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Book of Abstracts

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Built Environment**

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ECOBUILT Project

The project entitled *Eco-friendly Built Environemtn* (ECOBUILT) is implemented as a part of the Erasmus+ Mundus Design Measures Action (EMDM) in the period from February 2022 to April 2023. The project is led by RTU in collaboration with researchers from UB-FA and UNIGE.

The reason for undertaking ECOBUILT Consortium is based on the recognition that the framework of research, practice and education in the field of architectural and urban design faces numerous eco-oriented challenges and thematic issues such as climate change, environmentally sensitive development, green economy, sustainable cities and human settlements, and preservation of biodiversity and ecosystems. Above mentioned challenges require vital research and continuous improvement of curricular and extracurricular activities in a higher education, which should, in order to have a successful outcome, be transnationally carried out.

Objectives

- To enhance the quality of the architectural and urban design higher education by pooling expert resources from three universities.
- To equip the future graduates of the programme with the knowledge, skills, and competences which will help them to set the trends in a dynamically changed environment.
- To embrace new concepts of teaching and learning in a subject field.
- To effectively work in different locations and cultures, and bridge Europe's skills and competences gap in Eco-friendly Built Environment.
- To enhance the employability of the graduates by providing various learning paths in accordance with the-state-of-the-art trends in green architecture and urban greening.
- To design and develop the tracks which will provide an opportunity to carry out the main goal of the EHEA initiative – to increase staff and student mobility and to increase graduates' attractiveness at the labour market through rendering talent and raising innovation.
- To secure sustainable impact on the human health and environment in the long run through graduates' conscious efforts to design buildings, natural zones, cities, and villages with minimum effect on the environment.

Editors Note

ECOBUILT (Eco-friendly Built Environment) Conference aims to gather participants of various profiles and expertise who will present current approaches, tendencies and thematic practices in the domain of sustainable built environment. The conference aims to encourage and open a dialogue between academia and practice with the idea of exchanging expert knowledge, methodologies and approaches in the educational and professional arena of architecture and urbanism. The thematic focus of the conference is on innovative practices and learning and teaching skills, as well as new approaches to higher education in the field of environmentally friendly built environment through four challenges: green architecture, urban design, landscape design and restorative design.

Consortium members

RTU: Riga Technical University, Latvia:

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UNIGE: University of Genoa, Italy:

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ECOBUILT Open House - Exhibition

ECOBUILT Open House represents the promotional activity of the results of the ECOBUILT project and is realized in the form of a thematic exhibition in the hall of the University of Belgrade - Faculty of Architecture.

The results presented through the exhibition are:

· **Analogous Maps Student Workshop** realized as part of the elective courses *Space and health: ecological, cultural and psychological influences* (teacher: Dr. Jelena Ristić Trajković, associate professor; 3rd year of bachelor studies) and *Contemporary Urban House* (teacher: Dr. Ana Nikezić, full professor; 1st year of master studies; 4th year of 5-cycle integrated studies) with the support of tutors (Dr. Aleksandra Đorđević, teaching assistant; Mladen Pešić, Ph.D., teaching assistant; Dr. Aleksandra Milovanović, research assistant; M.Arch. Dunja Dedić; M.Arch. Nenad Pavlovic).

· **Elective course *Urban oasis*** (teacher: Dr. Budimir Sudimac, associate professor; 1st year of master studies; 4th year of 5-cycle integrated studies).

The exhibition will be preceded by a session dedicated to the presentation of the concept and results of the ECOBUILT project as the result of the joint work of partner institutions.

Urban Oasis



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Sandra Draganić
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Student Participants

Analogous Maps Student Workshop



Igor Iljić,
Anja Paprikić



Danica Pop-Krstić, Anđela
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THEMATIC LECTURES

APPROACHES AND EXAMPLES OF SUSTAINABLE DEVELOPMENT AND URBAN REGENERATION IN LATVIA

The Faculty of Architecture of Riga Technical University pays significant attention to the diverse aspects of urban regeneration and up-to-date approaches to building renovation practices. In the study works and graduation projects of Master level students, a row of sustainable development and building renovation projects have been developed recently; they point out the students' interest in the circular economy and resilient development. Hopefully, the knowledge gained during the studies will contribute to their future practical work, providing them with the competencies required.

In recent years broad activities have taken place in Latvia in building renovation. Riga is one of the UNESCO World Heritage Sites, and one of the highlights of its urban landscape is the diversity of urban patterns and scales, including historical timber architecture. The activity *Koka Rīga* (Timber Riga) to preserve the timber architectural heritage started in 2013; due to that, many timber houses have been renovated and become landmarks of the city. Besides, developing new timber structures and constructing new buildings from CLT prefabricated structures have also become more and more popular. That makes it possible to shorten the on-site construction process and increase the quality of construction works, the energy efficiency of buildings, sustainability and resource-saving.

ECOLOGICAL APPROACH TO URBAN DESIGN: MEANINGS AND PATHWAYS

It has been widely assumed that responding to contemporary environmental challenges requires a shift towards an *ecological approach* to how we plan and design cities and that *ecological urban design* can bring positive changes to urban life and the environment. But in practice, “ecological design” is often interpreted in a simplistic way (e.g., as “green” technical solutions) and does not use the full potential of the urban design – ecology nexus.

The lecture provides an overview of different meanings of ecology and the ways they relate to urbanism in theory and practice. We explore how different *understandings* of “ecology” and “ecological” influence the purpose, scope, scale, and process of urban design. The aim is to reveal and discuss contemporary *pathways* to linking ecology and urban design and to outline the implications of the findings for architecture and urban design education.

We argue that a broader understanding of ecology is needed if we are to respond to environmental challenges in a creative and place-specific way through urban design. In the broad sense, ecology is about *relations and relationships* in different realms, at different scales and times. An ecological approach to urban design is, therefore, not only about knowing when and how to implement “ecological measures” as instant solutions, but also how to *creatively* restore broken links and develop strategies for the new, life-supporting *ecologies* to occur. By encouraging ecological thinking, academic education should help students develop ecological literacy and worldview.

FROM LANDSCAPE TO ECOLOGY: GENEALOGY OF A THEORY FOR LANDSCAPE URBANISM

While climate change, sustainable architecture, and green technologies have become increasingly topical, issues surrounding the sustainability of the city are much less developed. An ecological approach to urban landscapes is urgently needed as an imaginative and practical method for re-establishing the role of design as integrating practice at multiple scales of intervention.

In this way, Landscape Urbanism emerges as a field that combines urban design theories through the lens of landscape architecture, socio-ecological ecosystems and territorial resilience in the built environment process. This approach emerged in the late 1990s as a critique of urban designers' inability to deal with the expanded character of urbanization. So, the landscape has become a medium through which to interpret the contemporary city and develop ecologically sound urbanism.

In the last twenty years, several books, academic programs, and design projects have been developed under the landscape urbanism headings, contributing to blurring the boundaries between the spatial disciplines and multiplying the urban strategies. The lecture wants to trace a quick exploration into a multidisciplinary approach to urbanism, starting from those main figures who developed the discourse and exploring the main cultural and academic contexts in which the field of landscape urbanism has emerged, such as Mohsen Mostafavi, Charles Waldheim, James Corner, Alan Berger, among others.

SHARING ECONOMY AND CITIES: WORLD EXPERIENCE AND PROSPECTS FOR SERBIA

Sharing economy has emerged as a solution to sustainability challenges faced by cities. Urbanization has led to increased pressure on city infrastructure and growing demand for short-term rental of accommodation, cars or professional services. Through digital platforms, each individual can have easy access to the facilities and services they need, as well as the possibility to make available their own unused resources. This enables activation of underutilized assets and leads cities and communities towards environmental effectiveness and inherent sustainability. However, sustainability potential of urban sharing and utilization pathways have not yet been fully understood and researched. From the perspective of building eco-friendly cities sharing economy is still a contested concept. Whether driven by economic or social reasons new digital technologies are revolutionizing the ways transport, housing, goods and other services are used and challenge urban planning processes, policy formulation and regulatory structures. How and to which extent urban sharing will support eco-shift depends on understanding new digital socio-economic models and cooperation amongst public authorities, platform operators and prosumers. Findings from the ongoing project on sharing economy in Serbia PANACEA* reveal that, although slowly, sharing economy ideas are sprouting. Sharing economy platforms in Serbia are established mainly in cities, following the practice of successful global providers and transferring not only business models, but also the problems that these innovative systems face.

* Research supported by the Science Fund of the Republic of Serbia, Grant No. 7523041, Setting foundation for caPacity buildiNg of shAring Community in SErbiA-**PANACEA**, Project website: <https://panacea-ideje.rs/>

CIRCULAR ECONOMY AND NATURE-BASED SOLUTIONS IN THE FRAMEWORK OF SUSTAINABLE URBAN ENVIRONMENT– CIRCULAR CITIES

The COST Action Circular City (CA17133) - Implementing nature-based solutions for creating a resourceful circular city, aimed to establish a network in order to adopt the concept of circular economy into the city and increasing socio-economic benefits of urban areas. Nature-based solutions (NBS) are set up to manage nutrients and resources within a circular flow system the urban biosphere will lead to a sustainable, resilient and healthy urban environment. The interdisciplinary activities between the working groups (WG): WG1. Built Environment, WG2. Sustainable urban water utilization, WG3. Resource recovery, WG4. Urban farming, and WG5. Transformation tools, were directed to facilitate implementation of NBS in circular cities. An integrated approach which includes the social, economic, and environmental aspects for potential implementation of nature-based solutions in the concept of urban circularity is considered within the project. This contribution will present the overall results achieved within the Action by summarizing main project outcomes and assessment tools (published scientific papers, reports, conferences, workshops, training schools and guidelines for stakeholders).

* The author is grateful for the support of the European Cooperation in Science and Technology COST Action CA17133 Circular City.

TOWARD A GREEN CONCRETE UTOPIA

Contemporary tendency is to make everything eco-friendly, carbon-neutral or net-zero. It is with no doubt the imperative to redirect all our actions toward sustainable human development, but it is essential to understand the principles, main problems, methodologies and prevent greenwashing strategies from taking over the eco-friendly narrative. This can only be done with systematic and mindful approach implemented in all stages of formal and informal education.

It is especially challenging to implement new approaches in a conservative field like the construction industry. However, this is especially important having in mind that the construction industry uses more than 40% of natural stone, more than 25% of virgin wood, more than 16% of water and more than 40% of produced energy. Concrete itself is the most widely used material by humans after water! It has been a long way from ancient Parthenon to 100-Mile-Long Linear City, with industrialisation, capitalism and abandonment of using local materials principals that led us to this not so eco environment.

There is a great amount of pressure to lower the negative ecological effect of most harmful construction materials (e.g. cement, concrete and steel). This led to a series of new technologies and new materials intending to replace the traditional ones: recycled concrete, concrete made with waste materials as a total or partial replacement of cement, high-performance materials, self-healing materials, additive manufacturing optimization, smart concrete... Some of these materials or technologies are still far from practical application, but a lot of them are available but underutilized.

POTENTIALS OF GLAZED FACADE CONSTRUCTIONS FOR ECOLOGICAL AND GREEN ARCHITECTURE

In contemporary architecture, glazed facade surfaces have dominated the appearance of buildings for many years. Therefore, they represent a huge potential for ecological and green architecture that must not be ignored. The basic potential certainly refers to the basic design of these surfaces. Form and design should not be an end in themselves. The design process should include conditions related to natural heating, cooling, ventilation, lighting, accumulation, or energy production, etc.

The second level and the next potential lies in the products themselves for the materialization of glazed facade surfaces. These products should be technically, technologically and visually designed to fit into the ecological and green building trends.

The third level and additional potential lies in the standardization and certification system, which establish the levels of contribution to the ecological approach and green architecture.

These systems establish socially acceptable minimums, as well as higher contribution levels, which are then socially favored by various methods. The field of potential for ecological and green architecture in the field of glazed facade constructions is rounded off by the potentials that lie in the sphere of social responsibility and the development of consciousness of all participants in the process of realization of these constructions. These are the currently visible and active potentials that can be put to the function of ecological and green construction in the segment of glazed facade surfaces. The company Schueco, as a leader in the field of design and development of systems and materials for these building structures, is constantly working on finding new potentials and ideas that can be drawn from this segment of construction.

THE OPERATIVE PRINCIPLES OF SUSTAINABLE DESIGN

The achievement of the objectives of sustainable development can be translated into project characteristics/choices, which can be subdivided into three levels, basically corresponding to the scale of the project phases.

Environmental characteristics/choices: the external environment is a complex context that strongly influences living conditions. The main environmental factors that can simultaneously influence and be exploited to create conditions of living comfort are: climate and its meteorological phenomena, site morphology, local characteristics of the site.

Characteristics/typological choices: They indicate the overall design choices aimed at achieving the primary sustainable requirements. They are influenced by the environmental characteristics of the site that consider the building, or the set of buildings, in their global volumetry, inserted in a site. The analysis of the typological characteristics/choices is based on the concept of orientation and shape of the buildings.

Detailed characteristics/choices: they concern the technical and technological solutions aimed at the execution of building constructions from the point of view of sustainability. The matrix of these solutions is constituted by the set of materials, building elements and construction techniques that the project evaluates respectively in the natural characteristics, in the overall performance, in the ability to constitute complex systems with requirements to satisfy the expected performance.

THE SCALE OF SUSTAINABLE DESIGN

At the national level each country regulates its own method for energy assessment, supply and distribution, but at the same time there isn't a single nation that thinks of energy as a resource that arrives and goes over the national borders. The recent energetic crisis has shown us the precariousness of this energy system. It has made clear that every nation is dependent on others, for raw materials or energy, but there are no shared strategies for management of resources at the international level. This means that there is no planning for a common future on the theme of energy and other ecological aspects. Shared ecological strategies have a higher level of complexity but, since we cannot imagine a future at the national scale, we have to think at the global scale of energy and ecology, as some visionary architects did. Utopic projects of Buckminster Fuller or Rem Koolhaas seems now to show the possibility of an interconnection of resources, but not as exchanges between states, as a shared planning. The international planning of resources introduces a design problem in the energy field, a much bigger scale of planning, designing the world as a unicum.

PERMANENT CHARACTERS OF SUSTAINABLE ARCHITECTURE

Although today Sustainability is the common ambition of all contemporary architecture, it actually has very ancient origins. The appropriate use of natural resources and local materials was already synonymous with some of the achievements of antiquity: from the water-collecting cisterns of the Sumerians to the heating systems of Roman baths and medieval green roofs, only to name some examples. The more recent history of 20th-century architecture has also addressed sustainability issues in the discussion of Hygienism, a central theme of urban design in light of the consequences of the urbanization phenomena induced by the Industrial Revolution. Hinging on the theme of hygienism are the German theories of *Licht, Luft und Sonne* and French theories of *Radiouse*. In the first decades of the last century by some Masters the focus is on the design of the individual architectural artifact determining a mode retrospectively traceable to a kind of proto-environmentalism. Along with the very early Frank Lloyd Wright of the Jacobs House 1 (1937) and the later Le Corbousier of villa Sarabhai (1956), one of the figures at the forefront of design and theorizing was Bruno Taut. The German master, fleeing Nazism, wrote the book *Architecturlehre* (1937) that collected his ideas on architecture, emphasizing the centrality of the question of climate as the main factor in morphogenetic processes.

ARCHITECTURAL COMPOSITION IN HOLISTIC SUSTAINABLE DESIGN

The meaning of “sustainable Design” is intended as an holistic strategy in which various aspects of the design process co-operates to the functioning of the building and its environment. It is a matter of design and technology that goes together. History gives us visions for our present and future and masters of the twentieth century, as Le Corbusier, applied ecological holistic strategies in their project a sort of *proto-ecologism*. In his project there are experimentations, sometimes ecological choices guided the project - the opportunity to reuse the stone of the pre-existing cathedral conditioned the thickness of the walls of the chapel of Notre-Dame-du-Haut - sometimes it is the project that led to an ecological choice - as in the case of the Villa Le Lac by Le Corbusier, who first designed the famous house for his mother and then searched along the shores of Lake Geneva for the site with the perfect orientation. At the bigger scale Le Corbusier imagined a planning of the urban landscape, with his linear buildings surrounded by nature, trees and fields. Today this image is something we should reflect on to avoid the binomial that being Zero-CO2 means being ecological while the design process is much more complex. Theoretical and historical-critical knowledge of architecture for eco-friendly constructions represents the base for any project, and examples can be found in history.

AN ALTERNATIVE CONCEPT OF URBAN GREENING: URBAN PHOTO- BIOREACTOR LIQUID3

Limited space, high commercial value of the land, and air and soil pollution that is detrimental to plants prevent traditional greening using trees and lawns in urban environments with high population density and intensive traffic. Urban photo-bioreactor LIQUID3 represents an alternative concept of greening that was developed for such urban environments. LIQUID3 exploits high efficiency of microalgae in CO₂ fixation and O₂ and biomass production, as well as water column filtration that removes PM particles from the polluted air. A multidisciplinary approach was applied to integrate biotechnological application with urban functions – bench, USB solar charger, and nightlight, and contemporary design, which represent the basis of its functionality and viability in the urban space. Alternative concepts of greening like LIQUID3 enable smart use of city space, promote environmental awareness, and support even distribution of greenery throughout the city, which is related to economic prosperity, social justice and sustainability. The innovative idea of urban photo-bioreactor LIQUID3 has been developed from the concept to the prototype at the University of Belgrade – Institute for Multidisciplinary Research with the support of UNDP Serbia, Global Environmental Facility and the Ministry of Environmental Protection of the Republic of Serbia. The prototype was installed in the centre of Belgrade in September 2021.

Stefan Radošević, M.Arch.

Luka Višnjić, M.Arch.

AΔA kolektiv, Belgrade

BETWEEN PRODUCTION, ACTIVISM AND EDUCATION IN ART, DESIGN AND ARCHITECTURE: AΔA KOLEKTIV

AΔA [ada: art design architecture] *kolektiv* is transdisciplinary collective with the activity of the professional and research work and production of projects and artifacts in the field of architectural, urban, interior, landscape and furniture design and art, as well as engagement in architectural activism and education. Through an experimental, altruistic, activist initiative of the O:TVORENO concept project, the work of the collective is based on the self-initiated action of architects and the inclusion of the local population in the educational process of design and construction, as well as in engagement of individuals of wide multi-media spectrum in interdisciplinary, design social projects in (mainly neglected) public spaces, through two phases in particular: (1) Opening the Space, based on cognitive-research work through learning, drawing and planning where participants explore the potential of a particular public space through their own ideas and intervention suggestions, using cognitive-interactive sheets, maps and workbooks, and (2) Creating the Place, based on collaborative practical actions through construction and applied design where participants create a place in a particular space, building on the current context.

The presentation will cover general background, motives for the formation and approach of the collective, followed by presentation of the specificities of various projects design and/or realized from 2016 till today.

SMALL INTERVENTIONS - ECO IS SMALL

Small Interventions is a pioneering project in Bosnia and Herzegovina that combine top-down and bottom-up approaches in urban design in order to create massive small interventions limited by budget, time, resources, and lack of legislation. It is primarily designed for contexts with a lack of participatory culture and economic resources resulting in a low quality of public space and low awareness of their importance and of multiple roles public spaces play in urban life. The innovative character of the project is not only to provide a framework for public space redesign, but it is a tool for community building and regaining a sense of belonging to the space through common engagement and co-creation.

Small Interventions is also an original research method that uses theoretical urban design approaches for the renewal of public spaces through the use of a multi-sector and collaborative approach to public spaces that is small, efficient, flexible, transparent, democratic, dynamic, adaptable, and temporary.

As a collaborative urban design method, it was adapted to local contexts through a set of mechanisms with an aim of testing methodological tools in the real environment toward more sustainable and resilient design strategies. The collaboration between the stakeholders, the City, Professionals, and Citizens, has brought a new “spirit” and changed their view toward public space. It was tested in Banja Luka from 2019 to 2020 through the implementation of six pilot projects: Park2, Water vs. Plastic, Three passages, Cleaning the City, and Small Scale Workshop.

THE (UN)LIKELY ORIGINS AND EMERGING DEPARTURES OF A SIMPLE MUD CONSERVATORY

The case study of a simple conservatory (i.e. a greenhouse) intended for plant cultivation, and built partially in earthen and straw bale construction methods, presents itself as an interesting vantage point for discussing several key relations within 'green building' narrative and operational framework: The relation between the complete method of construction and the character of „naturalness“, the relation between highly sculptable materials and the notion of building, the relation between design and complete immersion in building process, the relation between pliability of earth and straightness of timber. Finally, there is also a relation between the regenerative intentions of 'green building' and the programmatic accents of interior plant cultivation. The case study lays out the ideological and stylistic background, the design process (or almost complete absence thereof), as well as specific technical details. Also, some of the author's other consecutive involvements with natural materials are also invoked in an attempt to shed light on specific subjects and problems. Final elaboration deals with establishing a useful and operative spectrum of different modes of "natural", in order to improve technical applicability and cultural acceptance, while preserving the character and low ecological impact of minimally transformed earth's own building blocks.

MICRO OFF-GRID ARCHITECTURE: BUZZOFFSKI CABINS

Buzzoffski is company founded in March 2021 based in Sremska Mitrovica, Serbia. We design, construct and rent sustainable off-grid cabins nestled in nature, offering to our clients place to escape, recharge and reconnect.

The presentation will introduce the design and construction concept of micro off-grid architecture and will address the challenges and innovations in process of design, construction and use of sustainable micro off-grid cabins. Moreover, presentation will provide insight into the impact of sustainable architecture to user's mindset and perception of environment and overall topic of sustainability and sustainable life.

NEW BUILDING FOR ELECTRICAL FACULTY ETF AND TECHNICAL FACULTIES CAMPUS

New building for Electrical Faculty ETF and Technical faculties Campus project was done in organization and close operation of the EU institutions and Serbian Government: Council of Europe Development Bank (CEB), Western Balkan Investment Framework (WBIF), Hill International Consortium (IPF7) with help of all relevant domestic institutions in the sector of planning, infrastructure and planning. The 4mInd team, which consists of architects Ilja Mikiliin, Lazar Kuzmanov, Nemanja Datio and Igor Mikilitin, won a prequalified international urban architectural competition with the Schematic Conceptual Design (SD) which furthermore led into development of Urban Design (UD) and Detailed Design (DD) projects.

Sustainable and resilient architectural approach has been implemented in the very begin-ning of conceptual idea. Truly complicated project task was a challenge in terms of fucnc-llonal disposition in relation with existing buildings, protection of architectural heritage, infrastructure fitting, cultural and symbolic meaning, and Genius Loci imprinted in everydaz life of students and residents of Belgrade. Above all, Ecological aspect was one of the most important axioms for development of this project that led to the 4 crucial design deci-sions:

/ Urban answer - main principle of connecting important park areas / continuity

/ Architectural answer - logical principle of landscape design and green platform / lowliness

/ Technological answer - principle of implementing zero energy systems in the new building with phased construction planning without disrupting regular classes / sustainability

NOVKABEL INDUSTRIAL HALL - TRANSFORMATION, SUSTAINABILITY, AND THE CONTINUITY OF VALUES

This project is a true pioneering endeavor and a significant step forward because it will be the first modern business facility in Serbia, obtained not by greenfield construction, but by reconstruction of an industrial hall, gross area of about 14,000 m², organized in a so-called open plan, with an extremely modern approach to the use and organization of business space.

The first meeting with the Novkabel complex left a strong impression on us because it still carries the strong spirit of an industrial giant that awakens a sense of respect. Investigating the history, we learned that Novkabel was a company of real progress in Novi Sad, for which the welfare of employees was a real place of attention, and that partial thanks to them, Novi Sad is today the capital of the IT industry in Serbia. This inspired us all and indicated that this reconstruction project should build on inherited values and that one of the more important goals of this project should be to build social awareness of the continuity of values.

The goal of this project was to keep the essence of the character of the production hall, cross it and enrich it with a modern way of use, completely unique for Serbia.

The importance of the process of transformation in an era of ecological and social crisis is huge as an explicatory example that truly „The greenest building is the one that already exists“ and we will try to walk you through the „design and built“ process for the such complex theme of transformation and adaptive reuse.

DEVELOPING THE STRUCTURAL DESIGN OF MASS TIMBER PROJECT: CASE STUDY KAUTOKEINO SCHOOL, NORWAY

The Kautokeino school in Norway has a unique architectural feature in its use of mass timber structure. The use of mass timber in the construction of the Kautokeino school demonstrates a commitment to sustainability, as it is made from a renewable resource and has a low carbon footprint. The use of mass timber also creates a warm and inviting atmosphere within the school, making it a welcoming environment for students and staff. The mass timber structure of the Kautokeino school sets a precedent for sustainable and innovative architectural design, and showcases the potential of this building material to be used in future educational and commercial projects.

MODULARITY, MULTIFUNCTIONALITY, TRANSFORMATION

Takt Studio places a strong emphasis on the concept of space multifunctionality in its practice. One of the studio's goals is to develop each project, particularly public space projects, in stages. This phasal approach creates dynamics which allow better collaboration with users and the establishment of a more fitting spatial framework. This methodology was first applied in the Impact Hub coworking space in Belgrade, through organized workshops with future users, in partnership with Tilt Studio from London, known for their unique co-design strategy. Similar methods were used in projects such as the Goethe Institute, Philosophy High School, and German School kindergarten in Belgrade. The studio's work is also characterized by modularity, which enables the transformation of space as user needs change over time. Through its projects, the studio has created modular elements that support the change in space usage, such as the modular trapezoidal table for Impact Hub. In further projects, variations and improvements of that modular trapezoidal element were made, allowing it to become a bench, shelf, and/or tribune. This principle of modularity was also applied in the book fair craft stands the studio designed for the German Embassy in 2017 and the Ministry of Culture of Romania in 2022.

DIRECTIVES AND CERTIFICATIONS AS CATALYST OF CHANGE: TOWARDS THE HEDONISTIC WORKSPACE

The concept of work and workspaces getting new meanings and development possibilities with new technologies, especially with the changes after Covid. The workplace becomes flexible, and enables a development of healthy environment, for productive and efficient work. We deal with the questions of why offices and workspaces have a chance to become sustainability leaders due to the rules „imposed“ by new reports on ESG, CSR and green certifications, how designers can use this, and how it will positively affect users that can “profit” by getting a healthy and hedonistic workspace? The holistic approach in designing the workspace that we are using involves crossing top-down implementation of proposed procedures and certifications, bottom-up analysis of individual users, flows and needs within the workspace, with a focus on user wellbeing, work efficiency and innovation. The implementation of new workplace design concepts (such as agile workplace, landscape workplace design, biophilic design, activity based space, dispersion and decentralisation), is more and more understood and used by corporate clients - so with the inevitable transformation of the workplace we can get a double benefit: workplace as a hedonistic place on one hand, while using ecological directives on the other - as a tool and with lot of global longterm benefits.

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