

## AVAILABILITY OF AREAS AND FACILITIES FOR PHYSICAL ACTIVITY FOR THE NON-REGISTERED PUBLIC

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### Abstract

*The conference on sustainability and accessibility of sports infrastructure organised by the NSA in 2022 showed how the issue of accessibility of sports and physical activities for citizens is crucial in the context of ensuring a healthy lifestyle for the general non-registered public. It also confirmed that there is a lack of any national concept for the country that addresses this topic. One of the key factors in promoting regular physical activity among the general public is accessibility, both geographic and financial. This paper outlines the current approaches to the development of databases for these places in the Czech Republic, which is the subject of the author's PhD thesis. They demonstrate that unless a national register of areas and facilities for sport and physical activity is quickly created, it is impossible to have an objective basis for planning the urban development of these places. Using the example of an analysis of selected cities in the country, it is shown that just few existing facilities are year-round complex wellness centres and that there is an insufficient number of them in relation to the demands of the people in the localities. Finally, a system of uniform methodology for the registration of suitable places and their relevance for the preparation of urban plans of town and municipality is outlined.*

### Keywords

*physical activity; wellness centre; non-registered public; accessibility; evidence of facilities and areas; development of the territory*

### 1. INTRODUCTION

Regular physical activity is one of the key factors in maintaining good holistic health. There are several possibilities how to include physical activity to everyday life. One of them is the most natural motion – walking, which is more suitable than driving cars or using public transport. Another option is the use of areas and facilities for physical activity and sport. These facilities must be available for public in their surroundings to eliminate necessity of using other transport than walking. Meaningful development of this infrastructure in the Czech Republic must be based on a nationwide register of these facilities used to identify and evaluate the current state of the art and then on a site-specific concept. There is currently no national database of facilities and areas for physical activity and relaxation intended for the general non-registered public

in the Czech Republic, although some sporting associations use their databases to provide a basic perspective of current facilities in the field of exercise and sport. However, these databases do not have analyses in relation to the population. Some presentations at a conference on the sustainability and accessibility of sports infrastructure, organised by the National Sports Agency in 2022, showed that databases of sports areas and facilities in other European countries have been compiled and made available online. However, these databases usually do not overlap with urban development concepts, but an exception is Finland, for example, where the database is linked to population data and serves as a basis for individual municipalities and regions in the area of urban development.

## 2 RESEARCH OBJECTIVE

The aim of the research was to obtain a more detailed insight into the issue of wellness facilities from the perspective of architecture and urban planning, and to find out what the current status and approach to the registration of these facilities is, and what conclusions can be deduced from this. Two primary hypotheses were formulated based on the generally known facts about this topic in the Czech Republic. The first hypothesis is that there is no unified database of facilities for physical and recreational activities, which would also be a suitable basis for sustainable planning of these activities. The second hypothesis assumes that there is no valid national document or methodology on the topic of wellness facilities at the urban planning level.

## 3 METHODOLOGY

The research uses a compilation method to present findings and data in the field of wellness centre design. Furthermore, the study analyses different approaches to the registration of sports facilities both abroad and in the Czech Republic. The research also includes an analysis of several cities in the Czech Republic in terms of the existence of facilities for physical and relaxation activities and their availability to citizens. Consequently, the conclusions for the future development of these facilities are made.

## 4 PROCEDURE AND RESULTS

### 4.1 Contexts of the wellness centre design

Defining a term “wellness centre” and its facilities is difficult due to the variety of services that can be offered in the centre and the complexity of the design of these facilities. The following is a possible definition:

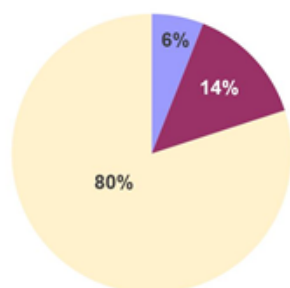
*„As far as possible, wellness facilities ought to offer a broad range of physical, relaxation and fitness activities, combined with health monitoring and preventive care for overall condition – physical, mental and health.“* (Kopřiva, 2011)

A wellness centre is a complex facility that must meet both legislative and public benefit requirements. This article primarily deals with the urban context of the proposal, but there are many more important aspects for the design (economic, target group of visitors...) and none of them should be neglected.

The national concept for the development of sports facilities ought to target the general non-registered public, which is the largest group of citizens in the field of sport and physical activity, and at the same time the one to which the least amount of space is allocated, as can be seen from the graphs (Figure 1) from prof. Kopriva's research. (Mirovský, 2016)

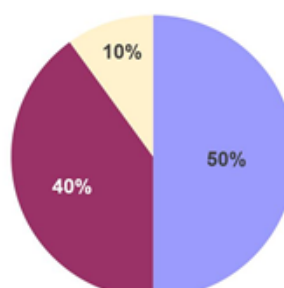
**POPULATION DISTRIBUTION**

■ registered ■ schools ■ non-registered



**SPORTS AREAS PROPORTION**

■ registered ■ schools ■ non-registered



**Figure 1** Graphs illustrating the percentage of different sports areas and the number of users, source: (Mirovský, 2016)

In the past, the public sport and recreation indicator was set at 17 m<sup>2</sup> per individual. However, the distribution of this indicator among various groups was heavily unbalanced in favour of organised movement. Unorganised movement, which comprised green spaces, playgrounds for children, youth and adults, was only given 6.87 m<sup>2</sup> per individual in school physical education and 8.0 m<sup>2</sup> per individual in organised physical activity. It is impossible to verify whether the indicators have been met, but it is likely that there have been large deviations from theoretical needs in practice. The precision of the global indicator and selected sections with respect to the true needs of different population groups may be questionable. At present, no such indicators exist. (Urbanismus architektura design – studio spol.s.r.o., 2007)

To enhance the overall holistic health of society, we must start with the generation of children who are encouraged by their parents to make physical activity a natural part of their daily routine. Nevertheless, it is crucial to note that parents too must adopt a natural approach towards movement in order to teach their children accordingly, which is yet to become the standard in all households. Guidance on movement at school can be helpful in this respect, where, among other things, the necessary facilities need to be created. (Urbanismus architektura design - studio spol.s.r.o., 2007)

The financial and geographical availability of facilities and areas for physical activity is essential for regular physical activity. In terms of financing, it is important to explore options for state or health insurance support in order to ensure equal access to year-round physical activity for all population groups. Short walking or commuting distances play a key role in sustainability and regularity. Suitable locations for wellness centres are those in close proximity to our homes or workplaces, reducing the need for commuting. These areas are known as catchment areas, which are often already urbanised. As such, it may be necessary to identify alternatives such as high-rise

developments, the reuse of brownfield sites, or incorporating wellness facilities into existing buildings, such as schools, hotels or office spaces. (Krejčí, 2016)

The catchment areas for physical and recreational activities can be divided into three sizes: the smallest is 600-800 m /10-12 minute walk; the middle is up to 2 000 m and can be reached either on foot or by public transport; the largest is about 30-40 km and requires public transport or private car transport. Figure 2 displays a schematic representation of these centers of population. The areas' size is determined by the optimal distances recommended for various activities that are part of the wellness centres. (Maier, 2016-2020)

Outdoor physical activities in nature, which are less preferred in the colder season, must not be neglected. When dealing with seasonal facilities, it is recommended to seek alternative uses for the facility during the remaining time to maximise its potential.

#### 4.2 An inspiring foreign example - Finland

The matter of physical activity and its promotion is being discussed all over the world, but each country is approaching it with different priorities and in different ways. Finland serves as an inspiring model from abroad for approaching the issue in a national conceptual way. Geographers from the University of Helsinki and social scientists from the University of Jyväskylä, supported by the Ministry of the Environment, are studying equal access to sports facilities and opportunities for physical activity. The project created a national database named LIPAS, publicly available online and able to provide context and analyse the research data. As a consequence, a unique basis for future decisions on the development of the territory is created. (University of Helsinki, n.d.)

The LIPAS database provides information on public sports and recreational facilities and supports municipalities in exchanging experiences and comparing financial

expenditure concerning these activities. These facilities are presented on an interactive map where they can be filtered according to several options (type of sport, type of sports ground, location, owner, operator, year of construction, current status ...). Additionally, the information is available in table format. The database does not contain the term "wellness centre" because of the unclear definition of the activities it encompasses. (University of Jyväskylä, n.d.)

The diversity tool contextualises data on movement opportunities and population data for the specific area being analysed. The analysis may also be founded on walking distance data using Open Street Maps. Comparison of results with normative or guideline values for movement opportunities in a given area is not possible, as such values are absent. (University of Helsinki, n.d.)



Figure 2 Catchment areas – scheme, source: (Vášková, 2023)



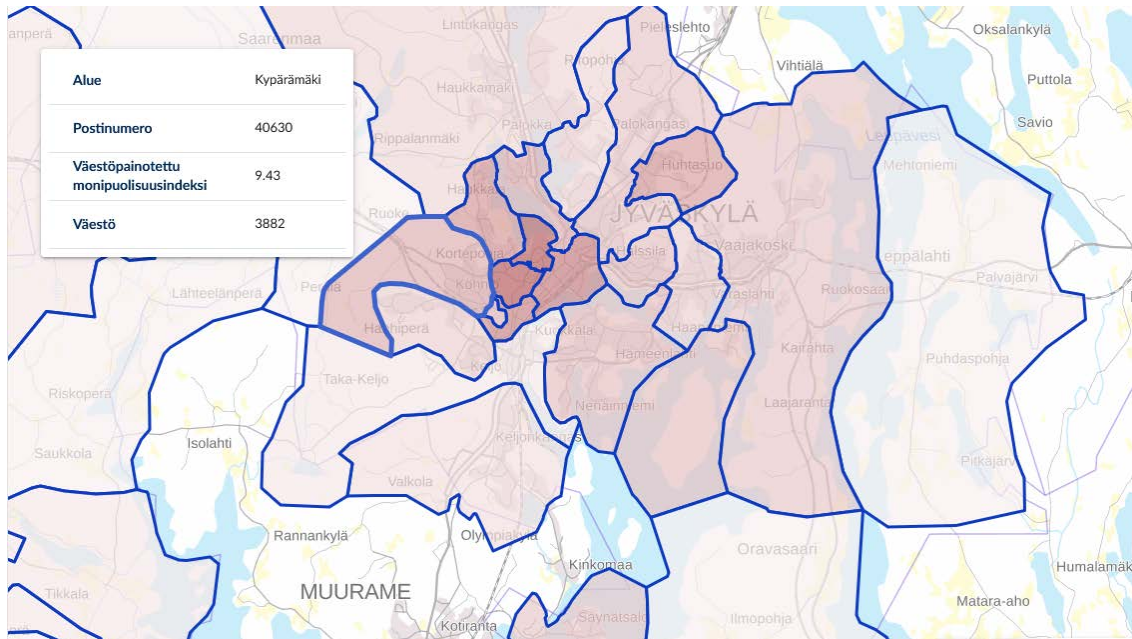


Figure 3 Project LIPAS – Finland, the database and the diversity tool, source: (University of Helsinki, n.d.)

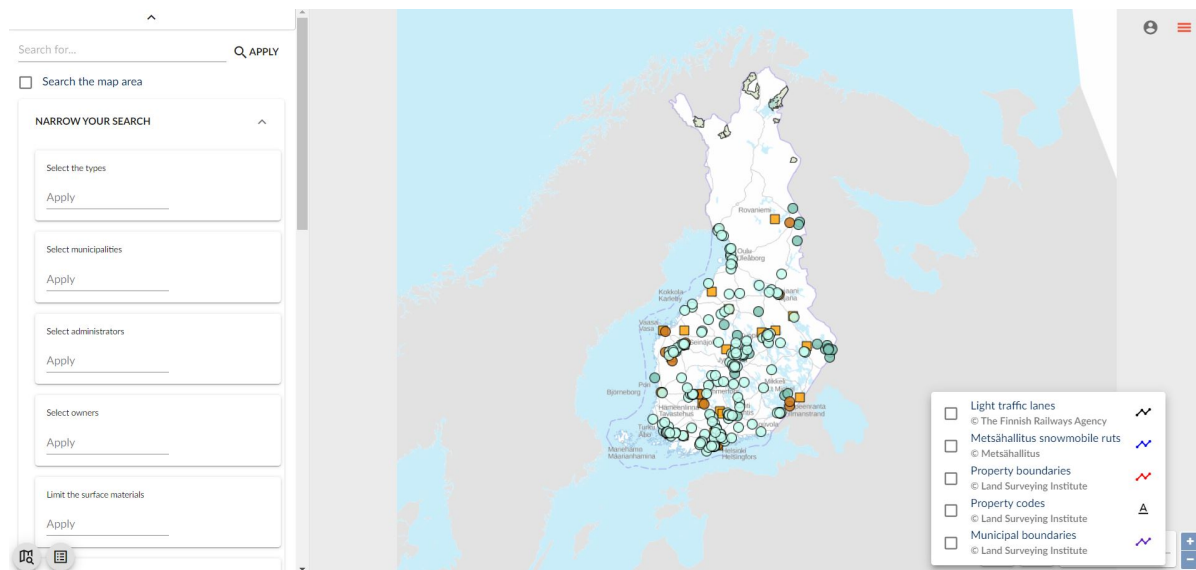


Figure 4 Project LIPAS – Finland, the database, source: (University of Jyväskylä, n.d.)

#### 4.3 Registration of facilities and areas for physical activity in the Czech Republic

The Czech Republic lacks a unified system for registering areas and facilities for physical

activity and relaxation. Presently, diverse databases are processed, with each recording specific areas or facilities for the specific purpose of the establishing organisation, which is related to the differences in the

recorded data. Furthermore, these databases are incompatible with each other.

The National Sports Agency (NSA) established the Register of Sports as the initial example of sports facility registration. This record contains a register of all sports organisations, sportsmen and sportswomen, coaches and sports facilities that apply for state subsidies. Some facilities are listed multiple times since they are registered by different clubs that use them. The database solely provides a list, which users can filter according to location and sport type, without any markings on the map. Therefore, the overview holds no relevance for subsequent reference. (Rejstřík sportu Národní sportovní agentura, n.d.)

The Czech Union of Sport's Information System provides a more complex system for registering sports facilities than the NSA, in that facilities are displayed both on a map and as a list. However, this database primarily comprises sport facilities managed by member organisations of the Czech Union of Sport (CUS). (Česká unie sportu, n.d.)

The exception is the region of South Bohemia, where an agreement was reached between the CUS and the municipal sector to include all sports facilities in the region. However, not all sports facilities are included in the database, as per the author's research. Moreover, Czech Floorball and some cities register these facilities on their websites (such as Olomouc, Pardubice and others). Notably, there is no database for wellness centres, and this term does not appear in the databases and surveys.

Given the above information, it is challenging

to obtain an overview of the actual amenities for physical activity and relaxation in the Czech Republic. Therefore, a survey of selected locations has been conducted with the goal of comprehending the current state of the matter. The survey of the area combined a personal visit to the city, studying various databases and concepts for the development of sport in cities or regions, communication with schools in the area and searching for additional information on the Internet. The study exclusively concentrated on indoor establishments adhering to the features of a wellness centre, such as fitness centres, swimming pools for fitness swimming, gyms, beauty salons, massages, etc. Schools were surveyed regarding their provision of a gym and its rental to the public outside school hours. The research was completed in a total of 15 cities / 5 regions and in 3 cities of different population within each region. For the purpose of this article, only 2 cities were selected: Pardubice, with a population of 88 520, and Strakonice, with a population of 22 214. (Český statistický úřad)

The full research can be found in the author's dissertation. (Vášková, 2023)

The maps in Figure 5 and Figure 7 illustrate the colour-coded facilities for physical activities, relaxation treatments, and their combinations. These facilities are categorized into dry or wet activities, as well as school facilities. The colour coding also indicates whether the facility is registered in one of the databases mentioned above. The accessibility of each wellness facility within a 10-12 minute walk (approximately 600-800m) is graphically displayed in Figure 6 and Figure 8.

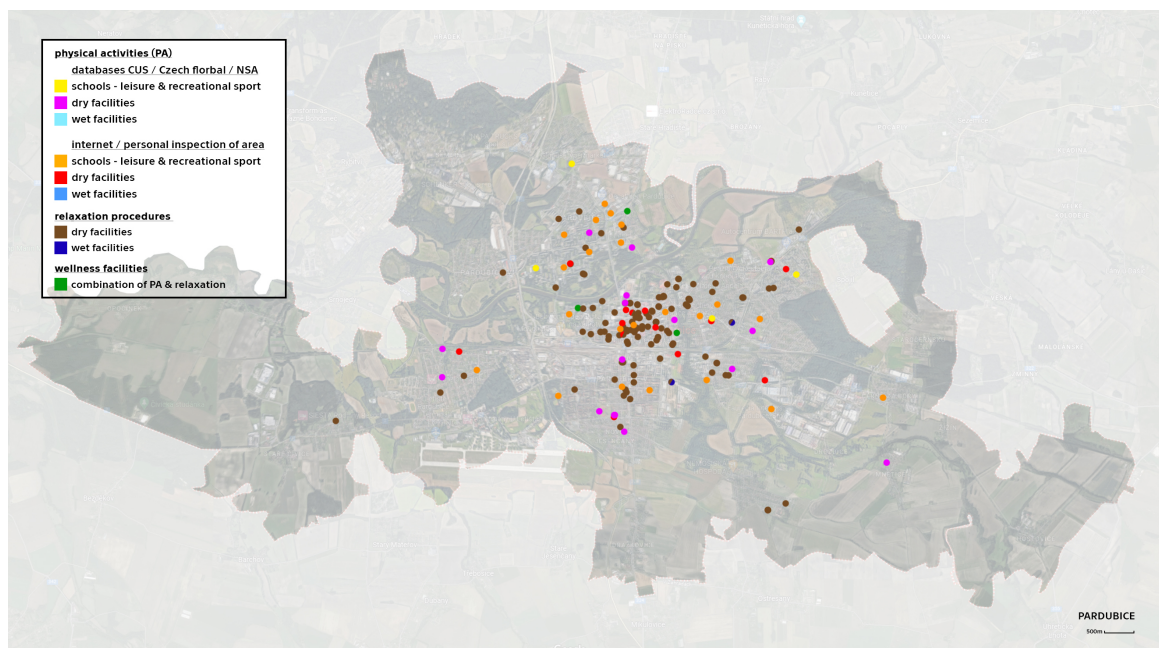


Figure 5 Map of the infrastructure of indoor facilities suitable for public movement and relaxation in Pardubice, source: (Vášková, 2023)

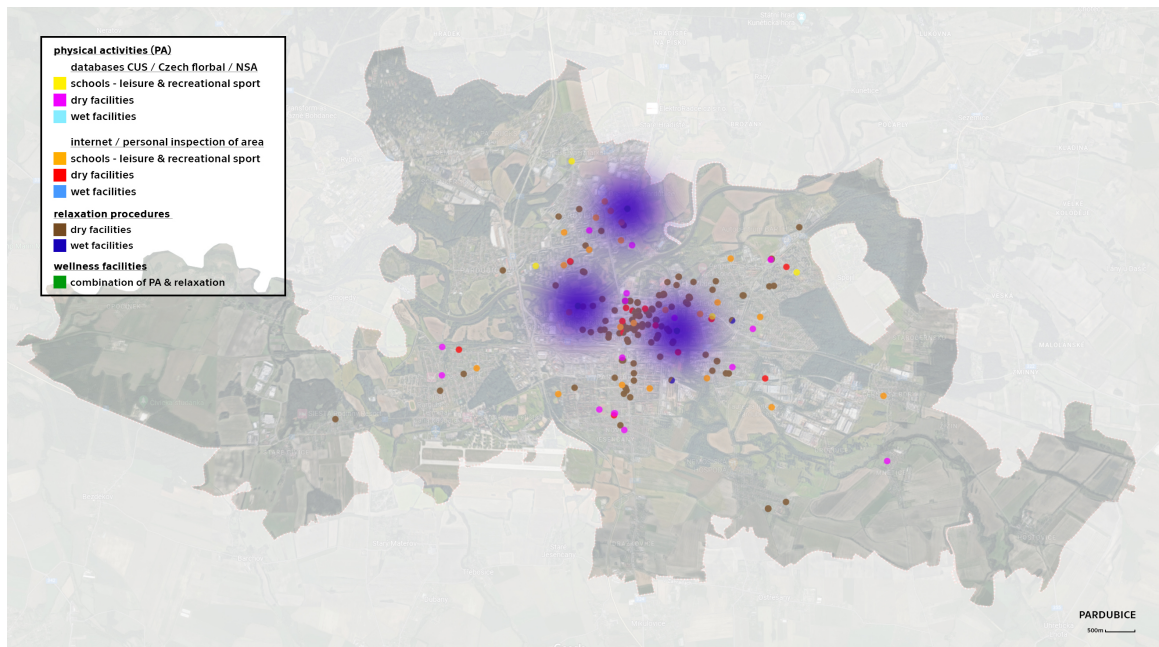
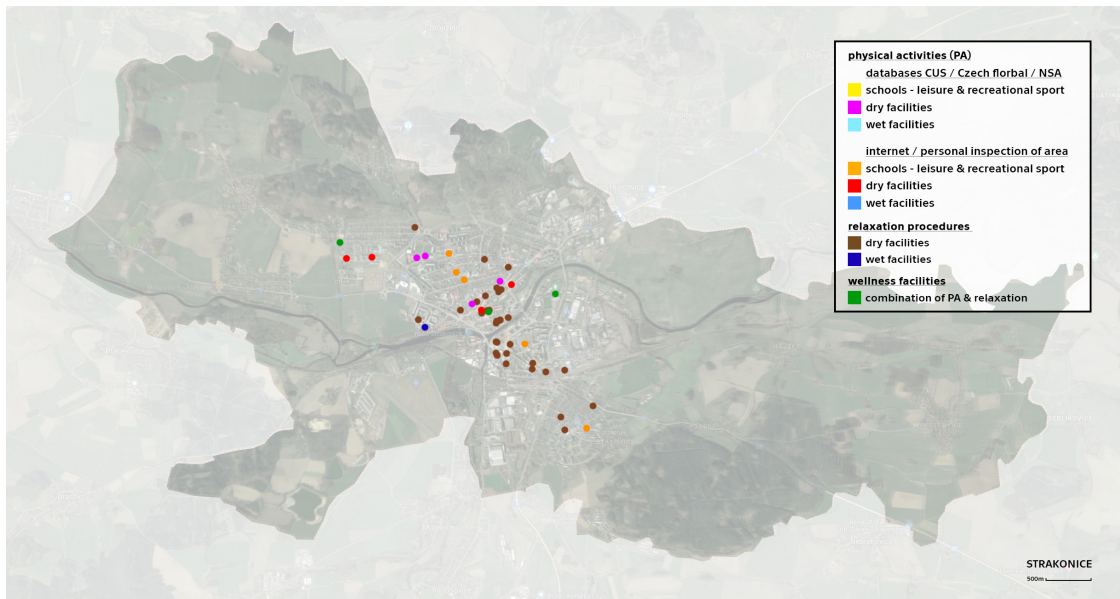
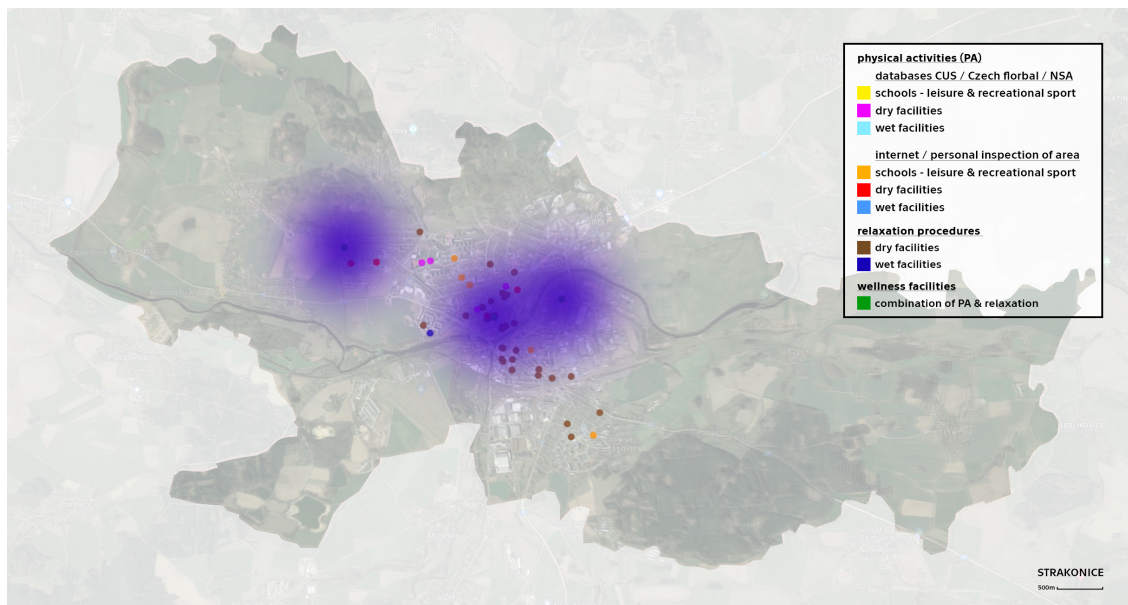


Figure 6 Map of the distribution of the infrastructure of indoor wellness facilities for the public in Pardubice, source: (Vášková, 2023)





**Figure 7** Map of the infrastructure of indoor facilities suitable for public movement and relaxation in Strakonice, source: (Vášková, 2023)



**Figure 8** Map of the distribution of the infrastructure of indoor wellness facilities for the public in Strakonice, source: (Vášková, 2023)

As the maps demonstrate, all exercise and relaxation facilities in the city are not comprehensive wellness centres. Consequently, these centres are not accessible within a 10-minute walk of all the

city's residential areas, forcing residents to spend more time on the road, using public or private transport. As a result, most people's visits are irregular. The depicted distribution of individual wellness centres



does not consider any untraceable or unavailable research data, such as the walkable street network, the residents' concentration in each building, and the capacity and size of the facility. (Vášková, 2023)

#### **4.4 Uniform methodology for the registration of facilities for physical exercise and relaxation activities**

The author provides their subjective opinion on how to approach registration due to incomplete information about the current state of equipment in areas and facilities for movement and relaxation activities. To enable the evaluation of the current situation at both local and national levels, the database should have uniformity throughout the Czech Republic. Despite the complexity of the issue, it is crucial to clearly define the areas and facilities that require registration. The registry ought to encompass establishments set up by the municipal sector, as well as club and commercial establishments. Registered facilities should be accessible to the public without the need to register with an association or club. Physical activity and relaxation need not perforce be the primary and sole activities at a registered facility, since, as an illustration, a hotel, office establishment, or school facility may also provide excellent venues for movement. It is important that the database is clear, allows filtering of results according to different parameters and is user-friendly for citizens. A mobile app that provides a timely overview of the available opportunities for physical activity in one's neighbourhood seems to be appropriate. (Vášková, 2023)

The database must contain data on the population, including permanent and temporary residents, as well as commuters. It should also be linked to the street network to evaluate the state of facilities for a given number of residents and walking distances. A comprehensive analysis also requires mapping the capacities of facilities and identifying the interests of citizens in the locality. Benchmarks for evaluating the

amenities of a locality should be given on a national level so that the whole country comes as close as possible to an ideal state where citizens can move, play sports and relax in the vicinity of their home or work. After a complete and up-to-date inventory of facilities and subsequent evaluation of individual sites, it is necessary to address individual problem areas and look for specific suitable locations where areas could be integrated or completely new ones created. (Vášková, 2023)

#### **5 CONCLUSIONS AND ACKNOWLEDGMENT**

The research aimed to investigate wellness in greater depth by documenting the current state of amenities, their links to urban planning and site development. The study revealed the absence of a unified national database covering all facilities and areas for exercise and relaxation. Defining the facilities to be registered seems to pose a complex challenge. The establishment of this database will take several months, which significantly postpones any conceptual change at national level. The assessment of the current status must be consistent throughout the country, based on comparable reference values that each region should strive towards. The historical values of the overall urban indicator should be revised in favour of the non-organised public. Simultaneously, the protection of the so-called yellow areas in the urban plans, areas for sport and recreation, which are being eliminated over time in favour of other functions, is necessary. The implementation of these changes is a long-term process, and the search for suitable sites to supplement the missing facilities becomes more difficult as development increases. It is essential to initiate these changes promptly so that the next generation, at least, can feel the change for the better in their daily lives. (Vášková, 2023)

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