

Social and Economic Prerequisites of Formation of Multifunctional Residential Compound

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ABSTRACT

The article describes social and economic prerequisites for the formation of multifunctional residential compound in the Chechen Republic and on a nationwide scale. Investment attractiveness of multifunctional residential compound caused primarily by the globalization of city-planning facilities. In view of to the deficiency and high prices of land in major urban cities of the world there become necessary of multiple increasing of building density, the measures are taking to increase the height of the constructed multifunctional compound up to 400-500 meters. It is shown that during designing of residential compound it is necessary to take into account its location and the following parameters: the features of construction and climatic region, the size of the city, placing of the compound in the city structure with regard to the city center, the size, configuration and topography of the construction site, the availability of support buildings, etc. One of the most important parameters is the estimated population density MFRC, which is set according to the standards of housing provision, the level of comfort of living and other parameters. It is outlined that the creation of an aesthetically city-planning ensemble of the residential compound depends primarily on urban planning ideas and the idea of subordination of all building components. The formation of the artistic image of the residential compound is influenced by the architecture of the existing building, natural and landscape features of the territory of the projected compound, composition and reception of public institutions to the living environment. The search of originality of residential development is built on such zoning, in which the organic unity of the three functionally distinct components - the yard, street, square - allows you to clearly identify the structure-foundation of architectural and spatial composition. It was determined that a differentiated approach in regards of placement of various types of residential buildings in housing development of MFRC allows to overcome the stereotype of its spatial composition and to create for different population groups favorable conditions for living. The use of noise proof residential houses is also possible, where acoustic comfort is achieved by applying of planning methods of solutions at home or apartment plan. In the initial phase of design of the residential compound the typical demographic composition of the city's families and their structure should be considered.

KEYWORDS

Residential areas; microdistrict; apartment;
residential areas; public space; city-planning
complex; multifunctional residential compound.

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Introduction

In modern conditions the folding new social and economic formation is characterized by more intensive development of urban areas without taking into account complexity and sustainability of building (Ryabov et al., 2014a; 2014b; Kurs et al., 2013; Vlot & Gunnink, 2001; Startsev et al., 2011; Buznik, 2013). Widespread

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distribution in native architectural practice, beginning from 50-60s, received an arrangement of urban area for residential districts, microdistricts and quarters (Maloyan, 2004; Novikov, 2007). These residential educations received multilevel service system, respectively: episodic, periodic and daily. However the residential zone was building in the process of construction of the area primarily, whereas the public zone, consisting of trade objects, food services, public services, culture and others, transformed into unfinished building. It led residents to loss of possibility to use elements of primary service. Accordingly, they had to use services of objects of periodic use, i.e. to go shopping to community centre of the district (Buznik et al., 2015; Biefer, 1981; Panin et al., 2013; Koshelev & Belyaev, 1967; Antipov et al., 2012; Beleshnikov, 1996; Antipov, 2011). It was necessary to change the current situation by replacing the concept “quarters” to “architectural complex” in the next stage of development of architectural practice (Gelfond, 2006; Lisitsyan, 2010). It meant an association of building estate – quarters into a single complex with elements of primary service of the population: food shops, industrial goods, cafes, post offices and others. Arrangement of objects of service in “architectural complex” was performed in the following options of space and town planning (Pavlov, 1973; Ferraris, 2005; Kablov, 2008; Ryabov et al., 2013; Kolobnev et al., 2012):

- built-in, when public service objects are located within enclosure structure at the level at first and second floors;
- built-in and built-on, when public service objects are partly located within enclosure structure of a residential house. They can be placed at the level of first and second floors or partially come out for fence outer walls of a residential house;
- free-standing, creating a single complex, consisting of linear "L"-shaped and "U"-shaped or closed form in terms of spatial education.

Materials and Methods

Thus the term “architectural complex”, entered in the 70-80s, became a prototype of the modern concept “residential complex with service elements”.

In the 90s the concept “residential complex” has undergone significant changes in the social, economic and political life of the country, which acquired more significant and privileged knowledge than social concept. This is primarily due to the fact that business in public life of the country became the financial and economic basis in its development.

Nowadays construction of multifunctional residential complexes with elements of public service becomes more and more actual (see fig. 1 and 2). Residential buildings are functionally interconnected with public facilities in these complexes. It allows residents of the complex to significantly reduce the time for buying food products, municipal-domestic service, as well as satisfaction of their needs for culture and mass leisure.

Experience of design and construction of multifunctional residential complexes in Moscow, St. Petersburg, Rostov-on-Don, Krasnodar, Samara, Yekaterinburg, Grozny and other cities shows that such complexes are characterized not only in major megapolises, but also in the peripheral regions of the country.

Results and Discussions

Investment attractiveness of multifunctional residential complex was caused primarily by globalization of architectural objects. It was necessary to massively increase built-up density, taking into account deficit and high prices for the land in major urban megapolises. In order to achieve this purpose, it's necessary to take measures for increasing the height of multifunctional complexes, erected to 400-500

meters. In modern conditions multifunctional complexes are formed from the following functional elements:

- office ones up to 25-30%;
- trade, sporting and entertaining ones approximately 20-25% and laggard part renders suitable for residence.



Figure 1. Multifunctional complex in Grozny “Grozny-city”



Figure 2. Multifunctional complex in Grozny “Grozny-city”

At the same time, construction of such facilities requires significant financial costs to perform complex architectural and planning concepts and structural ones, as well as equipping with modern technological equipment. Accordingly they refer to expensive objects, projects of which can be realized only by category business-class and premium-class. At the same time under conditions of continuing crisis,



realization of a project of multifunctional residential complexes in economy class doesn't turn to be possible.

It led to reduction of interest of common constituent in multifunctional residential complexes, while the residential part continues to maintain its relevance. However, there is a tendency in favour of development of housing by category business-class, i.e. liberal share is occupied by expensive apartments.

In the next stage it can lead to decrease in demand and residency of such a level, that it may affect on development of such complexes as a whole. So nowadays it's necessary to decide the question what multifunctional residential complex must be tomorrow, commercial or social. This affects future direction of development of architectural and planning structure, taking into account social and economic characteristics of such objects in both large cities and small towns.

Unfolding social and economic situation in the country (Tetior, 2009; Gairabekov et al., 2015a; 2015b; Taimaskhanov et al., 2016), periodicity of recurrence of crisis phenomena in global economy more significantly reflect on welfare of ordinary citizens. There are job cuts because of crisis phenomena, more and more highly qualified people become unemployed. They appear on a waiting list in labour markets, while funds, allocated to them because of loss of jobs, are insufficient to support themselves and their families.

In view of this, it's necessary to prepare the legislative and regulatory framework not only for juridical persons (CJSK, OJSK, LLC), but also for physical persons – private entrepreneurs to take part in social and economic life of the country. In addition, members of investment group on design and construction of multifunctional residential complexes can be representatives of both juridical and physical persons.

If juridical persons can afford to invest construction project at its own expense, physical persons can't afford it. Accordingly, the legislation needs to determine a list of members of the investment group with different social status and to provide them with equal opportunities. It can be achieved by obtaining credit and financial assets, all investors - participants of design of the object. Equal rights and obligations of participants of investment group are guaranteed legislatively by applicable public authorities of the RF. In the next stage it's necessary to make participation of investment groups regulatory in management of both public facility and residential property. It makes most sense to prepare physical person of number of investors – members of the project group in the complex for formation, management and functioning of multifunctional residential complex. Accordingly, it's necessary to ascertain new information data for them:

- social status – a worker, an employee or temporary unemployed;
- family status (married, unmarried);
- demographic structure and family membership;
- availability of education (specialty, profession);
- apartment availability and need for improvement of residential conditions;
- salary level on minimum statutory monthly pay;
- paying capacity on repayment of credit rate;

Basing on the information, obtained from members of the group in the investment project, it's necessary to determine the need:

a) in residential zone:

- types of residential houses on a class and their number;
- number of apartments with composition of rooms, basing on demographic composition of each member of family;

- number of apartment.
- b) in public zone:
 - a list of objects of complex service;
 - number of work places in each object, basing on needs of members of the investment group;
 - determination of composition of composition of placements of service objects, in accordance with the statutory requirements (SNiP, GOST and others);
 - determination of appointment of service objects on architectural and planning concept and space and town planning (built-in, built-on and free standing);
 - to develop architectural and planning concept and space and town planning of the multifunctional residential complex.

In the design process of the multifunctional residential complex it's necessary to specify number of work places in public zone for members – investors, and also to specify guaranteed work places in public zone of the complex.

Conclusions

In accordance with this, it's necessary to make changes in methodology of determination of architectural and planning structure and space and town one of multifunctional residential complexes, taking into account social and economic conditions of inhabitants, participating in the investment project. It will allow each family, participating in this project, to rely on employment of members of their families, according to their pre-filed application for obtaining work places in the complex.

Thus, address planning with need of family in the apartment, in accordance with demographic composition of family, as well as providing work places for each family in public zone in the complex will allow you to reduce social unrest in society.

Disclosure statement

No potential conflict of interest was reported by the authors.

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