

## **WE ARE TAUGHT TO BUILD, BUT DO WE KNOW HOW TO TEAR CITIES DOWN? EUROPEAN URBAN SOCIETIES ADAPTATIONS TO THE SHRINKING CITIES PHENOMENON**

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### **ABSTRACT**

While much attention is paid to urban development and to what is being built in general, much lesser notice has been given to the opposite phenomenon. While some cities are growing rapidly, many others are experiencing a population decline for various reasons. These include economic, environmental, and social changes to which urban societies and structures have to adapt. Significant outflow of population and decreasing population density are symptoms of these cities' structural crisis. As a result, local urban centers are reorganized and parts of residential districts are demolished. The paper analyzes the neighborhoods of selected European cities in which a significant demolition of residential structures has taken place over the last 30 years and seeks to find the parameters that characterize the affected areas and embody the nature of „what and why“ we demolish in our cities today. On the other hand, it is looking for characteristics that make these places different from one another. It also compares resulting quality of the respective areas after their adaptation to the new situation. The paper focuses mainly (but not only) on the physical impact of shrinkage on the selected cities structures and seeks for evidence and reasons of different vigour of studied phenomenon in diverse neighborhoods of cities. We achieve it through comparing variables related to shrinkage in 3 selected European cities. The selected variables are demographic (population trends), spatial (demolition rates, distribution within the city relative to the urban structure) and specific local conditions (urban policies, ownership). The comparison shows a wide range of conceptualised approaches to shrinkage, with housing tenure and the openness of urban policies to shrinkage emerging as key factors, although it should be noted that even these do not always lead to clearly better results, as the problem of shrinkage is not purely urban based and thus cannot be solved by purely urban planning methods.

**KEYWORDS:** shrinking cities; urban shrinkage; urban decline; urban decay; depopulation; urban renewal; urban planning

## **INTRODUCTION**

The phenomenon of "shrinking cities" refers to cities that have been losing population in both the long or short term. Between 1950 and 2020, more than 350 large cities over 100,000 inhabitants worldwide has lost a significant amount of the population, despite the overall growth of the world population (Oswald and Rieniets 2006). This is not a new phenomenon, cities have a history of shrinking, often due to natural disasters, epidemics, wars, fires, or loss of importance, but with the advent of industrialization, our Western civilization has entered a period of all-round rapid growth and the possibility of reverse quantitative development was left behind (Oswald and Rieniets 2006, IBA-Buro 2010). We are therefore used to long-term growth and expectations of its permanent continuation. However, the question is whether this is a long-term realistic expectation (Kaltenbrunner 2005). Half of the shrinking cities from 1950-2000 are located in the G7 countries, although they represent only about 13% of the world's population (Oswald and Rieniets 2006).

The population decline was logically transferred to the physical structures of the affected cities over time. However, the urban planning apparatus is usually not prepared for this situation and the architects are not trained for it as the past and current prevailing paradigm is the opposite. In this article, we focus on the situation in Central Europe, where the contraction mainly concerns the new Länder of Germany, mainly the border and industrial transforming regions in Poland, the Czech Republic or Slovakia (Kabisch et al. 2012). This region was chosen for the mutual structural similarity of its cities, a similar historical development of settlements and thus the assumption of similar conditions for their reduction. The physical effects of the shrinkage and the changes in the structure of the city that it causes can be conceptualized in many ways. Philip Oswald's book *Shrinking cities vol. 2: Interventions* (2006) describes the physical changes in the urban structure the following way: 1) Demolition City (to adapt the city to its new "real" size through demolitions), 2) Evolutionary City (creating future development of adaptable structures), 3) Feral City ("deurbanisation" of the city by exposing its parts to afforestation, urban agriculture, etc.), 4) Contraction City (restoring the city to its natural core or local cores and thus creating an "urban archipelago"), 5) Depleted City (depopulated cities with an elderly population that, despite circumstances, can retain internal mobility and functionality through a series of local interventions) and 6) Polarized Regional City (territorial development should not be the same across the board, both traditional development zones and quantitative shrinkage zones should be separated). Based on the monitored cities, a less regulated "thinning" can be added to the list of approaches, where the deployment of demolitions in the city organism does not follow a specific spatial logic. However, these general concepts have more specific and detailed impacts in the individual cities affected, which we want to illustrate in this article.

## **CITIES SELECTION**

To compare the circumstances and characteristics of cities where demolition of residential houses takes place, we chose 3 cities: Karviná (CZE), Frankfurt (GER) and Eisenhüttenstadt (GER). The choice does not aim to be representative of other European shrinking cities, as the authors of the article hardly consider it possible due to the high number and different

characteristics of these individual cities. However, based on a broader overview of shrinking cities, the selected cities are selected to represent a mix of analogous characteristics (size, location in Central Europe, urban structure, size of population decline) and distinct defining characteristics (organizational background, degree and nature of cities physical structure intervention, social context).

### **Karviná**

Karviná is located in the eastern part of the Czech Republic near the Polish border. Population development is slightly different here, from the typical representatives of shrinking cities in this region. While in most of them the population decline began around 1990, Karviná has been losing its population since 1977 (CZSO 2021). Karviná as a town grew significantly after the Second World War with the construction of the first “socialist realism” style neighborhoods, followed by typical panel housing estates from the 1960s onwards for incoming miners to local coal mines. In 1977, it reached a maximum of 82,000 inhabitants, then decreased to the current approximately 52,000 inhabitants, which represents a decrease of about 36%, which is the largest cumulative decline of all Czech cities that have more than 5,000 inhabitants (CZSO 2021).

Controlled demolition of apartment buildings in Karviná took place in the Karviná-Nové Město district, although it cannot be said that the population decline occurred only here. A total of 25 apartment buildings with multiple sections were demolished in two waves, first after 2012, then in 2019. The immediate reason for the demolition was the poor technical condition of the buildings and the associated low occupancy of apartments (Web-1). The owner of all these demolished houses is a private company, which owns a total of over 40,000 flats in the region, and the demolition is the result of the company's own decision. On the scale of the whole city, this demolition causes the gradual separation of the Nové Město district from the rest of Karviná, a concept described as the creation of an "urban archipelago". Within the district itself, on the other hand, we can talk about its implosion, because from a local point of view, its peripheral part is being demolished and, on the contrary, the central square of Nové Město was reconstructed, thus strengthening the local focus.



Figure 1: Distribution of Demolitions within the City of Karviná - red, green: main city structure's elements, black: housing reductions



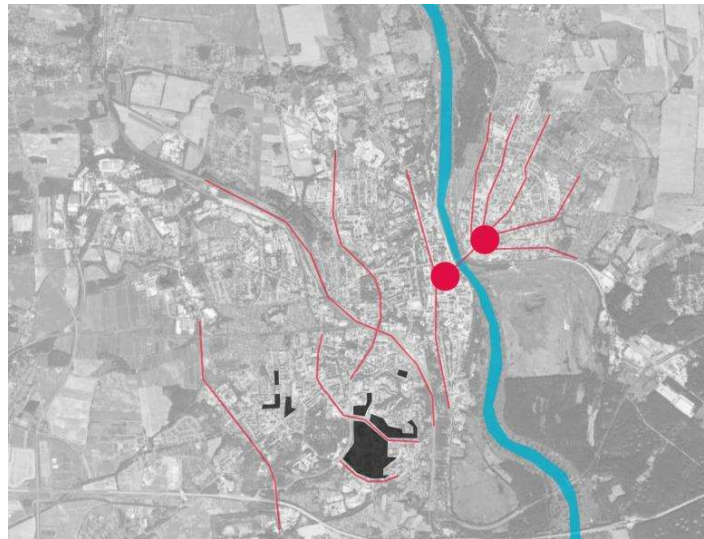
Figure 2: Distribution of Demolitions within the Neighbourhood of Karviná-Nové Město - red, green: main neighbourhood structure's elements, black: housing reductions

### Frankfurt (Oder)

Frankfurt (Oder) is a city on the German-Polish border, forming a twin town with Polish Słubice, with which it formed a single city before World War II. The population development of Frankfurt is relatively typical for this region - the sharp increase after the Industrial Revolution was interrupted by the two world wars, after which, however, the city continued to grow demographically until 1989, when it reached a maximum of 87,000 inhabitants. Due to economic and social changes, a sharp decline in population followed during the 1990s, later stabilized at around 58,000 after 2010, representing a decrease of approximately 33% (AfS Berlin Brandenburg 2006, Stadt Frankfurt (Oder) 2018).

The emigration wave particularly affected the housing estate in the Neubereshinchen district, which was built as a panel housing estate between 1977 - approx. 1990. After 1990, the

population began to decline and from 22 thousand decreased by 2005 to about 10 thousand, gradually to 5.5 thousand, with the result of a high ratio of vacancy of flats (Ruge 2010). Gradual demolitions have been underway since 2003, which meant reduction of about 6,200 housing units out of a total of ca 9,000 by 2020 (Stadt Frankfurt (Oder) 2021). The demolitions took place as part of the Stadtumbau Ost program in order to regain the balance of the housing market. The deployment of most of the demolitions in the southern part of Neuberesinchen leads to the loss of the urban character of this part of the city, while its location on the edge of the built-up area leads to the compacting of the rest of the urban development. Demolitions also took place in northern Neuberesinchen, but with less intensity. In this part, demolition can be described as “thinning” for the urban structure. Almost all areas after demolished houses are now unused, without an alternative, even temporary function. Similar demolitions leading to a thinning of the city structure took place in other parts of Frankfurt, but they almost always happened in prefab concrete construction housing estates of detached apartment buildings.



**Figure 3: Distribution of Demolitions within the City of Frankfurt (Oder) - red: main city structure's elements, black: housing reductions**

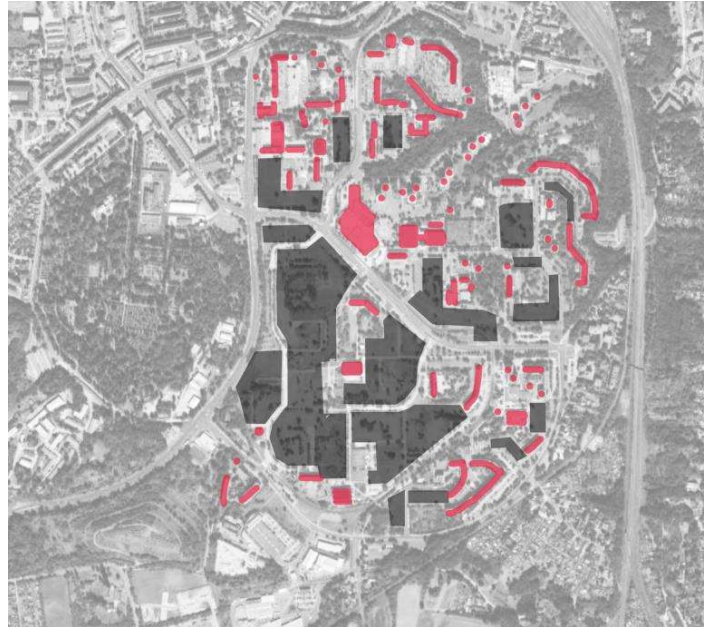


Figure 4: Distribution of Demolitions within the Neighbourhood of Frankfurt (Oder)-Neuberesinchen - red, green: main neighbourhood structure's elements, black: housing reductions

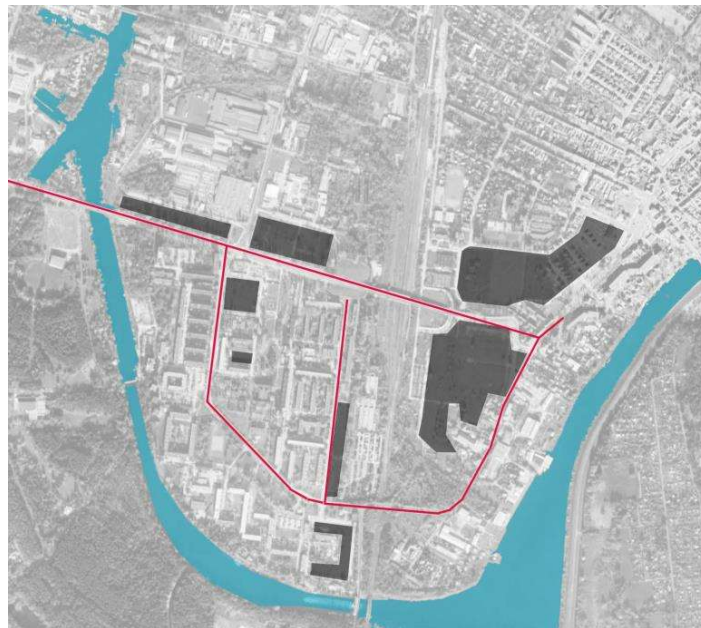
### Eisenhüttenstadt

Eisenhüttenstadt, like Frankfurt, is a city in the eastern part of Germany near the Polish border. Structurally, it can be described similarly to Karviná - the core of the new development after World War II is in a socialist-realistic style, both in terms of architecture itself and in terms of urban design. It is more similar to Frankfurt in terms of demographic development, as it follows a typical scheme for its region - a relatively sharp population decline after 1990, which meant a population decline from 53,000 to 24,000, a total of 55% (Stadt Eisenhüttenstadt 2015, AfS Berlin Brandenburg 2021)

As part of the Stadtumbau Ost program, over 6,200 flats were demolished between 2003 and 2015 (Web-3). Their distribution within the city is more difficult to describe than in the previous two examples, as it occurs in all parts of the city, regardless of their position and role in the urban structure. It is a way that can be conceptualized as "thinning", where the urbanized area of the city remains the same in shape, but the efficiency and built-up ratio is reduced due to demolition. The demolition of several blocks along the main railway corridor separates the Fürstenberg district from the rest of the city, thus we can conceptualize the formation as a creation of "urban archipelago", but the extent of demolition in the city is much larger and somehow the urban archipelago is not completely apt. We get the same view when we take a closer look at the individual districts where the demolition is concentrated. Even in their local system, the concentration of demolitions into related units is not obvious, thus even on a local scale we describe it as a thinning of individual districts.



**Figure 5: Distribution of Demolitions within the City of Eisenhüttenstadt - red: main city structure's elements, black: housing reductions**



**Figure 6: Distribution of Demolitions within the Neighbourhood on the Confluence - red, green: main neighbourhood structure's elements, black: housing reductions**

## COMPARISON

In order to know the similarities and differences of the shrinkage process in the surveyed cities, we compare their demographic variables (population development over time), spatial variables (demolition rate, their distribution in the city from multiple perspectives, their time sequence and their immediate causes) and local conditions (ownership, urban policies). The variable "Urban character of the demolitions in scale of the whole city" expresses the

conceptualization of the distribution of demolitions in terms of the structure of the whole city and in relation to the city-wide urban elements, as described in the introductory chapter. The variable "Urban character of the demolitions in the scale of the neighborhood" contains the same analysis, but in the neighborhood and in relation only to local urban elements. This quantity is not defined by the initial Oswalt (2006) division, but is derived from it and converted to a smaller scale. To describe the policy responses to shrinking we use G. J. Hospers classification (2014) which distinguishes four categories: trivializing of shrinkage, countering shrinkage, accepting shrinkage and utilizing shrinkage.

Table 1: Comparison of the Shrinking Cities

	Karviná	Frankfurt (Oder)	Eisenhüttenstadt
Location	Czechia (Moravian-Silesian region)	Germany (Brandenburg)	Germany (Brandenburg)
Region type	transforming mining region, border region	transforming industrial region, border region,	transforming industrial region, border region
Population maximum / now	82 000 / 52 000	87 000 / 58 000	53 000 / 24 000
Overall population decline	36 %	33 %	55 %
Population decline period	1977-now	1990-now	1990-now
Demolitions period	2013-now	2003-2019	2003-now
Urban character of the demolitions in scale of the whole city	urban archipelago (contraction city)	implosion (contraction city)	thinning
Urban character of the demolitions in scale of the neighbourhood	implosion	de-urbanisation, thinning	thinning
Affected urban structure	modern solitary housing developments	modern solitary housing developments	modern solitary housing developments
New usage of the territory	none	predominantly none	predominantly none, detached houses
Direct cause of the demolitions	technical condition	apartment vacancy	apartment vacancy
Ownership of the demolished houses	private company (Heimstaden Czech s.r.o.)	city-owned company, cooperative (Wowi, WohnBau Frankfurt)	city-owned company, cooperative (GeWI, EWG)
Policy response to shrinking	countering	accepting	accepting



## **CONCLUSION**

Although it is said that destroying is easy, while building is difficult, the situation in the three cities surveyed leads to a different conclusion. In order for meaningful reductions in the urban structure to take place, quite a few conditions must be met. In all three cities, the demolition is made possible by the relatively integrated ownership of the housing stock, there is the large private owner in Karviná and there are local city-owned companies and housing cooperatives in Frankfurt (Oder) and Eisenhüttenstadt. Ownership is also one of the reasons why demolitions occur only in housing estates from the second half of the 20th century in all monitored cities. The ownership structure in older quarters of cities is usually much more fragmented due to longer development, which generally complicates the general agreement on area's development, thus it complicates more complex demolition. Apartment housing reductions in these parts of the cities are also easier in terms of urban planning, as this does not necessarily result in urbanistically unfinished areas, which would necessarily arise during demolitions in a compact block of flats. The deployment of demolition within the city follows different logics in all three cities. From a certain size of cities, a distinction must be made between city-wide demolition distribution and local district-scale distribution. Both may be different, even contradictory, and the assessment of their effectiveness may also differ between them. In the monitored cities, there is no significant new use of areas after demolished houses, only in Eisenhüttenstadt part of these areas has been made available for individual housing. Thus, the new use is not the primary goal of these demolitions, which makes the phenomenon of shrinking cities different from the standard development of the area, which envisages the demolition of residential areas mainly for the purpose of new construction. Policy response to shrinking is logically crucial in terms of the ability to influence future developments, but the sample of cities shows that they do not always have the expected effects. In Karviná, demolitions are less coordinated and based on the decision of the private owner than in Frankfurt, but the resulting efficiency of the remaining structure is not fundamentally different. These findings correspond to the conclusions of the project "Shrinking Smart - The Governance of Shrinkage", where (despite some geographical generalization) differences in a more holistic approach in Western Europe and traditional growth-oriented strategies in Central Europe and its reliance on partial solutions through the private sector can be seen. (Rink et al. 2012).

## **RECOMMENDATIONS AND FURTHER RESEARCH AGENDA**

Our first recommendation concerns the general approach of municipalities to shrinkage. In order for any response to be at all possible and consequently effective, the phenomenon of shrinkage needs to be accepted as one of the possible development alternatives. This is not always the commonplace in the affected cities, many of them deny the situation or try to reverse it even in conditions where this is almost certainly not possible. Shrinkage need not be accepted as the only given form of the future, but it does need to be freed from the stigma of degradation in order to allow rational debate about the best possible forms of development, albeit in the context of population decline.

Furthermore, it seems appropriate to retain the chance of directing possible demolitions in the city - not to prevent them a priori, but rather to direct their placement in terms of urban

planning logic. Ownership plays a crucial role in this. In order to avoid the need to acquire the complete housing stock under the ownership of the city or its organisation, it is advisable to create an analysis that identifies the key locations in the city's structure that will allow shrinking in a "smart way".

The further research agenda rising from examples of the three selected cities includes examination of some of mentioned variables like ownership (due to its determining influence on development, i.e. demolition in the area), the type of structures where demolition occurs (their more accurate identification and subsequent analysis will allow more efficient localization of demolitions and subsequent use space after demolition of buildings) and the time relationship between the process of population decline and the occurrence of the need for demolition of residential buildings (to identify the "turning point" in the affected cities). More comprehensive evaluation of the effectiveness of demolition in different cities and the setting of a methodology for evaluating it is another important topic for the future research, that rises from our findings.

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**Web-1**

**[https://www.irozhlaz.cz/zpravy-domov/karvina-bourani-domu-residomo\\_1904100620\\_tec](https://www.irozhlaz.cz/zpravy-domov/karvina-bourani-domu-residomo_1904100620_tec)  
[quoted 2021-12-18]**

**Web-2**

**[https://www.eisenhuettenstadt.de/media/custom/2852\\_345\\_1.PDF?1522142663](https://www.eisenhuettenstadt.de/media/custom/2852_345_1.PDF?1522142663) [quoted  
2021-12-18]**

**Web-3**

**<https://www.eisenhuettenstadt.de/Leben-Wohnen/Wohnen-und-Bauen/Stadtentwicklung/Stadtumbau/R%C3%BCckbau/> [quoted 2021-12-18]**