

ENGINEERING AND TECHNOLOGIES

Zarubskaya E.O.

STREET SPORTS CENTER AS A NEW TYPE OF PUBLIC BUILDING

**Elena Olegovna Zarubskaya, Post-graduate student Saint
Petersburg State University of Architecture and Civil Engineering**

Abstract

Global trends in replacing static monofunctional sports sites for the adaptive ones reflect rapid development of technological and intellectual potential accumulated in traditional sports.

With all the equipment of sports facilities designed for classic national sports with a long history, the rapidly developing new street sports require a completely different approach to designing an architectural milieu for training with the same developed infrastructure system.

The street sports center as a new type of public building necessitates the reflection of the street sports philosophy including the development and observance of unprecedented security measures in the organization of unique functional and formal combinations of the architectural milieu.

The ratio between closed and open spaces for roll-skating in the world is 1 : 20, and street sports centers can become the most popular in the territory of the Russian Federation. The first three leaders - the United States, Great Britain and France - account for over 70% of total number of open and closed street sports sites by end 2017.

Street sports center for the Russian Federation shall be designed to become the Russian home for sports and spectator teams, the embodiment of the best sports practices and traditional values of our country.

Keywords: world ranking countries, street sports center.

Introduction. The emergence of an innovative type of building

Finding of sustainable strategies and architectural solutions that can respond to the demands of sports as the most important institution of civilization is one of the key public tasks of the Russian Federation. Replacement of static monofunctional sports facilities for the adaptive ones reflects the rapid development of technological and intellectual potential accumulated in traditional sports and continually gives impetus to the development of completely new street sports, thus revealing the need for urgent introduction of innovative types of buildings [1].

Street sports, being one of the most accessible for various strata of the population, is called on to revive the most important moral and social merits of citizens, raise morale and responsibility, create solid foundation for sustainable development, improvement of health and unity of nations. While modern transformation of classical national sports takes place under the serious impact of commercialization, politicization and globalization, an increased interest in alternative sports arises [2].

The anthropology of street sports can now develop a set of ideal parameters for training that contribute to the longevity of athletes ensuring safe and open involvement of new participants [3]. The need to popularize the art of active life of athletes and spectators calls on the architect to create a complex infrastructure in a system of new spaces that specifically intensify and stimulate the conduct of events.

Street sports is an astounding phenomenon with its expressiveness, bravery, extraordinary performances, tricks and selected locations. It is always a show that does not tolerate strict rules and external interference which at the same time requires the organization of unprecedented security measures in street sports centers, accurate architectural calculations of special parameters of spaces and unique functional combinations.

The International Olympic Committee placed in Lausanne has been receiving for years applications from international sports federations to include certain sports in Summer or Winter Olympic Games programs. Special emotions, staginess and mass expansion of new street sports around the world served as good reasons for recognizing skateboarding, BMX and rock-climbing in 2016 Olympic sports which popularity is expected to grow in the coming decades.

Discussion. Continuity of sports cycles and the emergence of new disciplines

Full value sports training process is characterized by its clearly expressed cyclicity; even in classical kinds of sports it is possible to trace

temporary inclusion of new sports as preparatory stages in relation to the basic one. Subsequently, these kinds of sports become independent. The original interchange of sports microcycles gave the world skateboarding, when surfers of the state of California, the USA found an alternative to surfboard on land.

The invention of the board on wheels in the 50s of the 20th century allowed for uninterrupted training for a period of severe storm danger and to roll along city streets. A powerful impetus to the independent development of this type of street sport was the replacement by Frank Nasworthy of iron wheels for polyurethane ones.

The revolutionary action of natural elements in the history of skateboarding in 1976 manifested itself in the USA during a severe drought. Empty basins and canals have become the birthplace of a new style of rolling – the vert. The creation of the Finnish modernist architect Alvar Aalto conceived in 1939, the pool of Villa Mareia, was the key to the explosion of illegal riding sessions in the local areas in various cities of United States and the emergence of new tricks in skateboarding.

In turn, BMX appeared when teenagers who waned but had no the possibility to participate in motocross, were preparing for adult competitions and designed on their own new, cheaper vehicles - bicycles, as well as their own routes, not far from home. The appearance of the Basquetrolet is connected with the event when American roller skaters began playing basketball to the music without removing roller skates.

Methods. Ramp as an indicator of the development of street sports

Basic complex coordination street sports are skateboarding, BMX, scootering and roller-blading. Sites for riding unified by the general structure of architectural elements of sites for riding have similar characteristics. A comprehensive analysis of spaces for riding containing the ramp as an indicator, made it possible to identify current trends affecting the choice of places for the development of street sports.

The interactive application “Ramp Map: World Skatepark Map” allows continuously monitoring social dynamics of the user response to the emergence of new parks of street sports in the world thus revealing the dependence of placement in certain places of open and closed street sports facilities on various factors [4].

In 2017, the first three leaders, the United States, Britain and France, owned over 70% of the total number of street sport facilities.

Rating of states in the provision of the population with closed spaces for street sports based on the ratio of total number of specialized closed buildings, structures and complexes to the total population of each country,

revealed the top ten leading countries including Denmark, Great Britain, Estonia, the USA, Ireland, Norway, Australia, Czech Republic, Qatar, Sweden; Russia ranked 33rd line*.

Five of the leading countries by total number of closed spaces of street sports included the United States, Great Britain, France, Germany, Canada (Table 1).

Table 1.

Leading countries un total number of closed spaces for street sports

Закрытые пространства для занятий уличным спортом			
Rating in total rating of countries	Leading countries in total number of special closed spaces with ramp	The country’s share in total world number of street sports sites*	The number of architectural facilities in the country*
(Total global number of sites 452*)			
1.	USA	54 %	237
2.	Great Britain	12 %	52
3.	France	5 %	21
4.	Germany	3 %	13
5.	Canada	3 %	12
* - according to interactive data “Ramp Map: World Skatepark Map”			

The first ten leaders in terms of the availability of public outdoor sports include New Zealand, Great Britain, Australia, France, USA, Ireland, Norway, Denmark, Cyprus, Switzerland; Russia ranks 40*.

The five leading countries in total number of open spaces of street sports are represented by USA, Great Britain, France, Australia, New Zealand (Table 2).

The ratio of the total number of closed and open spaces for street sports in the world amounted to 1 : 20. The success and demand of the street sports center in the community are primarily associated with the implementation of the philosophy of possibility for the development of each athlete’s individuality, the right choice of the place and scale of the main space for sports activities.

Table 2.

Leader counties in total number of open spaces for outdoor sports

Open spaces for street sports			
Rating in total rating of countries	Leading countries in total number of special open spaces with ramp	The country's share in total world number of street sports sites *	The number of sites in the country*
(Total global number of sites 8025*)			
1.	USA	42 %	3284
2.	Great Britain	24 %	1904
3.	France	12 %	983
4.	Australia	9 %	687
5.	New Zealand	2 %	191
* - according to interactive data “Ramp Map: World Skatepark Map”			

The countries with rich skateboard history are famous for many generations of professional inventors and legendary spots. The conditions closest to the ideal for street sports are presented today in the cities of Barcelona, Los Angeles, New York, San Francisco, Paris, Melbourne, London, Berlin [5].

Resume

The ratio of the total number of closed and open spaces for street sports in the world amount to 1 : 20. Meanwhile in the territory of the Russian Federation the most popular are closed skateparks.

The success and demand of the street sports center in the community are primarily associated with the implementation of the philosophy of possibility for the development of each athlete's individuality, the right choice of the place and scale of the main space for sports activities.

The key to solving the problem of designing and building a new type of building and sustainable development of street sports is not only the achievement of quantitative indicators of the effectiveness of use and visits to outdoor sports. The center of street sports for the Russian Federation is designed to become the Russian home for the demonstration of sport as an art of active life designed for the large presence of sports and spectator teams, the integration of human and urban nature, the manifestation of all social and cultural aspects of street sports, finding resonance between people based on traditional values of our country.

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PHYSICS

Serikbekova Z.K., Golovin N.P.

STRUCTURE OF THE TERMS IN THE FIELD OF NUCLEAR PHYSICS

Z.K.Serikbekova, N.P. Golovin, Tomsk Polytechnic University,
Russia, Tomsk

Abstract

The language of science refers to natural languages. It functions in the terminological sphere and specific science definitions, it also plays role of the language operator or dispatcher (predicates, ligaments, categorizer, morphology and syntax patterns). This is what most of the modern languages of science and technology look like (sublanguages of biology, medicine, math, physics, geology). It can be applied to the nuclear physics domain as well. Scientific knowledge, which found its expression in a word, in a term, moves into a qualitatively new stage, including the semantic system and the structure of a language of science, becoming a component of the lexical-semantic system of the language.

Keywords: Nuclear physics, etymological, structure, methodological, analysis, nuclear physics terms.

Methodological and etymological analysis of the term in nuclear physics.

Let us consider some of the terms.

atom (n.) late 15c., as a hypothetical indivisible body, the building block of the universe, from Latin atomus (especially in Lucretius) "indivisible particle," from Greek atomos "uncut, unhewn; indivisible," from a- "not" + tomos "a cutting," from temnein "to cut" (see tome). An ancient term of