

REFURBISHING INNOVATIVE STRUCTURES: THE CASE OF ROMANIAN SPORTS HALLS

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Abstract

This paper brings an in-depth look on 20th-century built heritage by researching refurbishment opportunities for Romanian sports halls built during the communist regime.

In those times, sports played a significant role for the controlling party's general propaganda machine. Being a leisure activity it infiltrated every aspect of society, from the worker's everyday schedule to the newly constructed collective buildings.

Sports halls were part of a larger and thoroughly controlled by the state urban equipment network spanning the entire country. After the fall of the communist regime, these buildings were left untouched and unused, as the sports phenomenon diminished in importance without the state's constant implication.

Even so, these buildings continue to impress evincing some innovative features for that period, from braided steel cables to post- or pre-stressed concrete beams and prefabricated systems for the whole construction. The synergy between the structure and the architecture casts the unique monumental image of these buildings onto their surroundings.

The research investigates the opportunity for refurbishment and reuse of these buildings as opposed to the demolition alternative. We will look in their future by comparing several case studies.

Besides its historical approach, the study aims at bringing forward the communist recent built heritage issue.

Key words: *Romanian sports halls, sports complex, prefabricated structures, modern movement, 20th century heritage*

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1. INTRODUCTION

The 20th century heritage poses a great deal of controversy - while scholars consider it valuable and important for the history of one's culture, the public opinion tends to have an opposite idea. This exactly same problem is faced by the sports halls built during the communist regime.

This article is based on the continuing research for the Phd thesis, "Architecture and sport in the communist Romania". The thesis follows the development of architecture for sport alongside the communist regime. Beside researching the recent heritage of the 20th century, the main purpose of the study is to bring some light on the built urban spaces of Romanian cities and help us understand how we should relate to these kinds of buildings built under special requirements during a dictatorial regime.

In the first part of the article we will present the general context in which these sports halls were built, emphasising the link between sports and the communist regime. In the second part of the article we will present multiple case studies that follow three sports halls built in the 70s in Romania. These case studies were chosen from a number of 48 sports halls built all over the country on criteria regarding their use of structure and engineering to create architecture and the general aesthetic.

In the third part of the article there will be presented the state of these buildings today and their nowadays issues. This is important as the refurbishing opportunities for these kind of buildings are influenced by the public opinion.

2. SPORTS AND THE COMMUNIST REGIME

The relation between modern sport and urban space was formed since the 19th century and the beginning of the modern movement. Sport was also a very popular interest after the First World War as parts of Europe started to lean down the totalitarian path. Some interesting research on this direction was made by Michael Hau considering the case of sport and its use in Germany's discourse during the inter-war period [1]. Europe was weak, and the general conception was that it needed healthy people to recover economically from the losses generated by the war. Thus, sport was on every country's agenda during that period. Beside that, totalitarian regimes included sport in their programs because it was an effective and efficient way to control the masses beside its genuine potential as everyday life entertainment.

As stated in official documents [2], after the rise to power of the communist party in 1945 Romania, influenced by the URSS's model formed in more than two decade experience with sports and the masses, sport became an important tool of the propaganda.

Even if sport was already an important leisure activity in the Romanian society, the communist party made a step forward and in the next 40 years, until its fall in December 1989, sport and sport development became a constantly promoted topic into all society levels - from working class to children and students, everyone was practicing sports one way or another[3].

In this context, the existing sport equipment was deemed insufficient, so architects were commissioned with the task of developing the national major sports endowment network[2].

Another important worth mentioning fact is the drastic change of architecture practice from a liberal one to an institutionalised activity while the main beneficiary was the state. Through this the communist party was in charge with everything that was being built all over the country, especially if the destination of the building was of national importance [4].

At first, in the 50s, the main sports construction were mainly open football arenas set in newly made parks which were called “parks for culture and sport”. These areas were also featured with small sports fields and sports halls for performance athletes training.

During the 60s and 70s near the already constructed sports areas of the cities, new urban equipment was being added, under the form of sports halls.

Sports hall were mainly big spaces that could accommodate a significant number of people for a sport spectacle. Of course, their use expanded the sports realm, and they were used for any large organised gathering. Because of their big openings, sports halls became quickly a challenging project for both architects and engineers.

After a lot of research in terms of functions and economical solutions, the researchers from The Institute for Typified Buildings, came up with various solutions that could be implemented in the urban areas. It is important to mention that these solutions were mainly concerning the interior and the exterior of the buildings - the public space and how the building communicates with the surroundings wasn't something they would solve for a long time. Even so, these studies were gathered in two catalogues of projects [5] and most importantly, were being built.

For the smaller and less important cities, the officials would choose typified projects that would solve the problem of big openings with the most economical solution, as this was the main concern of the communist party - the best solution was the cheapest one. In the same time, in important cities such as Bucharest, where this kind of urban equipment was more important for the fame of the city, the authorities would use an unique project, particularly made for that city [4].

Further we will present some of these unique projects that are still part of the urban fabric and most importantly, they are still used by the communities for different competitions.

3. SPORTS HALLS - THREE CASE STUDIES

For the analysis of these three case studies we followed their unique project, looking at how the structural part of the buildings are the one that create the architectural image. Just as in the 19th century metal and glass architecture made by engineers, here also their contribution was significant and important for the final aesthetic of the building.

The majority of these buildings made use of pre or post-compressed concrete systems, prefabricated elements, tie beams, cables and moving stands. Because of this, at the time of their building, they were considered breakthrough structures and they were presented at various international conferences, such as the 7th

Congress of The International Federation for Pre-compression that took place at New York in 1974 [6].

3.1 Galați's sports hall

The first project presented is a sports hall located in Galați, a South Eastern Romanian city situated on the main lower course of the Danube River. Even if it was a big city in the inter-war period, Galați had its biggest upsurge as it became an important industrial centre during the communist regime when its population increased up to the level of the 5th largest city in Romania.

Similar to other important cities of Romania, during the 50's and 60's – Galați experienced rapid industrial growth developing an important shipyard and the biggest steel factory in the country [7]. The rest of the city was developed as a "dormitory" for the workers with tall collective housing and cultural buildings such as the "House of Culture" and The Sports Hall.



Figure 1. Galați's sport hall in 2019, outside image. Source: author's gallery.

Sports played an important role for the communist regime as it was one of the instruments used to control the masses keep them busy during their free time in this case.

Starting from the importance of the city in the the country's economic scheme, these new functions were developed after unique architectural projects. The main sport zone of the city was developed in its southern outskirts that were constantly growing as new collective housing were being built [4]. The centre resided in an open football arena built in the 50s, the sports hall, an olympic swimming pool, a gymnastics hall and several training fields for tennis and basketball. This sports complex was developed alongside a park benefitting from related leisure activities.

As no programmatic document survived, we can only guess the initial intention for grouping these assets together was to create a local centre for the neighbourhood following a promotion to an important asset for the entire city.



Figure 2. Detail of the main facade. Source: author's gallery.



Figure 3. Interior of the sports hall - the public foyer. Source: author's gallery

The sports hall from Galati was built in 1971 for 2000 people and it consists of two adjacent volumes – the main volume represents the main public entrance and the playing field with stands while the secondary volume is reserved for athletes locker rooms and related functions. The main volume is an 45 metres wide square plan parallelepiped [8].

The iconic image of the sports halls is generated by the pre-stressed concrete exoskeleton, the metallic structure of the ceiling being hunged from this interlocking concrete frame. The main facade, the one that is oriented to the main public space is also decorated with three volumes destined for the radio-TV transmission stations that protrude in a sculptural manner.

The interior of the sports hall hosts 2000 people in the stands for handball and other sports competitions that require the whole field and the capacity of the hall grows to 3500 people during boxing matches.

Beside sports related events, the hall can also host conferences or concerts as the interior was finished with special acoustic treatments.

3.2 Pitești's sports hall

The second case study focuses on the Sports hall built in Pitești, another important industrial city of Romania located North of the capital city Bucharest.

The case of Pitești is similar to the one before. During the communist period the industrial part of the city experienced a flourishing development and the city population grew. Beside industrial development, architects focused on collective housing and socio-cultural urban equipments. In Pitești, sport areas were developed in multiple neighborhoods. The polyvalent sports hall that we will present was built according to the design made by architect Ion Mircea Enescu together with a team from The Institute for Typified Buildings (IPCT) [12].

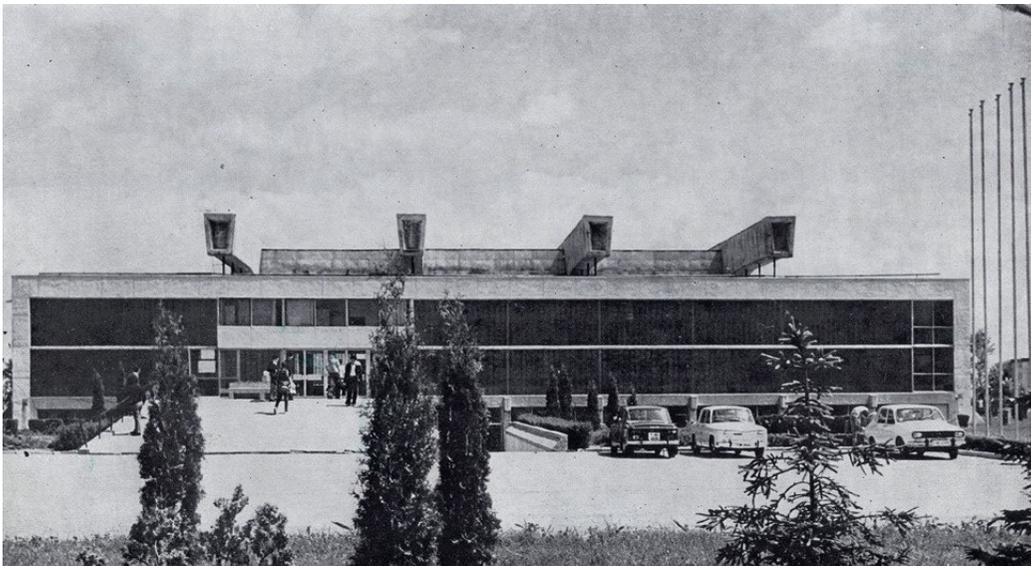


Figure 4. Pitești's Sports Hall, main facade, source: Architectura RPR, nr. 1-2, 1978, p.22.

The design team was commissioned to study and develop various designs for sports halls suiting the needs of the growing cities thus the halls should be able to expand their capacity and also be suitable for different kind of sports such as handball, volleyball, boxing or judo matches. Furthermore, considering their significance for the urban landscape, they should also be used for conferences and concerts, entailing the importance of the interior space acoustics. After numerous studies, Ion Mircea Enescu and his team developed four types of sports hall

designs that were built in various cities of Romania. Each one of them represents an experiment with space and structures [9].

The Pitesti Sports hall was positioned in the sports park, near a football arena and other urban sports equipment, in the South-East part of the city.

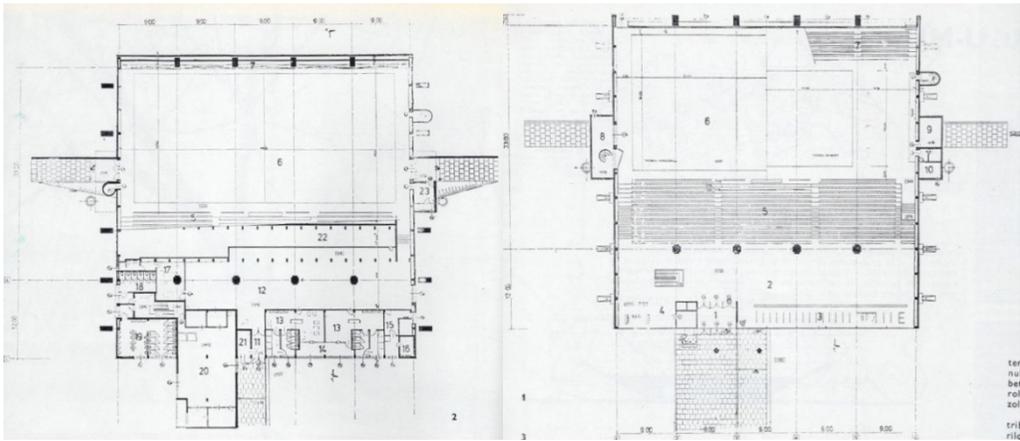


Figure 5. Playing field plan and public stands plan, source: source: *Architectura RPR*, nr. 1-2, 1978, p.24.



Figure 6. Public entrance detail, source: <https://www.uniuneaarhitectilor.ro/arhiva-ion-mircea-enescu>

The project consist of a single building that can accommodate between 1300 and 2000 people. Making use of the natural terrain, the final construction has a smaller height as it is buried 1,30 m. This way the main public access is made at the superior level of the stands through an exterior platform. The athletes' locker room, are being accessed down on a secondary ramp descending under the main public hall. This way the space under the hall's stands is used at its maximum capacity.

The structure of the building consists of four main prestressed concrete frames with tubular section with a 33 meters opening and a cantilever of 12 meters. From these structural frames the 9 meters prefabricated concrete "TT" elements of the terrace roof are suspended on twisted steel cables. The plan is a perfect square with 46 meters sides encompassing all spaces within its perimeter.

The main structure of the roof dominates the exterior image of the hall, creating an interesting aesthetic that will later become a rule for this type of buildings. The silhouette of the building is defined by simple yet strong elements. The considerable size of the prestressed concrete structure determined the architects to keep them outside the main building. This way, much more spectacular buildings are generated than the classic ones with internal structure.

The two accesses in the hall are perpendicular on the longer side of the playing field, which means that the stands are accessed from only one side. On the other side of the playing field, a series of removable steps were arranged, which allows for expanding the halls' capacity for conferences, concerts or other sports that don't require the use of the whole field. To allow hosting of special events the interior of the hall received acoustic treatments.

3.3 Iași Sports Hall

The third case study follows the sports hall built in Iași, located in the extreme Eastern part of the country. The design bares also architects' Ion Mircea Enescu signature together with his team from The Institute for Typified Buildings (IPCT) as it is part of the sport equipment research that the institute was assigned with.

Beside the sports competitions hosted by the sports hall, the big openings and large capacity makes them suitable for other crowd gathering activities such as conferences or concerts. It was in Iași the architect used for the first time in Romania moving stands - a system that would accommodate a bigger crowd when needed. The Iași sports hall has a capacity between 2000 and even 4000 people for ring based competitions [6].



Figure 7. Iași's Sports Hall, period image, source: *Architectura RPR*, nr. 1-2, 1978, p.30

For this sports hall the main structure consists of three median prestressed concrete pillars that sustain with an articulated system three longitudinal prestressed concrete beams. These beams sustain the linear elements of the roof - 12 meters prefabricated concrete beams. The logic of this structure creates two large open spaces - one for the playing field and the stands and the second one for the public entrance spaces. Beside its aesthetics, the economical part of this

structure is important, as prefabricated elements pre-made off site were a consistent part of the structure.

According to the architect, the construction site had a fast development and the structure of the roof had a quick installation as a consequence of the great number of prefabricated elements that were used.

The simple volume of the hall is once again dominated by the exterior structure. Beside this, the exposed concrete finishing, ventilation routes, both external and internal, participate in defining the volume and simple envelope of the hall, offering an austere shape that became the norm for this kind of buildings. Beside this, we must consider that these buildings were created during the 60's and the 70's, a period dominated by the Japanese Metabolism and the George Pompidou's Arts Center from Paris, references that were quite popular even in a closed society such as communist Romania.

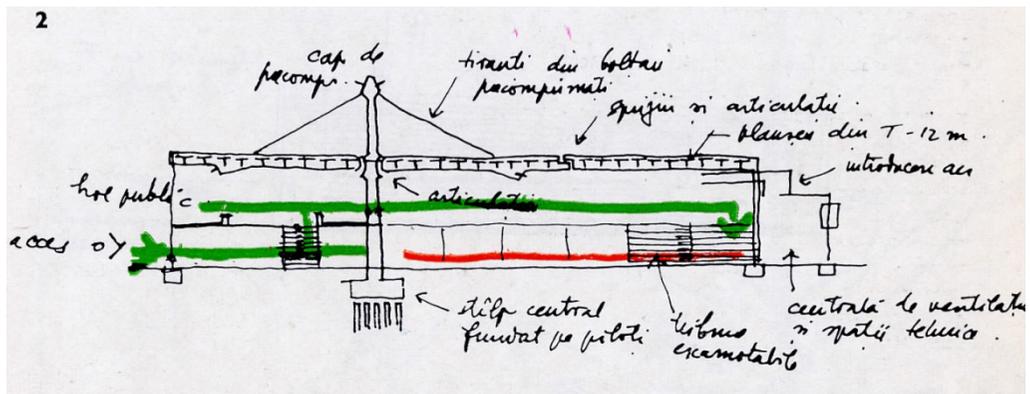


Figure 8. Sketch made by the architect, source: *Architectura RPR*, nr. 1-2, 1978, p.23.

4. REFURBISHING OPPORTUNITIES

All these halls are part of the today's urban fabric along with qualities and defects they are part of the recent cultural heritage which should not be marginalized just because it was built in the communist period.

As it is the case with the rest of the sports urban equipment all over the country, a very important network of the period, these sports halls were left behind in the years following the 1989 fall of the communist regime.

In this context, the sports halls still hold a central place in the urban network. Beside that, their qualities, some of which were presented above along the three case studies, promotes them as important cultural icons. The only problem resides in the perception of today's society of these buildings and its capacity to continue using them.

As an example, the sports hall from Galati stood unused until 2013 when an important refurbishing process took place. Before this it was in a continuing degraded state. Since then, the sports hall is continuously used for different sports competitions, concerts or fairs. Also the public space in front of it is used for winter fairs and various large gatherings.

Even if in today's time the requirements for such sporting venues changed, and in many cities, even the ones that were presented here, new sports halls were built

after the latest necessities [10], the main idea would be that these already existing sports halls should be refurbished and used as much as possible.

Beside their cultural importance, their continuous use has also an economical part - because these buildings are ones with special structures that usually cost more, using existing ones should have less impact on the budget.

The other two sports halls presented here didn't have the same chance as the one in Galati. The sports hall from Iasi is threatened with demolition, as it occupies an important place in the continuously developing city, even if the hall is used on a current basis by the local handball team.

Meanwhile the sports hall of Pitesti isn't under the same threat, but the original facade were changed and it's general appearance was negatively affected. Since nothing irreversible happened there is still time to make things better.

Another current problem these sports hall are facing is caused by the initial beneficiary and owner of these buildings - the National Council of Sports and Physical Education under the Ministry of Culture; after the fall of the communist regime, they remained under the same centralised system, local authorities lacking the power over their usage. As it is a generalised problem with most public buildings from that period, investments in these kind of buildings are only made with the implication of the National Council for Investment.

5. CONCLUSIONS

It is important to consider that today's Romanian cities are tributary to their development from the communist era. An overwhelming percentage of the population lives in communist collective housing gathered in neighbourhoods developed during that period [7]. Therefore, understanding the period's architecture and encompassing it in the present project is an important part of further developing the cities.

The issue of the 20th century heritage is a rather new topic of discussion in Romania, especially regarding buildings from the communist regime. even if 50 years have passed since their construction, these sports halls are still seen as communist edifices that should be rather demolished as they present no value to the nowadays society.

Fortunately, more and more scientific research is focused in the recent years on buildings from the communist regime, as people started to understand their value.

Thus, these buildings continue to impress evincing some innovative features for that period, from braided steel cables to post- or pre-stressed concrete beams and prefabricated systems for the whole construction. The synergy between the structure and the architecture casts the unique monumental image of these buildings onto their surroundings.

Their importance as innovative structures and their use of prefabricated concrete elements as well as their general appearance is what makes the case for including them in the 20th century heritage category.

REFERENCES

1. Hau Michael: **Sports in the Human Economy: “Leibesübungen,” Medicine, Psychology, and Performance Enhancement during the Weimar Republic.** *Central European History*, No. 41, 381–412, 2008.
2. ***, **Hotărârea Biroului Politic al CC al P.M.R. asupra problemei stimulării și dezvoltării continue a culturii fizice și a sportului,** *Editura Partidului Muncitoresc Român*, București, 1949.
3. Constantin Pompiliu-Nicolae: **Sportul în regimul comunist din România, în Panorama Comunismului în România,** Liliana Corobca (editor), *Editura Polirom*, București, 909-924, 2020.
4. Zahariade Ana-Maria: **Architecture in the communist project. Romania 1944-1989.** *Editura Simetria*, Bucuresti, 2011.
5. ***, **Studiu functional si constructiv asupra constructiilor sportive realizate dupa proiecte tip in vigoare cu propuneri de imbunatatire a proiectelor. Sali de educatie fizica si sport scolare, sali polivalente cu capacitati de 1000 locuri pentru centre urbane,** *Institutul de Proiectare pentru Constructii Tipizate*, București, 1979.
6. Mircea Enescu Ion, Opreșescu Ioana: **Construcții sportive programe, structuri, forme,** *Arhitectura*, Vol. 170-171, No. 1-2 , 22-31, 1978.
7. Calciu Daniela, Stoian Ina: **Orașul posibil - In(ter)venții în spațiul urban postcomunist,** *Editura Tact*, București, 2012.
8. ***, **Săli de sport gemene,** *Arhitectura RPR*, No. 3-4, 115, 1972.
9. Mircea Enescu Ion: **Arhitect sub comunism,** *Editura Paideia*, București, 2006.
10. ***, **Stadioane din România,** *Editura Igloo*, București, 2022.