrial base, which, historically, was focused on metallurgy, and/or the coal mining industry. Due to the present day worldwide economic development, all partner cities have had to cope with the dramatic restructuring and conversion not only of metallurgical production but also of their entire industrial base. Due to dependency on a single industry, the process of restructuring the metallurgical industry is accompanied by the economic stagnation of the city and the region as a whole. All of the V4 partner cities represent the second economic development pole of their state, which brings along a specific relationship to the capital and usually a certain tension in mutual relationships. The cities are the centers of two co-operating agglomerations on both sides of the Czech-Polish border and the Slovak-Hungarian border and with close proximity. Pittsburgh, with a strong former industrial heritage, mainly steel based, has many similarities with the cities of Ostrava, Katowice, Košice and Miskolc. Pittsburgh has experienced social and economic changes but has demonstrated success in redeveloping previously devastated and contaminated areas.

Table 2: City Information

City	Ostrava	Miskolc	Katowice	Kosice	Pittsburgh,PA
Land Area (square km.)	214	237	164.5	243.8	144
Population (millions)	318,000	182,220	330,200	236,000	334,563
Population Density (person / square km.)	1,486	769	2,007	968	2,323
Unemployment Rate	16.2%	12.3%	7.7%	16.4%	5.1%

In comparison, Pittsburgh has the highest population density followed by Katowice, Ostrava, Košice and Miskolc (Table 2). Košice, Ostrava and Miskolc have high unemployment rates with 16.4%, 16.2%, and 12.3%, respectively, compared to the EU15¹ average of 7.6%² and the US average of 5.8%³ Katowice and Pittsburgh follow with 7.7% and 5.1%

Katowice

Katowice is the capital of Upper Silesia and the largest consumer and investment market in Central Europe. Katowice is located in Southern Poland. It is the seat of a great number of commercial, academic and public institutions, widely co-operating with overseas countries.

Poland does not have a national inventory for environmentally damaged properties nor a program dedicated to brownfield redevelopment. Programs that deal with Environmental Protection, Noise Prevention and Waste Management are still under preparation. In the Polish system, such programs develop gradually from the top down: first on the national level, afterwards in the regional (voivodeship) level and finally in local communities.

Košice

Košice is the second biggest and second most significant city in the Slovak Republic. It is situated in the eastern part of Slovakia near the borders with Hungary, Ukraine and Poland. Location of the city was a significant element in the course of its development. Today the city is characterized by its historical center surrounded by new housing areas, related integrated production zones and the extensive complex of the East Slovakian Iron and Steel Works.

In Košice, there is a large amount of area classified as former industrial zone located throughout the whole city and connected to the technical infrastructure and networks. The revitalization process has not started yet, however, the city management has established cooperation with state administration authorities, schools, and representatives of the third sector non-government organizations (NGO's).

Slovakia has a national environmentally damaged property inventory but it does not differentiate between brownfields and blackfields. The Ministry for the Environmental Protection of the Slovak Republic has the overview of all environmentally damaged areas. The problem of identifying sites for remediation and eligibility for state supported cleanup funds is addressed through the Ministry. Some programs are already running (i.e. the remediation of the former Soviet Union army sites) but there are not enough finances for overall remediation.

Miskolc

Miskolc, is the largest city of the Northern Region its administrative, educational, cultural, scientific and industrial center. The traditional heavy industry lost its significance in the second part of the 1980's. Based on the impact of social changes in the early 1990's, the town is in a state of transition, and the number of small and medium-sized entrepreneurs based in Miskolc has increased significantly.

There is a national program in Hungary listing only "old ecological damages" or blackfields. Within the National Cleanup Program environmentally contaminated areas and objects, broken down by county and community, are included in the inventory (approximately 19,000 properties), which is 50% of the number estimated. It is necessary to devise a scheme to identify brownfields because ready-to-use programs are due to be prepared before EU funds are made available for development of said areas.

¹ Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom

² Eurostat, EU Statistical Office <http://www.europa.eu.int/comm/eurostat>

³ US Bureau of Labor Statistics <http://www.bls.gov>

There is no national program dedicated to the remediation and redevelopment of brownfields and there are no discussions about creating such a program.

Ostrava

Ostrava is the third largest city in the Czech Republic and it is the industrial, administrative, economic, trade, cultural and educational center of the Moravian and Silesian Region. Ostrava is advantageously situated near the intersection of the Czech borders with Poland and Slovakia and at the crossing of trans-European transport routes in the north-south and east-west directions. As a result of the historic development of Ostrava, abandoned areas are mainly situated in the central parts of the city, or in close proximity. These sites are equipped with extensive technical and transport infrastructure.

In the Czech Republic there is no general brownfields inventory. There is a “System of Evidence of the Old Environmental Damages”, which is administered by the Ministry of the Environment. The Government, through the National Property Fund, takes over the responsibility for old environmental damages caused before the privatization. The latest document related to brownfields is a Czech Republic Government resolution of January 10, 2001, No. 51: “On principles of Environmental commitments settlements arising prior to privatization”. This tool provides direct financial grants for remediation, cleanup limits, and technical support.

Pittsburgh

Pittsburgh was the capital of the US steel industry for over 100 years. The demand for labor attracted many foreign immigrants who populated ethnic neighborhoods throughout the city. Population grew steadily until the 1970’s when it peaked at approximately 750, 000 persons. The steady decline since that time is primarily the result of the downturn in the steel industry. With a current population of less than 350, 000, Pittsburgh has been a city of constant change. The current strategy is to reposition the city as post industrial; take industrial property assets (brownfields) and re-use them.

The federal government (equivalent of the state in European countries) puts together a National Priority List consisting of brownfields that pose an immediate danger to the environment and/or surrounding community. This is not a list of brownfields on a national basis. The USA consists of 52 states (regions), each functioning as a separate entity under one federal government. The US states (regions) are more independent in their internal administration compared to European country regions. Each state has its own environmental protection department and its own budget for environmental remediation. Unless the site is listed in NPL, the federal government (EPA) does not have jurisdiction over specific sites; however, the state departments do.

Case Studies

A total of 13 case studies have been reported by the participants (Table 3).

Table 3: Case Studies

City	Site name	Location	Size	Former use
Katowice	Silesia Plant	Nearby the city center	10 ha.	Steel industry
Katowice	Katowice Coal Mine	Nearby the city center	13 ha.	Mining industry
Katowice	Murcki Coal Mine	Periphery of the city	1 ha.	Mining industry
Katowice	Zaleska Halda	Nearby the city center	13 ha.	Mining industry
Katowice	Zaleze-Auchen	Periphery of the city	14 ha.	Other
Kosice	Novy Domov-Finiš	Nearby the Spišská Nová Ves City center	4.5 ha.	Textile, wood and furniture industries
Miskolc	Diosgyor Industrial Park	Nearby the city center	44 ha.	Steel and machinery industries
Ostrava	Karolina	City center	60 ha.	Steel, mining, and chemical industries
Ostrava	Lower Vítkovice	Nearby the city center	150 ha.	Steel, mining, and chemical industries
Ostrava	Hrušov	Periphery of the city	45.5 ha.	Residential area damage by floods
Pittsburgh	Nine Mile Run	Periphery of the city	97 ha.	Slug dump
Pittsburgh	Washington’s Landing	Periphery of the city	17 ha.	Livestock slaughter house
Pittsburgh	LTV Hazelwood	Periphery of the city	72 ha.	Steel

The case studies reported by the participants are mostly old steel plants located near or the periphery of the city center (Table 3). They vary in size; however, they are all connected to major transportation lines and other basic infrastructure. The sites are in various phase of completion.

Conclusion

The comparative study was based on data collected in a questionnaire that addressed national and local initiatives for land development, and brownfield case studies. It is safe to say that of the V4 countries, the Czech Republic and Slovakia seem to be more proactive with respect to encouraging brownfield development. Hungary has supported greenfield development and Poland appears to be lagging in both greenfield and brownfield development; perhaps priorities are redirected as a result of the extremely poor economy.

The partner cities seem to echo the progress and intentions of the national government in that Ostrava and Košice seem to be more active in creating brownfield development opportunities. Miskolc and Katowice are lagging in their focus on brownfields. This may be a function of other priorities that are based on hard economic times. This further suggests that brownfield development is neither the 'key' nor the 'secret' to economic development but rather brownfield development is a component to be recognized when other priorities, such as un- and underemployment, are addressed.

The following are conclusions regarding conditions that result in brownfield development progress:

- Education – the conveyance of lessons learned can help a potential project
- Historical preservation – a mandate without provisions for funding may hinder progress
- Incentives – brownfield projects can be marginal, therefore, incentives can be a form of encouragement
- Land use – should be consistent with the neighborhood; particularly mixed use that includes residential
- Market creation – property demand will drive the need for developer-ready brownfields
- Motivation – one or more parties must be drive to success, either the owner, the developers/investors, or the government
- Partnerships – like incentives, partnerships can help to mitigate risk
- Patience – development may take many years therefore persistence is imperative
- Regulatory framework – knowledge of the goals is essential, therefore, so is a clear and supportive regulatory framework
- Size – properties that are too small may hold no value to developers/investors and properties that are too large may require the collaboration of many developers/investors

Summary

- Brownfield development is not the 'secret' to economic development, but rather a component that must be considered in perspective of other priorities.
- City involvement is important and so is the availability of public funds and other incentives
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References

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