The period between 1867 and 1918 was one of the most productive periods for the planning and modernization of towns in the Kingdom of Hungary. The reconstruction of historic structures and creation of new urban areas culminated at the end of the 19th and beginning of the 20th centuries. The social and economic changes that conditioned the Austro-Hungarian constitutional settlement of 1867 started the moderate industrialization of Hungary and the transformation of Hungarian towns and cities. The development of towns in Hungary was also directly influenced by a change in the paradigms in the field of town planning. New types of building development arose, producing new typologies of building, generally bringing to the principles of town building the ideas of modern planning, such as concern with hygiene, the principle of zoning and new ideas about transport infrastructure. European trends in modern urbanism penetrated into the territory of Hungary with some delay, and they were
applied to the practical planning and construction of towns only slowly and with
difficulty. In spite of this, the architects and engineers of Hungary followed these
tendencies very observantly, discussed them and applied them to the regulation
and planning of towns in Hungary.

The first regulation plans started from the engineering approach of the
German urbanists such as Reinhard Baumeister and Joseph Stübben. Regulation
was applied mechanically with a rectilinear grid of streets, town blocks and
transport routes regarded as the basis for planning and building a town or city.
This approach also brought to the towns of Hungary the division of towns into
zones according to function and an emphasis on hygienic or sanitary principles.
However, this type of mechanically regulated urban structure soon became a
target of criticism from experts, who created space for the application of an
artistic approach to town planning following the views of the Viennese architect
and urbanist Camillo Sitte. Such an approach to urban structure can be seen, for
example, in the work of Josip Pospošil at Sarajevo, Antal Palóczy at Bratislava
and Novi Sad, Lajos Ybl at Timișoara (Temesvár) or Lajos Lechner at Szeged
and Budapest. Modern principles of town planning, like the basic typology of
urban spaces, namely the circle, boulevard, promenade, city park, garden quarter
and so on, became the common platform for the development of towns and
cities in the whole of Austria-Hungary. This common urbanist language was
most clearly readable where plans were carried out in their full complexity, as
at Budapest and Szeged. However, most of the smaller plans were applied only
partially or in fragmented form, so that it is now difficult to identify them in the
morphology of towns. The fact that after the disintegration of the Monarchy,
continuity of planning was interrupted and the successor states often deliberately
rejected or ignored plans from the preceding period, also contributes to this.
This was precisely the situation at Prešporok and Novi Sad. The following text
presents the results of recent research, which has uncovered hitherto unknown
documents concerning the beginnings of the modern planning of these two cities.

Today Bratislava and Novi Sad are situated in two different independent
states. However, for several centuries they were part of the same Monarchy,
which conditioned the parallels in their development. The two cities have similar
geographical locations. Both are situated on the left bank of the River Danube.
Novi Sad was the southernmost royal borough in the kingdom, and Bratislava
was the westernmost. The morphology of both cities was influenced by the
presence of the river and the Carpathian Mountains, which directly or indirectly
determined the structure of the built-up areas.

In the mid 19th century, Elek Fényes in the Geographical Dictionary of
Hungary described Bratislava as the “oldest, most beautiful and most famous
of all the royal boroughs... There is no market or square that does not deserve
to be described as beautiful for its dimensions or regular shape. The streets are wide and long, clean and mostly paved with stone, the main ones with granite. A castle stands on a high hill by the city towers over the Danube, giving a superb view of the green islands of the Danube, the surrounding arms of the river and the wooded hills of Austria.” At that time, Bratislava had 46,540 inhabitants and 1,884 buildings concentrated in an area of 74.4 km². The same dictionary describes Novi Sad as follows: “Although the city has been built without much idea of order, it can be praised for its beautiful houses. Danube Street, in particular, can take pride in its two-storey buildings with rich shops.” The city had an area of 156.3 km², which was twice as much as Bratislava. The number of buildings was also almost twice as large, with 2,706. However, the population reached only 19,119.

Novi Sad began to develop more substantially only in the second half of the 19th century, although its historic core remained unchanged. The first cadastral survey of the city was done in 1876, and on this basis the first cadastral map was produced in 1877 and published in 1880. The development was similar in Bratislava. The original form of the historic core including the castle hill was preserved, with new structures appearing around the edge. A map of the city with a scale of 1:3600 produced by the Technical Department under the leadership of the chief engineer Anton Sendlein in 1882 can be regarded as the first detailed plan capturing the form of Bratislava. The cadastral map of the city with a scale of 1:10,000 was produced in 1894. Three years later in 1897 a detailed cadastral map showed individual plots with numbers. However, the dynamic growth of towns in Hungary in the 19th century required not only mapping of the existing state, but also effective instruments for planning and regulating urban development. Expert discussion of this theme began soon after the Austro-Hungarian constitutional settlement, but precisely the lack of the basic documentation needed for regulation slowed down this process for several decades.

In the period of the Austro-Hungarian Monarchy, all building activity including the establishment of new quarters and streets or the erection of new buildings was subject to administration by the technical department of the town. However, town councils or ministries in Budapest decided on important investments. Decisions often reflected the individual preferences and interests of members of the town council or officials in the ministries. In 1896 the Technical Department headed by Anton Sendlein was entrusted with the preparation of a plan for the regulation

2 FÉNYES, ref. 1.
3 Arhiv Vojvodine Novi Sad, F. 419 69-70-73-74-77.
and development of Prešporok and revision of the city’s building regulations. The City Council discussed this plan at a special session in December 1898, and recommended some changes, especially concerning the width of some planned streets. The staff of the Technical Department continued their work on preparing the plan. Its final version is probably the plan from 1906 based on the cadastral map from 1894, which is preserved in the Széchényi National Library in Budapest. The plan proposed new streets, starting from the existing street network, but creating a rectilinear plan in hitherto unbuilt up areas. Continuing criticism of the plan and delays to its approval eventually led to a leading industrialist and city councillor Johann Ludwig getting a new plan prepared externally. Ludwig addressed the privy councillor and former commissioner of Hungarian State Railways Viktor Bernárdt. His plan was presented to the city council in September 1905, but also without success. Repeated discussion of a regulation plan led to the city council discussing specific questions of regulation, such as a city ring-road, regulation of industrial zones or the building of a second bridge over the Danube. In November 1906 precisely these discussions inspired the city councillors to entrust the preparation of the plan to a real expert, namely the already well-known urbanist and professor at the School of Applied Art in Budapest Antal Palóczi (1849–1927). Palóczi’s role was to assess the two existing plans, but his erudite commentary probably addressed the city council so much that in March 1909 they asked him to produce a new plan for the regulation and expansion of the city.

It was similar in Novi Sad. Working out of a regulation plan was also entrusted to the Technical Department of the town under the leadership of the chief engineer Rudolf Stössel. The plan was based on a detailed map from 1900. It was completed in 1908. It is not known whether this plan was approved as a whole or was even publicly presented. However, in Novi Sad, as in Bratislava, they proceeded to obtain a plan from outsiders even before the official plan was complete. In spring 1907, they announced a competition for a regulation plan for the town, and the entries were assessed in December of the same year. Three equal prizes were awarded to the following: Imre Francsek and Lipót Berczeller; Antal Palóczi and György Kopeczek; József Wälder. All them were notable Hungarian

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5 Országos Széchenyi Könyvtár, OSZK TM 422, Pozsony sz. kír. város átnézeti térképe és városhivatali terve, 1906.
7 Magyar Mérnök és Építész Egylet Heti Értesítője, 01 Dec 1907.12.01. 26(43); Építő Ipar, 01 Dec 1907. 31(48)
architects of the time, which probably testifies to the importance attached to the competition in expert circles. In the end, they entrusted preparation of the regulation plan of Novi Sad to Antal Palóczi.

Comparison of the first regulation plans worked out by the technical departments of Bratislava and Novi Sad shows that both applied the established principles of town planning, such as health measures, improvement of transport infrastructure by means of new streets in the form of a rectilinear street network, relatively mechanically without much intervention in the existing urban structure. The view of such a plan from the expert public is best shown by a comment from the Bratislava grammar school teacher and curator of the city museum Ágost Helmár, who wrote: "Not much mental effort was put into making the regulation plan. ... The main aim was to get rid of every corner or sharper bend, to put straight, parallel lines everywhere possible."

Planning according to Antal Palóczi

From the beginning of the 1880s, the Budapest architect and town planner Antal Palóczi devoted great attention to all the trends, principles and theories of modern town planning, and to promoting these ideas among colleagues in Hungary. His theoretical works were concerned with the theories of the time, and with criticism of town planning practice. He analysed and classified urban spaces, starting from the work of the German town planner Joseph Stübben, but also using principles mentioned in expert discussions by the Viennese architect and town planner Camillo Sitte. Palóczi was one of the few people in Hungary to emphasize that the most important aspect of town planning was not the construction of impressive buildings, but the consistent application of a single regulation plan for the whole city. During his professional career, he worked out many regulation plans and was considered the leading expert on town planning in the whole Kingdom of Hungary.

In the case of our two cities, Bratislava City Council was the first to order a plan for the regulation and development of the city from Antal Palóczi. He presented the first outline of the plan to the public in 1907. Immediately on this occasion he stated his approach to such work, mentioning the principles of modern city building with rules derived from German hygiene congresses, and the approach of Camillo Sitte, who had allegedly "succeeded in getting all current town planners into his camp". Palóczi defined his own position as a "compromise between medieval and modern ideas". "Designing the street

8 HELMÁR, Ágost: Pozsony és a városépítési elvei a múltban és a jelenben. In Városszabályozási kérdések. Pozsony, Angermayer Ny, p. 29.
network and method of construction... will reflect modern demands, especially for transport and hygiene, but does not lose sight of artistic considerations and the demand for comfort." Palóczi supposed that in the next 50 years the population of Bratislava would increase to 150,000, and he planned the expansion of the city with this in mind. He indicated two main directions for territorial growth. The first included the flat land of the existing industrial suburbs, and the other, the slopes of the Malé Karpaty Mountains on the eastern edge of the city, where he proposed the construction of a garden quarter. In the framework of regulation, he proposed the removal of some of the railway tracks in the centre, or their rebuilding as elevated structures, and the removal or reconstruction of several railway stations. He also proposed an industrial canal on the eastern edge of the city. He proposed three new bridges across the Danube to serve development on the right bank of the river, as well as transit traffic. He placed great emphasis on the morphology of the terrain and the unique features of the original urban structure. He regarded the ruined castle as an extraordinarily important feature of the city. He proposed that it should be preserved in its existing form and supplemented with an extensive park. The views from the main regulated or newly proposed streets and city boulevards would be directed towards the castle.

In the same year that he was entrusted with working out the plan for Bratislava, Palóczi participated in the competition for a new regulation plan for Novi Sad. He worked on his proposal with another important Hungarian architect György Kopeczek, who also designed various important buildings in the territory of Slovakia. After assessment of the competition, working out of the plan was entrusted to Antal Palóczi. Engineer László Szesztay, who worked on a new orientation for the city, cooperated with Palóczi in working out the competition proposal. Their regulation plan was assessed by the Novi Sad City Council in January 1911 and accepted as a basis for the final version of the plan.

The press of the time described the plan as a document reflecting all the current trends in town planning, such as the separation of individual zones according to function, application of the principles of hygiene or construction of transport circles and city radials. As a potential direction for the growth of the city, he proposed the area south of the centre along the River Danube, where he proposed the construction of a new bridge. The street connecting the central Franz Joseph

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11 For more details on Palóczi’s conception for the regulation of Bratislava see MORAVČÍKO-VÁ – LOVRA – PASTOREKOVÁ, ref. 4.


13 A detailed description of the plan was presented in the newspaper *Újvidéki Napló*, Újvidék szabályozása és bővítése, 30 July 1911, no. 31, p. 1–2.
Square with the new bridge would be the most impressive in the city. “According to the regulation plan, the most beautiful parks and public buildings, a harbour, railway line and market place would be placed by the Danube... and most transport would flow along this newly proposed street”, called in the press of the time “Francis II Rákoczi Street”, which “had to greatly impress the visitor with its width and rows of trees”. An interesting feature of this communication axis was the fact that going towards the centre it gradually widened and moderately changed direction. To improve hygiene conditions, the regulation plan included enlargement of green areas by extending existing parks or establishing new ones in unbuilt up parts of the city centre. Changing the originally dense structure by opening new squares and streets was intended to fulfil the same aim.

A closer examination of the process of preparing the plans for the regulation and expansion of Bratislava and Novi Sad enables us to identify various similar approaches. In both cases, we especially notice the role of the city’s Technical Department, but also the decision to entrust preparation of the territorial planning documentation precisely to Antal Palóczi. It is also worth mentioning the conceptual parallels between the two plans, which are excellent examples of the approach to planning and regulating towns and cities in Hungary around the turn of the 19th and 20th centuries. The decisive aspect was determining the future direction of the territorial growth of the city, the functional zoning of the urban area, organization of road and rail transport, circular and radial communication, including the siting of bridges, as required by the future growth of the city. An equally important aspect was improving the health conditions of the urban environment, proposing parks and tree lined avenues, but also the aesthetic aspects, the shaping of new squares and streets or the placing of impressive new buildings and monuments. In this context, Palóczi stated: “The key to the good effect of a square lies in its delimitation. It is necessary to create continuous surrounding walls..., interrupted only by several streets... The shape of a square does not have to be regular... The dimensions should correspond to those of existing buildings, including those still to be built.” Concerning impressive buildings, he added that it is not correct to concentrate them all in one place.

In the case of both cities, Antal Palóczi devoted great attention to detailed specification of the functions and method of building of individual parts of a city. In the area of both cities, he defined six zones where precisely defined types of construction had to be applied. The zone that included the city centre needed to

14 Újvideki Napló, ref. 12.
have firm street fronts or closed city blocks. The wider centre should also have an equally compact structure. The form of construction gradually loosened towards the periphery of the city ranging from partly open rows to the open villa structure of a garden city. The peripheral zones included factories with workers’ residential quarters and agricultural area with rural settlements. In both cities, the open villa structure with a lot of green would occupy attractive natural localities with good connections to the city centre. In Bratislava these were slopes of the Carpathians, in Novi Sad former pastures. In both cities, Palóczi proposed to provide inner and outer rings for traffic. In Bratislava this would mean the construction of two bridges over the Danube. Traffic problems would also be reduced by eliminating dead-end streets, widening existing communications and creating new radial routes. Palóczi proposed the planting of trees along new or widened streets. “By planting rows of trees we strengthen the importance of a street, its comfort” according to one of his texts. At the same time, however, he observed that “successful planting of trees is only possible if the trees are placed at least 6 metres from facades. Therefore, a street with rows of trees must be at least 24–26 metres wide.”

Rows of trees and front gardens also supplemented apartment blocks on the edge of the city. Palóczi also devoted great attention to the Danube embankments, which he identified as unique places with great developmental potential, designated for the construction of impressive buildings.

Another notable element that links the plans of the two cities is the organization of the industrial zone including the winter harbour and the so-called industrial canal. The latter was already built at Novi Sad in 1871–1875. It also appeared in all the regulation plans for Bratislava from before 1918. The Bratislava winter harbour composed of two basins constructed at the beginning of the 20th century close to the city’s oldest industrial area probably served as the inspiration for the harbour in Novi Sad. Palóczi proposed it in the same form and placed it at the beginning of the existing canal. The regulation plans of both cities also included green zones or parks, which were placed around the edge of the city, by the industrial canal or near industrial areas to protect the city from emissions.

The method of graphic presentation of the plans is also worth mentioning. In both cases it involved coloured drawing on the background of the cadastral map. He presented his final version of the plan at a session of the Hungarian Union of Engineers and Architects in June 1917.

17 PALÓCZI, ref. 15, p. 9.
19 Vortrag Prof. Anton Palóczis über den Stadtregulierungsplan. In Pressburger Zeitung, 17 June
regulation plan for Novi Sad by Palóczi and Szesztay was probably approved in January 1911.\textsuperscript{20} The pair continued to work on a more detailed version, which they published in 1912. A complex process of discussion accompanied the whole process of preparing the plans. Not only the particular interests of members of the city council, but also the changing state policy represented by decisions of the ministries in Budapest played important roles. The original plans prepared by the technical department of the town provided a relatively firm starting point, and the basic outlines of Antal Palóczi’s plans were added. This fact was explicitly expressed in the criticism of the Novi Sad regulation plan at the time, which stated: “The regulation plan for the city was to a large extent proposed according to the ideas of this office.”\textsuperscript{21} Thus, the entry of a well-known professor to the planning process cannot be regarded as a revolutionary rejection of existing practices, but rather their skilful gradual redirection. It is clear that Palóczi was able to sensitively analyse the existing, historical and natural features of the two cities as well as the preconditions for their expected growth. He could rely on existing work when conceiving and arguing for a plan for urban growth, transport and zonation of the urban structure. However, it can be considered revolutionary that they applied a two-stage planning mechanism, which included a regulation plan for the whole city, including development areas and the detailed regulation of the parts of the city that this approach required. Therefore, it is entirely correct to regard Antal Palóczi as the founder of modern urban planning practice in both our cities. His ideas represent a firm skeleton on which later planning of the two cities was deliberately or spontaneously based.

**The determining role of Palóczi’s plans**

Antal Palóczi’s regulation plans for Bratislava and Novi Sad were not finally approved or applied to their full extent to the construction of these cities. This was mainly a result of historic events, namely the outbreak of the First World War, the disintegration of the Monarchy, and the creation of new states in which both cities were included. However, factors such as the long-time interval from proposal to implementation and the general complexity characteristic of the planning process also played their roles. In spite of this, the influence of Palóczi’s plans can be identified not only in later territorial planning documentation, but also in the physical form of both cities.

After 1918 the administration of the cities and the planning of their development and regulation came into the hands of new groups. The original

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\begin{itemize}
    \item 1917, vol. 154, no. 165, p. 3.
    \item 20 Újvidéki Napló, 15 Nov 1911, vol. 3, no. 3, p. 4.
\end{itemize}
officials were replaced by new ones, who tended to distance themselves from the past era. Antal Palóczi remained professionally active until his death in 1927, but he no longer had the possibility to be involved in the planning process at Bratislava and Novi Sad. Part of the planning documentation remained closed in the archives of the Budapest ministries, some was deposited as out of date documents in the city archives, but a considerable part still served as a basis for regulation of construction. Drawings of buildings erected according to the original regulation plan and planned new buildings were included in the cadastral maps of the city. Until the production of a new cadastral map in 1934, a map from 1897 was used when regulating new building in Bratislava. In the case of Novi Sad, the most significant influence of Palóczi’s views on regulation and urban growth can be seen in the plan from 1929. The Technical Department of the city worked it out directly on the basis of the original plan by Palóczi and Szesztay, applying the same structure and division of city blocks, and the same way of connecting the winter harbour to the existing industrial canal. However, there are also substantial differences involving transport arrangement in the form of ring-roads, which we do not find in the new plan or in the present-day form of the city.

Comparison of the present form of Bratislava with Palóczi’s plans also gives an interesting picture. Some of these plans, for example, the idea of an industrial canal, were abandoned even before the collapse of the Monarchy. However, other ideas, which attracted hardly any reaction from the public at the time of their origin, were entirely fulfilled. This applies to Palóczi’s ideas about bridges over the Danube. All the present Bratislava bridges stand at places proposed in Anton Palóczi’s regulation plan. The course of railway lines, the location of railway stations and their categorization are also the direct result of decisions relying on ideas outlined in Palóczi’s plan. It is very similar with the location of the university complexes, which copy all three alternative possibilities suggested to the city by Palóczi in the period 1910–1917. Palóczi’s idea of preserving the castle was also fulfilled, although not as a ruin, in spite of various suggestions to replace it with a government or university complex. The outline of various developments that substantially influenced the character of the city in the course of the 20th century can be clearly identified in Anton Palóczi’s plan for the regulation and development of the city. In spite of the fact that it was never approved as a whole by the city council, Palóczi’s regulation plan can be regarded not only as initiating but also as opinion forming in the field of the modern planning of the city.

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22 Biblioteka Matice Srpske, BMS Pg III, 20, Plan grada Novog Sada, Gradski građevinski odeljak.
23 For more details see MORAVČÍKOVÁ–Lovra–PASTOREKOVÁ, ref. 4.
Analysis of the regulation plans for Novi Sad (1908) and Bratislavy (1906), worked out by the technical departments of these cities

Source: Archív oA HÚ SAV
Analysis of the regulation plans of Novi Sad (1910–1911) and Bratislava (1907–1917) worked out by Antal Palóczi

Source: Archív oA HÚ SAV
However, it is noteworthy that later workers on regulation or territorial plans of the city following the original drawn or text documentation usually did not mention Anton Palóczi. Ignoring of historical materials was characteristic of the modern planning of the city after the Second World War, which aimed to give the impression of entirely new, original solutions. The fact that these planners actually worked out the same solutions as their forerunners at the beginning of the 20th century testifies to a sort of unintentional continuity flowing form the natural vitality and resilience of the urban structure, which led planners to the most natural solutions as if spontaneously.

A similar developmental trajectory from the penetration of modern planning at the end of the 19th century, through their thorough application in the form of the first regulation plans and general appropriation by the expert and wider public in the 1930s to their almost complete submergence under the layer of post-war urbanism can also be identified in other cities of the former Kingdom of Hungary. However, the present sounding into the historical layers of urban planning shows that it was precisely the original ideas shared by the first town planners across the Europe of their time that decisively marked the form of our cities.

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ANFÄNGE DER MODERNEN STÄDTEBAULICHEN PLANUNG IN UNGARN: FALL PRESSBURG UND NEUSATZ

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