

ABSTRACT

of the dissertation by **Yessenbayev Arken Maratovich**
on the topic: «**Stages of transformation of a dwelling in the conditions of the main stages of its evolution**» for the degree of Doctor of Philosophy (PhD) in the educational program 8D07301 - «Architecture»

The relevance of the research topic is justified by the following:

1. The need to revise the established classification of housing and expand it.
2. The establishment of the specific influence of regional factors on the formation of new housing.
3. The limited variability of planning solutions and building morphotypes.
4. The identification of contemporary trends in the development of architectural, planning, and urban development solutions for housing and residential construction.

The object of the research is the spatial architecture of urban housing.

The subject of the research is the transformational variability of spatial planning techniques for residential structures.

The aim of the research is to develop the theoretical foundations for the formation of the architectural, planning, and urban development organization of the modern housing model based on a retrospective analysis of its evolution and prognostic transformation in time and space.

To achieve this goal, the following **research tasks** are addressed in the work:

- analyze the historical prerequisites for the formation of the main stages of housing evolution;
- identify the fundamental factors influencing the formation of housing transformation;
- study existing architectural, planning, and urban development solutions for housing;
- review the current classification of housing and the morphological structure of the city;
- systematize the functional, structural, spatial, and organizational aspects of the transformation process;
- identify promising trends in the development of housing transformation;
- develop a conceptual and theoretical model for the formation of modern housing, taking into account the dynamics of its promising development.

The methodological basis of the study is based on the use of a comprehensive approach to achieve the set goals and objectives:

- the method of analyzing sources, including: textual – scientific, archival, normative; graphic – photographic, design;
- logical modeling method – determining the algorithm for the development of the architectural volume under study based on the identification of cause-and-effect relationships, generally accepted methods of logic and analysis;
- field survey method – photographic recording, taking the necessary measurements, and collecting data on residential objects of different typological

groups in the territory under study. The current state and pressing issues of the housing stock in the major cities of Northern Kazakhstan – Petropavlovsk, Kostanay, Pavlodar, Kokshetau, Astana – were studied;

- sociological method – surveying respondents to obtain primary information about the conditions of their current housing and the formation of a new model for it;
- summarization of the results obtained – creation of graphical analytical diagrams and illustrations.

The study is based on factual material collected by the author in 2022-2025.

Scientific novelty: in accordance with the working hypothesis, the study for the first time:

- identified objective stages of housing transformation;
- established the relationship between architectural and planning, social, and urban transformation on the model of housing formation;
- identified shortcomings in the formation of modern housing;
- proposed recommendations for the architectural, planning, and urban development of a modern housing model;
- developed a universal conceptual and theoretical model for the formation of housing.

The practical significance of the work lies in:

- the development of a conceptual and theoretical model for the architectural, planning, and urban development of housing, and its possible application in the planning and implementation of housing design and construction;
- the formation of new and additional conditions in regulatory documents in the field of architectural, urban planning, and construction activities;
- the integration of research results into the academic environment. The information obtained has been incorporated into the educational program «B073-Architecture» of the NAO «KATIU named after S. Seifullin» and is used in lectures, coursework, and diploma design.

Provisions put forward for defense:

- the main evolutionary stages of housing formation;
- a set of fundamental factors influencing housing formation;
- principles of housing and residential development organization;
- basic schemes of housing transformation and vectors of its development;
- a universal conceptual and theoretical model of housing formation in the regional conditions of Northern Kazakhstan

Structure of the work: the dissertation consists of an introduction, three sections, a conclusion, a list of sources used (112 titles), and an appendix containing 51 pages of A4 illustrative material explaining and supplementing the text of the study.

Final conclusions. The study confirmed that the development of urban housing is a multifactorial process closely linked to the evolution of the city, socio-economic conditions, cultural attitudes, and scientific and technological progress. A retrospective and analytical approach made it possible to identify patterns in the formation and transformation of housing, determine the continuity of architectural

and planning solutions, and, on this basis, predict the directions of further development of the living environment.

As a result of systematizing historical, regional, and contemporary factors, the model of spatial organization of housing was refined and key requirements for modern urban housing were identified, including multifunctionality, flexibility of planning solutions, environmental friendliness, energy efficiency, and integration of service infrastructure. The developed classification scale and conceptual-theoretical model of housing formation provide a more accurate typification of multi-apartment residential complexes and create a basis for improving the regulatory framework and design practice.

Thus, the results of the study have both theoretical and practical significance and can be used in the design and urban development of the housing environment, including taking into account the regional conditions of Northern Kazakhstan and promising trends in urban housing architecture.

Prospects for further research. Further research should focus on an in-depth analysis of adaptive and transformable housing models, taking into account changes in lifestyle, forms of employment, and the demographic structure of the population. The development of a typology of multifunctional residential complexes and the study of their impact on the quality of the urban environment and social sustainability appear to be promising areas for research.

An important area of focus remains the improvement of the regulatory and legal framework for design based on the proposed classification model and the conduct of interdisciplinary and comparative studies aimed at forming universal and, at the same time, regionally adapted principles for the development of modern urban housing.