CZECHOSLOVAK SPORTS INFRASTRUC-TURE 1918-1938 AS AN INSPIRATION FOR THE DEVELOPMENT OF SPORTS FACILI-TIES IN THE 21ST CENTURY

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ABSTRACT: "Czechoslovak Sports Infrastructure 1918-1938 as an Inspiration for the Development of Sports Facilities in the 21st Century" presents the successful twenty-year history of building of Sokol and Orel sports infrastructure during the First Republic and its relevance for the present. The text focuses on the need for objective direction of state grants to sport and highlights that the path to fulfilling Tyrš's motto "in a healthy body a healthy spirit" begins with an addressed mapping of the range of physical activities in the Czech Republic.

The article also points out the uniqueness of sokol halls as multi-purpose buildings, which are characterised by many modifications and architectural forms. Their location within walking distance of densely built-up urban areas and their almost ideal urban distribution within settlements is an important feature that should be considered when planning sports infrastructure in urban areas.

Mapping current sports facilities and system planning of changes in preferences is key to supporting the development of the most needed sports facilities for public health. Affordability will also be an important aspect for the optimal placement of these facilities in an area, which will become increasingly important in the near future. The aim should be to build sports facilities for a healthy lifestyle that are in accordance with the strategic and conceptual documents of the Czech Republic and the EU and do not contradict the theory of sustainable development.

The text provides valuable insights and inspiration for the development of sports infrastructure in the 21st century, taking into account historical experiences and current needs.

KEYWORDS: Sokol halls; sports infrastructure; sustainable development; public health; planning; sports facilities

INTRODUCTION

In the realm of health and well-being, sports and physical activity play a pivotal role. The effective utilization and development of sports infrastructure in the Czech Republic necessitate a systematic approach to the spatial planning of these facilities, rooted in a comprehensive and thoughtful strategy. The "State of Art" in the field of functional spatial planning of sports facilities takes into account specific accessibility and location considerations and encompasses a wide array of critical aspects.

The historical sports infrastructure in Czechoslovakia from 1918 to 1938 was unique and significantly influenced by socio-political changes accompanying the birth of the new state. Concurrently, with the consolidation of the state, the Sokol movement, founded in the mid-19th century, reached the pinnacle of popularity and became a key player in the development of sports infrastructure. The primary aim of this article is to systematically examine the evolution of sports infrastructure in Czechoslovakia from 1918 to 1938, with a focus on the influence of Sokol organizations. Additionally, we will attempt to identify how these historical experiences can inform and inspire contemporary sports facility development in the 21st century [1].

This current review will cover a wide range of topics related to Sokol infrastructure, including historical roots, development, and architectural forms, up to possibilities of integration into the modern sports environment of the 21st century. It will address the unique Sokol infrastructure that played a fundamental cultural and sports role in the 20th century. Despite the well-documented history of the Sokol movement, there is still room for further exploration and analysis of this exceptional infrastructure and its role in today's society. Beyond its historical and cultural significance, it will also explore the potential of Sokol infrastructure for the future development of towns and municipalities in the Czech Republic.

In today's context, it is crucial to consider not only traditional sports facilities but also the integration of physical activities into the daily lives of citizens. The increase in the decline of areas designated for sports in spatial plans highlights the need for alternative approaches and strategies to support physical activities. This section of the text will delve into proposals and possibilities for expanding physical activities beyond traditional sports facilities and emphasize the necessity of a coordinated and systematic approach. Furthermore, we will develop ideas regarding the use of higher floors of buildings, the integration of sports facilities into other types of buildings (e.g., schools or hotels), and flexible architectural elements for multifunctional spaces. Simultaneously, the need for a national concept, including a unified overview of the current state of sports and physical activity infrastructure, will be emphasized.

A challenge is also the decline in development areas designated for sports in spatial plans in the Czech Republic over the past 30 years. This trend, which directs more construction toward housing at the expense of sports areas, requires measures to compensate for and prevent further losses. Finding tools at the national level to prevent adverse changes in spatial planning is crucial [2].

In the following section of the text, we will analyse specific existing databases related to sports facilities and organizations in the Czech Republic. Simultaneously, we will assess whether these databases align with the current context. We will underscore the need for a comprehensive and interactive registry that would facilitate coordination, efficiency, and accessibility of

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AThe author works as a senior architect at AI DESIGN, s.r.o. with British-Czech architect Eva Jiřičná and Petr Vágner where she works on large scale projects. At the same time, she is a PhD student in Architecture and Civil Engineering at the Faculty of Civil Engineering of the Czech Technical University with a focus on buildings and facilities for sport and physical activity and her teaching is focused on sports facilities. sports infrastructure and activities for all. This section will provide insights into current issues and potential solutions in the field of spatial planning for sports infrastructure in the Czech Republic. It can serve as a foundation for future discussions and be a source of inspiration for researchers, urban planners, architects, and other experts striving to connect sports and physical activity with modern lifestyles.

Overall, this text aims to present new perspectives on sports infrastructure in the Czech Republic, evaluate its current state and direction, and propose practical solutions for future development. It should serve as a catalyst for discussion and reflection and could inspire those involved in the development and innovation of the sports environment in the present day.

THE CONTRIBUTION OF SPORTS ASSOCIA-TIONS AND SOKOL GATHERINGS TO PHYSICAL EDUCATION IN THE CZECH LANDS

The origins of physical culture and sports in the Czech lands can be traced back to the first half of the 19th century when the first private gymnastics institutes began to emerge, laying the foundation for the future development of this field. Following the fall of Bach's absolutism in 1859, various associations with different focuses started to emerge, and they had a significant impact on the development of the national movement and the establishment of nationally oriented physical education units. This era was characterized by the fusion of physical culture with social and national issues [1].

One of the most prominent examples of these associations was Sokol, founded by Miroslav Tyrš and Jindřich Fügner on February 16, 1862, in Prague. This organization held a unique position in society and ushered in a new era in which physical education ceased to be an activity reserved exclusively for the nobility and the affluent classes. The founding of Sokol symbolized the entry of physical culture into the life of modern society, with an emphasis on the comprehensive development of the individual.

The Sokol idea became a global phenomenon that also influenced the architecture and financing of Sokol halls. Throughout the year 1862, units were established in the Czech countryside, with more being added each year, not only in the territories of Bohemia and Moravia but also abroad. During these years, the Sokol idea spread among Czech settlers in the United States, who played a significant role in raising funds for the construction of Sokol halls, among other endeavours [3].

Towards the end of the 19th century, sports Sokol gymnasiums began to integrate into school buildings, serving local physical education units until the construction of dedicated Sokol halls. School gymnasiums were used for various occasions, including student gatherings, thus following the multi-purpose model of large Sokol halls. The increase in Sokol membership, and particularly the increasingly successful and massive Sokol gatherings, led to the construction of impressive Sokol stadiums with monumental sculptural decorations even before the First World War. Sport and physical education became an integral part of the lifestyle of many residents of Prague, whether as active athletes or spectators [4].

The history of sport and physical education in the Czech lands is a complex and fascinating subject that reflects societal changes and cultural development in the region. Sokol, as a key element of this history, illustrates the power of sport and physical culture as tools for national consciousness and social development. Over time, there was a transformation in the understanding of physical culture, which evolved from being the privilege of the nobility and the wealthier bourgeoisie to becoming an integral part of modern society, a key element of national awareness, and a symbol of social progress.

THE POTENTIAL AND INTEGRATION OF SOKOL INFRASTRUCTURE INTO MODERN SPORTS FA-CILITIES OF THE 21ST CENTURY

Sokol infrastructure and its potential for integration into modern 21st-century sports facilities are key aspects for the future development of physical education and sports in the Czech Republic. In the context of historical evolution, Sokol halls have become unique elements of sports and social infrastructure with great potential for further development and adaptation.

Sokol complexes were never just sports facilities; they were multifunctional centres that combined sports, culture, and gastronomy. This combination provides opportunities for the expansion and revitalization of these spaces in the 21st century, with the primary goal being the creation of modern and sustainable sports and recreational centres.

Transforming Sokol halls into wellness centres for the public represents an opportunity to expand their function and strengthen their role as community hubs. This would not only enable better utilization of existing capacities but also broaden the range of sports and recreational activities available to citizens of all age groups. This strategy would also contribute to promoting a healthy lifestyle and physical fitness among the population.

However, the key to the success of this process lies in detailed analysis and planning. It is essential to analyze the number and condition of existing Sokol halls, their utilization, accessibility, and amenities. This process should also include an analysis of the connections between Sokol buildings, schools, and other sports facilities because these relationships play a crucial role in providing quality physical education and sports activities.

Overall, this chapter demonstrates that there is significant potential for further utilization and integration of Sokol infrastructure into modern 21st-century sports facilities. Realizing this potential would not only improve sports infrastructure but also strengthen social cohesion and promote a healthy lifestyle.

The images below depict the contrasting evolution of sports infrastructure between the past and the present. On one side is the historical Sokol hall building with its distinctive architectural features and the ambiance of the 20th century. On the other side is a modern sports center with multifunctional spaces, modern technology, and innovative design that reflects the needs and trends of the 21st century.



Fig. 1.: Sokol gymnasium Hradec Králové – preview including search functionality (Source: https://kam.hradcekralove.cz/objekt/14-sokolovna accessed: 3.8.2023)



Fig. 2.: National Sports Center - preview including search functionality (Source: https://www.asb-portal.cz/architektura/obcanske-stavby/sportoviste/narodni-sportovni-centrum accessed: 3.8.2023)

AN INNOVATIVE MODEL OF COLLABORATION BETWEEN SCHOOLS AND SOKOL FOR THE TRANSFORMATION OF SOKOL SPACES INTO WELLNESS CENTERS AND SPORTS FACILITIES

There is an increasing demand for wellness services and accessible sports facilities for the public. This creates a need for an innovative approach to utilizing Sokol spaces, which have a rich history and tradition. Shifting the focus of these spaces towards providing wellness services and sports activities for schools could yield many benefits and contribute to the overall development of physical culture and public health. It is essential to renovate Sokol spaces and ensure the provision of essential wellness services such as fitness swimming, sauna, massages, and relaxation. These measures should be available not only to the general public but also to schools as state institutions with funding capabilities. In addition to schools, which have limited timeframes for using sports facilities, there is room for commercial utilization. In many cases, the renovation of existing facilities would be considered, as well as the construction of new or outdoor sports facilities. Therefore, it is imperative to establish collaboration with the Sokol association and create a cooperative model between private ownership (Sokol) and public interest (providing the best services to citizens) with the possibility of financing through grants or other state contributions and joint management.

The analysis and research would focus on two possible forms of collaboration between schools and Sokol. The first option would involve using school-owned land for the construction of new sports facilities and wellness centres. The second option would involve using Sokolowned spaces to expand the offering of wellness services and sports facilities for schools. During the research, it would be essential to analyse and propose the optimal transformation of these spaces that would meet the needs of all stakeholders. This would include designing efficient logistics for rentals and coordinating the use of sports facilities by schools and the potential for commercial rentals.

THE KEY ROLE OF FUNCTIONAL SPATIAL PLAN-NING FOR SPECIFIC ACCESSIBILITY AND LOCA-TION OF SPORTS FACILITIES

Another way to expand the range of physical activity options for the public is to consider areas and spaces designated for sports and movement other than just Sokol spaces, although they serve as a suitable model. Functional spatial planning for sports and recreation systems, which deals with the context of the placement of sports facilities in the area and their interaction with other systems, needs, in our opinion, a more targeted designation of suitable locations in terms of their specific accessibility when planning areas for physical activities. Currently, in the case where an investor decides to build facilities suitable for physical activity or sports, it is usually approved without objections and is positively received. However, not always is the suitable location chosen in terms of the catchment area of the population or the appropriate physical activity. If the establishment were subject to a national concept that defined the parameters and conditions for where and what facilities should be created, we could achieve a positive response along with the combination of a suitable location and activity. The time horizon for the real implementation of construction on functional sports and recreation areas is long-term, which is why it requires starting the update of spatial plans as soon as possible.

LOSS OF DEVELOPMENT AREAS FOR SPORT IN LAND-USE PLANS

Over the past 30 years, there has been a significant loss of development areas for sports compared to land-use plans from the 1990s, which is not quantified and has primarily favoured residential functions. Unfortunately, residential property development does not always include provisions for sports facilities, resulting in the gradual reduction of so-called "yellow areas" from land-use plans. On a national level, we should seek tools to prevent further changes in landuse plans that work against sports.

One form of compensating for the loss of these areas is planning integrated facilities in other functional spaces, such as schools, Sokol halls, hotels, office buildings, etc. Schools, especially primary schools, are suitable due to their proximity to population centres and often already have Sokol gymnasiums that can be rented to the unorganized public in the afternoon and evening hours when a significant portion of the adult population is not working. These school facilities usually lack wet zones for physical activities, which would be a valuable addition. Sokol halls and their utilization have already been mentioned in a previous part of the text and can be considered similar to schools in this regard. Integrating facilities for physical activity into hotels is also feasible, as many of them already include amenities such as swimming pools, whirlpools, saunas, or multipurpose halls in their services. Here, it is important for these services to be accessible to local residents who are not staying in the hotel but live nearby [2].

Another option to address the shortage of areas suitable for daily physical activities in desired locations is utilizing higher floors in buildings, which is not currently a standard practice in sports facilities. It is obvious that not all activities are suitable for this approach, but it presents a viable solution for some. However, when designing such spaces, it is crucial to maintain a connection with nature and access to fresh air. Another principle that could help is the mobility of certain parts of the building. For example, installing a retractable roof above a water area could provide both an indoor and outdoor pool in one space, or a sliding facade could be used for a climbing wall. Ensuring year-round use of various areas for physical activity should now be a standard practice [2].

PASSPORT OF THE CURRENT STATE OF SPORTS INFRASTRUCTURE IN THE CZECH REPUBLIC

To develop a national-level concept, it is first necessary to create a uniform passport of the current state of sports and physical activity infrastructure throughout the Czech Republic. Current legislation obligates municipal entities to prepare sports development concepts for specific periods, including the registration of sports facilities in their respective areas, although the method of preparation is not defined. Often, this only involves an electronic document published on the city's website. The approaches to data processing vary, and as a result, they are not compatible with each other. However, the ability to draw data from these sources and interconnect them is crucial for evaluating the current state and sustainable development. This database or registry should not only record the current state but should also be an interactive system linked to a map, allowing any citizen to find sports facilities in their locality with additional necessary information (services offered, equipment, opening hours, types of admission, price list, transportation options, parking, photographs, etc.). The categorization in this system should also include areas for unorganized public activities, wellness facilities, or areas for physical activities. Additionally, the database should highlight optimal areas for building facilities for physical activities, accompanied by capacity requirements verified during the selection process (content, floor space, and division into indoor and outdoor for year-round operation). In other countries (Finland, Denmark, the Netherlands, etc.), national databases are typically managed under the auspices of the Ministry of Sport in cooperation with specialized institutes or universities. The passport of the current state is created, followed by an interpretation in the context of the population and its concentration in specific locations, accessibility, usability, and the suitability of specific sports. However, these databases and evaluations usually focus only on sports, with facilities for movement or relaxation not being recorded or evaluated.

In the Czech Republic, there are currently several databases that collect information about specific types of sports facilities, each created for a specific purpose, which is why they do not contain all the data and facilities that a national database should include.

For instance, there is the Information System of the Czech Union of Sports (ČUS), which records over 8,000 sports facilities across the Czech Republic, predominantly those managed by sports clubs and physical education units, members of regional ČUS associations. An exception is the South Bohemian Region, which, in cooperation with the regional branch of ČUS, registers all sports facilities in the region. This database does not include evidence of locations suitable for physical activity or wellness. The Information System also records affiliated sports clubs, federations, physical education units and clubs, sections, and individuals [5].

The second example is the Sports Registry established by the Ministry of Education, Youth, and Sports (MŠMT) and currently managed by the National Sports Agency (NSA). This registry contains information about sports organizations, athletes, coaches, and sports facilities. Registration in this database is a prerequisite for obtaining state subsidies, which is a significant motivation for most entities. The registry has a public and a non-public section; the public section only displays the total number of sports facilities, individual names with addresses and types of sports venues, but it does



Fig. 3.: Czech Union of Sport Database – search filtr (Source: https://iscus.cz/web/pasport/?is_map_active=0, accessed: 17.03.2023)

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Fig. 4.: Sports Registry – preview including search option (Source: https://rejstriksportu.cz/dashboard/public/agenda/sportoviste, accessed: 25.03.2023)

not provide links to maps or other additional information. This database also does not address the category focused on unorganized public activities or areas for physical activity [6].

SPORTS INFRASTRUCTURE AS A KEY ELEMENT IN THE FIGHT AGAINST CIVILIZATIONAL DIS-EASES AND IN PROMOTING A HEALTHY LIFE-STYLE

Civilizational diseases, which represent a growing health threat in today's society, are closely related to the lack of physical activity among individuals. One of the effective means of preventing these diseases is the implementation of a healthy lifestyle, in which regular physical activity plays a crucial role. This article emphasizes the importance of accessibility to physical activities for all citizens without restrictions based on socioeconomic factors or geographical location [7].

Investments in sports infrastructure may be perceived as costly, but in a broader context, they are investments in the health and well-being of citizens, which is crucial for sustainable societal development. In light of the growing problems of obesity and chronic diseases, promoting physical activity has become not only a health but also an economic priority, contributing to reducing healthcare costs and increasing the productivity and quality of life of citizens [8].

Investments made in preventive programs and support for physical activity will translate into future savings in expenditures on outpatient medical care and the elimination of medical procedures. Specific financial predictions are not currently available and are not the main focus of this text; the aim is to emphasize the importance of prevention. Globally, 1 in 4 adults does not meet the recommended levels of physical activity according to the World Health Organization (WHO), and more than 80% of the global adolescent population is insufficiently physically active. Any physical activity is better than none, and being more active on a daily basis through relatively simple means leads to achieving the recommended activity levels [9].

Securing resources for sports infrastructure is a key element in promoting physical culture and a healthy lifestyle. Currently, state support often focuses on professional sports, which may limit the accessibility of facilities for amateur sports and the unorganized public. The public sector plays a crucial role in providing resources for sports infrastructure, as its main goal is to promote a healthy lifestyle.

This also includes seeking alternative sources, such as public-private partnerships, or establishing funds that can come from various public or private sources. It is also important to thoughtfully allocate financial resources to support the construction and maintenance of sports facilities in different parts of the country, ensuring equal access to sports infrastructure regardless of the socioeconomic status of citizens. This strategy requires a deep understanding of the current situation and future needs in the field of sports infrastructure.

CONCLUSION

The Sokol movement, historically pivotal in the process of national education, plays a significant role in the development of physical culture and sports in the Czech lands. Currently, its facilities become an exceptional platform for innovative and sustainable development. Leveraging their strategic location, multifunctionality, and historical value, these facilities can bring benefits to schools, the public, and society as a whole.

This article presents a new model of cooperation be-

tween schools and Sokol. It aims to transform Sokol spaces into wellness centres and sports facilities, with an emphasis on optimizing existing infrastructure, adding new elements, and improving service accessibility. The synergy between the public and private sectors plays a crucial role here, enabling efficient planning and implementation of projects that can be beneficial to the entire society.

An analysis of sports infrastructure in the Czech Republic is essential for its effective development. This analysis should include a comprehensive database covering all sports facilities and areas suitable for public movement throughout the country, simplifying access to information for citizens, whether regions have access to comprehensive databases or utilize less complex resources. The results should contribute to the sports and physical education debate, taking into account both the present and future generations. Through territorial planning and targeted coordination, opportunities for locally suitable sports facilities are created. This approach promotes physical activity, strengthens public health, and highlights potential risks associated with the loss of development areas for sports.

The overall research framework emphasizes integration, cooperation, and innovative approaches to the development of wellness and sports infrastructure. It can serve as inspiration for communities and regions seeking ways to support a healthy lifestyle. Its potential is extensive, offering new paths for the development of physical culture, improving the quality of life, and enhancing community collaboration.

The targeted coordination of the transformation of Sokol facilities, along with the planning of facilities for physical activity, represents a promising step towards the future sustainable development of the public in the Czech Republic. This work not only underscores the importance of the historical and cultural heritage associated with sports but also demonstrates new possibilities for improving the quality of life and strengthening community collaboration. The potential for further research and implementation of this model is substantial, opening up new opportunities for the entire field of physical culture in the region.

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