

## Europoint – Railway Junction Redevelopment – A Chance for Brno

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### 1 INTRODUCTION

The city of Brno, the Czech Republic's second largest city, is the metropolis of the South Moravian Region. On a macro-scale, it is a part of the Berlin – Prague – Vienna – Bratislava – Budapest development axis and inside the CENTROPE Region.

The city's unique position in the European context is underlined by its location on the flow line of two of 30 selected EU transport projects – Trans-European Transport Network (TEN-T). Brno is one of a few European cities appearing on the lines of two of these projects.

The redevelopment of the Brno railway junction, marketed under the title of EUROPOINT BRNO, is a part of a broader government program of modernization of key railway junctions and stations on the lines of transit corridors, which is one of the current investment priorities of the railway transport development in the Czech Republic.



Picture 1: Brno within Europe

The Brno railway junction redevelopment project represents a unique chance to use this redevelopment for a sophisticated urban development in the central and southern parts of the city, which will become an important city development zone in the 21st century. The objective is not only the modernization of the railway traffic through Brno and the construction of a new station as a principal transfer point for all types of public transport, but also the development of the southern part of the city. The development in this area has stagnated due to the long-term unresolved issue of the Brno railway junction redevelopment.



Picture 2: Project sitting in the city context



Picture 3: Present status quo of the EUROPOINT site area

## 2 HISTORY OF THE BRNO RAILWAY JUNCTION

The Brno railway junction dates back to the year 1839, when the first railway line to Breclav was commissioned, thus enabling a train connection to Vienna. The line terminated in the area of the today's main railway station. A major part of its bridge over the river Svatka has been preserved to the present day.

Twelve years later, in 1851, a northern line was brought to Brno from Ceska Trebova, which provided a connection from Brno to Prague. At first, the line terminated perpendicular to the original station building; only later was it connected to the Breclav line and the current station building was built, situated along the line.



Picture 4: 1839 – Brno – Vienna – the first railway in the Austro-Hungarian Monarchy

Later in the 19th century, additional lines were brought to Brno from Strelice (1856) and Prerov (1869), and a connecting line was built between the „lower“ station and the main (the „upper“) stations in 1870. Further lines followed from Tisnov (1885) and Veseli nad Moravou (1888). This complicated situation was made even worse by the uncoordinated construction of sidings to industrial plants in the 19th and 20th centuries.

After WWI, the history of the Brno railway junction continued with the construction of a marshalling yard in Malomerice (1938) and a new line for Tisnov (1953). In the 1970's, a two track through line for freight traffic and a container transshipment yard in Horni Herspice were built.

## 2.1 Brno railway junction redevelopment history

The Brno railway junction grew in chaotic consequent steps, and further issues arose. These concerned namely the utilization and connecting of the area adjacent to the Brno railway junction (hereinafter called „ZUB“ – the commonly used Czech abbreviation).

The construction of the station on the southern city limits (outer fortification belt) in the 1830's meant the founding of a new southern rampart regardless of any envisaged further city development.

In the 1920's, the main issues to resolve were defined, which became groundwork for the terms of reference of competitions and proposals for the city development solutions:

- insufficient capacity of the main station and its dispatcher building,
- ramification of the lines in the city area,
- age of most railway facilities,
- low capacity of the shunting yard (for passenger trains),
- constrained space in front of the station, and
- development of the city's southern segment.

The first urban planning competition for the solution of the railway issue in the city was announced in 1924.

The outcome of another competition for a „General build-up plan of the city of Brno“ in the year 1927 was the recognition of the fact that the relocation of the passenger station was inevitable, and that the build-up plan, i.e. the ideas of the city development, could not be treated separately from the set of issues of the railway and the station. At that time, an idea appeared that the area of the current main station should be abandoned and a new station should be built in the area of the so-called „lower station“, to the south of the current station. In the post-WWII period, a new station with a vast redevelopment of the railway junction appears in all master-zoning plans from the years 1956, 1970 and 1982. The idea of building a new passenger station outside the area of the current main station was not only picked over from one plan to another, but it was always examined and assessed in the entire urban planning context. The conclusions of these assessments always reaffirmed the previously chosen concept of the railway junction redevelopment.

For that particular reason a two track through line for freight traffic was built in the 1970's as a framework for the future solution to the railway junction redevelopment. Subsequently, following the ZUB redevelopment concept, the Prior department store and the Zvonarka central coach station were built; the redevelopment, however, did not continue any further.

The issue of importance of the ZUB redevelopment for the city was re-opened only after 1989, in the wake of political changes in the Czech Republic. In the years 1990-1991, a joint commission of Ceske drahy, s. o. (the state railway management company), the then Federal Ministry of Transport and the City of Brno, with the participation of foreign experts, assessed four options for the positioning of the new passenger station, elaborated into eight technical drafts. The selected option with a new relocated passenger station was recommended to be included in the new Master Zoning Plan of the City of Brno. In 1994, the City Assembly approved the Master Zoning Plan of the City of Brno and reconfirmed the concept of the ZUB redevelopment, which became a foundation stone for the solution of the railway transport development concept and the related city development concept.

### **3 BENEFITS OF THE CURRENT CONCEPT OF THE RAILWAY JUNCTION REDEVELOPMENT**

#### **3.1.1 Benefits for the development of Brno:**

- The opportunity to develop the central zone and the adjacent area to the south of the city centre
- Development of the public transport system in the city
- Completion of the Brno ring road as an important element of the historical urban planning structure
- The opportunity to complete the city's transport service system
- Inclusion of the River Svatka and its wharfs in the development of the city
- Improvement of the transport accessibility of Brno and the region (a comfortable transit hub)
- Range of modern services within the new railway station complex

#### **3.1.2 Benefits for rail transport in Brno:**

- New high-capacity passenger railway station in technical parameters that allow the creation of an integrated transport system
- Non-conflicting connection between high-speed lines, thereby strengthening the role of the city and the region within Europe
- Simplification and reduction of the entire rail track system within the city
- Improvement of the transfer options between rail and bus transport
- A priority during the construction of the new station to preserve the unaffected operation of the existing railway station
- Reduction of time losses when passing through the Brno railway junction

#### **3.1.3 Benefits for the Czech Republic's railway system**

- Construction of a high-quality railway junction as a part of the Czech and European rail network
- Completion of the modernization of the 1st railway corridor without affecting the existing Brno passenger station
- Acceleration of international traffic on the 1st railway corridor and on other routes
- Creation of technical groundwork for the development of the integrated transport system in the South Moravian Region including cross-border links
- Reduction of state grants for passenger rail transport as a result of the increase in quality and speed of transport through the Brno railway junction.
- Possibility of multi-sources financing of new railway station construction

## **4 URBAN PLANNING ASPECTS OF THE RAILWAY JUNCTION REDEVELOPMENT**

### **4.1 Development of the southern segment of the city in the context of the development of the city as a whole**

Brno has in effect completed the development of its areas in the section from Bosonohy through Kohoutovice, Bystrc, Soběšice and Líšeň to almost its maximum possible development extent. Its continuation would mean the degradation of the natural city belt and high levels of investment into the construction of public infrastructure that would be extensive in nature. On the other hand, development in the other direction, which has been blocked for many years by protection to agricultural land, flood plains, technical networks, etc, offers, despite all these limitations, great opportunities for the concentrated development of all the basic city functions, and linked to the regional context as well. The basic framework of this development consists of a proposed network of transport systems with preferential rail-based regional transport. The current pressure exerted by investors to the south of the city along its southern boundary signals their interest now and in the future.

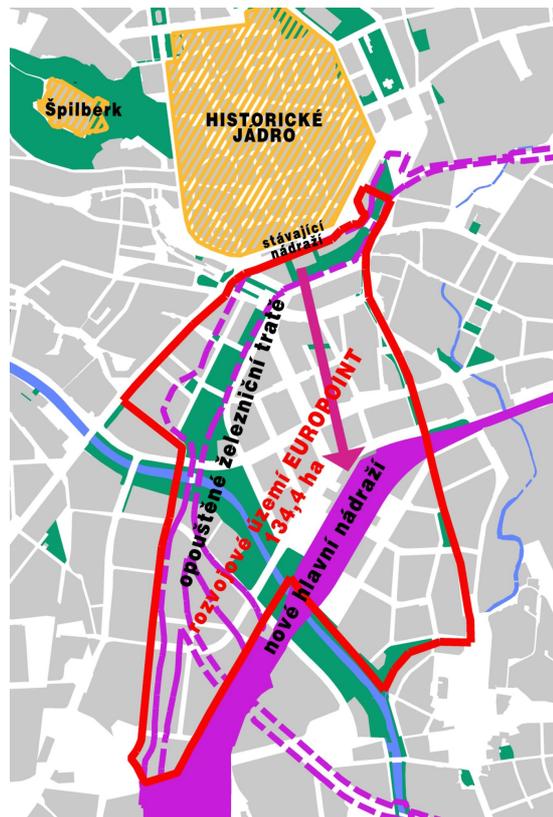
For Brno, this would mean the preparation of conditions for the gradual completion of the southern part of the city, completing the segment stretching from the historical city centre, through Komárov and to the route of the large outer ring road in Horní Heršpice, thereby creating a new urban planning structure. This will seamlessly connect to the existing structure of the historical centre and the completion of the Brno ring road idea. The City of Brno will thereby make use of the unique opportunity to raise the level of a large section of the city to the benefit of citywide and regional functions, thereby creating a new and attractive area close to the centre of the city. This will all allow the redevelopment of the ZUB, which is linked to the relocation of the current passenger station to the south of its existing site.

### **4.2 Development of the southern segment of the city**

Today's area (134 ha in extent), with regard to the redevelopment of the ZUB, does not reflect the importance that it has thanks to its position. It is situated in the central area of the city, and is directly linked to the historical city centre. The current condition of the land and its overall temporary usage nature is a result of the long-discussed, prepared, but always postponed ZUB redevelopment.

The construction site is an area that lies between the city centre and Komárov and is marked by 150 years of chaotic expansion of the railway and the construction of mainly temporary storage, manufacturing premises and residential units relating to the railway. The area is affected by the uncertainty surrounding the ZUB redevelopment, and this is reflected in turn in the uncertainty of the property owners. The area can be described as one large temporary unit and the rundown condition of the area is also reflected in the ever-falling number of permanent residents.

At the end of the 1970's, the Prior (today Tesco) department store was built here. The most extensive urban development intervention in this area was the large-scale clearance of part of Komárov and the construction of the Komárov housing estate, including the reconstruction of the Hnevkovskeho and Brnenska Streets using the parameters of four-lane traffic routes, which completely destroyed the historical urban structure.



Picture 5: Relations scheme in connection to the city centre

The basic requirement for the intensive usage of the area in accordance with its social and economic importance is the creation of conditions for the new development of this zone in a natural demographic and socio-economic composition of its inhabitants. This means that at the same time as the planned new construction it will be necessary to increase the attractiveness of the area for private and public investment.

Between the Tesco department store and the Zvonařka central bus station the successful reconstruction of the former „Vankovka“ premises has been carried out, which since 2005 has formed a new notional gateway to the development area to the south of the city centre. They were originally industrial premises, which were left to fall into disrepair over several years, and have now found a new use. Today, it is used for commercial and cultural purposes. In place of the original manufacturing plant the new „Galerie Vankovka“ shopping centre was established, and it has been possible to include each part of the historical buildings in the new plan. The former engineering plant underwent complete restoration and serves today as a gallery of contemporary creative art and the reconstructed offices are once more used for business purposes. The revival of this area has also changed the impression of distance between the future railway station and the historical city centre. Formerly the route from the bus station to the centre passed alongside the derelict factory and seemed to be longer than it actually is. Today the Zvonařka bus station and the „Galerie Vankovka“ and the linked Tesco department store form a functional belt leading to the city centre, along which further development continues in a coherent unity.

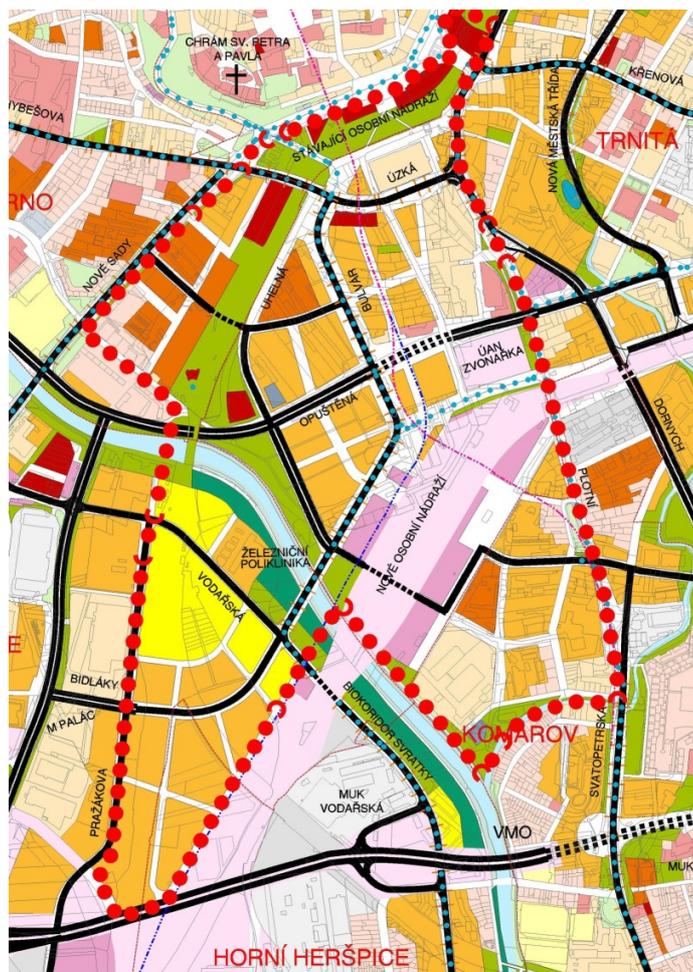
Not long ago, the headquarters of the Land Registry Office was built here, and currently a hotel and office development is being built. The increasing interest shown by investors confirms the propriety of the proposed plan for the development project for the redevelopment of the Brno-EUROPOINT railway junction.



Picture 6: New South centrum - view from the south

#### 4.2.1 Urban planning

- The redevelopment of the railway junction in its displaced position will simplify and reduce the entire rail track system within the city to the benefit of the development of the central and southern parts of the city. This will have a direct influence on the increase in quality of the urban environment and an increase in the economic value of the area.
- When constructing a through station, there is always the problem simply called “in front of and behind the station”. Even when making efforts to plan the southern entry to the station from Komárov so that it is equal to the main north entrance, i.e. from the historical centre, the value of the property between the historical centre and the new station will certainly be higher than the value of the land behind the station. This fact plays an important role in the economic deliberations of the entire ZUB redevelopment project. The City of Brno, České dráhy (Czech Railways) and the Czech State are jointly the owners of more than 70% of the land that will be affected by the planned ZUB redevelopment. It stems from this that the yields from this land may, in however small a manner, contribute to the overall budget for the reconstruction of the area.
- The area of the land in question together with the ZUB redevelopment is 134 ha, of which 58 ha has been reserved for development purposes. The majority of the area consists of mixed-use land, which consists of 31% of the total area of the land. The following Table 1 list the areas of each function present in the area.
- On the site of today’s railway station there once was a promenade, which formed a part of the green belt surrounding the fortifications from 1816 onwards. The embankment, on which the existing passenger station was built, will be used to complete the Brno ring road, which in the zone planning and character of the city is one of the most important elements.
- The new part of the ring road should be completed by buildings of a metropolitan character set in green areas, which will thereby return after an absence of two hundred years. The protected buildings of the existing railway station will also have a metropolitan character. The differences in level between the historical centre and the area to the south of it will be used for underground parking with a total capacity of c. 2000 places.



**LEGEND**

stabilised / proposed zones

	HOUSING
	MIXED USE
	RECREATIONAL
	PUBLIC FACILITIES
	TRANSPORT CONSTRUCTIONS, SERVICES AND FACILITIES
	TECHNICAL FACILITIES
	URBAN GREEN
	LANDSCAPE
	WATER
	MAIN ROADS
	BOUNDARIES OF THE EUROPOINT DEVELOPMENT AREA

Split by function	
Housing	7,1 ha
Mixed purpose (retail, service and manufacturing)	40,8 ha
Civic facilities	2,9 ha
Sports and recreation	7,6 ha

Picture 7: Section of the Master Zoning Plan of the City of Brno

Table 1: Areas offered as suitable for developers

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- The new part of the ring road should be completed by buildings of a metropolitan character set in green areas, which will thereby return after an absence of two hundred years. The protected buildings of the existing railway station will also have a metropolitan character. The differences in level between the historical centre and the area to the south of it will be used for underground parking with a total capacity of c. 2000 places.
- The passenger rail route from the existing station to Židenice will be decommissioned. The corridor left behind will be used for a new urban radial road with buildings on both sides. The new boulevard will lighten the traffic on Křenová and Cejl streets and the area will become more accessible.
- The tracks from the decommissioned Přerov line will be removed and used for other purposes. Closing this line will significantly simplify the construction of the large city ring road on the right bank of the river Svratka.
- Other areas will be used for new development after removal of the tracks, particularly of a sporting – recreational character in the area, which will be linked to the green corridor along the River Svratka. In this area, it will be possible to place an extensive sports-recreation area of a regional importance with good quality transport links.
- Currently the majority of tramlines are routed around the existing main railway station. Only one tramline passes through the area to the south of the railway station to Komárov, which to this day passes by the Zvonarka bus station, which will make transfer to city public transport more complicated for passengers. Similarly, in the area there is a deficit in other technical infrastructure systems. The EUROPOINT project assumes the completion of the tramlines to the new railway

station and their continuation southwards. As part of this project, the necessary technical infrastructure allowing the development of the South Centre will also be commissioned.



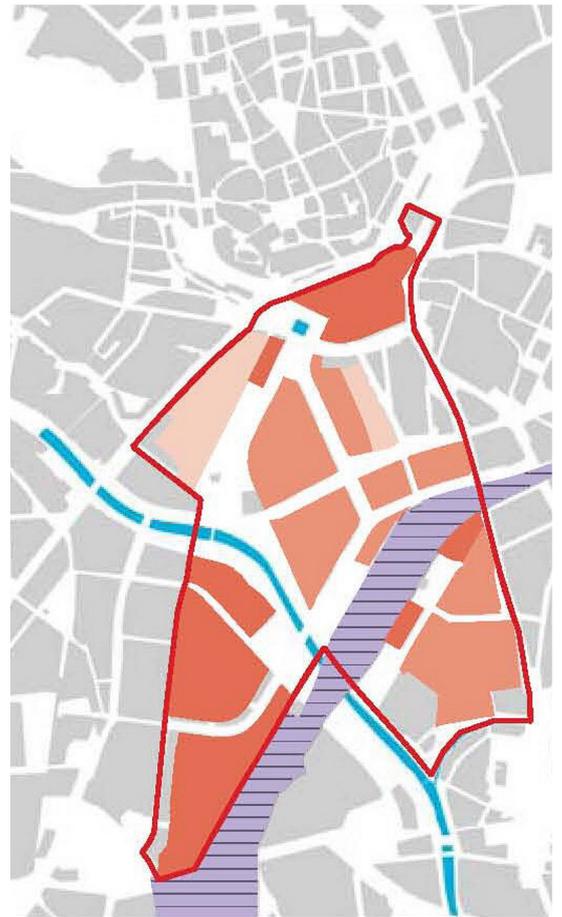
Picture 8: Volume Study visualization of the EUTOPOINT site area

#### 4.2.2 Timetable and stages of building work

The redevelopment process of the Brno railway junction - EUROPOINT was begun in May 2007, when the land zoning decision “Redevelopment of the Brno railway junction” entered legal force. It is expected that the new railway station, abandoning the existing rail areas, will be in operation by 2015.

The ZUB project is divided into several rail and urban infrastructure projects, which are interlinked in stages according to scheduled schemes, which are shown in the table below.

Part of the ZUB redevelopment is the construction of backbone transport and technical infrastructure, which will integrate the land in the structure of the city. The development of the building plots is subject to the construction process of these buildings.



Picture 9

	Location	Vacant from	Development conditions
<b>STAGE 1</b>	East of Nové sady Street, west of Galerie Vaňkovka shopping centre	2006	
<b>STAGE 2</b>	Between historical downtown and Komárov, including new passenger station	2009 - 2015	Implementation of municipal infrastructure
<b>STAGE 3</b>	East of Pražákova Street and existing railway station	2011 - 2015	Commissioning of new passenger station vacating of existing railway facilities

Table 2: Stages of development

## 5 CONCLUSION

Due to its extent, the redevelopment of the ZUB is one of the most important priority development projects in the city, because transport is the alpha and the omega of the development of each city and its region.

The complete reconstruction of areas around railway stations is today being carried out in many other European cities (Vienna, Stuttgart, Lyon, Marseilles, Lille, London, etc). Similar historical backgrounds are not the only common features of such reconstructions. In almost all cases, such development came about as a result of peripheral neglect in the area surrounding the station, as in Brno. They are for us inspirational examples of successful co-operation between the public and private sectors both in their financing and in their implementation.

The key to the success of such projects are their links to a high-capacity interchange hub, which will automatically provide a constant movement of passengers, and a supply of potential customers and clients. Because it is such a highly attractive site in the near vicinity of the historical city centre, it will be commercially attractive mainly for private investors. The construction of a modern railway station in Brno will be the first important event from a list of subsequent and logical steps in the revitalization of the South Moravian transport system. This together with other buildings and the related development of the land will help to gradually lend the city an image of an important city at the centre of Europe, to which we will all be happy to return.

Cities that, together with their regions, are successful in the complex competition between other regions, will have a future within Europe. Brno has a unique chance to make use of the envisaged railway junction to increase mobility between cities and regions,

The regeneration of derelict land and its intensive development within the city will thereby also strengthen the prosperity of the city and the South Moravian Region.

## 6 SOURCES USED:

Derived from materials on the project available at the Brno City Hall, Planning and Development Department, and the project website: <http://www.europointbrno.cz/index.php?nav01=6299>