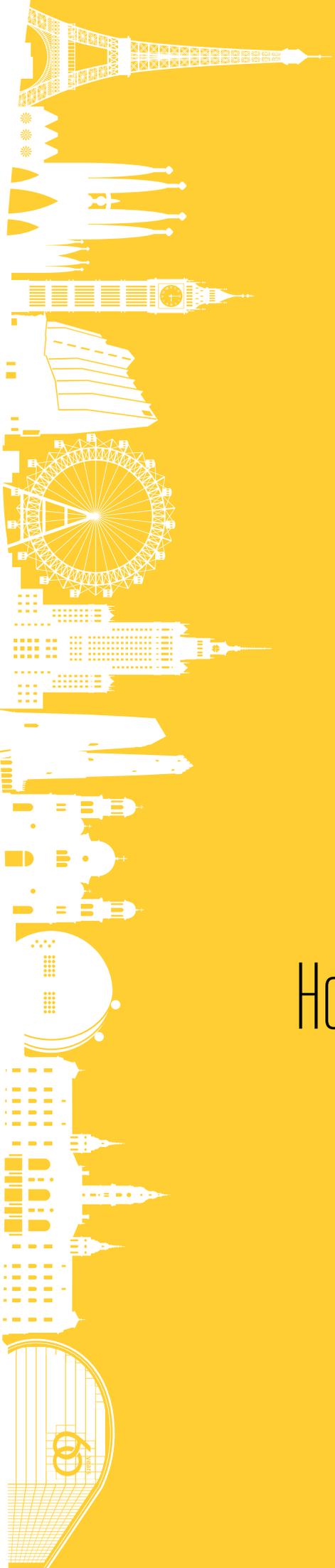


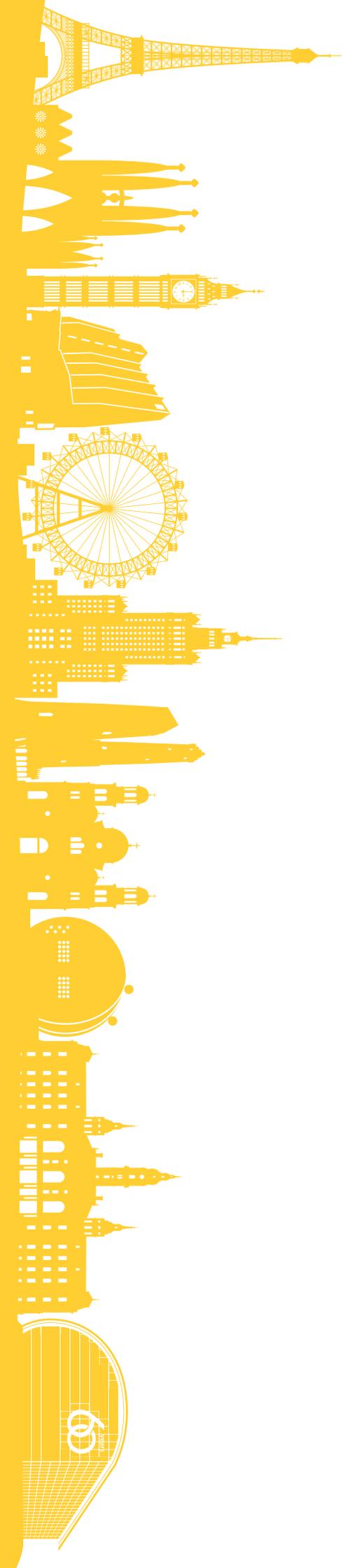
city, transformed

GYŐR

How to compete with capital cities

Éva Gerőházi
Iván Tosics





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Located between three European capital cities, Győr has to work hard to attract investment and jobs. The Hungarian city has set itself up to attract innovative companies, creating new urban values such as education-based innovation, a high-quality urban environment and a lively cultural sphere. Here's how a “secondary city” builds on its industrial past even as it breaks away from its dependence on it.

Győr is a Hungarian “secondary city” close to Vienna, Bratislava and Budapest. These three capital cities attract most of the development potential in the area, making it difficult for smaller cities such as Győr to attract the headquarters of international companies or to develop large-scale new urban areas. Győr's response has been to focus on “smart specialisation” in line with its broader innovation-based development concept.

With 125,000 residents, Győr is located in north-west Hungary, 40 km east of the Austrian border and exactly halfway between Budapest and Vienna. The city boasts a special geographical position within the triangle of three European capital cities (Bratislava being the third).

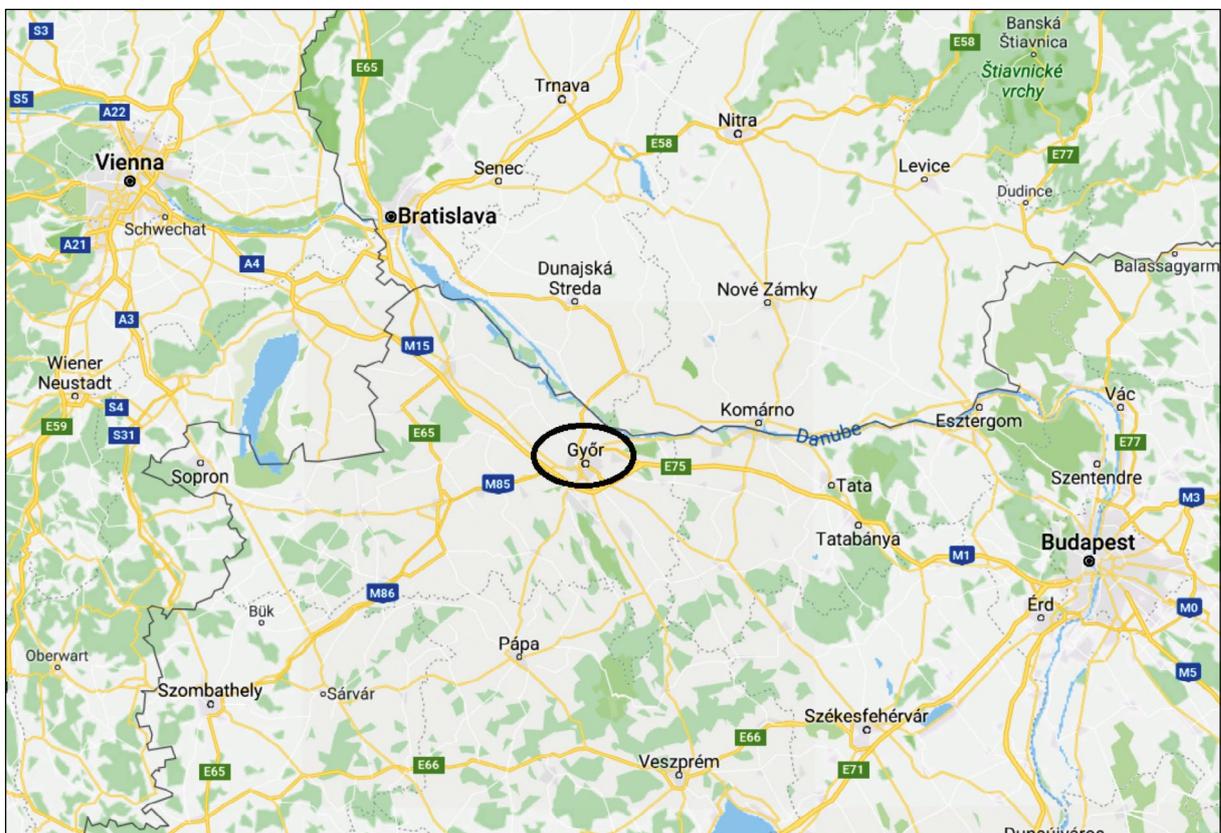


Figure 1. Location of Győr between three capitals

From a domestic perspective, Győr has an outstanding economic position. It currently is — and has been for a long time — a flagship of Hungarian heavy industry, having made a very successful transition from socialist machine industries to modern car manufacturing. Győr was the only city in Hungary barely affected by major economic crises (the economic and social transition of the early 1990s and the global financial crisis at the end of the 2000s). It experienced continued growth when all other Hungarian cities faced a downturn. On the other hand, the local economy has always relied on a single dominant industry. Before the economic transition of the 1990s, the Hungarian Waggon and Machine Factory RÁBA was the largest employer, dominating the local economy. Audi Hungaria took over this role after 1994, with nearly as many employees as RÁBA previously.

The following figure displays key milestones in Győr's urban development, grouped into three categories: economic, spatial, and social.

Economic development	Spatial development	Social development	Main planning documents
Establishment of the International Business Park in 1992			Concept for the EXPO in 1992
Audi started production in 1994			Perspectives of urban development in 1994
Győr-Pér airport started its operation in 2003		The former lower-level higher education institute became a university in 2002	Strategic Development Plan of Győr 2002-2003
Significant enlargement of the Audi sites in 2010-2012	Construction of the Jedlik bridge 2010		Autopolis concept in 2006
	Rehabilitation of the city centre 2008-2010	Social rehabilitation in Újváros (2008-2018)	Integrated Urban Development Plan 2007-2013
		Youth Olympics in 2017	Integrated Urban Development Plan 2014-2020

Figure 2. Milestones in urban development in Győr

The development of the city is determined largely by market actors. In the last two or three decades, the local government has made consistent efforts to create a “triple helix” structure: that is, to increase the role of local government and higher education institutions to foster their function as equal partners for strong economic players. On its path from industrial city to centre of innovation, research and creative industries, the city has to continue its efforts, building up institutional structures for territorial cooperation in the large and expanding functional area of Győr. Thus, the successful period of development based on market logic should be followed by a new period of public-led development, to consolidate previous achievements and strengthen the role of the city as a regional centre.

The European Investment Bank has not provided direct loans to any entities in Győr; neither to the local municipality, nor to any private or public organisations. However, the EIB has backed nearly all investments funded from Operational Programmes (European Union funds), the obligatory share of the State in these programmes being financed by the EIB in both the 2007-2013 and the 2014-2020 European budgetary periods. In addition, the EIB has provided financing to commercial banks (sometimes directly, sometimes through Exim Bank or the Hungarian Development Bank, MFB), which in turn has issued hundreds of commercial loans mainly to small and medium-sized enterprises, or even to housing cooperatives. Thus, the EIB has provided significant indirect contributions to the development of the city since 2007. In the future, it is planned to finance several large-scale projects from EU and State funds (such as the creation of a new techno-campus or the construction of new cultural facilities as tools to revitalise large-scale brownfield areas in the city). In these cases, there are serious uncertainties about the availability of EU or State resources, so other sources of financing, such as the EIB, should also be explored.

Before the economic transition

The present day area of Győr has long been inhabited, including the significant settlement Arrabona in the Roman Empire, thanks to its location beside the main road along the river Danube and astride the river Rába. It was a fortified border town in the 16th and 17th centuries (during the Ottoman occupation), and then became an important trading and industrial centre as early as the 18th century, resulting in the development of its architecture and educational facilities. Up to the 1860s, Győr was an agricultural trading hub. As the rail system developed in the 19th century, the industrial development of the city began, benefiting from the existing roots of medieval guilds. Magyar Waggon és Gépgyár (Hungarian Wagon and Machine Factory, later also called RÁBA), founded in 1896 and known locally simply as “the Factory”, became the flagship company of local industry. It soon developed a wide range of machinery. However, the key products have always remained different types of vehicles. As a typical key company, the Factory provided employment for the inhabitants of the city, as well as social and leisure services like sport clubs and cultural facilities. The Factory became one of Hungary’s main producers of military equipment in the 1930s, which resulted in its further expansion in the 1940s. Even though the Factory suffered serious damage during World War II, it was soon rebuilt and increased production of railway machinery and engines for different vehicles, mostly exported to other socialist bloc countries.

After 1965, other fields of industry expanded as well. Innovation remained limited, however. This led to a decline in production after 1989, when the Soviet bloc was dismantled and products had to compete on the global market.

Between 1945 and the end of state socialism in 1989, the city grew because of the natural population increase and mobility, as well as the inclusion of nine neighbouring villages in the city territory in 1970. The number of inhabitants reached 129,331 by 1990, with forecasts indicating it might reach 170,000. However, the population eventually stabilised between 120,000 and 130,000. Győr has had a high migration gain along with strong economic growth since the mid-1990s (Rechnitzer 2016, p. 151), counterbalancing natural population loss.

Although Győr was already a city with county rights (a special category in the Hungarian settlement structure, including all county seats and a few other cities) in the socialist era, professional literature considered it a “regional centre without sufficient roles” (Rechnitzer 2016, p. 77) because it lacked significant institutions and higher education and regional public services. In the 1960s, during the short period of an anti-Budapest national territorial development concept, the role of secondary cities was strengthened. Thus, Győr was acknowledged as a territorial centre of national importance, equal to the other four “traditional” regional centres: Debrecen, Miskolc, Pécs and Szeged. The development of government functions that started in this period accelerated because of economic factors after the late 1980s. In this regard, the development of Győr, based mainly on market logic, differed from the public-state model of Debrecen, Pécs, or Szeged. The position of Győr as a regional centre remains based somewhat more on its strong economy than its role in science, education or public services.

Economic development

As early as 1990, all of the city's economic performance indicators (such as the number of companies per 10,000 inhabitants, the prevalence of financial institutions, or the number of companies with foreign capital) were significantly better than those of other county seats. However, the city performed less favourably in educational attainment (e.g. number of residents with PhD degrees). By 2010, the city's economic advantage continued, and its lag in scientific performance slightly narrowed. It has become the second most important economic centre in the country after Budapest (Rechnitzer 2016, p. 99-101).

This outstanding economic performance is rooted in the city's socialist past, based around 1) the skilled labour force in car manufacturing; 2) a significant share of small private businesses, which were allowed to be established after the 1981 market reforms (Tosics, 2005); and 3) strong economic connections with Western European partners. Practically no other Hungarian city had this combination of assets. As the analytical part of the city's Integrated Urban Development Plan (2014, p. 249) emphasised: "The development of Győr is linear and dynamic. The reason behind this is the economic structure based on 200 years of tradition, of which there are 120 years of experience in large-scale manufacturing. During this time a certain work culture, way of life and values have been created in the city, which could not be undone by political systems, economic changes, local actions or any other factors."

The privatisation of industry started in the 1980s (known as "spontaneous privatisation"). It reached its peak between 1994 and 1997. By the end of the privatisation process, some bigger companies had been sold completely (e.g. the former RÁBA Wagon and Machine Factory, which became a shareholder company). Others were split into smaller units and operated by SMEs. Many others ceased to operate immediately after 1989 or within a few years. This was the case for most of the textile and food processing industry. Most former factory sites were reused by new enterprises, while other plants became unused or underused brownfields.

The success of Győr was closely intertwined with the Hungarian Wagon and Machine Factory in the last century, and then with Audi Hungaria in the last 25 years. Audi, after careful investigation of 180 settlements, decided to establish a new engine manufacturing factory in Győr in November 1992. The main reasons for the decision probably included low labour costs, good accessibility, the existing culture of automotive manufacturing, and the new industrial park that was able to accommodate suppliers. The first production hall was ready by October 1994. In the first four years, the plant produced engines. Since 1998, complete cars have been assembled there. In 2013, Audi's facility in Győr was the biggest engine factory in the world, providing machinery for all types of vehicles in the Volkswagen Group. By 2014, the number of employees surpassed 11,000. According to a survey in 2014, 8.1% of employees in the city worked for Audi, mainly representing the younger generation (Rechnitzer 2016, p. 136). In addition, Audi created strong demand in the supplier market. The vast majority of suppliers, however, are not Hungarian. Audi has created strong links with secondary and higher educational institutions to supply the skilled labour force it needs, and to accelerate R&D activities. Importantly, Audi currently has nearly as many employees as the former RÁBA factory at its peak (about 15,000). Thus, the city still has one major employer of outstanding importance. The company is the highest local taxpayer. Even though it benefitted from substantial tax relief between 2004 and 2008, it has been paying 30-40% of total local business tax since then. Besides direct tax revenues, the company finances a range of services, such as education from nursery to university level. It co-finances infrastructure investment and the operation of cultural and sport organisations. Through the activities of Audi, Győr became part of an automotive manufacturing cluster located in a 300 km radius around the city (incorporating Volkswagen in Bratislava, General Motors in Aspen, Austria, Suzuki in Esztergom, General Motors in Szentgotthárd, and the new Land Rover factory in Nitra, Slovakia).

Despite the many positive effects of Audi's operations in Győr, it is important to note that, in the case of the current economic boom, Audi creates a crowding out effect. It attracts skilled labour, which has already become scarce throughout the automotive manufacturing cluster area around the city, and pushes up real estate prices. The need for constant growth at the factory has also created other types of tensions. For the construction of its new buildings in 2010-2012, the company required some rezoning of land (Natura 2000 areas), which made it necessary

to undertake additional steps to protect the environment, such as the relocation of sensitive animal and plant species.

As the city's baseline document for its Integrated Development Plan summarises (Baseline of IDP 2014, p. 245): "The economy of the city was affected moderately by the financial crisis of 2007-2010. Dynamic sectors survived this period, thanks to large-scale industrial investment (Audi). The interlinked economic entities have stabilised, some of them even enlarged their capacities."

Economic development has enjoyed a prominent position in the municipality's urban development plans since the transition. The city's first significant urban development plan was prepared in 1992 to establish a concept for the World Expo-96 tender¹. This was the first concept that put *innovation* onto its agenda, and all the following development plans emphasised this aspect. As early as September 1994, a document with the title "Perspectives of the development and spatial planning of Győr" was published. Eight major goals were formulated in this document: 1) improving the economic environment; 2) strengthening the city's role as a regional centre; 3) launching Győr as a university centre; 4) protecting the environment; 5) protecting natural and cultural heritage; 6) infrastructure development; 7) tackling housing issues; and 8) spatial development and urban rehabilitation (Rechnitzer 2016, p. 205-206). The main objectives and values of this development plan prevailed in the long run. The specific strategy on the improvement of the IT environment in Győr (2001) listed the developments necessary for intelligent solutions in all spheres of life.

The Strategic Development Plan of Győr (2003-2004) was the next milestone, monitoring the results of the previous complex development plan of 1994. The new methodology for the creation of this plan was based on "Workshops on the Future", focus groups in each urban quarter. The main finding of this programme was that the future development of the economy should be rooted in the quality of human resources, thus more emphasis should be placed on education and strengthening the business environment.

After Hungary's accession to the European Union in 2004, a specific programme was created for the Development Plan of the Western Transdanubia Development Pole, named "Autopolis" (2006). The programme aimed to create a network of automotive industry actors in the Western Transdanubia region² and strongly emphasised the need for formal cooperation among administrative actors. This sectoral push was important as the administrative actors of the three counties constituting the NUTS (Nomenclature of Territorial Units for Statistics) 2 region would otherwise not have been interested in developing a tighter network, because they considered the Western Transdanubia development region to be an artificial entity. Elements in the programme related to interventions within the city were mostly implemented in the 2007-2013 EU budgetary period through the European Regional Development Fund (e.g. infrastructural developments for the university or interventions in the industrial park for car industry suppliers).

EU accession brought significant innovations into the Hungarian planning system. In the 2007-2013 EU budgetary period, all cities were required to prepare Integrated Urban Development Plans in order to participate in a tender for urban rehabilitation funds. Consequently, more than 200 Hungarian cities prepared such plans, following a methodology developed by the national government. Győr also prepared its Integrated Urban Development Plan for 2007-2013, based on its strategic plan of 2005. The new aspects of this plan were linked to its spatial approach: the plan defined target areas for concentrated spatial actions, and identified areas at risk of social marginalisation. Based on the development concept of Győr, local actors (NGOs, businesses, other organisations) obtained about €310 million in grant financing, while the city gained approximately €44 million from the Western Transdanubia Regional Operational Programme. Most of these resources stimulated the local economy directly or indirectly.

The International Business Park of Győr was established in 1992. After constant growth, it covered 210 hectares in 2018, accommodating more than 100 companies and about 7,000 employees. It is mostly based on automotive manufacturing, but other sectors such as textiles, construction and electronics are present, besides logistics and wholesale trade activities. Before 2012, the industrial park was partially owned by the local municipality. Since then, it has become entirely publicly owned (by Győr-Szol, a limited liability company). Interventions financed by the European Union (and the State, through the EIB, which indirectly finances the State share in each European Structural Funds-backed project) were implemented in the park, e.g. the extension of the inner rail line by 1.9 km in 2013-2014.

In the 2014-2020 EU budgetary period, the national Regional Operational Programme allocated the municipality about €62 million. This, however, does not mean that the city can freely decide how to use the funds. It has to implement projects in line with the national strategy. In addition, the city of Győr and the surrounding county constitute different entities as regards cohesion policy, having separated subsidy amounts dedicated for their development. Thus, the two functionally linked entities follow separate development plans for the use of EU funds, which is another administrative constraint to integrated development.

The new Integrated Development Strategy (2014-2020) of the city reflects a shift of emphasis from economic development towards the quality of life. Its motto is “Health, Culture and Innovation: the future is being built in Győr”. The Integrated Development Strategy 2014-2020 relies on the objectives defined in the long-term development concept of the city (2014), namely: social development, economic development, development of the built and natural environment, and an increase in energy efficiency. Integrated Development Plans build heavily on available forms of EU financing that are distributed on a national level. Consequently, very similar topics (e.g. renovation of public infrastructure and institutions, urban rehabilitation, energy-efficient interventions in the public sector, increase of green public spaces, renovation of public roads, and preference for sustainable modes of transport) are specified in most cities’ urban development plans. Besides these usual elements, the following additional aspects are specified in Győr’s Integrated Urban Development Strategy:

- strong emphasis is put on interventions to improve the infrastructure of Széchenyi István University and the local departments of the University of West Hungary;
- measures to develop Audi’s education system;
- investments in the infrastructure of the European Youth Olympics (2017);
- further development of the Győr International Industrial Park;
- creation of a regional innovation and knowledge centre on automotive industry;
- development of new sites for residential construction.

The Strategy displays a slight shift towards diversification in the local economy. This is expected to stimulate investment in new economic sectors like private healthcare services, recreation, leisure, and creative industries.

Spatial development

Geographically, Győr is part of the micro-region of Vienna-Bratislava, which extends towards Brno and České Budějovice in the Czech Republic. Called Centrope, it was established within the framework of an Interreg III³A programme in 2005. Although the major actors in this area share some obvious common interests, formal cooperation has always been much stronger between Vienna and Bratislava, the two EU capital cities that are the closest to each other (only 70 km apart, connected by highway and railway as well). Due to the lack of domestic political support, the three participating Hungarian cities (Győr, Szombathely and Sopron) officially left the formal organisation of Centrope in 2013 and consequently the links between the cities of this area remained loose.

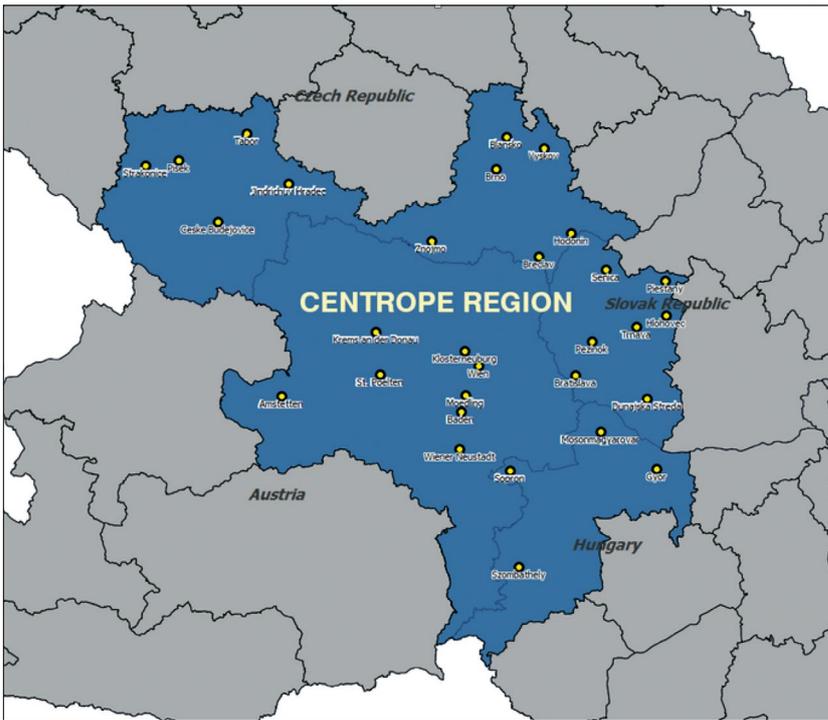


Figure 3. Location of Centropem Region in Central Europe

Source: <http://www.centropemap.org/index.php?id=3>

Within Hungary, Győr is a regional centre of national importance. In the Western Transdanubia Region, no single regional centre is identified. Instead, this role is shared for historical reasons between the neighbouring county seat cities and bigger towns. Nonetheless, the importance and role of Győr has been increasing since the turn of the millennium due to market-driven urban development, which resulted in the emergence of a strong financial sector, significant foreign direct investment, the upgrading of its higher education institutions into a university, and a stable urban population in a period of overall national population decline. The role of Győr in the national urban hierarchy was defined in 2005 in the National Territorial Development Concept as a “regional centre in a development pole role”, which still needs enriched government and education functions and improved transport connections. The next major national plan, the National Development Plan of 2011, defined an urban hierarchy based on the economic potential of cities. It named Győr as second most important city after Budapest. The National Development and Spatial Development Plan in 2014 also put substantial emphasis on Győr, underlining the importance of the city in the Vienna-Bratislava-Budapest development triangle and naming Győr as one of the five major secondary cities of Hungary.

The international and regional role of the city has been strengthened by some major infrastructure developments created or expanded with the use of European Union funding (and State co-financing, in most cases pre-financed by the European Investment Bank):

- the port of Győr-Gönyű (next to the city, by the river Danube) is the largest intermodal port in Transdanubia, covering 110 hectares. In operation since 1992, it is in the mixed ownership of the State and the local municipalities (60%), and professional investors from Austria. The European Union (and indirectly the European Investment Bank through the Hungarian State) contributed significantly to its development in two main stages, during which the intermodal centre was created and extended. The third stage of development is currently under implementation. The first measures were completed just before the financial crisis, thus the intermodal hub was underused for years, and while demand for harbour services has gradually increased the port still has unused capacity to accommodate companies.

- Győr-Pér Airport was already in operation in socialist times as a military airport. It was redeveloped for civil use from 2000 (financed by Phare CBC and Audi Hungaria); it has been in operation since 2003 (with Audi Hungaria as a co-owner besides the municipality of Győr and the Hungarian State). The airport is used mainly for freight transportation. European Funds (and, indirectly, EIB funds) were used to create an instrument landing system (which helps planes land when there is no visual contact) and for the purchase of equipment, vehicles and tools to improve the quality of services.
- The development of road No. 85 into a motorway (M85) between Győr and Sopron has also started (financed mostly from EU and State funds, the latter pre-financed by the EIB). The motorway is complete between Győr and Csorna and leads to the new M86 motorway towards Szombathely. This means Győr now has a fast connection to the Austrian border not only through the M1 motorway (towards Vienna), but through the M85 and the M86 (towards Graz).

Suburbanisation (moving to the suburbs from the city core) around Győr has a residential character: economic activities are concentrated in the city core, while the labour force commutes. Commuting was a strong phenomenon already at the beginning of the 1970s when the number of active employees reached 53,000, and about half of them were commuting mainly from a 20 km radius around the city (Rechnitzer 2016, p. 107). The commuting zone has expanded to neighbouring counties. In 1983, based on a detailed analysis of urban agglomerations, nine settlements around the city were considered to belong to the close agglomeration zone, while 18 belonged to the larger agglomeration area, consisting of 57,000 people in addition to the city population of 127,000 (Rechnitzer 2016, p. 107). The suburbanisation process started at the beginning of the 1980s. The composition of the agglomeration settlements changed according to the Census of 2001 (dropping six settlements while including seven new ones). By this time, the population of the agglomeration zone consisted of 53,500, which was an increase of 5,600 compared to the early 1990s. Its composition has also shifted towards younger families. The main mode of commuting was public transport at that time. The agglomeration zone was resized in 2014 based on the 2011 Census; 67 settlements are considered part of Győr's agglomeration, according to the new set of data. In 2011, around 129,000 people lived in Győr and 99,000 in its agglomeration. This area is an exception to demographic trends in Hungary, as the number of residents increased. Most other urban areas were stable or declining. By the 2010s, some functional differentiation between the settlements of the agglomeration emerged, although none of the surrounding settlements were so far established as real sub-regional centres — the Győr agglomeration retains its monocentric character (IDP 2014, p.254). Horizontal transport connections among agglomeration settlements remain very weak. The zone reaches its greatest distances alongside the Győr-Budapest and the Győr-Sopron railway lines.

The institutional structure of cooperation within the agglomeration area was not strong. However, it had two exploitable strengths: 1) there was multifunctional micro-regional, mostly task-based cooperation, in order to operate common public services until 2012, when they were discontinued by national law; and 2) the foundation of the Development Association of Győr Agglomeration in 2003 with the participation of 46 settlements. The latter had the aim of coordinating development strategy for the participating settlements, and the idea of setting up a common development fund was also raised. In practice, this association was never launched. Meanwhile, an official multifunctional micro-regional cooperation structure was established with the participation of 27 settlements to coordinate tourism and marketing activities and to coordinate some social services. This organisation was abolished in 2013 due to changes in national legislation. Thus, the functional links around Győr lack any institutional background.

The inner spatial structure of the city has also changed in recent decades. The city has a relatively large territory (174.6 km²), of which the built-up area covers less than 30%. The main trends in the development of the city structure are: 1) the rehabilitation of the inner city to make it more pedestrian-friendly; 2) the construction of bypasses that surround the city and thus decrease through traffic; 3) nature restoration projects along the riverbanks; and 4) the construction of new bridges through the Moson-Danube branch to create new connections between neighbourhoods.

The rehabilitation of the inner city (the historic urban core) started in the 1980s. The city received the Europa Nostra Prize for Architecture for its results in 1989. Nonetheless, tourism remained insignificant before the economic transition, even though after Budapest and Sopron this city contains the highest number of architecturally protected buildings (Rechnitzer 2016, p. 62). The rehabilitation process restarted in 1997, when the pedestrian Baross Street was renewed with the involvement of private funds as well. Afterwards, several streets and squares were renovated under the city's urban development programmes. The Strategic Development Plan of Győr (2003-2004) also emphasised the importance of urban rehabilitation. Subsequent development programmes of the 2014-2020 period maintained this goal.

The rehabilitation of the inner city speeded up in the 2007-2013 EU budgetary period, when major interventions were completed, such as the renovation of the city's main Széchenyi Square and neighbouring pedestrian streets and squares, together with the reconstruction of public buildings. In the 2014-2020 budgetary period the continuous upgrading of the inner part of the city was still on the agenda. The renovation measures for some major public areas, such as Dunakapu Square and the side streets, were completed recently, or are in progress. The project also involved private financing as it included the renovation of facades of privately owned restaurants.



Figure 4. Győr's main city centre street, Baross Street)

By 2018, the inner part of the city became a completely pedestrianised area with renovated public squares, filled with hotels, restaurants, shops and cultural sites. The interventions concerned the "hardware" (buildings and public areas), as well as spaces for festivals and cultural events (nearly every week in the summer) and thematic guided tours.

In recent decades, significant investment has been channelled into road infrastructure to divert freight traffic away from the city centre. Thus, new bypasses were built connecting the M1 motorway with the industrial areas (e.g. the Audi factory and the International Industrial Park). On the other hand, the ring road around the city is not yet complete; some missing sections (e.g. in the north-west) are currently in the planning stage.

The construction of Jedlik Bridge in 2010 using the city's own resources is an example of successful urban infrastructure development. This intervention succeeded in connecting neighbourhoods and accelerating their development (Révfülu, Sziget, Újváros, blocks of Széchenyi University), and also created new transport routes diverting heavy traffic away from densely built-up areas.

Despite significant improvements in the structure and quality of urban spaces, a number of problems remain unresolved. One of these concerns brownfield areas, some of which are located in the heart of the city (the former facilities of the RÁBA factory on 60 hectares).

Energy efficiency has also been gaining importance. This topic was given considerable emphasis in the city's latest Integrated Development Strategy (2014-2020), in which energy-efficient measures and the upgrading of public buildings are planned, as well as further support for the renovation of pre-fabricated housing stock.

Social development

The demography of Győr follows very similar patterns to that of other Hungarian cities, i.e. an ageing population and a continuous decrease in the natural reproduction rate. However, these processes affect Győr less critically than most other Hungarian cities, thanks to its attractive labour market and the resulting younger composition of inhabitants. Győr was — and still is — fortunate that its migration loss was limited to short periods (e.g. in the beginning of the 2000s), in spite of the suburbanisation process of the 1990s and 2000s. The reason behind this again is the strong economy of the city, which attracts people from other parts of the country. The education level of the citizens is also above the national average (even though the city is not among the strongest centres of higher education).

Newcomers prefer to live in housing estates in the city (according to a survey in 2014, Rechnitzer, 2016, p.162). The housing factory in Győr, which produced pre-fabricated concrete panel blocks in the 1970s, was one of the most developed "panel factories" (system-built housing parts) in the country, thus the pre-fabricated housing block estates built here were of relatively high quality. In the early 1980s, one fifth of all new construction in the city was pre-fabricated. Consequently, the renovation of the pre-fabricated housing stock became an important issue by the beginning of the 2000s.

The European Investment Bank provided a credit line to Raiffeisen Bank to finance energy-efficient measures in the small and medium-sized enterprises sector. This credit line, coupled with a grant from the European Union, formed the financial background for the Raab-Sol project in Győr, one of the few outstanding residential Energy Service Company (ESCO) projects in the country. Organised by an ESCO (Energosys) and supported by the local municipality, a framework was created with the Thirtieth Housing Cooperative in Győr to implement major renovation measures in as many cooperative buildings as possible. Under the scheme, the cooperative took the preferential loan from Raiffeisen, with the 15% grant content coupled with a 20-25% subsidy from the local municipality. This amount financed the energy-efficiency renovation works (wall insulation, replacement of windows, modernisation of heating and ventilation system, etc.). The ESCO implemented the renovation works; the district heating tariffs paid by residents remained unchanged (or more precisely were set at about 95% of the old tariff); and the difference between this "baseline" and the reduced energy consumption covered the loan instalments and the ESCO's operation costs (30% energy savings were guaranteed, but much more was achieved). Ten years after the start of the process in 2011, the ESCO contract will expire. The loan will be repaid in full, and the residents will experience a radical reduction in their heating costs. As the financial conditions are constantly changing, because of emerging and disappearing State and local grants, only five buildings of the 63 blocks in the cooperative have joined the programme so far.

As an analysis based on a 2014 survey pointed out (Csizmadia, Tóth 2014, Rechnitzer 2016, p. 158) that the process of spatial separation of different social groups has already started, although most residential neighbourhoods are still socially mixed. In the Integrated Urban Development Strategy of Győr (2007-2013), certain areas were identified as being at risk of social marginalisation. Five areas were defined based on a complex set of indicators: Újváros, Gorkijváros, Nyugat-Újváros, Sziget, and Gyárváros 1. Újváros (New Town) was identified as the area where the depth and complexity of social conflicts is the most challenging. In this neighbourhood, close to the heart of the city, the share of Roma people was significant. Many of these inhabited small, old (built before 1945), low-comfort municipal apartments. Kindergartens and primary schools in the area also showed clear signs of social segregation. The marginalisation of the area was a result of a prolonged process, accelerated by the relocation of Roma families from the Győr inner city area during rehabilitation.

A social rehabilitation project was implemented in two phases in the Újváros neighbourhood in the 2007-2013 and 2014-2020 periods. The first phase included the renovation of six municipally owned and architecturally protected residential buildings and provided additional space for shops and a local police station. In addition, the façade of the primary school in the neighbourhood was renewed, while the local church was partially reconstructed. The green areas besides the neighbourhood's main street were renovated, and new parks and playgrounds were created. In the second phase of the project, the common parts of four privately owned residential buildings were renewed. Besides the measures in the buildings and public spaces, "soft" programmes for the inhabitants were organised to increase their awareness of health issues and to provide them social assistance in taking up training and employment opportunities.



Figure 5. Overview of Győr-Újváros

By 2018, the neighbourhood had regained most of its historical character, complemented by new structures. Meanwhile, due to the relocation of several former tenants and the new construction processes in the area, the social rehabilitation projects in Újváros resulted in significant gentrification. This meant the area's integration into the urban texture and an improvement in the protection of architectural heritage on the one hand, and the crowding out of some vulnerable families on the other.

Thanks to the social rehabilitation project, as well as some spontaneous trends (e.g. the overall increase in educational attainment), the 2014-2020 Integrated Urban Development Strategy of the city no longer identified strongly marginalised neighbourhoods. Nonetheless, Győr-Újváros is still socially more vulnerable than other parts of the city. In addition, social status indicators for inhabitants in some suburban areas have declined, suggesting that families with a low social and employment status have moved to suburban areas from the inner city.

Győr has historically a strong education sector, particularly at secondary level (it had famous religious secondary schools before World War II, which were nationalised in 1948). The city lobbied for a university at the beginning of the 20th century; it was eventually able to accommodate a Technical College on Transport and Telecommunication in 1968 and a teacher training college in 1978. In 2002, the Technical College (a sub-university-level higher educational institute) was converted into Széchenyi István University (retaining the name of the former college), which has a technical orientation. There is still an imbalance between the economic position of the city and its higher education position in Hungary. Even though the number of departments has increased significantly to nine, many of the lecturers commute, instead of relocating to Győr. Accordingly, strengthening the innovation potential and the educational status of the city through the university has been a major goal of urban development in recent decades. In the 2007-2013 EU budgetary period, the University of Győr obtained the third-biggest amount (about €40 million) of development funding among Hungarian universities for the renovation and reconstruction of university buildings and teaching equipment. The university cooperates closely with Audi Hungaria — an entire department is dedicated to educating the automotive engineers of the future. Besides cooperation with the automotive industry, the University established a Higher Education and Industrial Cooperation Centre (FIEK, in Hungarian) in 2016, funded from European and State resources. The Centre aims to implement applied research based on local industry demand.

The city participated in the tender for the European Capital of Culture 2010, but lost to Pécs in southern Hungary. The tender document listed several infrastructure developments in the cultural sector of the city, most of which have already been at least partially completed, such as the Media Centre, market places, new exhibition venues, renovation of the synagogue, the new university library, and more intense use of the river banks. The city has submitted a new application for the European Capital of Culture 2023, competing with Debrecen and Veszprém in Hungary. The decision to select the winner is due in December 2018. The new application is built on the availability of most of the required cultural infrastructure, except for a new concert hall and a combined exhibition and conference centre (KOMFEX), the building for which is planned under the framework of the Modern Cities programme (details discussed in the last chapter).

Győr hosted the European Youth Olympic Festival in 2017. To provide proper space for the event, several sport halls were renovated, a new swimming pool and sports centre was created and investments were made in temporary accommodation, such as a dormitory for the university and a residential complex that was sold after the event. The new sports infrastructure is to be utilised in the long term as an Olympic training centre for Hungary. To perform this role well, the construction of a new sports hotel is necessary and planned from State resources.

The latest development strategy of the city (Integrated Urban Development Strategy 2014-2020) puts strong emphasis on quality of life, in addition to economic and infrastructural development. These plans relating to the social sphere are intended to increase the capacity and the energy performance of educational and social institutions (e.g. kindergartens, primary schools, dormitories, university campuses, cultural institutions, healthcare centres, sports facilities, elderly care services).

Future challenges and opportunities

Challenges:

The city retains its somewhat mono-functional economy, dominated by the production of Audi Hungaria. It is, therefore, strongly connected to economic cycles in the automotive industry, which can be jeopardised by factors such as the expansion of electronic vehicles, potential economic crises and the use of artificial intelligence systems. Accordingly, the city's most recent development plan (Integrated Urban Development Strategy 2014-2020) is intended to diversify the local economy.

The Central European region—and Hungary specifically—lacks skilled workers due to heavy outward migration. Győr also suffers from outward migration. A significant share of its workforce commutes daily to Austria and Slovakia. This labour shortage can be a serious impediment to further economic development, as well as to the maintenance of the current quality of life. Some of the fields most sensitive to labour shortage are healthcare, catering, and retail services. Fortunately, the city is able to retain most students after graduation thanks to the strong local economy, as opposed to most other Hungarian university towns.

The functional urban area of Győr has been steadily increasing in territory, due to the dynamic development of the economy and growing demand on the housing market. However, in the 2010s, all previously established territorial cooperation efforts were drastically cut back and discontinued, including Centrope, as we mentioned earlier, from which Győr exited. This was despite the fact that the expanding economic centre would benefit from strengthening territorial cooperation.

Social deprivation has already appeared in pre-fab housing blocks, which traditionally constituted more socially mixed neighbourhoods. In addition, spatial segregation has been gaining ground in the outer areas of the city, where access to residential infrastructure and services is limited.

Future opportunities:

There is already an ongoing diversification process in the agglomeration zone (the primary residential area is accommodating more services and industries), which could help significantly to reduce the need for commuting.

All major cities in Hungary are involved in the “Modern Cities Programme”, which is a package of measures dedicated specifically to the 23 cities with county rights (except for Budapest), based on a mixture of European and national funds. According to critics, the availability of the funds is somewhat uncertain and the package can be considered an “urban development wish-list”. The package for Győr contains several potential projects: the construction of further bypass roads and bridges; modernisation of the traffic system in the inner city; widening to four lanes of the road between Győr and Dunaszerdahely; the creation of an intermodal centre around the railway station; the reconstruction of the city theatre and missing elements of cultural infrastructure; and development of the city baths and the zoo, which is more or less complete. In addition, the package includes the creation of a techno-campus, an extension of the Higher Education and Industrial Cooperation Centre. The techno-campus would be a big step towards breaking away from the city's dependence on its industrial past. It would strengthen research and innovation, a major goal defined in the development plans of the city in recent decades. The techno-campus would be a knowledge and research centre based on the enlarged capacities of the university for cooperation with industrial companies in the city. Besides carrying out applied research, it would also aim to incubate start-up companies based on the results of that research.

Another future area of development is the 60 hectares of former RÁBA factory sites that is now a brownfield area in the heart of Győr. The successor of RÁBA (RÁBA Ltd.) aims to utilise the entire area as a single site. The land has limited contamination and a few remaining buildings, thus providing unique potential for the creation of a new urban district. In combination with the techno-campus, the brownfield site could elevate the city to a higher stage of urban development.

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- 1 The EXPO in 1996 was planned to be implemented in Vienna and Budapest. However, several bigger cities prepared their development plan at that time to identify the possibilities of joining this important international event indirectly. The organisation of the EXPO in 1996 was finally cancelled both by Budapest, due to the lack of the needed financial resources, and Vienna, due to the opposition of residents.
- 2 Traditionally there were no regions in Hungary; the middle tier of administration comprised 19 historically rooted counties. Based on European requirements, seven development regions were defined as a basis for EU-level planning and programming and for statistical data gathering. The role of these regions was strengthened in 2004 and they became the major actors in the distribution of funds for Regional Operational Programmes (there were seven ROPs between 2007 and 2013). Some of the regions were more “organic” entities, while others had predominantly artificial features. Győr belongs to the Western Transdanubia region, which is amongst the “artificial” ones, as spatial cohesion is low between the three counties that comprise the region, and the county seats and other major cities have always been competing for the role of the regional seat. After 2010, a new national centralisation process was initiated in the government structure that diminished the former regional development councils and their agencies, and strengthened county-level rather than regional development. Since then, the seven NUTS 2 regions have again served only a statistical data-gathering role and as the geographical subjects of EU fund allocations.
- 3 Interreg is the programme founded by the European Regional Development Fund to foster cooperation between regions and Member States.

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