

Industrial Zone in the Context of Transport Links and Urban Development of the City of Brno

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1 ABSTRACT

This contribution focuses on the city development project of an industrial zone from the viewpoint of the city's long-term development in its southeastern sector, in the context of the international airport. It is an example of close relationship between development projects and transport infrastructure, as well as proof of the fact that the success of development activities depends on good transport links. The combination of multiple transport modes and the crossing of their lines represent an enhanced quality that accelerates the occupation of a development site. A successful implementation of a development project generates additional demand for more comfortable transport links. Their arrangement already in the preparatory planning phase creates conditions for the continuity of the development and for additional projects to ensue. Multimodal transport infrastructure and the city development thus determine and stimulate one another.

2 DEVELOPMENT AFTER THE YEAR 1989

The change in the political situation in 1989 led to macroeconomic changes connected with restructuring of the industry. The loss of traditional markets resulted in a gradual degrading of the economic situation; remarkable slowdown of industrial production caused important giant manufacturing plants to shut down with consequent growth of unemployment. Workforce started to move from manufacturing to the services sector. In 1989, about 49% of all the city's workforce was employed in the secondary sector (industry and building). The largest employer was a tractor manufacturing plant with more than 10 thousand employees; nowadays, it still employs about 1000 persons. The largest today's employer in the secondary sector (nowadays counting for 27% of jobs) employs about 1200 persons. Three largest employers in the city belong to the tertiary sector (services), which creates about 73% of jobs. The 1990's were a period of open market, accompanied by rising influx of foreign capital. Each larger city made effort to face this situation by preparing new industrial areas, which would gradually make up for the overall decay after the industry restructuring. The development of manufacturing activities targeted mainly greenfields adjacent to motorways or main traffic arteries. A majority of the Brno's shutdown industries are located close to the downtown, in a location known as the Svitava River Industrial Zone; that is why the new Master Zoning Plan proposes the future use of these areas for different functions.

2.1 Creating Conditions For FDI

Those cities, which succeeded in preparing industrial zones, could experience decrease in unemployment rate previously caused by industry restructuring. The city of Brno, as the second largest city in the Czech Republic, with an excellent geographic location on the crossroads of important transport routes, and also with a high ratio of educated population and a sufficient supply of skilled workforce, ranks among those Central-European cities that are attractive for foreign direct investment (FDI). The approved Master Zoning Plan of the City of Brno of 1994 proposed several sizable manufacturing zones, mainly in private ownership. In 1998, the Brno leaders, working together with the CzechInvest Investment and Business Development Agency, commissioned a document called „Project Brno 2000“, which aimed at creating a long-term policy and determine related steps focused on the boosting of property market and therewith related economic prosperity of the city.

3 INTENTION TO CREATE A CITY INDUSTRIAL ZONE

The “Brno Industrial Zone“ project was selected as a key project supporting the city's economic growth and meeting the requirements for the entrance of large-scale foreign investors. The project was placed on the area of a former military airport with adjacent undeveloped areas, mainly because of the ideal position of this site towards main traffic arteries (the D1 motorway, a highway, a railway and a nearby international airport), but also because of immediate ownership availability of the land.

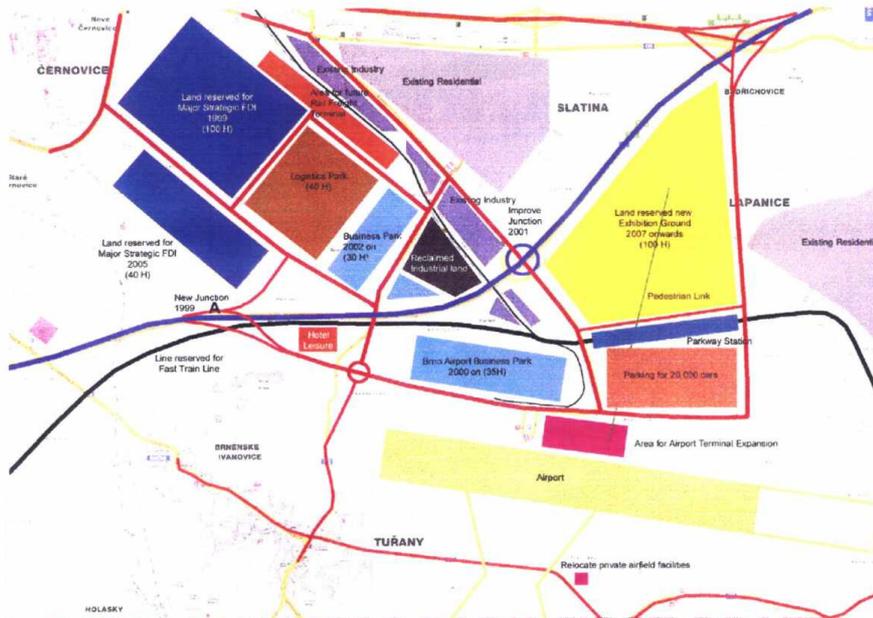


Fig. 1: Position of the Zone within the city

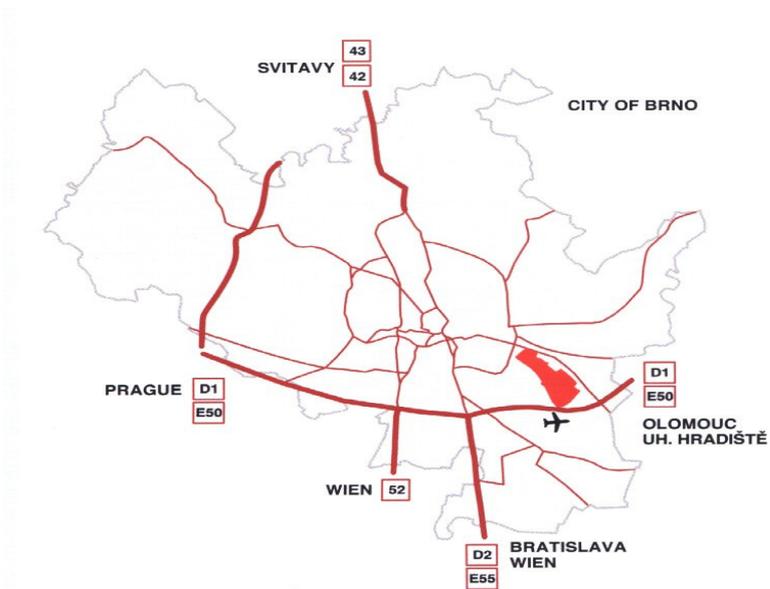


Fig. 2: Layout – the Brno Industrial Zone

In 1997, an urban-planning study named Slatina-Švédské Šance was prepared for a part of this project that was later conducted under the name of „Brněnská průmyslová zóna - Černovická terasa“ (“Brno Industrial Zone – Černovice Terrace“, hereafter called „the Zone“). The Study addressed the proposed first phase of the delimited zone for the development of manufacturing areas, and subsequently the area of the Černovice military airport was to be included in the envisaged Zone. In May 2000, the city leaders approved the intent to build the Zone; the intent has then become the city’s key development document, or its “flag project“. The objective of the project was to create an attractive proposal by the city to major foreign investors in manufacturing industry. With its total size of about 190 ha, the Zone ranked among the Czech Republic’s strategic industrial zones and determined the opportunity for the placement of space-demanding manufacturing plants in the central part of the Zone.



Fig. 3: Detail zoomed from an aerial view of the Zone

3.1 Support from the Czech Republic's Central Government

In October 2000, the Czech central government passed a resolution that set forth the conditions for the placement of investors in this Zone, specified details of the free-of-charge transfer of the military property to the city and requirements for the granting of government subsidies for the construction of infrastructure. The proposal of future use of the military airport including adjacent land in the area of the Černovice terrace was made into an urban-planning study, followed upon by documentation for the amendment to the city's Master Zoning Plan. The documentation delimited the areas designed for industry, including the necessary transport and technical infrastructure for the building of the Zone, the area of which was finally determined to be 179,2 ha. The amendment to the Master Zoning Plan was subdivided into individual phases according to the urgency and complexity of the issues in the areas in question. The last phase was the most intriguing – it concerned the connection of the Zone to the D1 motorway, which was eventually approved in May 2002. Specific conditions of use for the industrial areas within the Zone were consequently approved, which determine selected branches of manufacturing industry.

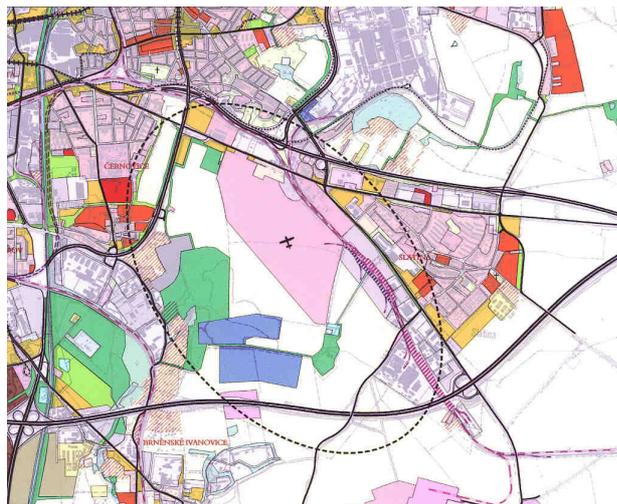


Fig. 4: Status before zoning amendment

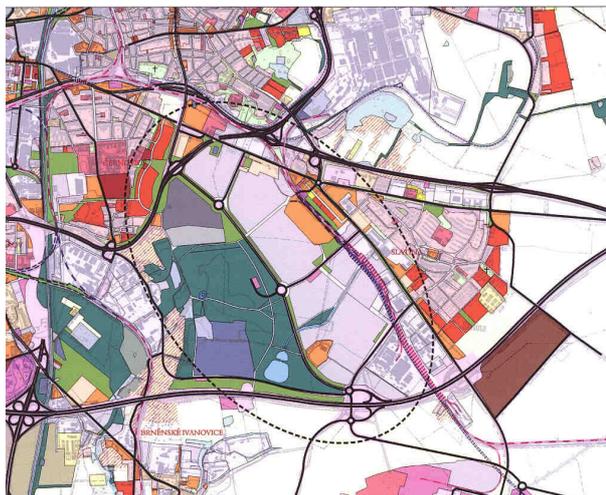


Fig. 5: Current zoning status

3.2 Implementation

The backbone transport servicing and technical infrastructure was built in the years 2002 and 2003, which created a supply of free serviced plots. The infrastructure was built with the support from the central government, through a subsidy from the Industrial Zones Support Program. The former military airport had no transport servicing, hence the city had to build a backbone road and two bridges to cross the railway. The existing backbone access road will be connected to the large city ring road, which will further enhance the transport servicing of the Zone from the viewpoint of broader traffic relationships. The most important action for the Zone and its closest adjacent area will be the connection of the Zone to the D1 motorway in the form of a monolithic motorway junction, the first stage of which has already been implemented.

3.2.1 Zone Occupancy

Nowadays, after a long way that had begun with planning preparation, the Master Zoning Plan amendment in several phases, and subsequent designing and implementation of transport servicing and utilities infrastructure. The first routine step in the acquisition of tenants for the zone is the preparation of a suitable comprehensive offer with all basics information about the Zone and the city, based on the specific request by an investor. The city provides by itself a comprehensive service in offering the ready-made plots. The negotiations with potential investors are roofed by the CzechInvest Investment and Business Development Agency, which works together with the investor on the motivational component of government incentives. The city of Brno promotes the Zone by presenting it at investment opportunity fairs in the Czech Republic and abroad, as well as on the Brno website, as one of the main municipal projects. CzechInvest presents strategic industrial zones on offer in global professional forums. The first investor to start its operations in the Zone in November 2000 was the US company Flextronics International. At present, the zone is occupied by the British company Carclo Technical Plastics Czech Republic, producing plastic components for the final assembly of electronic appliances. After Flextronics had moved its operations away in 2002, the US company Honeywell settled in the constructed manufacturing facility in 2003 with its global development center, producing security systems. Four Japanese companies operate in the Zone: Daikin Device Czech Republic producing air conditioning equipment, Ohmori Technos Corporation producing components for air conditioning equipment, Daido Metal Czech with its production of bearings for the automotive industry, and Nitto Denko Czech producing polarization filters. Furthermore, there is the Austrian company Bomar, dealing in the development, manufacturing and sales of bandsaws for metals, material conveyors and feeding machines. The German hydraulic equipment manufacturer Bosch Rexroth and the Swiss company Aguna, producing precision engineering tools are also operating in the Zone. Some of the above companies have thus far implemented only the first stages of their investment plans on the premises.

After the withdrawal of Flextronics, the development and management of a part of the Zone (36 ha) is provided by the Dutch developer CTP Invest, which offers investors the construction and subsequent rental lease of industrial estate. Currently, this part of the Zone is occupied by almost 20 companies, such as Acer Czech Republic, Qisda Czech, and Andrew Telecommunications, which together created 2,253 job openings

with expected growth to as many as 2,800 jobs by the end of the year 2009. The overall area of premises occupied (84 ha) within the Zone suggests that about 56% of all construction areas are rented out. The current tenants created a total of 4,540 job openings in the Zone (figures as of December 2007) with expected growth by 1,500 new job opportunities through the construction of additional stages in individual premises by the year 2009. At present, the construction of a development and training center of manufacturing and trade of the Czech company Intelekt Invest is being prepared, as well as the construction of a technology center of another Czech company – Ivar. The placement of additional companies on parts of available construction plots of a size of about 43 ha is already under negotiation. If the negotiations are successful, the Zone will be full up; that is why the city leaders prepare additional areas of 16 ha for further expansion of the Zone in the adjacent military facility after the shutdown of the aircraft repair base, and on a part of the former Slatina barracks premises.



Fig. 6: Development situation in the Zone – September 2006

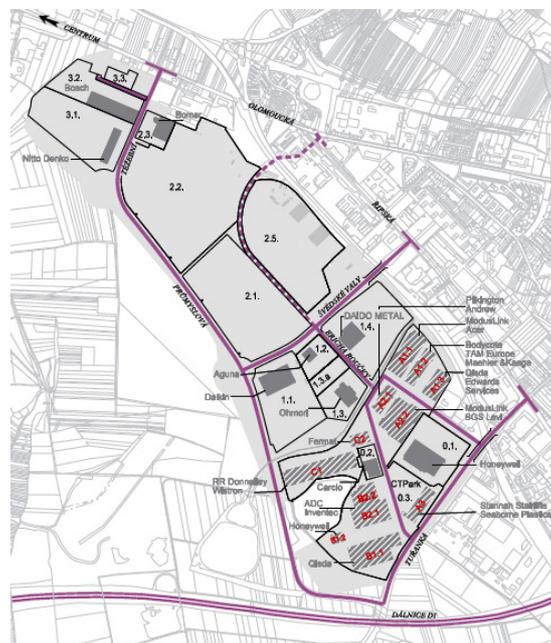


Fig. 7: Utilization of the Zone – ttthe present state

3.2.2 Recapitulation

After the construction of the first Flextronics plant and in the time of progressing construction of the Zone's backbone infrastructure, a dramatic dropout in the investor's demand occurred for about nine months. This was due to the events that took place in the USA after September 11, 2001. Following the investor's interests, many negotiations were conducted mostly with Japanese companies about the booking of individual plots. The construction of infrastructure, including two bridges over the railway, was completed. The investors concerned frankly admitted that the industrial zone in Brno is the most attractive in Central Europe. A major role in the individual investor's decision-making was played the country's cultural and educational

standards. As a smiley bead, we can quote a remark made by the CEO of the Japanese company Daido Metal Czech during the ceremonial opening of the company's operations: he said that one of the reasons for the company to pick the Czech Republic rather than Poland or Hungary were our world-renowned music composers Smetana and Janáček. Is this perhaps to say, that even music composers can be the best entrepreneurs? The Brno Industrial Zone – Černovice Terrace gained good reputation among other Czech industrial zones by being awarded a prize in the „Industrial Zone“ competition for the year 2004. It is considered a very successful project that remarkably contributes to the economic growth of the city and the entire region. In a relatively short period of time, a major part of the Zone was successfully occupied by important foreign companies from all over the world. The city's leaders expect the Zone to continue to lure additional investors, who will strengthen the position of Brno as a manufacturing and technology centre for the region of Central Europe.

4 INCENTIVES FOR THE LONG-TERM DEVELOPMENT OF THE CITY OF BRNO EADER 1

The progress of occupancy in the Černovice Terrace Industrial Zone suggests is a very successful project. The construction of a motorway junction and subsequent direct connection to the motorway network (the Prague – Brno D1 motorway) will have a major impact on further expansion of the Zone in the future as well as further development of the city in this area. Together with the proximity to the international airport, it will create outstanding comfort for the development of the adjacent areas and ensure a growing demand from the investors. A favorable combination of transport modes that are available in here is a focal point for further development, an incentive for the rise of new manufacturing and trade zones: the Airport Zone, which is situated in the immediate vicinity to the airport, the Brno-Tuřany Zone with an area of about 250 ha, and the Šlapanice Zone, which is already outreaching the city's administrative boundaries. The long-term development of the area for manufacturing purposes is mentioned, due to its regional importance, in the processed planning document – Planning Prognosis for the South Moravian Region. The whole set of issues, including the technical and transport infrastructure systems, was subsequently verified in the Urban-planning Study of the Development Zones of the Brno-Tuřany Airport, Černovice Terrace and Šlapanice, commissioned by the South Moravian Regional Authority. The Study mentions a qualitatively new level of transport infrastructure – the high-speed railway: the existing railway line in the area, which still serves nearby communities, will be relocated to a new position to serve the Brno-Tuřany Airport, where a new station is proposed. In the adjacent corridor, the high-speed railway line will be placed, which will also use the station as an interchange point.

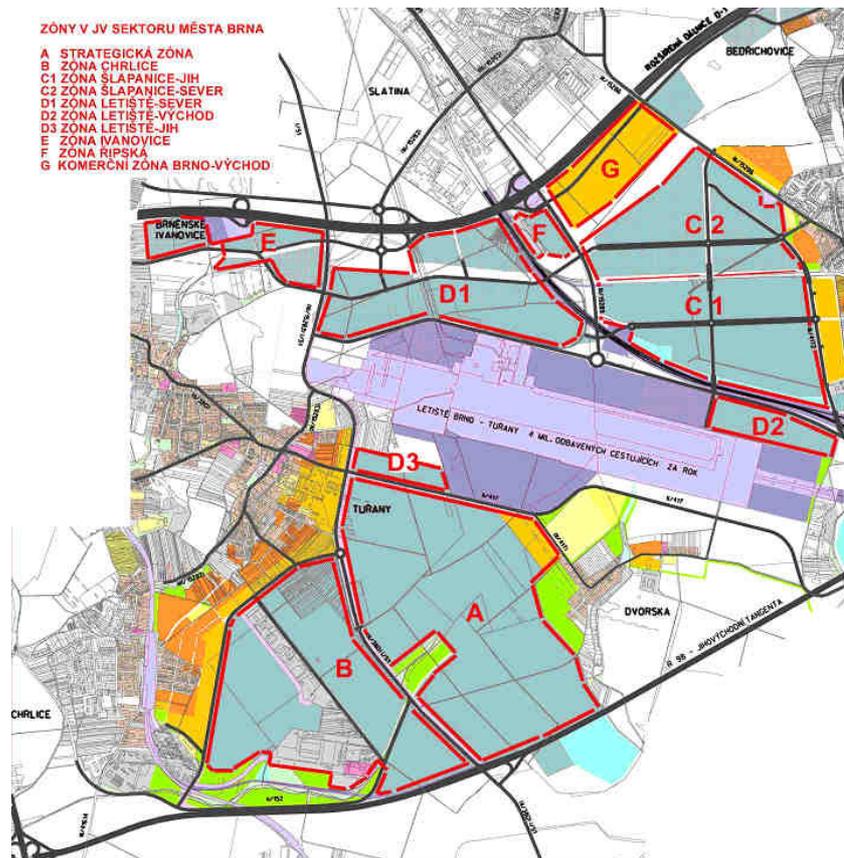


Fig. 8: Land provisions for the development of the city of Brno and the town of Šlapanice

According to the information provided by the Investment and Business Development Agency, there is a short supply of adequate assembled serviced sites of a strategic size over 200 ha. Further development of the southeastern part of Brno, together with the development of the related area of the town of Šlapanice, will enable to put additional sites on offer for huge investments of manufacturing and warehousing nature, and important projects in the field of strategic services, science and research. It will also have a substantial impact on the economy of the city and the whole region, by enabling effective return on the investments made into necessary servicing systems. At the present time, the future spatial development outside the limits of the current Master Zoning Plan is being processed in various options for the draft new Master Zoning Plan of the City of Brno. The envisaged development potential according to the above-mentioned urban-planning study of the development zones is being verified in one of the draft solution options in order to prevent a remarkable growth of regionally important zones, mainly for manufacturing purposes, from deteriorating the existing imbalances in the city's functional structure and therewith-connected imbalance of transport links between homes and workplaces. The future use of such an extensive area will be determined by the implementation of new technical and transport infrastructure systems, namely a high-capacity speedway – the southeast tangent. Its construction will be of major importance for the relieving of long-term overburdened stretches of the D1 and D2 motorways running through the territory of the city of Brno even without the fulfillment of the envisaged planning potential.

5 CONCLUSION

Advanced transport infrastructure with comfortable multimodal nodes has a far-reaching importance for the development of the city and of the region – it accelerates economic growth, which influences it in return. Successful growth generates demand for a higher quality of sophisticated transport modes. They interact with one another through reciprocal stimulation, which plays an irreplaceable role in the development of the city.