

# SUSTAINABILITY OF HISTORICAL CITY CENTERS COMBINED WITH NEW ADMINISTRATIVE AND COMMERCIAL AREAS

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## ABSTRACT

The construction of a new commercial and administrative center near the historical city center of Ostrava resulted in an empty area. It has already become the third non-functional site in this part of the city. The opportunities for these sites and their future in the city structure is discussed. The current situation, attitude of the government and results of past architectural competitions were analyzed, and in referring to earlier research by other authors, some potential options were explored. These were applied to the conceptual proposals of architecture students at the Technical University of Ostrava. Students see the future of historical cores in the construction of multifunctional flexible objects and specific cultural and social objects. They tried to connect individual dysfunctional sites with a newly designed public space. The results were discussed with the city council of Ostrava, the professional and general public, and then displayed as exhibitions.

*Keywords: city center, city planning, sustainability, historical centers, revitalization, crime reduction.*

## 1 INTRODUCTION

The city center of Ostrava originally consisted of buildings that were mainly used for housing, with a commercial parterre (ground floor). Later, in the 1990s, buildings were renovated into administrative facilities. Most of them are currently empty, as is the public space in front of them. Some of these spaces have been modified into car parking. This contributed to the disappearance of public space, but helped to keep stores running. In attempting to address these empty public spaces, the city council injected life into the city by staging annual events, such as Christmas or Easter markets, with traditional products and crafts. Unfortunately, the markets were accompanied by inappropriate entertainment. So far, these methods have been more degrading than helpful towards public spaces.

Ostrava, with a population of 300,000, is the third largest city in the Czech Republic. It saw its greatest boom in the nineteenth century, through developments in coal mining and the associated industry. Mining in Ostrava itself was gradually phased out in the 1990s, and brown fields now populate the city center and its vicinities. There is no easy solution for what to do with them, as they require removal of ecological problems, resolving of ownership relationships, finding new functions for abandoned sites, and determining the business aims and financial resources for their revitalization [1].

The city is much like a mosaic. Individual city districts are separated by the river or the greenery of deciduous forests. Each city district functions both physically and administratively as its own independent region; therefore, does not need the original historical center for them to be run. The center is located in the Moravian Ostrava district.

The historical city center (Fig. 1) was significantly rebuilt during the second half of the nineteenth century. The original long wooden housing, assembled around the 9500 m<sup>2</sup> rectangular square (Masaryk) was replaced by brick structures. The dominating structure, the town hall from the sixteenth century, as well as the Marian column and statue of St. Florian from the eighteenth century, remain. Gradually, important department store buildings were built on the square. Two pedestrian zones that connect the square with Nádražní street, which



is flanked by bank buildings, and further along by the Edvard Beneš square, where there is a department store building, Ostravica-Textilia (since 1928). This building separated the square from the smaller Smetana square, where the National Theatre of Antonín Dvořák is the dominant structure.



Figure 1: Summer event, “Beach” in 2018, in the historical city center of Ostrava. (Source: L. Kaboň [10].)

This area is bordered by the exhibition hall Černá louka, which was built on a former brown field (two mine dumps were once located here) [5]. The area was developed without order or coherence, and was also included in the broader concepts for developing the historical center.

With a population of 50,000 people, this city district competes with the almost 100,000 in district Ostrava-Poruba, built for the most part in the 1950s in the historical style of socialist realism. It mainly consists of housing, which was scarce after the Second World War (WWII) and could not satisfy the huge demand of the incoming labor force to work in the factories and mines. In the last three decades, much of the population has been moving to surrounding satellite towns, mostly to the west of Ostrava, thereby encouraging suburbanization, despite that cities should rather be densifying.

The problem of depopulation in the historical city center started with the construction of the Nová radnice [New Town Hall] in 1930, which replaced the original on Masaryk square, known now as the Old Town Hall, used today as a regional museum. Another circumstance that created a short-lived extension of the center was the conversion of most apartments in city center buildings into offices, during the 1990s.

In 2001, the department store Ostravica-Textilia closed (consisted of three buildings on Edvard Beneš square). In 2012, a new department store, apartment and administrative center was built near the center, on the rejuvenated area of the former Karolina mine and coking plant [6] (Fig. 2). This coincided with the end of the lease of most stores in the historical part of the city; and the new leasing of offices and apartments, which began a mass movement,

included one of the banks located on Nádražní street moving into new premises. This last event vacated the historical center not only in terms of public space, but also in terms of functional buildings.



Figure 2: New administrative, business and housing center named Karolina. (Source: LDR Technoprojekt s.r.o. [11].)

The center itself gradually became empty, and the buildings today remain a sad memento of the city's previous glory at the turn of the nineteenth and twentieth centuries. Questions arise whether these changes have been for the good of not just society, but also the city as an organism, and what should be done with the abandoned sites and brown fields.

From the perspective of ethical responsibility to future generations and in reference to Hans Jonas [2], we should focus today on constructing permanent buildings of good quality and revitalizing cultural heritage sites, historical city palaces, the department stores and bank buildings of the nineteenth and twentieth centuries, replenishing them with quality contemporary architecture in a manner that retains an ethical heritage for future generations; because even these generations have the right to at least an equivalent standard of living as the current generations.

From the point of view of site sustainability, today's needs must be satisfied in a way that does not jeopardize the ability of future generations to meet their own needs (see the Rio Declaration on Environment and Development, 1992).

The next reason for constructing quality buildings is the effort to achieve longevity, in terms of use, as this will seem the most lucrative investment for stakeholders. The architect Dietmar Eberle spoke of multi-functional housing that would allow us to integrate several different future functions (which are generated by society's needs and are entirely out of our control) during the lifetime of a building [3]. "Objects should be able to cope with a change in use... The essence of adaptability is to prolong the productive life of a building. A flexible structure is transfunctional and multi-purpose and must allow for a change in use – changing the space for working into housing, changing the space for housing into leisure areas, or covering several functions at the same time" [4]. This means that the functions which can revive historical purposes are for the current need of today's society, and do not have to be useful for the purposes of the next generation.

Some buildings, however, are very specific, such as the scientific library, philharmonic hall or theatre, which cannot be placed into a multi-functionally conceived building and are not expected to be used only for a short period of time. On the contrary, it is necessary to design these buildings according to their operational needs, and the cultural and social functions of its organizations. Here, experience speaks against modifying existing buildings with other functions for the purposes of the above-mentioned library or philharmonic hall (for example, the six-year-old temporary building of the Moravian-Silesian scientific library in the New Town Hall in Ostrava, or the Regional Library in the three adapted historical buildings on Perštýn square in Pardubice).

Other and separate questions concern public space. As we can see from modern administrative-commercial buildings and foreign projects, people need to encounter something astonishing or entertaining; therefore, public spaces are modified according to these expectations. Good examples are the famous Mushrooms of Seville (Fig. 3) on Plaza de la Encarnación and Plaza de Andalucía, or The Red Square by BIG in Copenhagen. The issue is that these designs could seem too aggressive in a historical context, yet their aim to astonish is achieved very well, and of course, they are attractive to many visitors and tourists. According to our responsibilities and in terms of sustainability, potential solutions for locations in Ostrava's historical city center are discussed in this paper. This could be helpful in tackling the brown fields in other European towns, mainly from the point of view of functionality of buildings.



Figure 3: The Mushrooms of Seville. (Source: Klára Frolíková Palánová.)

## 2 METHODS AND APPLICATION OF SOLUTIONS

In order to specify possible solutions, the center of Moravská Ostrava was divided into three areas: Masaryk square, Edvard Beneš square and the Černá louka exhibition hall (see locations in Fig. 4). The historical and current situation of the locations was then compared by examining government objectives, analyzing previous architectural competitions and studying the research results from professional articles. All of the concepts suggested demonstrated solutions for repairing brown fields in the historical city center of Ostrava. These were then applied in the conceptual proposals by architecture students at the Technical University of Ostrava, and then discussed with the city council. All conceptual designs were presented to the professional and general public through exhibitions.



## 2.1 Masarykovo náměstí [Masaryk square]

The wide and sprawling public space of Masaryk square, which underwent complete reconstruction in the year 2007 (designed by Ateliér RAW, Brno), is surrounded by buildings from the end of the nineteenth century, the Old Town Hall, the Baťa department store (1931) in a functionalist style, and the Laso department store building (1974).



Figure 4: Map of the historical city center and surroundings. (Source: Marek Výtisk.)

Currently, the parterre of the square is slowly filling up with new cafes, candy stores and restaurants, and a rejuvenation of the public space is taking place. The returned function of housing appears to be the most beneficial in the long run. The reverse conversion of offices from the 1990s into apartments will be a very long process, and the residents alone cannot significantly rejuvenate this public space.

The main problem is in the evening and at night, when the cafes are closed, the people are inside, and the square is empty. This situation could raise crime in the area. It would be beneficial to place a hotel or a guest house in this area, providing an opportunity for guests to go out in the evenings to a restaurant, bar or to attend a cultural event. The development of services could help generate state administrative offices, and visitors and employees could use the shops and restaurants nearby. "It turned out that those who spent their work and leisure time in one location experienced this place more deeply, felt more connected with it and took greater care of it" [4].

Of course, schools, kindergartens and civic amenities must be part of the location in order to be attractive to residents. A relaxation zone could be established along the riverbank. City representatives can then plan to extend the public bus route to the square, so that the locations would become physically more accessible.

On the western, longitudinal side of the square is an empty area overgrown with grass that has been there since WWII. Over time, it has merged with the square and formed a ground plan shaped like the letter “L.” This empty area was the subject for atelier design projects in the master’s degree program for architecture and engineering (Technical University of Ostrava): it allowed students to design a hotel one year and a town hall the next year (Fig. 5).



Figure 5: Variants of solutions for the empty area near Masaryk Square. (Source: authors, adapted from student designs.)

In both cases, students selected three potential solutions involving either construction over the entire square-shaped lot with a block of buildings, or only on a part of the area, so that some public space would remain free to connect with the square, while maintaining the diagonal direction of pedestrians crossing through the area, which would also support the continuity of the square as an existing pedestrian zone. The building’s entrance would face the square. The building’s height would be level with the surrounding buildings from the end of the nineteenth century. Parking would be possible underground but would need to consider the destabilized area and more difficult access from narrow service roads.

Although no building dominates, even the Old Town Hall, students designed objects as a common part of the square’s lines (Fig. 6). Of course, closing off this part of the square appears to be a logical solution, not only according to historical evidence.



Figure 6: Student design of town hall. (Source: student design Ivona Dlábková.)

## 2.2 Náměstí Edvarda Beneše [Edvard Beneš square]

After construction of the Karolina business-administrative center was complete, the Edvard Beneš square was midway along the pedestrian route between it and Masaryk square. It is also crossed by the conceptual cultural axis between the National Theatre and Art Gallery. It is therefore a very significant area, bordered on one side by the above-mentioned famous Nádražní ulice and its bank buildings. One of them once formed the border of the square, before it relocated to the new center. The city has made use of this significant area with a new city district office for Moravská-Ostrava. This brought about the movement of people into the area, even the abandoned building.

Another unresolved building is the aforementioned Ostravica-Textilia department store (abandoned in 2001). It is in dilapidated condition, but despite that, the city is considering purchasing it and opening an office for the department of citizen identification and travel documents. The city was also considering locating the Moravian-Silesian scientific library here. Students therefore created conceptual designs for this socio-cultural institution [7]. In order to respond to the cultural axis of the theatre-gallery, the option of placing the philharmonic hall there was also examined (Fig. 7).

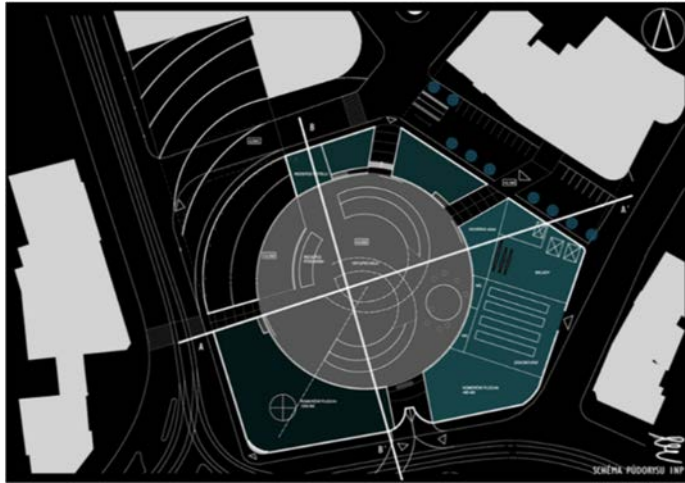


Figure 7: Variant of the solution for Edvard Beneš square: philharmonic hall design. (Source: student design by Lenka Volná.)

For the library's building, students investigated three potential solutions: constructing over the entire area (in the case of the philharmonic hall, this would be necessary, because of the functional demands on space); an addendum to the original building of the Textilia department store; and for the final option, constructing a solitary object in the middle of the square. In this case, two options deal with the Ostravica-Textilia department store building. Students have noted a general trend of methods for converting brown fields in city centers that involves demolishing the brown fields in the city center, while preserving those on the outskirts or in open landscapes [8]. Even a minimal solution still required the existing department store building to be reconstructed. Because this square is usually used as a thoroughfare, most of the designs attempted to find a way of creating a through-passing ground floor, thus avoiding a barrier (Fig. 8).

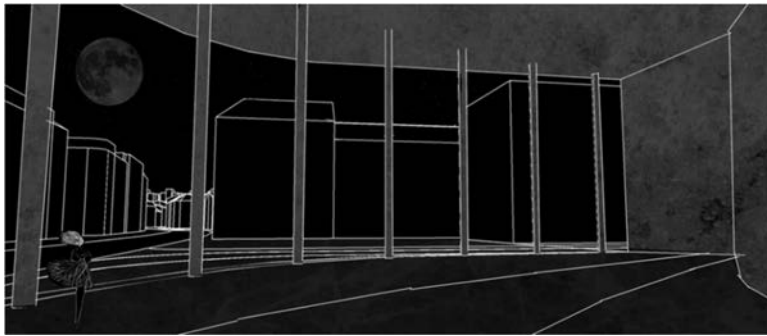


Figure 8: Linking the public space and ground floor of the philharmonic hall design. (Source: student design by Lenka Volná.)

Behind the Ostravica-Textilia building from Edvard Beneš square is Bedřich Smetana square, where the long-abandoned buildings were once used by the local university to build a student dormitory. This encouraged canteens with healthy food and cafes along the square near the Antonín Dvořák theatre.

### 2.3 Černá louka [Black Meadow]

In the area of today's Smetana square is the Antonín shaft, and near Černá louka [Black Meadow] was a 25m-high mine spoil dump. In the twentieth century, it became the center of the newly built Tivoli amusement park. In 1935, however, the dump was used for building material, and by 1960, the entire area had been gradually restored. This brown field gradually became a center for exhibitions and culture; however, it never was a unified and compact composition (Fig. 9). This unification has largely been the city's objective for the last two decades. The area borders Smetana square and the theatre, and is near Masaryk square; it has a walking path crossing it in the direction of the Silesian Ostrava castle. Part of the unkempt grass, trees and overgrown field is an exhibition hall, puppet theatre and the Cooltour cultural center, although it is located in restored buildings that had a formerly different function.

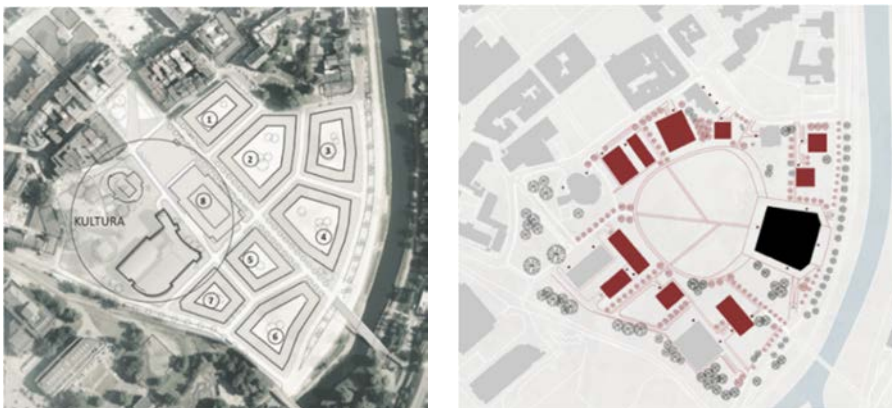


Figure 9: Variants of the solution for Black Meadow. (Source: student design by Marek Výtisk and Marie Liberdová.)



The area has been the central theme of many competitions since the end of the nineteenth century, but a suitable function and the extent of construction needed has not been suitably determined. The most recent competition was in 2010: it was won by the architecture studio Maxwan Architects + Urbanists (of The Netherlands). The winning design kept the area as a field, and the designers arranged the concept buildings in a similar manner to which students had selected in their atelier designs, with either a free or very precisely conceived approach.

Grasping the essence of the area and thinking of its function and direction has been part of a long debate. In both cases, options included either entire blocks of buildings or solitary buildings. The blocks continued on from the central axis of the city's avenue, and the solitary buildings formed a circle around a central field. In both cases, one of the buildings was cultural: a cultural center or philharmonic hall (Fig. 10). Both urban design plans continued on to the Ostravice riverbank and other important centers. In this way, new walking paths were created from the center of the city over Černá louka, and on to the Unie bridge over the Ostravice river, then leading to the Silesian Ostrava castle and further on, to Silesian Ostrava. At the same time, functionality would encourage pedestrians to walk, and the entire area would become rejuvenated by the population using the administration, residential housing, student housing and cultural building's parterre. The sum of functions, together with the pedestrian axis, would ensure the movement of people during the day and evening, all week. These designs also strived to resolve the disorderly structure of the area in such a way that it would become a fully functioning part of the city center.

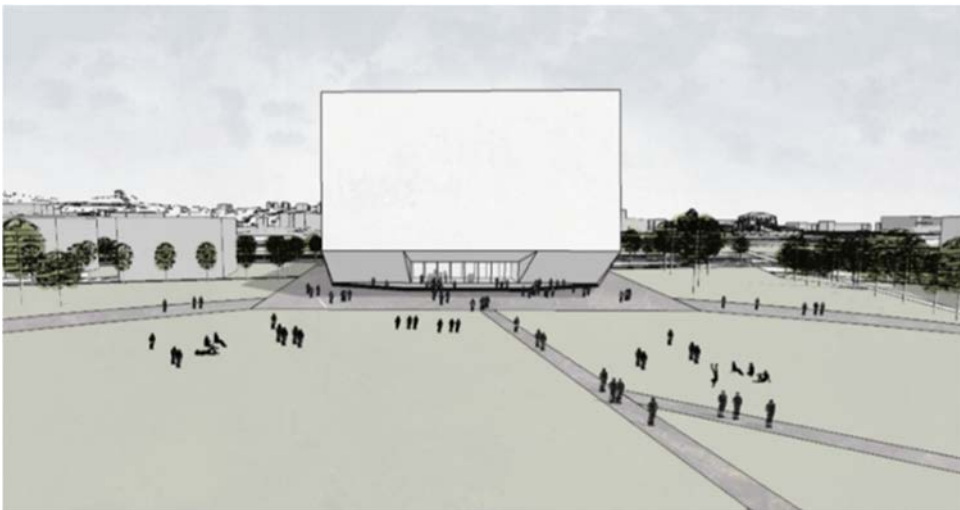


Figure 10: A view of the philharmonic hall design from the meadow area, located at Black Meadow. (Source: student design by Marie Liberová.)

### 3 CONCLUSIONS

Currently disorganized, the historical center of Ostrava and three focal points of Masaryk square with the Old Town Hall, Edvard Beneš square with the Ostravica-Textilia department store building and the Černá louka site with a link to the Silesian Ostrava castle are currently little-used and unprosperous sites. The situation could be resolved by increasing the movement of people at different times of the day and night. In response to the apparent trend in cities for important socio-cultural organizations to be present, building types should

generate a wide range of functions in the nearby surroundings, with the effect of increasing pedestrian traffic through these areas where specified. Christopher Alexander and Jan Gehl state that the life of an area generates more life, and with it, the complexity of the system starts increasing [9]. The existing functions are always reckoned with, as they are still relevant and exist in terms of developing society and the needs of the population in the area; such as housing, administration, shops and restaurants working together in multi-purpose buildings. Also, city department offices, guest houses, dormitories for students, cultural buildings and more could be added to these, so that a broad range of functions would assure the required movement of people.

The most significant changes are yet to be seen, in the area near Edvard Beneš square after a city administrative office and student dormitories were built. But already today, there has been a noticeable increase in pedestrian movement during the day and evening that has been observed. The phenomenon is being further supported by hotels and a public transportation stop. The square also serves as a public space that is associated with the public transportation stop and pedestrian zones leading to Masaryk square, and to the recently constructed Karolina retail-administrative building center. By redesigning the public space and resolving the situation of the unused Ostravica-Textilia department store building, the focal point, which is already functioning today, will be complete. This could have a lasting effect on the structural and technical condition of the historical buildings in the future and could help citizens to re-discover the identity of their historical center, decrease crime in the area and be a good example for development of other sites.

By focusing on the historical center of the city, as the existing brown fields allow us, the city will not expand and take up new land and create demands for technical infrastructure and environmental burdens. Although it is not possible to dictate how a city should function, our gateways must always be as open as possible, in order to naturally develop society and cities. This is supported by having multifunctional objects that are capable of transformation and the small amount of support that will generate the current needs in time.

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