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**SOCIAL SCENARIO AND FORMATION OF THE CONCEPT
OF A MULTI-APARTMENT RESIDENTIAL COMPLEX**

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Abstract. The article describes the features of the scenario approach for creating the concept of multi-apartment urban housing, in particular, residential complexes; shows the expediency of its application for such tasks; defines the social scenario of a residential complex; gives examples of possible socio-demographic scenarios that can form the basis of a general urban planning, spatial and planning concept and be a motivated basis for drawing up a task for designing multi-apartment residential complexes.

Key words: multi-apartment residential complex, socio-demographic scenario, linguistic, socially effective, architectural and spatial model

Problem statement

Nowadays, approaches to designing multi-apartment housing in large cities of Ukraine should change. This is evidenced by the existence of many problems that arise in this segment of residential real estate. In our opinion, this is a conflict between price and quality, a discrepancy between the housing environment and the expectations of residents-consumers. Also, these problems arise due to significant miscalculations of developers who focus on the so-called actual demand of various segments of the population for urban housing. In our opinion, some of these problems could be solved if we involve a scenario approach at the stage preceding the development of the design task in the process of creating multi-apartment formations of various capacities and densities.

Scenario approach allows "...to clarify or comprehend actions currently taken in the light of future events; allows you to study a diverse and uncertain future; provides for a systematic approach; allows you to take into account qualitative data and strategies of all interested parties; reminds that information and predictions are never neutral and always reflect someone's interests; supports the use of various methods; calls into question biased predictions and forecasts..." (Pereverza, 2011).

In the scenario approach usually, a combination of qualitative and quantitative approaches is effective, such as: taking into account the opinions of specialists (of research) and experts in various areas of knowledge related to architectural design in sociology, demography and psychology, as well as economics and urbanism; using methods of collective discussion and brainstorming of specialists-architects, sociologists, urbanists, economists, etc.; conducting up-to-date monitoring and analysis of indicators and parameters of the studied socio-spatial structures, which are multi-apartment residential complexes and their users.

The scenario approach can be implemented during the creation of socio-demographic models of future housing education, and accordingly influence its conceptual urban planning, spatial and functional planning solutions.

Status of the problem research

Identification of problems that arise in Ukraine today and ways to solve them; analysis of the current state and latest trends in housing construction in Ukraine and the world (European experience), design methods covered in the works of I. P. Gnes (Gnes, 2013), H. D. Yablonska (Yablonska, 2009), (Yablonska, 2013), (Yablonska, 2016), (Yablonska, 2018), V. I. Knysh (Knysh, Yablonska, 2017), (Knysh, Yablonska, 2018). Fundamental analytical work on modern urban housing is presented in a series of books published by a+t authors Aurora Fernández Per, Javier Mozas (Aurora Fernández Per, Javier Mozas., 2016). K. V. Kiyanenکو's fundamental research is devoted to the issues of social modelling of housing.

(Kiyanenکو, 2015). The scenario method of forming apartment buildings is proposed by S. H. Buravchenko (Buravchenko, 2020). A purely sociological approach to assessing the quality of the residential environment by residents is comprehensively presented in the collective monograph of E. Libanova, O. Osaulenko, L. Cherenko (Libanova, Osaulenko, Cherenko, 2020). But the issues of creating socio-demographic scenarios of local communities of residents, as a motivated basis for determining the direction of urban planning and spatial conceptual solutions of multi-apartment formations, in particular, residential complexes, require updating and research.

Purpose of the article

The article defines the relevance and significance of socio-architectural aspects in the design of multi-apartment housing, points out the close relationship between the socio-demographic characteristics of a local-territorial community and architectural and urban planning solutions of multi-apartment residential complexes, and provides several examples of possible social scenarios that can become the basis for an architectural and spatial model of a residential complex.

Research and discussion

When designing multi-apartment residential complexes, for their effective use over a long time, it is possible to apply a scenario approach, which consists in formulating possible stories of the development of states-events in the life and actions of people living in it, in the rapidly changing conditions of a modern city. The purpose of this approach is to form certain socially effective and architectural-spatial models of a residential object that would correspond to the diverse demographic, socio-economic, mental and other conditions of potential groups of residents of such complexes.

Despite the absolute diversity of modern urban residents, when forming the task and further designing multi-apartment residential complexes usually either a normative-unified or development-marketing approach is used. This leads to various problems in the further convenient and efficient use of housing by consumers.

Events that do not fit into the standard course of things cannot be predicted based on previous trends. The reason for this is the rapid changes in the social, economic and technological spheres, which had no precedents in the experience of a more or less comfortable use of living space. Transferring previous design experience to the future does not always give a positive result. It can lead, on the one hand, to the dissatisfaction of residents-users with housing that does not meet expectations, and, on the other, to miscalculations of investors and developers who rely on changing trends in the real estate market.

These models are based on a social scenario, which can be defined as a set of socio-demographic states of a local group and a sequence of possible events in people's lives that occur in time and space of a residential complex. Socio-demographic conditions of potential users determine their main preferences for the residential environment. Possible events change their life needs and requirements for housing, and accordingly, the processes of life management, as well as the most convenient (comfortable) use of various spaces in multi-apartment residential complexes.

The scenario that is created has a hypothetical nature, includes a description of alternative variants of the future, as chains of states and events that have a causal relationship, internal consistency, reliability and explanatory-probabilistic nature.

The social scenario can serve as a basis for creating project concepts of urban housing, in particular, such self-sufficient integral objects as residential complexes. This approach, at the stage of creating a concept, allows you to model situations of the interaction of an individual, family or group of residents with the living environment (space), including in a residential complex, as a local territorial – autonomous integral housing entity, which consists of residential premises and apartments grouped around vertical and horizontal internal communications, elements of house and urban infrastructure, house territories (yards) with landscaping, as well as open and closed parking lots, entrances and approaches, etc.

The scenario of life in an apartment complex is a locally generalized model of the life of a group of people (community) in a certain territory. This scenario can be “written”, that is, it is presented in the form of a linguistic, hypothetical model that reflects several community-specific processes. It can provide answers to some questions, namely: what kind of people (age, marital status, status, mentality, wealth) and how they live (lifestyle, preferences); what they want to get from using certain elements of the housing environment; what priorities they set for themselves when choosing and using the housing environment. In other words, this model takes into account the social, demographic, property and status aspects of a person's life, that happens and changes over a certain period. The model assumes diversity both in terms of socio-demographic, property and status of people belonging to this community, as a condition for the viability of such an entity – “multi-apartment residential complex”.

The scenario is formed based on socio-demographic characteristics of the main and specific social groups of the urban population.

In the past, when designing mass multi-apartment housing, only the type of family was taken into account by the number of its members, with very strict rationing of the area. And later, in fact, only its property status was taken into account, that is, the financial capabilities of the person (family). Previous experience, which was largely negative, both in the conditions of an extremely regulated planned socialist and poorly regulated market economy, showed that the creation of a comfortable housing environment should include a list of such characteristics as age status, social status, property status, as well as lifestyle, the mentality of future users. Also, today it is impossible to neglect the time factor when designing housing, that is, how long a potential consumer plans to use it – constantly, for a long time or for a short time.

Each of the above features has many states that form a complex mosaic that characterizes both the potential consumer and his needs for housing, its quality and with open – or closed-house infrastructure, etc. This should affect the functional-planning (function and structure) and three-dimensional-spatial (number of storeys, morphology, location) methods of organizing multi-apartment residential complexes. Moreover, these features should be taken into account at all levels of the “housing” system – residential development, residential building (complex), residential unit (apartment), etc.

All this socio-demographic heterogeneity of the urban population should be adequately manifested in the variety of use of territorial-urban planning and architectural-typological techniques in the design of residential complexes. There are currently a lot of these techniques. Their use in real design will be able to ensure maximum compliance with the needs and capabilities of the local-territorial community of such complexes. This will also allow you to diversify their architectural, planning and three-dimensional solutions.

There can be many variants of social scenarios and corresponding urban planning and architectural concepts of multi-apartment residential complexes.

For example, a residential complex is calculated by family type – for singles (50 %) and simple families with one or two young children (50 %); by age-mainly for young and below-average age; by social status – mainly for working and studying (students); by property status – for the poor; by living time – a small part of housing users intend to live permanently (20 %), the other (the majority) – for a long time (working singles, young couples without children) – 70 %, the third part – for a short time (working people, students) – 10 %. Such a limited and diverse composition of residents assumes that the comfort level of this complex will be the minimum allowable, and the density will be quite high (600–700 people/ha). That is, living conditions, planning solutions, areas of residential premises, house infrastructure and arrangement of the house territory should

provide, on the one hand, acceptable living conditions (normative and permissible), and on the other, correspond to their property status and lifestyle.

In general, the lifestyle of such a community is quite dynamic and open; the requirements for the arrangement and layout of residential units do not provide for large full-fledged apartments of the “family nest” type. It can be small-room apartments, studio apartments, or smart apartments. The location of residential units in this complex can be differentiated. Vertically: on the lower floors – apartments for families with children, on the upper floors – studio apartments for working singles and students. Horizontally: isolated blocks-houses united by one territory and adjacent infrastructure. The presence of a separate courtyard in such a complex is also not a priority. This can be an open area attached to the house with places for short-term recreation and public sports, with a small play space for young children.

Such a socio-demographic version of the user community provides for the organization of the corresponding infrastructure of the residential complex. For example, the availability of places for storing bicycles and strollers; auxiliary common areas for storing things and sports equipment, etc; small common areas for sports (with exercise equipment); a mini kindergarten or a space for children where you can leave them for a while under supervision; household premises (self-service laundry), etc. You also need parking space (underground, above-ground, open type) at a rate of 50 % of the number of residential units. It is relevant to have small office space in such a complex, where you can rent a place and time for work or study. It is possible to provide a room for a small cafe, fast food, an order table, a mini-store, etc. The main condition is that the infrastructure elements meet the complex needs, lifestyle and financial capabilities of residents.

Such a linguistic model of the socio-demographic scenario can have several conceptual architectural, spatial and typological options for housing education solutions. For example, this complex can be solved as several separate residential buildings-plates of variable storeys, with a mixed sectional-corridor or corridor-gallery structure, partially united by a stylobate, where both infrastructure and parking spaces for residents can be located.

A different socio-demographic scenario is possible for a multi-apartment residential complex. The local-territorial group of potential consumers includes, by family type of different ages – simple (nuclear, 1–2 children) – 60 %, as well as complex families (adult with children and elderly parents) – 40 %. The family may include those who study and work, housewives, pensioners, according to their property status – average income, who need comfortable housing for permanent residence.

Such a local community usually tends towards a secluded lifestyle focused on family, raising children, and so on. The family way of life, average income and intention of permanent residence imply increased requirements for the quality and comfort of private residential and intra – and adjacent-space of general use. These requirements should refer to the residential units (apartments) themselves, to their area and zoning; to the presence of isolated kitchens, bedrooms, summer, plumbing and utility rooms; to the quality of microclimate, natural ventilation, orientation, noise protection, etc. Also, in general, such a community's priorities when choosing housing will be focused on less amount of apartments per floor and less amount of storeys, as comfort conditions for permanent residence. Such a community usually has increased requirements for the availability of guaranteed security measures for both intra-house and yard space. Priority for them is a courtyard without outside access, with appropriate landscaping and greenery, with clear zoning of playgrounds for the elderly, family recreation, children's areas and outdoor sports spaces. The internal infrastructure of the house may include a mini kindergarten, club spaces for children and the elderly, possibly a small cafe for family holidays, fitness, hair salon, mini market, etc.

The socio-demographic scenario given above can, for example, be conceptually conceived in the form of a blockhouse, medium storeys, sectional structure with 3–4 apartments on the floor of a residential section, different in the number of rooms (bedrooms), with through passages (courtyard-street) for easy use, with the use of security measures (automation or concierge), with the organization of aboveground (stylobate) or underground parking (100 % of the number of residential cells), with the placement of intra-house infrastructure focused on the courtyard of the complex. It is also possible to differentiate the types of apartments by room size, total area and placement in the structure of the house (section). For example, vertically, i.e. multi-room apartments for complex families on the lower floors or two-level multi-room apartments on the upper floors, etc.

For further drawing up a design assignment, you need urban planning and natural and climatic analysis of the site, analysis of transport and pedestrian accessibility, urban infrastructure, etc. Of course, the further design requires a more detailed study of the task, based on the built-up area and location of the site, as well as calculation of both the type, number of apartments and their area, availability and area of premises for house infrastructure, calculation and organization of places for closed and open parking, etc.

But the creation of a socio-demographic scenario and the selection of a conceptual spatial planning solution that will suit it on the principle of “gloves” will make it possible to more fully and sufficiently ensure that the architectural solution of the residential complex meets the needs and capabilities of potential consumers of a certain part of the urban community and, in the end, to avoid major miscalculations of developers, investors and developers that take place today.

Conclusions

Housing, in general, and multi-apartment housing, in particular, is primarily a socially-oriented product. The vast majority of citizens do not build their housing. He chooses it, that is, buys or rents what others have come up with, designed and built. The question of how much this corresponds to their interests, ideas and needs is always open.

Who today determines how much housing will meet the needs and lifestyle of a potential consumer? In theory, it is a potential consumer, but in practice, it is a developer or investor. But, in this process, there is an intermediary who carries out (designs) multi-apartment housing – an architect. Going along with the customer is the easiest way, but not the most effective for all the actors in this process. The investor is interested in a quick result. Monitoring conducted by the customer's representatives is focused on fleeting, often random circumstances and situations in the residential real estate market.

An architect who designs multi-apartment housing should not only be fluent in a variety of urban planning, spatial and functional planning techniques for organizing multi-apartment housing, but also take into account modern research on sociology, urbanism, the psychology of the citizen, understand the needs and capabilities of the urban community and, based on this knowledge, develop a socio-demographic scenario for creating an architectural concept of housing education.

If you are motivated and persistently offer solutions that will be more socially adapted to the interests of the end-user, then gradually the situation as a whole will level out. This is a regular European practice and is already beginning to manifest itself in some residential facilities that are being built or started to be operated in Ukraine: in Kyiv, Lviv, etc.

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СОЦІАЛЬНИЙ СЦЕНАРІЙ І ФОРМУВАННЯ КОНЦЕПЦІЇ КВАРТИРНОГО ЖИТЛОВОГО КОМПЛЕКСУ

Анотація. На ринку житлової нерухомості в Україні існує низка проблем. Необхідно змінити підходи до проектування багатоквартирного житла. Деякі проблеми можна вирішити, використовуючи сценарій підходу на етапі, що передує створенню проектного завдання.

Він полягає у формуванні можливих історій розвитку держав та подій у житті та діях жителів у швидко мінливих умовах сучасного міста. Його метою є формування конкретних подійних та архітектурно-просторових моделей житлового комплексу, які відповідали б різним демографічним, побутовим, соціально-економічним характеристикам потенційних груп мешканців. Ці моделі базуються на соціальному сценарії. Це сукупність соціально-демографічних умов місцевої групи жителів.

Це послідовність можливих подій у житті людей, які вчасно відбуваються в житловому комплексі. Соціально-демографічні характеристики потенційних мешканців визначають основні переваги щодо організації середовища проживання.

У статті представлено кілька варіантів соціальних сценаріїв та відповідні містобудівні та архітектурні концепції багатоквартирних житлових комплексів.

Використання соціального сценарію на етапі створення концепції дозволяє моделювати ситуації взаємодії окремої людини, сім'ї чи групи жителів із середовищем проживання (простором). Створення комфортного середовища проживання повинно включати ряд ознак: вік, соціальний статус, майновий стан, спосіб життя, менталітет мешканців. Також необхідно враховувати час перебування в житловому комплексі – постійний, довгостроковий та короткочасний.

Соціально-демографічна різноманітність характеристик мешканців повинна проявлятися в різноманітних містобудівних та типологічних прийомах. Це допоможе забезпечити максимальну відповідність потребам та можливостям місцево-територіальної громади, яка проживатиме у таких житлових комплексах. Це також урізноманітнить їх архітектурні, планувальні та об'ємно-просторові рішення.

Ключові слова: багатоквартирний житловий комплекс, соціальний сценарій, подія та архітектурно-просторова модель.