

IFAU`19

November 21-23 | Tirana

3rd INTERNATIONAL FORUM ON ARCHITECTURE AND URBANISM

MODERNISATION AND GLOBALIZATION

Challenges and Opportunities in Architecture, Urbanism, Cultural Heritage

PAPERS PROCEEDINGS BOOK

IFAU 2019 – 3rd International Forum on Architecture and Urbanism aims to bring together leading academic scientists, researchers, and research scholars to exchange and share their experiences and research results about all aspects of Architecture, Urbanism, Cultural Heritage within Modernization and Globalization trends of XXI century.

The third edition is expanding the horizon by introducing a series of overlapping visions spanning the recently institutionalized Adriatic – Ionian Euroregion, now extended to the Balkan and South-East European region.

The Forum will concentrate on Architecture, Urbanism, Cultural Heritage located in contexts and territories that reveal their tendencies to Modernization and Globalization.

Themes of the Research Abstracts

- Global / local modernizations
 - XXth Century modernism and the question of cultural heritage
- Phenomena of re-generation, revitalization, recycle, reuse
 - Modernization / globalization of urban planning / design and landscapes
- Modern housing
- Modern designing and daily life / universal design
 - Utilization of future technologies
- Sustainability on the era of modernization / globalization



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FOREWORD OF THE RECTOR

It's a great pleasure for me to be here with you today in the opening ceremony of this Forum to greet and thank you in the name of PUT and wish the 3-rd International Forum of Architecture and Urbanism 2019 good work and full success.

I am happy that today IFAU-2019, in the continuity of the success achieved in the two other Forums in Tirana and Pescara, concretizes and evidences scientific research activity, in collaboration and full partnership with international partner universities through this Forum.

The Forum contains some important values, not only in components such as challenges of scientific research but it also has an excellent possibility to bring together professors, academic scientists and researchers on an international platform, to exchange and share their experiences and research results about all aspects related to Challenges and Opportunities in Architecture, Urbanism and Cultural Heritage within Modernization and Globalization trends of this Century.

And of course, these confrontations of ideas, sharing experiences of scientific researches, learning from each other best practices, are the best ways to generate some significant values for sustainable development in the Architecture, Urbanism and Cultural Heritage scientific research.

Collaboration and partnership of PUT with homologue international universities and other partner institutions, generally in Italy, France, Germany, Austria, Balkan countries, and in the more partners around the world, is considered a very significant element for sustainable and safe development of scientific research. This Forum confirms in the best way this vital objective, for a lasting partnership and collaboration with international partner universities.

I would like to take this opportunity to thank you for the positive response to take part in this international Forum, all representatives of the foreign partner universities from Italy, France, Austria and from our region Kosovo, Montenegro, North Macedonia, Serbia, Slovenia: Università degli Studi di Firenze, IUAV, Venezia, Università degli Studi di Campania "Luigi Vanvitelli", Napoli, Università di Pescara, Politecnico di Bari, ESTP, Paris, Vienna University of Technology, University of Ljubljana, Belgrade University.

On the other hand, PUT considers as necessary the relation of scientific research with the professionals, market and the companies that operate in the field of architecture, urbanism and civil engineering, in collaboration and full partnership with them. This Forum reflects in the best way this relation and cooperation through presentations and scientific references that will be presented today.

I would like to thank you for the positive response to take part and to support this international Forum, all representatives of the partner companies and our sponsors: MegaTek, Crystal Systems, Guardian Glass, Gjeo-Vjosa, Microdrones, ALB-MATRIX Group, Recycling Group.

Lastly, PUT and our partner universities, in our mission of preparing young architects, urbanists, engineers and scientists would not make sense without the participation of students in scientific research, who give a new dimension in innovation and scientific research.

Student participation in scientific research together with professors and researchers in IFAU-2019 is another significant and essential value, which I would like to put in evidence. Once again, I would like to wish all the best, good work and full success to the Forum.

Prof. Dr. Andrea Maliqari
Rector of Polytechnic University of Tirana

FOREWORD OF THE CONFERENCE DIRECTOR

The International Forum on Architecture and Urbanism aims to bring together leading academic scientists, researchers, and scholars to exchange and share their experiences and research results about all aspects of architecture, urbanism and cultural heritage.

I am happy and honoured that we realize the third edition of IFAU 2019 - International Forum on Architecture and Urbanism in Tirana, thus extending the cycle of these important events. The IFAU 2019 had two precedents: The first edition of “IFAU 2017 - International Forum on Architecture and Urbanism. Cities in transitions” in December 2017 Tirana, organized by the Polytechnic University of Tirana - Faculty of Architecture and Urbanism (FAU) and the University of Prishtina, Faculty of Civil Engineering and Architecture, deals various aspects of urban development in the cities in transition. Of particular interest in sustainable development, formal and informal settlement and the memory of the cities. The second edition of “IFAU 2018 - International Forum on Architecture and Urbanism. Fragility of Territories” organized by Università degli Studi G. d’Annunzio Chieti-Pescara - Dipartimento di Architettura (DdA) and the Polytechnic University of Tirana - Faculty of Architecture and Urbanism is concentrated on landscapes, cities and architecture located in contexts and territories that reveal their own fragility.

In addition to a very reputable scientific conference, it is essential to point out some other valuable publishing results of research papers and posters presented in the Forum. The best papers presented in the IFAU 2017 have been published in an international monograph of “Collana FAU. Forum for Architecture and Urbanism”, edited by the Italian publishing house “La scuola di Pitagora editrice” and e-book, PDF distributed by international EBSCO and the abstract book and the best papers presented in the IFAU 2018 have been published in an international monograph edited by the Italian publishing house “Gangemi Editore Spa”. This has proven to be a strong incentive and motivation for all researchers presenting their work in well-known Italian publishing houses.

The third edition IFAU 2019 - International Forum on Architecture and Urbanism. Modernization and Globalization: Challenges and Opportunities in Architecture, Urbanism, and Cultural Heritage” organized by Faculty of Architecture and Urbanism, Polytechnic University of Tirana, is expanding the horizon by introducing a series of overlapping visions related to all aspects of Architecture, Urbanism, and Cultural Heritage within Modernization and Globalization trends of XXI century.

The Forum has a full Board of Scientific Advisers of very high level to guarantee the quality of the event. The scientific committee has accepted more than 200 abstract papers made by professors, researchers and PhD students from 65 Universities and Institutions all over the world (Albania, Austria, Belgium, Netherlands, Germany, Italy, Hungary, Kosovo, Poland, Spain, Slovenia, Serbia, Northern Macedonia, Bosnia and Herzegovina, Montenegro, Turkey, Russia, Egypt, Lebanon, Jordan, Nigeria, Tunisia, India, Ecuador, etc.) for participation in this prestigious international event. Twelfth eminent keynote speakers from Twelfth eminent keynote speakers from well-known international universities have been invited to the Forum for the lectures, together with academics and scholars who work within the field of research.

We are very proud of the session moderators, who are notable experts in their fields, in the region and abroad.

In the framework of the IFAU19 - 3rd International Forum for Architecture and Urbanism a photography competition was organized by FAU Student's Council and the IFAU Organizing Committee, with the theme: "Modernization and Globalization. Challenges and Opportunities in Architecture, Urbanism, Cultural Heritage."

Since the founding conference in Tirana in 2017, there is a visible growing interest from researchers from different universities of Adriatic – Ionian region, now extended to the Balkan and South-East European countries. It makes this forum an important international event that is going to be held one year in the Polytechnic University of Tirana and another year in a well-known international Italian University.

Through our commitment in the quality based in the prominent Organizing Committee and the academic and professional excellence of the Scientific Committee of the forum, we have the ambition to keep it among the most important International Forum of architecture and urbanism in Mediterranean region.

The IFAU 2019 Abstract Proceedings Book publication will be followed by the IFAU 2019 Paper Proceedings Book with ISBN. The best papers selected by the scientific committee will be published in the international monograph of "Collana FAU. Forum for Architecture and Urbanism", edited by Italian publishing house "La scuola di Pitagora editrice" and e-book, PDF distributed by international EBSCO.

I express my gratitude to the Organizing Committee and Technical Committee especially to Etleva Bushati, Ani (Panariti) Tola, Loreta Capeli, Andi Shameti, Jonida Meniku, Erisa Dhimitri, Adriana Dervishi for their specific contribution on the preparation and progress of the forum.

A special thanks I have to express to the eminent keynote professors, professional moderators and the Scientific Committee members for their important contribution to make this Forum one of important international scientific events in architecture and urbanism. Finally, we thank all the authors and participants for their trust and contribution.

Prof. Dr Florian Nepravishta
Director IFAU
Dean of Faculty of Architecture and Urbanism,
Polytechnic University of Tirana

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INTRODUCTION

After the first edition of the IFAU 2017 – International Forum on Architecture and Urbanism organised in Tirana, and the second edition of the IFAU 2018 organised in Pescara, Italy, the Polytechnic University of Tirana – Faculty of Architecture and Urbanism (FAU) is organising the third edition:

IFAU 2019 – International Forum on Architecture and Urbanism in Tirana, Albania on November 21 - 23, 2019, with the theme “Modernization and Globalization.”

IFAU 2019 – 3rd International Forum on Architecture and Urbanism aims to bring together leading academic scientists, researchers, and research scholars to exchange and share their experiences and research results about all aspects of Architecture, Urbanism, Cultural Heritage within Modernization and Globalization trends of XXI century. It also provides the premier interdisciplinary forum for researchers, practitioners, and educators to present and discuss the most recent innovations, trends, and concerns, practical challenges encountered and the solutions adopted for the Modernization and Globalization in the Cities in Transition.

The third edition is expanding the horizon by introducing a series of overlapping visions spanning the recently institutionalised Adriatic - Ionian Euroregion, now extended to the Balkan and South East European region. The Forum will concentrate on Architecture, Urbanism, Cultural Heritage located in contexts and territories that reveal their tendencies to Modernization and Globalization.

Modernisation and Globalization in Architecture, Urbanism and Heritage provide a multi-faceted analysis that is based on the understandings of architects and urban planners working in both the developed and developing countries traditions.

Globalisation is a broad concept not only concerning the diversity of regions, cultures, and actors but also concerning the diversity of analytical approaches that can be employed to study it. During the past decade, notions of globalisation have displaced familiar discourses of modernisation.

We consider Modernization and Globalization as a process that naturally links the past, the present and the future - as a bridge between the past and the future. Current events such as the cultural heritage protection crisis illustrate that the discussion should not be confined to specific geographic regions or narrowly defined analysis methods but in a broader and deeper search spectrum.

The research presented in this forum embraces the need to cover a variety of aspects and dimensions of Modernization and Globalization in Architecture, Urbanism and Cultural Heritage, to see both its local and its global manifestations. From our perspective, globalisation studies imply research that is not just limited to the most popular spheres of globalisation but also includes the study of global problems such as sustainable development, cultural heritage, and so on.

In summary, the distinctive character of the Modernization and Globalization is that it delivers a large international and multicultural thematic issue associated with Architecture, Urbanism and Cultural Heritage, including their impact on particular cultural-geographic regions.

The Modernization and Globalization of territories and cities in transition is the object of this Forum.

Through contributions from colleagues and scholars from different international universities the intention is to explore different interpretations of contexts, to study processes of Modernization and Globalization in territories and cities in transition, to define strategies for urban transformation and to confront issues raised by environmental and architectural sustainability, all framed by an up-to-date and contemporary vision of the entire Adriatic-Ionian and Balkan region.

Culture and the strength of ideas are viewed as the essential tools for building bridges between knowledge and for rediscovering, in a new relationship between Architecture, Urbanism and Cultural Heritage, the key to interpreting the processes transforming territories and cities.

The conference program will include the topic of interest that include, but are not limited to:

1. Global/local modernizations;
2. XXth century modernism and the question of cultural heritage;
3. Phenomena of regeneration, revitalization, recycle, reuse;
4. Modernization/globalization of urban planning/design and landscapes;
5. Modern housing;
6. Modern designing and daily life/universal design;
7. Utilization of future technologies;
8. Sustainability in the era of modernization/globalization.

"BAJLONI" BREWERY IN BELGRADE - POSSIBILITIES FOR PROTECTION, REVITALIZATION AND RE-USE

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ABSTRACT

In the last decades, the development of Belgrade has had a negative effect with regard to the industrial heritage built in the 19th and early 20th century. In order to stop this tendency and to demonstrate a will to achieve further sustainable development, it is necessary to redefine the approach to the protection of the Belgrade industrial zones, creating a new one for urban and spatial planning, taking into account all the specificities, tradition, authenticity and identity. With all the reconstructions and inadequate changes in the city industrial zones, particularly along the Sava and Danube banks, the historical cityscape, with its characteristic morphology and typology, is gradually fading away.

The education process for the students of architecture, the future builders, provides possibilities to comprehend the problems of the city's industrial heritage protection, its historical and urban context, its genesis and cultural and architectural values. Furthermore, it also provides possibilities of comparing different approaches in its presentation and modern utilization.

This paper will present a search for possibilities of protecting the "Bajloni" Brewery in Belgrade, its presentation and inclusion in the modern way of life. It was a part of the master's academic program at the University of Belgrade - Faculty of Architecture. Through a designing process, the students put an accent on comprehensive investigations of its entire history: various changes in its structure, from the middle of the 19th century to the present day. The goal was to define a sustainable solution that would protect all the development stages of the complex. On the other hand, the idea was to make the complex active and useful once again and to reintegrate it in its immediate surroundings. Consequently, the students proposed a number of modern cultural, educational and artistic uses of the complex, which would be in correlation with its character and significance, thus providing a way of achieving an active future.

Keywords: Industrial heritage, protection, revitalization, authenticity, education

TEACHING PROCESS IN THE FIELD OF STUDY, PROTECTION AND REVITALIZATION OF ARCHITECTURAL HERITAGE AT THE FACULTY OF ARCHITECTURE IN BELGRADE

Within the educational system at the Faculty of Architecture of the University of Belgrade, there is a successful and long term development of the curriculum in the field of study, protection, and revitalization of architectural heritage, both in compulsory and elective subjects. The curriculum is in line with the ICOMOS recommendations adopted for education and training in the conservation of monuments, ensembles and sites in Colombo, in 1993. In the system of education and training in conservation, these recommendations understand that it is paramount to pass on all the necessary knowledge to those who directly or indirectly influence cultural heritage. Therefore, basic recommendations have been incorporated in various ways into the system of education and training in conservatory practices in certain European countries, as well as at the Faculty of Architecture in Belgrade. Since 1990, the teaching process at the Faculty of Architecture, in the field of architectural heritage studies has encompassed work on projects of the revitalization of protected cultural and historical spatial ensembles in order to educate students to work in the sensitive and very demanding field of contemporary architectural design in protected areas. Students have dealt with the issues of revival and design of areas with extraordinary historical, cultural and natural values through concept designs of revitalization of Old downtown of Zemun, Topčider and Tašmajdan parks in Belgrade, as well as through projects of protection and presentation of archeological sites of Mediana located near Niš and Christian basilica and Martyrium in Jagodin Mala in Niš. With the adoption of the Bologna declaration in 2005, the conditions were met for the Faculty of Architecture to create a new teaching curriculum in the form of three degrees of studies: basic academic studies of architecture lasting three years, i.e. integrated academic studies lasting five years, master academic studies of architecture lasting two years and doctor academic studies of architecture and urban planning lasting three years.

The subject of research, protection and revitalization of architectural heritage is studied in one semester at the third year of basic i.e. integrated academic studies of architecture. Students are introduced to the architectural heritage in Serbia, by researching the development of prehistoric, ancient, medieval, post-medieval and vernacular architecture, in the lectures of the courses Architectural Heritage in Serbia and Protection and Revitalization of Architectural Heritage. In addition to the development of architecture in Serbia, the lectures explore contemporary international charters and recommendations, as well as basic principles and methods of protection of architectural heritage. By connecting these two topics in a single unit, it is possible to understand their mutual interconnection, which emphasizes both the importance of background knowledge on general historical course of development of architecture and settlements in the world and in designing and realization of contemporary approaches to protection and presentation of architectural heritage. The most considerable change brought about by the Bologna reform was introduced to master academy studies of architecture which, according to the new teaching curriculum, enabled students through various topics, to expand their knowledge on theoretical questions related to the history of architecture and art, contemporary architecture and artistic creation, as well as current theoretical questions in the field of contemporary conservation. The teaching process has been conceived in such a manner that a rather summarised subject of research, protection and revitalization of architectural heritage, introduced on basic academic studies, could further be expanded and practically

upgraded by means of elective courses in which specific topics related to research, evaluation, protection and revitalization of archaeological sites, medieval fortified towns, architecture of 19th and 20th century in Serbia, as well as industrial heritage are addressed. Available elective courses dealing with this matter are as follows: History and Theory 1 – Visual Culture in Architectural Theory and Practice, History and Theory 2 – Contemporary Principles of Preservation of Architectural Heritage, History and Theory 3 – Ancient Heritage in the Region and elective course 2 – Medieval Fortified Towns in Serbia. The above-mentioned courses are organized for smaller student groups of 30-35 and they last for one semester.

METHODOLOGY OF WORK IN THE ELECTIVE COURSE HISTORY AND THEORY 1 – VISUAL CULTURE IN ARCHITECTURAL THEORY AND PRACTICE

During the school year 2018/2019, in the fall semester, a course titled History and Theory 1 – Visual Culture in the Architectural Theory and Practice, headed by Assistant Professor Marko Nikolić and teaching assistant Ena Takač, was realized in the course of the first year of master studies of architecture, i.e. in the fourth year of integrated academic studies of architecture at the Faculty of Architecture of the University of Belgrade.

This school year topic was related to the study of industrial heritage in the territory of Belgrade, through the study of the “Bajloni” Brewery and the possibilities of its protection, revitalization and presentation. This represents a continuation of the study of the industrial heritage of Belgrade within a teaching process on master studies of architecture i.e. integrated studies of the Faculty in the field of research, protection and revitalization of architectural heritage. The goal of the course was to define particular values of the industrial heritage of Belgrade, specifically those of the “Bajloni” Brewery, so that the students would improve and enrich their knowledge and approach to the preservation of architectural heritage and contemporary design in protected complexes by means of proposals of revitalization and presentation. During one-semester course, which consists of lectures and assignments, students were able to familiarize themselves with a contemporary methodological approach of research and evaluation of industrial heritage both in the world and in Belgrade itself; the problems and methods of definition of potential and possibilities of regeneration of industrial heritage in accordance with contemporary needs.

Students began their course work by field, literature and online sources research, in order to familiarize themselves with the particularities of significant examples of industrial heritage in the world and in Belgrade. After exploring the site, students analyzed cultural, historical, urban, architectural and technical values of the area of the “Bajloni” brewery and its surroundings as well as previous approaches to protection and presentation of this complex. Students were introduced to the process of evaluation of industrial facilities in the lectures, so after collecting data on the example set to be studied – the “Bajloni” Brewery in Belgrade, they focused on the evaluation of the complex. They formed their own opinions and ideas of this complex. Following the collection of basic data on the historical, urban and architectural development of the complex and fieldwork, students presented the results of their research, particularly accentuating evaluation and emphasizing its values which are to be included into the future proposals for the reconstruction and revitalization of this significant complex. Based on the results of the research, the work on the design of proposals of contemporary interventions commenced i.e. work on defining the spirit of future design and presentation of the “Bajloni” Brewery.

ANALYSIS OF CULTURAL-HISTORICAL VALUES OF “BAJLONI” BREWERY AND ITS SURROUNDINGS

An industrialist Filip Đorđević built a brewery around 1850, on the corner of present-day Belgrade's Skadarska and Cetinjska streets, which citizens dubbed “Mala” or “Filip’s” brewery. He managed the brewing business on his own until 1871, when he invested Pivara as his shareholding stake into the newly formed “First Serbian Brewery Joint Stock Company”. The business was not doing well and because of ever bigger and more frequent problems, “Mala” brewery was bought from Joint Stock Company in 1883 by an industrialist Jovan Brabec. Judging from the previous work of this brewery, he realized that it had to be modernized, and in line with that, he introduced the steam engine into the production, which gave Belgrade its second steam-powered brewery, after the Weifert brewery. During this time, he built several new facilities and additionally modernized the production process, however, due to a string of adverse results he had to halt the work and sell the Brewery to the Bajloni family. They incorporated the Brewery into their company “Ignjat Bajloni and Sons” and they officially began beer production in 1888.

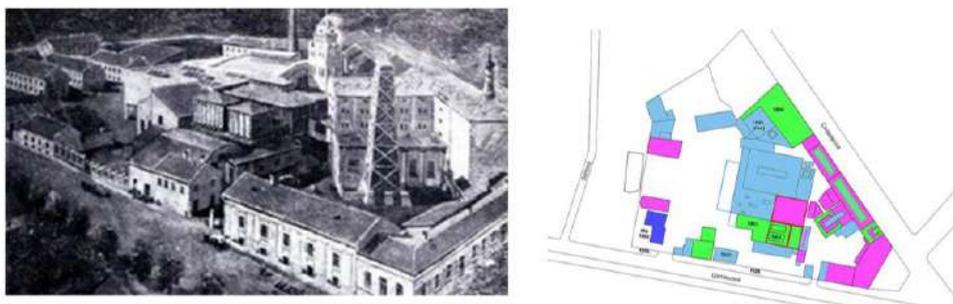


Figure 1: Steam-powered brewery “Ignjat Bajloni and Sons” (left), Chronology of complex construction (right)
■ – buildings built by the end of the 19th century; ■ - cellars built by the end of the 19th century; ■ - buildings built from 1900 to 1921; ■ - buildings built after reconstruction from 1921 to 1940 (source: Nenad Lukić, “Parna pivara Ignjat Bajloni i sinovi 1888-1946”, Nasledje, no. XVI (2015), p.127 and p. 133)

Over the years of being in the hands of the Bajloni family, the brewery complex underwent significant changes in exterior architecture and interior construction of facilities. The buildings built before the renovation of the Brewery in 1921 are generally lower, built of fire-baked bricks and concrete pillars with a relatively small span of bearing elements. On the other hand, the rhythmic composition of the facade of the street front was formed by pilaster and frieze of blind arcades. Few facilities of this type have been preserved; they have been destroyed to a large extent by inadequate maintenance. The facilities built after 1921 are one-story buildings designed for certain functions of the production process of the factory, whose large spans were bridged by a system of reinforced concrete columns and ribbed ceilings. Unlike the facilities built before 1921, exterior architecture did not have decorative elements. By decision of the Cultural Heritage Preservation Institute of Belgrade, no. 322/2 of 28 August 1967, the “Bajloni” Brewery was put under legal protection as a spatial cultural and historic ensemble “Skadarlija”, with particular historical, memorial and ambience values. A group of experts from the Cultural Heritage Preservation Institute of Belgrade consisting of Željko Škalamera and Gordana Gordić prepared a report on the Brewery in 1971 and evaluated its facilities with the final conclusion that the Brewery, which was still active, should be preserved as a museum of brewing. The foundation of the museum had not been carried out as this industrial complex was sold in 2006, since that

moment, it has been increasingly ruined. Nowadays, after privatization, this industrial complex, despite the poor preservation of architecture and the lack of original equipment for beer production, has been partially revitalized by adequate amenities such as gallery or catering facilities. However, what current amenities lack is to present visitors to this complex with the original purpose of the Brewery through educational activities that would utilize the existing facilities.

POSSIBILITIES OF PROTECTION, REVITALIZATION AND PRESENTATION OF “BAJLONI” BREWERY – STUDENTS’ ACHIEVED RESULTS

Forgotten industrial facilities represent rich sites for the development of various cultural-artistic activities which can enrich the society itself. The “Bajloni” Brewery is situated in downtown Belgrade and it represents an adequate place for the development of diverse activities which would again draw attention to this unrightfully neglected monument of industrial heritage. Based on the conducted analyses of the “Bajloni” Brewery, the students concluded that their solutions should be worked out in accordance with contemporary needs which represent the historical development and production process of this complex. By forming this approach, the students emphasized the importance of presenting tangible and intangible values, thereby contributing to the preservation of the authenticity and integrity of the complex. With their solutions, students aimed at keeping the primary cultural-educational character of the complex by reactivating the complex with new artistic and educational functions, thus making it more attractive to visitors. With careful consideration of new activities, students have revived this significant example of the technological heritage of Belgrade.

PROPOSAL OF STUDENTS VERA AGOLI, MILENA ARSIĆ, MARIJA ANDRIĆ, SLAĐANA ANIČIĆ I SOFIJA BJEGOVIĆ

The starting point in the proposal of the revitalization of the former brewery refers to the transformation of its facilities with maximum preservation of original spatial organization, structures, architectural shaping, as well as intangible values of this industrial complex. Therefore, the main goal of this proposal was to find a balance between the old and the new in order to preserve the authenticity of the “Bajloni” Brewery. As the whole intervention represents, in a sense, the integration of the new and the old, the proposal suggests two entrances which are conceived in line with this idea. The first entrance is envisaged as a historical entrance, closer to the “Bajloni” market, which would retain its current appearance and which starts the path through narrow passages among brewery facilities, which by themselves represent historical artifacts, memorials of industrial architecture as part of the cultural heritage of this city.



Figure 2: Gallery in the passage – intervention position within the complex (left); current state (middle), a proposal of revitalization (right)

The second, modern entrance into the complex is envisaged as a semi-open viewpoint offering an opportunity of seeing the whole complex of the brewery and forming an exhibition space, i.e. a space for modern art installations.



Figure 3: Modern entrance – the construction of semi-open viewpoint – intervention position within the complex (left), current state (middle), a proposal of revitalization (right)

The concept design proposes the organization of the inner, central, open space, surrounded by existing catering facilities, which would form an open, multi-purpose space of different features, built by prefabricated elements, which, depending on the needs, could include the following facilities: a market, a seating area, a space for temporary exhibitions and other cultural events such as: small-scale concerts and film projections in the open. The area would be defined by a modular system, and the basic element would be a beer crate – a box for storing beer.



Figure 4: Revitalization of the central inner yard – intervention position within the complex (left), current state (middle), a proposal of revitalization (right)

The revitalization of this industrial complex, according to the proposal of the students, also includes the creation of an exhibition and educational space within the old warehouse. The introduction of educational function in the form of various workshops and lectures related to beer brewing, but also to the complete history of this place, enables the reinterpretation of former appearance of beer workshop, plant and machines.



Figure 5: Proposal of the revitalization of an old warehouse – intervention position within the complex (left), current state (middle), a proposal of revitalization (right)

PROPOSAL OF STUDENTS JELENA PAVLICA, MILOŠ PAVLOVIĆ AND JOVAN ALEKSIĆ

This proposal of revitalization took into consideration the preservation of the original architecture of this complex, as well as the presentation of its former purpose, which resulted in the conceptualization of educative amenities where visitors would have the opportunity to learn about the manner of former production of beer. The group of students saw the potential for development and revitalization of this complex in the old warehouse facility. In their design, they have envisaged the development of the exhibition and educational facilities which would enlighten users about the historical development of this building, as well as the beer production process. By placing a glass curtain wall on the main facade of the building, the students have closed this space and facilitated its uninterrupted use. With a contemporary renovation, this facility is meant to function as a museum and a center for culture and education promotion.



Figure 6: Proposal of the revitalization of a former warehouse – intervention position within the complex (left), current state (middle), a proposal of revitalization (right)

In addition to the revitalization of the old warehouse, this group of students also included the solution to the inner open space of the complex into their proposal. After adding new amenities to various spaces and facilities, the students concluded that the space in front of the former warehouse should be organized as a multi-purpose plateau. Based on this, they envisaged literary evenings, exhibitions and open theatre taking place in this area, for the purpose of connecting amenities situated inside the warehouse. Therefore, the plateau pavement and all pedestrian paths within the complex are conceived as interactive surface, which guides the user to other amenities within the complex all the while informing them about the historical development of the industrial complex itself.



Figure 7: Proposal of organization of inner yard plateau - current state (left), a proposal of revitalization (middle and right)

CONCLUSIONS

In line with recommendations on education in the field of protection of architectural heritage, it can be deduced that the reform of studies at the Faculty of Architecture of the University of Belgrade follows, in its entirety, a general direction and scope existing in other European countries. Although the Bologna reform of the curriculum and programme has

greatly shortened the lessons attended by all students on courses related to the historical development of architecture and arts on basic and integrated academic studies of architecture, on the other hand this reform facilitated improvement and enrichment of lessons with certain topics which had not been previously explored in the teaching process, within elective courses on master and integrated academic studies of architecture. Through their work on specific topics related to research, evaluation, protection and revitalization of architectural heritage, the newly created elective courses enabled students to develop and enrich their knowledge in solving numerous contemporary problems in the protection and revitalization of historical sites and ambiances. The work on the course History and Theory 1 - Visual Culture in Architectural Theory and Practice, introduced students to contemporary principles of protection, revitalization and presentation of industrial heritage in the world and facilitated the application of the acquired knowledge to a specific example of industrial heritage in Belgrade. Accordingly, students' concept designs filled the "Bajloni" Brewery complex with brand new amenities, for the purpose of improvement of historical, cultural and technological values which the Brewery has. Accompanying students' concept designs of revitalization and presentation of the Brewery contributed to the research of city industrial architecture development, but also to a design of possibilities of its reactivation through new cultural-artistic amenities that would preserve this important example of technological culture. A dynamic concept of continual authenticity enrichment of historical place was thus supported by changes and layers brought about by history, with the necessary adherence to the guidelines of international charters and recommendations.

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