

# Theoretical Aspects of Design and Construction of "Alive" House in Conditions of Changes of the Environment of the Life-sustaining Activity

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**Abstract:** Arguments in support of the thesis of the necessity of acceleration of the creation of harmonious human environment in connection with development of the freelance on the West and in the Russian Federation are presented in the present work. Disclosed the contents of the spatial-property modeling of the apartment house, not only as point of residence of the human, but also as a place of work. Justified the importance and availability of ensure by the comfortable housing for those groups of citizens who engage in freelance and have a certain capital. Special place is given to the formation of the theory of the "alive" house in consideration of the peculiarities of the eco-friendly, investment and luxury housing.

## 1 Introduction

Currently, improvement of the quality of life, in particular the improvement of living conditions, is a key question of government economic policies of developed countries. That's why the scientific substantiation of the necessity of harmonization of the human life and activities environment is the priority for scientific researches, conducting nowadays.

Globalization causes the necessity to study and change the human life and activities environment. Managers of many of the big and medium companies don't consider the daily presence of their employees in the offices appropriate. Ever more valuable resource, on their point of view, is becoming the ability of employees to generate and create the new product, added value, to provide services, but not just stay in the workplaces in rented offices. For example, specialists and developers of Yandex are working on flexible schedule and can come to work at any time, 24 hours a day. So, Yandex provides a lot for comfortable work, these are dining rooms, kitchens for staff, fitness rooms, music rooms, rumpus rooms, and, of course, work areas, which organized in recreation areas with ability to work. The main principle is convenience for staff, more space for concentrated work, nothing should distract.

Reason for this publication became the abundance of conflicting views, concepts and assessments of prospects for the development of the idea of "alive" house for architects, builders, environmentalists, power engineers, biologists, hygienists and other researchers. Purpose is a critical reassessment of existing views on the formation of the theory of "alive"

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house and presentation of the author's own approach to designing and building of "alive" house in a changing life-sustaining activity environment.

## **2 Methods**

Number of studies, which were performed in the post-reform period in Russia [1, 2], stated that effective functioning of the housing sector is one of the main system factors of the sustainable social-economic development of the country. Direct economic efficiency of the housing sector is significant itself. But its indirect impact on the efficiency of social reproduction of capital is more important as it defines the level and quality of the life of citizens. Moreover, the solution of the housing problem is able to "stretch out" any regional and national economy from the stagnation.

Housing market has an investment function [3]: excess of efficient demand for housing over the available one creates supreme significant opportunities for real and indirect investments which not only give the fast and economically viable effect on this stage, but also bring maximal income for investor as a result of action of the accelerator.

Study of essential content and organizational-economic nature of eco-friendly [4], luxury, investment, energy efficient, "smart" and other types of housing [5] is very urgent nowadays. Even with very large number of studies undertaken on the above-mentioned segments of its market. As in this case question is not about the limited budgetary means of the different levels (federal, regional, municipal), but about the private investments (proper or borrowing costs of citizens).

First of all, it's necessary to mention "The Universal Declaration of Human Rights" [6], which was adopted in 1948. In accordance with it, the right for adequate housing is the important component of the right for the adequate standard of living. Appropriate housing shall be understood to mean not only as the roof over the warm corner, but a living conditions, which provide non-interference to private life; suitable living space; physical availability; suitable safety; guarantees of housing preservation; stability and reliability of the existing structures; appropriate lighting, heating and ventilation; suitable basic infrastructure, such as: water supply, sanitation and waste disposal; corresponding quality of environment and factors, which influence on health, suitable and available location of housing in relation to the place of work and service departments. All of this should be available at affordable prices.

Housing as a city subsystem, according to V. I. Sidorenko, has to have the highest qualities, and to protect from both natural, and physical factors of influence. Complex of the environment components, which influence on the human, should include two groups: natural geo-ecological conditions (climate, air, water, soil, vegetation) and conditions, which were artificially created by human (noise, vibration, radioactive and electromagnetic radiation), including a set of factors related to the construction (used building materials); and psychological (proximity of dangerous production, specific prospects) [7, p. 15].

We believe [8], that housing is a specific capital durable goods, which satisfies the more essential needs of the independence of the person, maintenance of separate economy, creation of the own family, privacy, obtaining more comfort and domesticity. Housing characterizes social status and income level of the person. Main criterial and generic feature, which allows to classify housing as unit of the legal regulation, which is distinct from others, and the main its specific feature is the inextricable connection with ground.

"Eco-housing" in the conditions of modern market economy is a specific durable goods which is designed for human habitation, and satisfaction of the human needs not only in privacy, but n creation of their own family, maintenance of separate economy, independence, but first of all in the environmental friendliness and comfort. To the factors which characterize the eco-friendliness of housing we include "healthy" planning, favorable

environment surrounding area, usage of the green building materials and equipment only, exploitation of the energy efficient equipment; separate taps for drinking water, high level of ventilation and air conditioning systems, good sound insulation. Comfort factors include remoteness from the city and the quality of adjacent territory [9].

Since environmental and hygienic aspects of architectural and construction solutions of habitable territories are inseparable from the problem of residential buildings, the concept of the housing can't be limited with walls of the building. Robust relationship and interdependence of the intra housing and external urban environment defines the necessity to consider the living environment as a single system "human - living cell - building - micro-district - urban residential district". For example, Yu. D. Gubernsky considers "*living environment*" as a complex of conditions and factors, which allow person to perform their non-productive activity in habitable territory of the city [10].

"Energy efficiency of residential buildings" is the indicator, which characterizes the relation of the useful effect of the use of energy sources to the volume of their consumption by residential building as unified energy system, which is exposed to the influence of the external climate on the cover, and as well as the ratio of the energy collected in the exterior wall envelopes of the building, and energy which comes from the air-conditioning systems of the building and internal technological sources [11].

To ensure comfortable conditions of residence and work, housing must meet three basic requirements: satisfaction of all main physiological human needs, their psychological needs and protection from risk factors in the housing, from infections and accidents at home. Enclosure pattern of buildings should create comfortable conditions for internal environment indoors. Criteria which determine the size of the living space and aerial cube, which is equal to the product of height by the square of the floor area are associated with it. All these parameters are closely linked and should be considered in conjunction [4, p. 25].

Nowadays, space-property modeling of the modern housing has great importance. According to E. A. Chefranova and A. D. Sidorenko [1] opinion, it results from a defining significance of the relations of property in the apartment condominium house, as in the socio-technical system, and necessity in their account on the all stages of the life cycle of the apartment residential building which provides a possibility of protection of the property and non-property rights of owners of residential and non-residential accommodations. This simulation allows to get the concept of legally significant relationships between people, and between people and real estate. Their accounting at design, construction and operation of buildings is an important factor of ensuring the possibility of creation, in the conditions of joint property, comfortable and safe life-sustaining activity environment, and also possibility of protection of property and non-property rights and interests of the owners of residential and non-residential accommodations and formation of effective and responsible house owner.

### **3 Results**

Results of our research [5, 6, 10] suggests that its useless to build a new world with old view of the Universe. Since any project starts with modeling of the desired result, we believe that today its necessary to "draw" the perfect image of the future housing.

We share the ideas of modern explorers, who are the enthusiasts of the "alive" house [3, 9], because we feel the necessity of renewal of the space of human activity, their homes, towns, cities and the planet as a whole. Human should strive to become healthier and happier with the help of space. We consider the concept of "alive" house especially urgent in the conditions of development of freelance in our and foreign countries, when person not only lives, but works at home for most of the time.

It's possible to achieve this result only at the realization of the interdisciplinary

approach, romantic of which is the author of this publication. Therefore, it's necessary to develop theories and write new laws for the introduction of future technologies, without looking at stereotypes and circulars (methods) of researches conduction. The time has come to stop to qualify the researches as true- and quasi-scientific, "right" and "wrong".

## 4 Discussion

It should be emphasized that the word "alive" house is quite unusual. Certainly, we met it before: often, when people get into some house or flat, they say: "This House is alive". Only somewhere on a subconscious level, there appears a feeling of comfort, warmth, coziness. And it doesn't depend on the sizes and beauty of the house, quantity and quality of furniture, design: "alive" house is a space of life, which is consonant with person or, in another words, which is in resonance with them. It is difficult to qualify the concept of "aura" properly, is it spiritual or material?

There is a great many of interesting, unusual, unconventional, and original approaches. So, "smart home" and "energy efficient home", "luxury", "eco-house" also have direct relation to the "alive" house. Concepts of "quality" of housing [1, 4, 10], "Feng Shui", "vastu" are also in the inextricable connection with "alive" house. But nothing of stated above, being apart, can't be identified with the notion of "alive" house definitely. Although these notions have traits, elements, characteristics which more or less peculiar to it.

## 5 Conclusion

Arguments in support of the thesis of the necessity of acceleration of the creation of harmonious human environment in connection with development of the freelance on the West and in the Russian Federation are presented in the present work. Disclosed the contents of the spatial-property modeling of the apartment house, not only as point of residence of the human, but also as a place of work. Justified the importance and availability of ensure by the comfortable housing for those groups of citizens who engage in freelance and have a certain capital. Special place is given to the formation of the theory of the "alive house" in consideration of the peculiarities of the eco-friendly, investment and luxury housing.

Author's definition of basic categories is provided for the scientific, expert and professional community, involved in research of the problems of functioning and development of the housing in conditions of changing of the human life-sustaining activity environment and within formation of the "alive" house theory. "Alive House" is an opened socio-techno-bio-eco-geo-system on the establishment, operation and development of which affect not only physical, technological, environmental, geological, economic, but also biological, energy, emotional, religious, psychological, esoteric and other factors, both inside and outside the building.

Main criterial and generic feature, which allows to classify "alive" house as real estate and legal regulation unit which differs from other ones and its main specific feature is the ability to create an environment, which forms human personality on predetermined spiritual, psychological, biological, intellectual and physical parameters.

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