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Transformation of industrial territories

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Abstract. The problem of removing industrial enterprises from the historical center of the city and the subsequent effective use of the territories has been relevant for Western countries. Nowadays, the problem is crucial for Russia, its megacities and regional centers. The paper analyzes successful projects of transforming industrial facilities into cultural, business and residential objects in the world and in Russia. The patterns of the project development have been determined and presented in the paper.

1. Introduction

Nowadays, historically established industrial sites located in the central part of the city do not meet the requirements for the development of territories. This spoils the appearance of the city as an integral architectural and urban formation, limits its development, reduces the economic value of land, and increases environmental risks [1].

There are numerous successful projects aimed at transformation or redevelopment of industrial sites [2-4]. The most successful renewal urban projects are the London Docklands in London (area of 421 hectares), the Confluence Lyon in Lyon (150 hectares), and the Fjord City in Oslo (225 hectares) [5]. In Russia, especially in large cities, the process of redevelopment captures vacant industrial sites, for example, ar-space Vinzavod in Moscow, a new residential district Kamenny Ostrov (a former film-making factory) or the House by the Sea (a former plant Plastpribor) in St. Petersburg and many others.

2. Methodology

Redevelopment is a process of transformation of industrial zones and the thrown industrial objects for the purpose to change their functional purpose and their most effective use at present. The term «redevelopment» is obliged by emergence to America. The basis of the word is «redevelopment» and the prefix “-re” that means «again». Redevelopment is re-planning, revision, change, restoration and so on.

This process has gained the widest circulation in the USA and Europe within the last 40-50 years when the industry began to leave the city centers in search of cheaper, effective places for existence on suburbs. There were first companies which began to buy up the outdated enterprises and to rehabilitate



them in attractive real estate objects. Thus, the abandoned industrial territories and objects became a call for architects.

Transformation of Old port in Montreal (Canada) to the public park became one of the first projects. The old port was located between Saint Lavrenti's river and historical quarters of Montreal. The changes made by architects have made the park the favourite place of citizens. The structure of the park is penetrated by dynamism, and is capable to change and adapt to various actions.

One more striking example of redevelopment is in Montreal as well. You can see a housing estate with commercial rooms on the first floors (Redpath Lofts) in the former sugar plant (Figure 1). Architectural language increases the industrial character what tell facades, abundance of metal, glass, a set of transitions and terraces here about. And interiors opposite to us assure that this place is convenient for comfortable and cozy accommodation. Floor spaces and the courtyard where the picturesque garden was stretched, became a lock for inhabitants and the public. According to experts, it is the unique, difficult and economic project. From the economic point of view, projects of redevelopment are favorable as they have extensive infrastructure, communications including automobile communication.

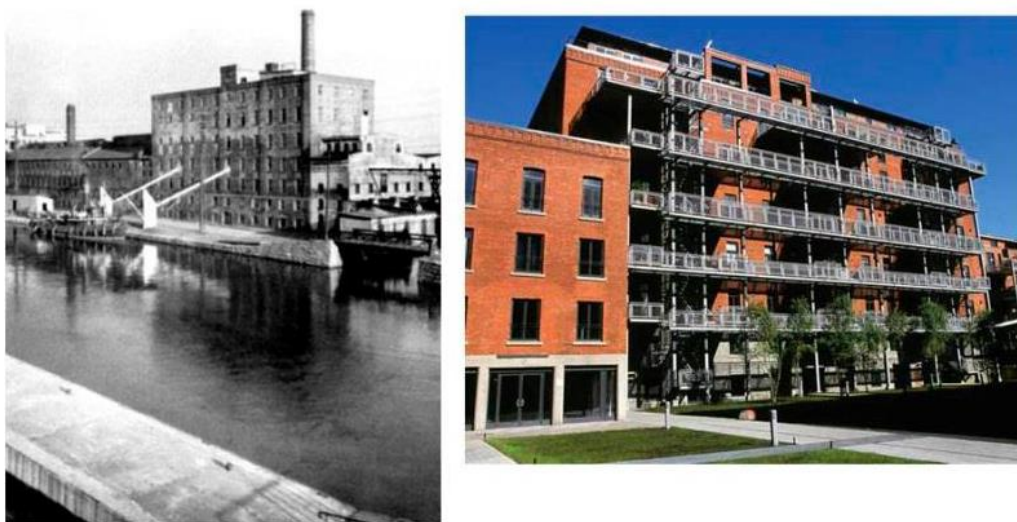


Figure 1. Housing estate of «Redpath Lofts». Montreal. Canada.

At the end of the 19th century Glasgow (England) was one of the largest industrial cities. In the center there was a tram depot which has fallen over time into decay. And then in 1990 the center of the modern art and theater "Tram" has opened here. Today it is one of the most known theaters in Europe.

One more interesting object is in Hamburg (Germany) is a night club in an antiaircraft tower. High ceilings provide good acoustics, and long spiral staircases became the business card of the club. One of dance pavilions is located directly on a roof where there was a cannon platform earlier.

In Philadelphia (USA) the Piazza project became an integral part of city space. On one hectare of the former brewery the complex including apartments (in two levels), trade and office rooms has settled down. In the center of a complex the public area framed with numerous shops, galleries and restaurants. One of design features became big window openings which allow the sun to fill in with apartment light, and windows leave on both sides of the building.

One of the most known projects of transformation is the High Line park in New York (USA). It has appeared instead of the abandoned railroad, at the height of ten meters from the Earth's surface. Beautiful views of Hudson River and the city open from its. The project pursued the aim to keep flora and fauna. 210 species of plants are presented here. At realization the new technologies from special concrete production to the drainage system that represent a flat matrix from plastic cavities were used.

The other object is also situated in the USA, in Philadelphia. In the place of merge of two rivers. The building of naval shipyard was turned into an art – a cluster, the design of studio, bureau, offices of the companies have settled down here.

In Seattle (USA), on four hectares of the former industrial territory at the edge of water the Olympic Park of sculptures from where improbable panoramas on the Olympic mountains open was placed (Figure 2). On this project the international competition has been announced. The Z-shaped platform which on 40 feet from the city goes down to water has turned out. In the territory there are pavilions for arts, performances and educational programs. From each pavilion there is a walking route to water, connecting three landscapes: dense evergreen forests, the deciduous woods and at the coastline – a garden. The open design creates feeling of interaction of the environment and art.

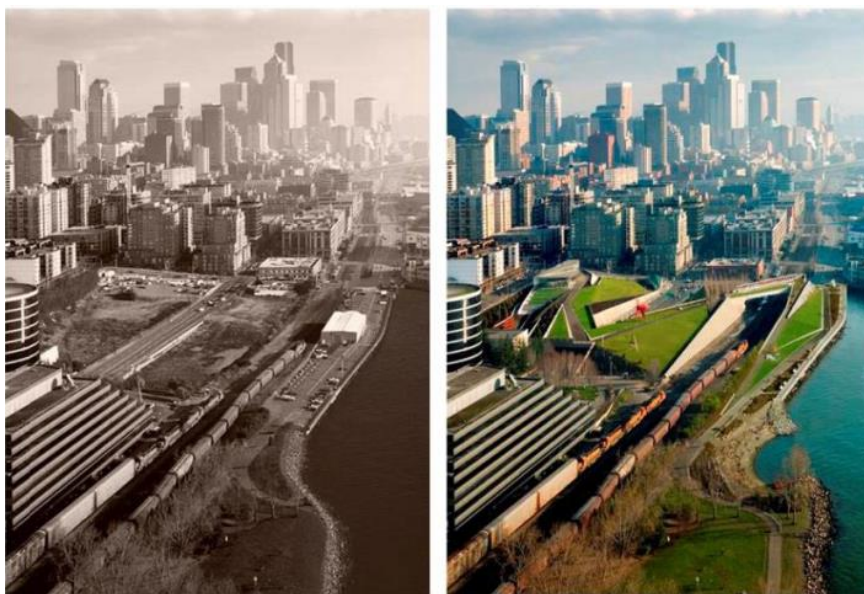


Figure 2. Park of the Olympic sculptures. Seattle. USA.

In Russia the term «redevelopment» has also got accustomed. Now these projects appear actively and are discussed first of all in Moscow and St. Petersburg. But gradually this tendency will extend across all Russia.

The most large-scale project in Moscow is today redevelopment the «ZIL» plant.

The main boulevard of the plant put in 1936 is taken as a composite basis. The end faces of shops coming to the boulevard will be kept. In the body shop it is planned to create the cultural and educational center. Old shops over 200 m long will be demolished. Instead of them houses and apartments with the corresponding infrastructure will appear.

The territory of the plant is going to be assigned to different architectural workshops to receive the platform for experiments and to create here "bright living city tissue" as the head of «Meganom» bureau Yury Grigoryan speaks.

The interest is attracted by the project of the modern residential quarter instead of block of experimental plant No. 408 (Figure 3). It will be chamber and cozy quarter with two-storied building with cattle roofs, in style of old dachas. The roof plays an important role here and acts as the fifth facade. Architects looked for inspiration in modern Dutch architecture which likes to experiment with a form of penthouses very much. Seclusion, scale to the person, rhythmic of roofs, new materials carefully supply the reconstructed bricklaying. In a new quarter it is already difficult to learn outlines of the former plant.



Figure 3. Housing estate. Project. Moscow. Russia.

Therefore it isn't surprising that in New York, along Hudson River where earlier loaders and sailors scurried about, people play golf now. Thousands of people visit the power plant building in London, the Museum of Modern Art was located there. In Omaha, the former rooms for the cattle, are filled with rock music sounds, sound recording studios have located there. In Russia, Moscow, hundreds of young people want to arrive or just to plunge into the creative atmosphere of «Red October» Chocolate factory, the institute of media, architecture and design of «STRELKA» exactly there has opened the doors. In places where pipes of the enterprises smoked and there were warehouses, now it is possible to have a rest in a shadow of trees, to visit a new exhibition, to get housing or to have office rooms. absolutely another life boils there now.

In our city there are also not used industrial facilities. But nowadays they have the shopping centers only. Tomsk positions itself as the highly cultured student's city. They try to form us as a society of consumers. It would be desirable to see more planted trees and shrubs spaces and unique platforms for development of creative potential of citizens: showrooms, galleries, lecture halls, or so-called art clusters in the city.

The business center «Stanislavsky's Factory» is the business quarter in the center of Moscow located in the territory of the former factory of Alekseev. The project is developed by the British architect John McAslan. A business center, a cafe, a restaurant, a conference room, banks, shops and studios of theaters are a part of a complex.

Three large showrooms, authoritative Moscow galleries, photo galleries, design studios and workshops, the open area for holding various actions are «Winery», the Museum of Modern Art was placed in the territory of Moscow Bavaria brewery.

One more project connected with art is the «Flakon Design plant» that is the exhibition and trade and office complex organized in the territory of the former plant «Hrustalny» of Kalinin on the area of two hectares. According to the Forbes magazine it is one of the projects which have changed the image of Moscow to the best.

3. Summary

Thus, rehabilitation of industrial zones and transformation of the thrown industrial objects gains steam. Architects propose new and new solutions, adapting to needs of the city. It both unique residential quarters and office space, but in the majority it is an art – clusters, parks, places for pleasant rest of the population.

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