



11TH INTERNATIONAL CONFERENCE

ON ARCHITECTURE
– CHALLENGES IN

DESIGN

PROCEEDINGS

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SUSTAINABLE URBAN SOCIETY ASSOCIATION

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Preface

At the beginning of the 21st century, faced with the challenges of climate change, depletion of resources, high environmental pollution, and hints at an uncertain future, we are questioning the various roles of architecture. Whether technological development and the use of new concepts in design, the use of new materials in construction, the use of new tools in the creation of concepts can provide an answer, is the theme of the conference and exhibition “Challenges in Design”.

The new concept of architectural objects and the use of materials in the isolation of objects and the concept of facade envelope are an inspiration and a challenge in creation. Is art a part or is it against the concept of an architectural work – art vs architecture. Whether architecture and new media and the use of virtual and augmented reality can be tools in architectural design is the question of the position of architecture in the digital era – from parametric design to VR and AI, as tools in design. In addition to new buildings in the transformation of the city and the change in the structure of activities, there are many huge abandoned industrial buildings, which refers to the topic of reconstruction – reworking of the city and architecture – reworking of architecture and the city – reuse of abandoned buildings and places.

The conference will explore and discuss the complexity and different meanings of architecture. These topics will consider the essence of architecture through all its dimensions, always thinking of it as an art and a philosophical reflection on architecture. The essence will be considered through different points, processes and trends that contribute to new aesthetics and functionality: globalization, new approaches to design, innovative technologies, projects, and materials. A special block of topics is focused on the challenges in architecture and urban design in terms of how we can reshape the future in creating sustainability after the pandemic and how we can reset the sustainable development goals for the challenges of the pandemic – from the perspective of research, policy, or practice.

In the past year, many conference programs were focused on that topic, such as the [New European Bauhaus](#) initiative for green sustainable cities, or the [COP 27](#) UN conference on climate change and impacts, many also implemented educational programs at universities, as well as charters and declarations in associations. That is why it is particularly interesting how cities will be organized in future development, how to improve the quality of work and life, and how architecture can help through the organization of space and materialization. In particular, the further improvement of information technology, which has made an outstanding contribution, enabling the holding of study programs in the faculties, as well as the holding of conferences and meetings.

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10.10:**10-Year Retrospective of Architectural Education Outcomes In 10 Themes On The Topic Of *Postindustrial Development Of The Area Between Dunavska Street And The Danube's Belgrade Waterfront***

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Abstract: This paper aims to present 10 main groups of results as the outcome of 10 years of work undertaken as part of the educational process of completing a master's thesis at the Master Studies at the University of Belgrade – Faculty of Architecture, on the topic of Post-industrial Development of the area between Dunavska Street and Danube's Belgrade Waterfront, under the mentorship of professor Nebojša Fotirić, with assistant Dr Bojana Jerković-Babović. The subject area represents a peculiar spatial phenomenon in Belgrade and as such it served for a whole decade as a practice ground for the development of creative and innovative architectural and urbanistic exhibits, concepts and projects. Dealing with the very complex spatial context through the process of architectural design, the results present the outcome and methodology of architectural education, affirming architectural and urban design as a process involving research, theory and design, and intermediality. The outcomes are classified into three main parts which will be visually presented in this paper - (1) *hybrid typologies and programmes* dealing with new ways of interpreting the new functions in the post-industrial phase of this locality; (2) *tendencies of form and structure* which relate to the deliberation of architectural and urbanistic structures in the foreseeable future, and (3) new cultural and aesthetic values of urban space in *phenomenological and aesthetic perspectives*.

Keywords: architectural education, Master thesis, architectural design, design process

The specificity of the spatial framework of the topic is reflected in the fact that it includes the former First Industrial Zone of Belgrade, which in the modern context, devastated and abandoned, is explored in a post-industrial sense, concerning the contemporary needs of Belgrade life and its associated architecture and urbanism. The first industrial zone of Belgrade is the area with the longest continuity of industrial function in Belgrade and as such, caused the expansion of the city along the right bank of the Danube along with the development of urban settlements and the Belgrade railway. The existing industrial buildings are evidence of continuous industrial development in a discontinuous physical form, and the diversity, inhomogeneity and multitude of material pieces of evidence of the history of this area are the specific value and architectural heritage of Belgrade. The creative potentials of preserving, affirming or assimilating this heritage in contemporary design architectural-urban interventions represent a complex issue that problematizes the relationship between the contemporary, dynamic social-spatial context and the static position of the abandoned, devastated spaces of the former industry (Jerković-Babović, Zorić, Fotirić, 2011, p 139).

Concerning the development of Belgrade, the location in question is seen as an architectural and urban void, unkempt and unaffirmed, despite significant locational qualities in the context of modern urban life - proximity to the innermost city centre and proximity to the river. This zone represents a border territory across which, in addition to abandoned industrial buildings, the question of lowering the city to the river, and activation of the Danube bank in the infrastructural and recreational, cultural or residential domain of modern Belgrade everyday life is raised. The stretch of the location in question, which follows the course of the Danube and Dunavska street, in the given zone between the mentioned two landmarks, respectively includes the Sports and Recreational Center "25. May - Milan Gale Muškatirović", a residential area along Tadeusa Koščuška Street and Danube Quay, the Dorćol marina, the former power plant "Snaga I svetlost", the "Dunav" heating plant, the "Žitomlina" silos, the port of Belgrade and industrial facilities next to the port and the shipyard (now club "Hangar", cargo centre, "Tempo", etc.) (Map of Belgrade, 2022).

The location in question includes Marina Dorćol and the Port of Belgrade, as the two most important zones on the Danube coast in Belgrade, the use of which is reviewed and analyzed in the context of the modern way of life. The proximity of the city centre, its urbanity and the density of the city matrix are interrupted by the former industrial zone, where Dunavska Street is recognized as an immaterial stretch of the border. The post-industrial phase of the given context is explored as a basic theme, opening questions of a new program from new housing models, through complete hybridity of content to new forms of industry that correspond to contemporary cultural and social development. The mentioned zones, in direct or indirect, visual contact with the Danube, appear as significant points of the potential of coastal activation and inclusion of the Danube Bank in the new architecture and urbanization of this area.

Ten years of experience in working on this topic (from 2012. to 2013.) has shown that the research and understanding of the spatial potential of this area of the Belgrade coast results in current individual topics that students approach to the treatment of a specific, selected part of this area or individual, abandoned objects of former industry. Through the relationship between theoretical research in architecture and their translation into project tasks, dealing with the topic of the post-phase of the former industrial zone at the Studio has over the years repeatedly gone beyond the mere contemporary utilization of the found space, the reconstruction or revitalization of the industrial heritage, and has positioned the subject location high in the domain of contemporary cultural, philosophical, technological and aesthetic frameworks of contemporary architecture, and often the architecture of the future (Fotirić, Jerković-Babović, 2023, p 158). In this way, the direct research, and theoretical-practical experience that we have collected during ten years of dealing with this topic, shows that the topicality of the topic and its spatial scope is actualized and refreshed every year (Fotirić, Jerković-Babović, 2023, p 159).

Although the diversity of ideas, concepts, research topics and projects over the past ten years of work on the topic Production of the city: the post-industrial phase of the area between Dunavska Street and the Danube coast in Belgrade can be analyzed and presented in multiple layers, following the specificity and authenticity of each solution, the work so far is summarized in three main groups (Fotirić, Jerković-Babović, 2023). Through three basic groups, we encompassed three basic levels of architectural and design creativity, i.e. new ways of thinking about architecture through function, form and spatial experience, within nine basic, recognized thematic units.

This paper is conceived as a visual essay that illustrates the results of decades of research and design on the topic, based on three main parts: 1. Chronology of study topics, student groups and expressions with a synthesis of the main research and design topics that are recognized in them (figure 1), 2. Visual fragments of research projects that illustrate the synthesized basic research topics (figure 2) and 3. Classification of the results into basic groupings that include (1) functional, (2) form-structural and (3) ambient-aesthetic domains of the architectural project (figure 3).

The first group of results refers to the hybridity of typologies and programs, where we consider new ways of interpreting the architectural function in contextualizing the theme of the post-industrial phase of the given location. Contemporary architectural and design tendencies, architectural theory and practice, show an increasingly pronounced loss of typological frameworks and principles, so the hybridity of the program during the year proved to be the most dominant feature of thinking and solving the architectural function. The outcome of the analysis is a modern interpretation of architectural typologies as former conventions and models of spatial organization that are transformed following changes in social patterns of functioning in the modern city and new life dynamics.

The second group of results includes design-structural tendencies, which refer to the reflection of architectural-urban structures of the near future of the given context and the development of Belgrade's architecture in general. This grouping of results is divided into two basic categories that appear over the years, namely: Networked systems, open type and Isolated systems, closed type. In this group of results, we considered the architectural design, the basic recognized principles of the formation of architectural and architectural-urban solutions, through which the subject of the post-industrial phase of the subject intervention zone is contextualized in a physical sense. By systems, we mean complex urban-architectural structures that integrate new design tendencies and considerations in architecture.

The third group of results in the past ten years includes interpretations of new cultural and aesthetic values of urban space, where design directions are recognized that operationalize contemporary phenomenological-aesthetic perspectives of new spatial experience. The students' theoretical research and their practical interpretations resulted in the implementation of contemporary socio-spatial values in architectural design, whereby specific spatial atmospheres and identities are projected through the creative process. In this way, through the perceptual domain and visualizations of the potential, and future character of the architectural space, we considered the artistic and aesthetic aspects of architecture in the post-phase of the subject area.

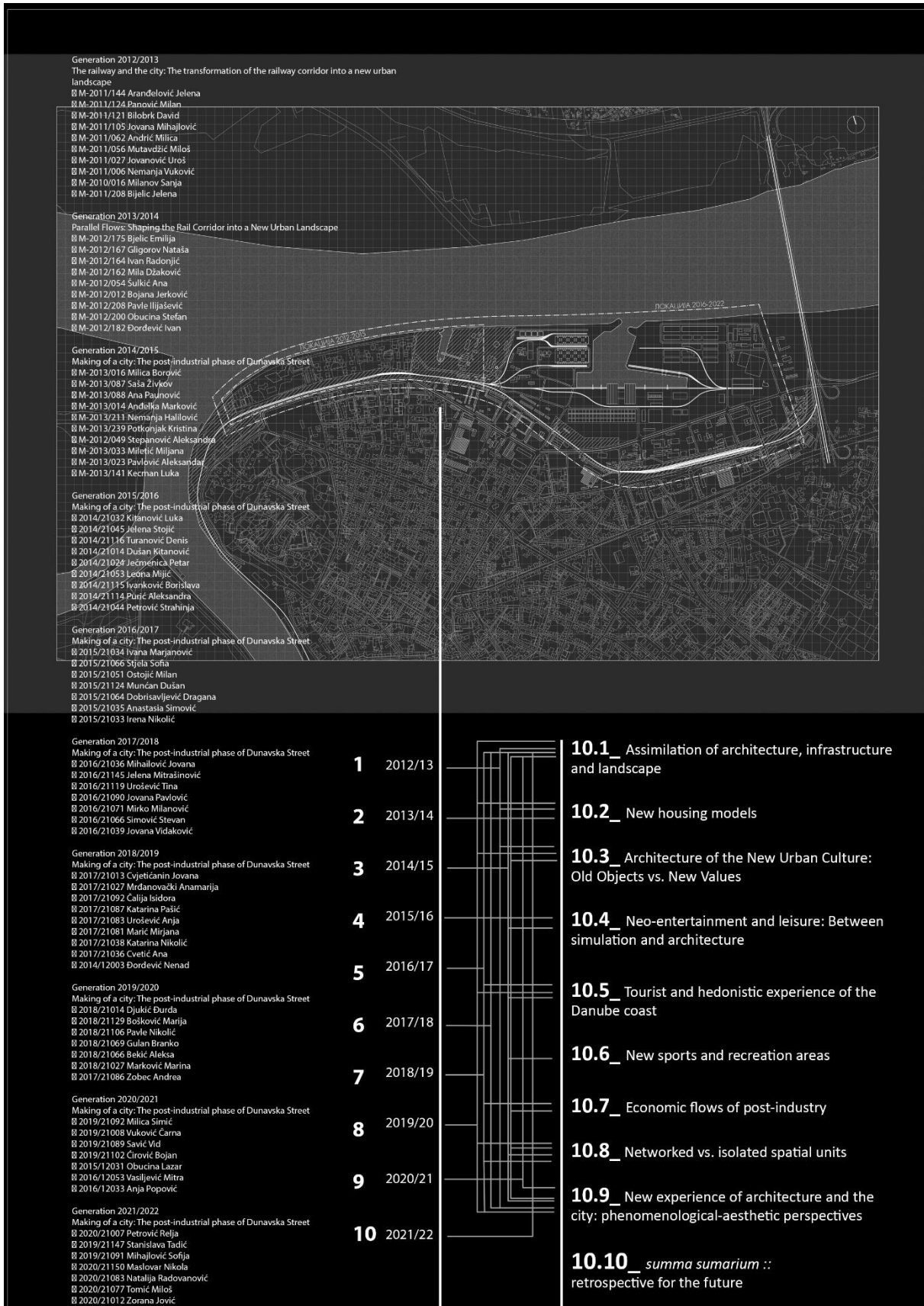


Figure 1 - Chronology of study topics, student groups and expressions with a synthesis of the main research and design topics that are recognized in them

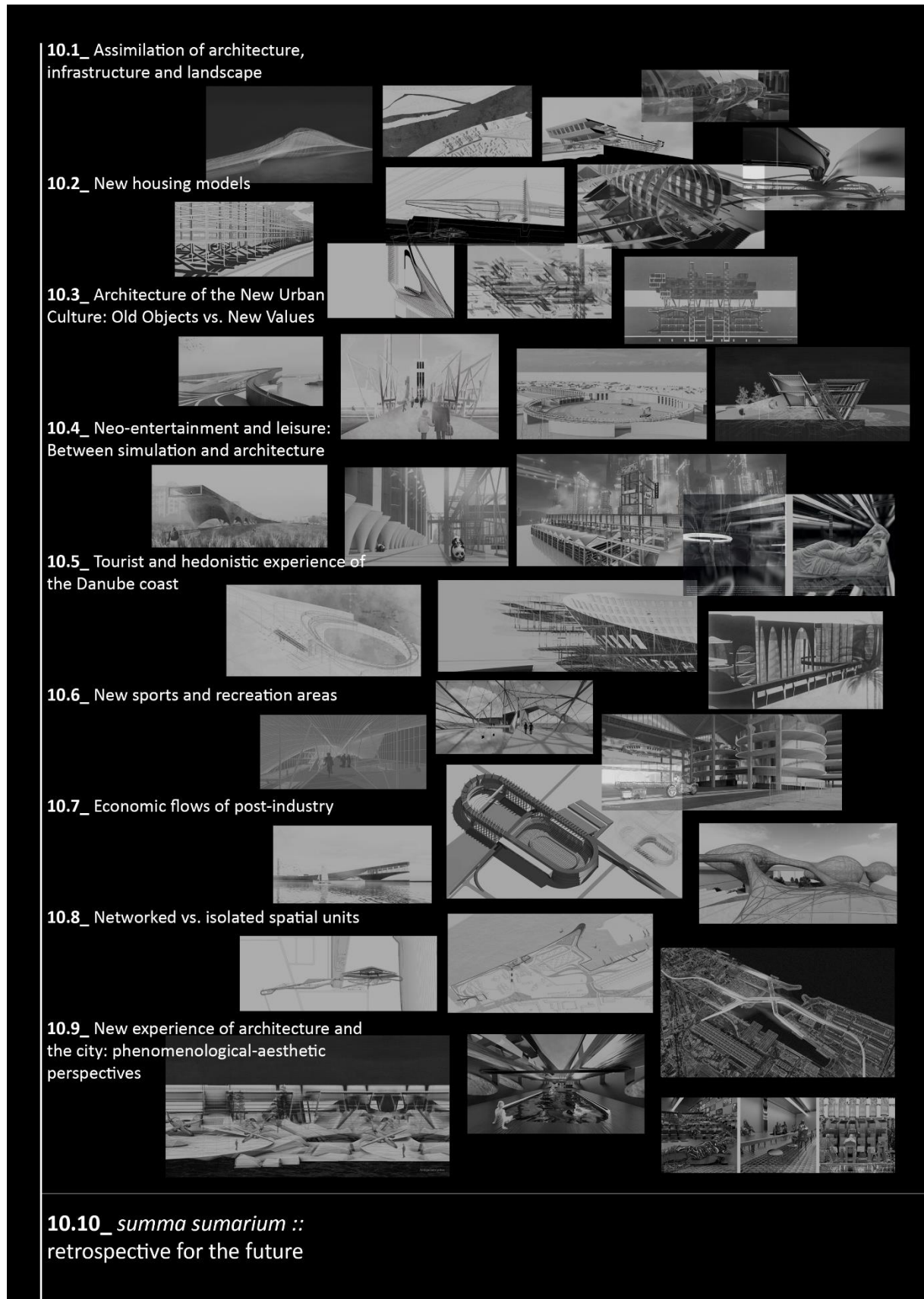


Figure 2 - Visual fragments of research projects that illustrate the synthesized basic research topics

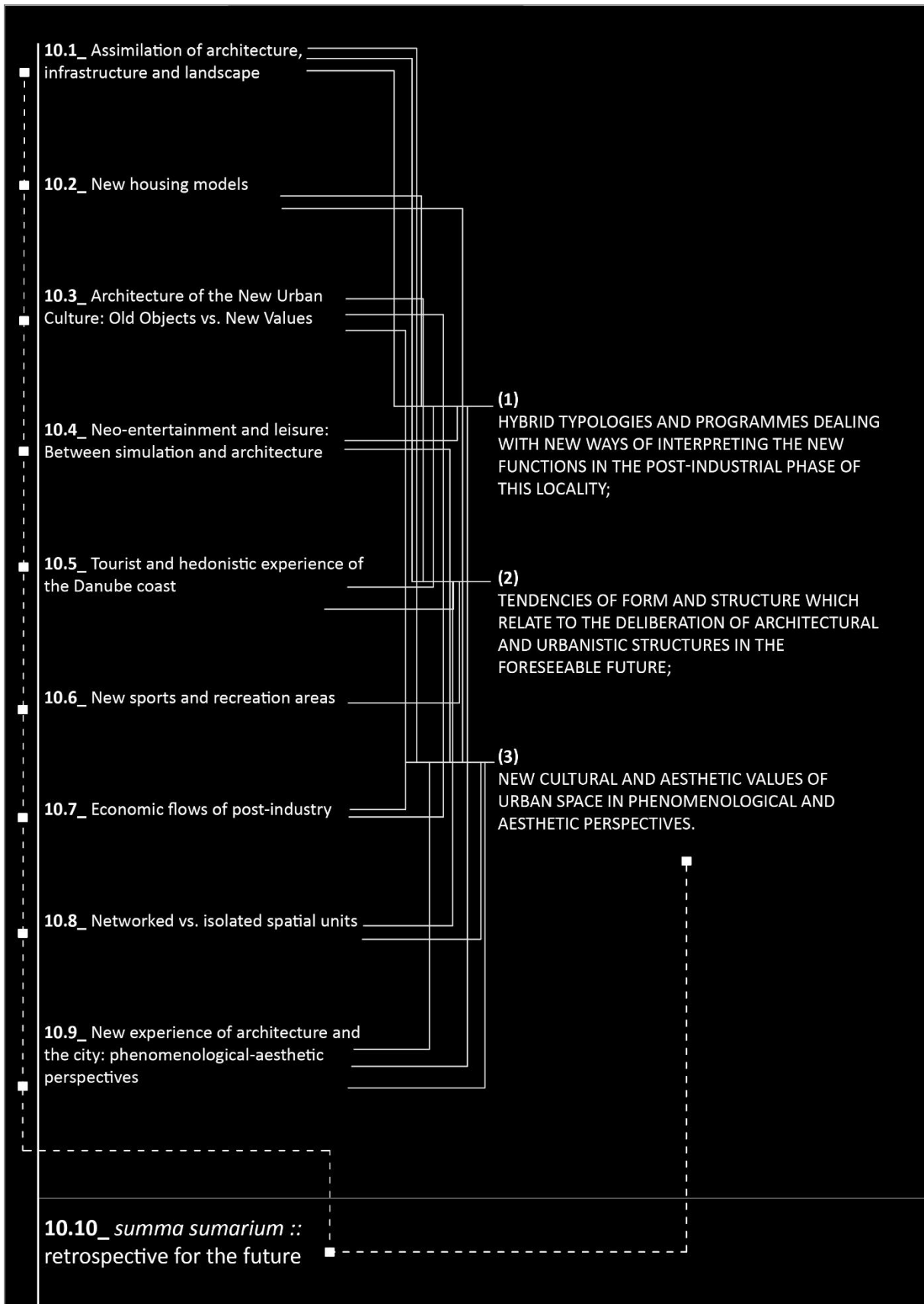


Figure 3 - Classification of the results into basic groupings that include (1) functional, (2) form-structural and (3) ambient-aesthetic domains of the architectural project

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