

# Development of Creative Economy Objects as a Means of Industrial Territories Revitalization



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**Abstract** The article considers the possibilities of using the creative economy objects (i.e. refers to a range of economic activities which are concerned with the generation or exploitation of knowledge and information) as a means of industrial territories revitalization in the modern conditions of Ukraine. Based on a comparative analysis of the development of the creative economy in Ukraine and other European countries, it is determined that despite the insignificant role of the creative economy in Ukraine now there are certain prerequisites for its further dynamic development. The world and Ukrainian experience of revitalization of industrial territories with placement of objects of creative economy, and also existing conceptual offers concerning development of objects of creative economy in Ukraine is analyzed. It is stressed that solving the problem of industrial areas revitalization is impossible without the development of creative economy organization new forms, including art clusters. The list of urban planning, organizational and financial, spatial planning and engineering and design criteria for the selection of industrial facilities for conversion into creative economy objects in the modern socio-economic conditions of Ukraine is determined.

**Keywords** Industrial territories · Re-profiling · Creative economy · Art cluster · Art centre

## 1 Introduction

In recent decades, in many cities we can see the emergence of industrial areas that are not used for their intended purpose and need revitalization, due to a range of factors,

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including socio-economic, scientific and technological, urban, environmental and others. The closure of unprofitable industrial enterprises is an objective pattern for countries that have entered the so-called post-industrial era, i.e. primarily for the most developed countries in the world.

There are different approaches to the use of such industrial areas, some of which involve the complete demolition of existing buildings and structures and the use of areas for another function (usually residential), others—the preservation of at least part of existing buildings and its adaptation to other functions. The second approach is used in particular when the buildings and structures of non-operating enterprises are monuments of industrial architecture, when the areas to be revitalized are located near the historic city centre, and so on. One possible means of revitalizing industrial areas with preservation of existing buildings is the deployment of objects of so-called “creative economy” (i.e. refers to a range of economic activities which are concerned with the generation or exploitation of knowledge and information). According to Howkins [1, pp. 88–117] “creative economy” includes art, film industry, music industry, performing arts, fashion, advertising, publishing, TV and radio, toys and games, videogames, craft, design, architecture, research and development, software. Some researchers not only note the importance of partnership and collaboration across higher education institutions and the creative and cultural industries but also consider the education industry as a part of the creative economy [2].

In general, the problems of preserving monuments of industrial architecture, revitalization of industrial areas (especially located near the central parts of historic cities) and the development of new sectors of the economy, typical of the post-industrial period are closely linked and need comprehensive research.

General problems of degradation of cultural heritage (including due to industrial and domestic pollution, which is a significant problem for monuments of industrial architecture) are studied in the work of Spiridon, Sandu, Stratulat [3]. The development of creative industries in European countries was analyzed by Boix, Capone, de Propriis [4], Selada, da Cunha, Tomaz [5], in Ukraine—Skavronska [6]. Current trends in the revitalization of the urban environment and the role of art in this process have been studied by Kashchenko, Kovalska, Gnatiuk [7]. The problems of revitalization of industrial enterprises are directly investigated in the works of Kulikov, Dyomin, Chernyshev, Kuśnierz-Krupa, Krupa, Orlenko, Ivashko, Kobylarczyk, Stefański, Gryglewski, Dmytrenko, Ivashko, Leshchenko, Tovbych [8–12]. Examples of revitalization of former industrial facilities in Lodz, Poland by placing objects of the creative industry are covered in the works of Ugorowicz [13] Rawicka [14] and Cysek-Pawlak [15]. General and specific problems of restoration of monuments of industrial architecture are investigated in the works of Orlenko and Buzin [16, 17].

At the same time, the issue of using the objects of creative economy as a means of revitalization of industrial areas in Ukraine remains insufficiently studied.

## 2 Main Part

### 2.1 Purpose of the Article

The purpose of the article is to formulate the criteria for the preservation of individual objects of industrial architecture with the subsequent re-profiling of the objects of the creative economy in the modern socio-economic conditions of Ukraine.

### 2.2 Research Methodology

Existing scientific sources, regulations and materials of their own research were used in preparing the article. Methods of historical analysis and comparative analysis were chosen as the main ones. The method of historical analysis allowed analyzing the origins of problems related to industrial areas in the structure of cities and their specifics in different cities, the method of comparative analysis allowed to analyze the effectiveness of revitalization measures in different countries and new concepts and draw conclusions.

### 2.3 Results

**Socio-economic Preconditions.** In European countries, the role of the creative economy is constantly, albeit rather slowly, growing [18]. Thus, in 2018, 3.7% of the EU population was employed in the creative economy [19]. The level of the creative economy development varies greatly in different European countries. The undisputed leader here is the United Kingdom, where in 2019 there were 5.3 million jobs in the DCMS (Digital, Culture, Media & Sport) sector, which was 15.7% of the total number of jobs [20]. Ukraine, along with Latvia and Bulgaria, are among the countries with a low percentage of employees in the creative economy and a small contribution of the creative economy to GDP. This situation is due to a number of factors, but it should be noted that Ukraine has certain prerequisites for the development of a creative economy, one of which is a high level of education, including a significant percentage of people with higher education: 50.3% of Ukrainians under 30–34 have higher educational attainment rates (compared to 36.9% of EU's citizens) [6, p. 99]. This allows us to consider the location of creative economy objects as one of the possible promising means of industrial areas revitalization in Ukraine.

**Analysis of the World Experience of Industrial Territories Revitalization.** The study of world experience proves that with a sufficient level of investment, no design and spatial planning features of revitalized industrial buildings can be an obstacle to the re-profiling of the industrial enterprise under the objects of the creative economy.

For example, in the re-profiling of industrial enterprises, perhaps one of the most difficult tasks is the revitalization of old silos, as round shapes are the most difficult to saturate with a new function. However, this did not prevent the conversion of silos of the former malt production of the nineteenth century near Antwerp in Belgium into a residential and public complex with a combination of residential apartments, offices and exhibitions. Preserving the original form, the authors modernized it by replacing it with glass parts. Another example of the conversion of grain silos to a cultural object is the Zeitz Museum of Contemporary Art Africa in Cape Town. Decommissioned in 1990, the silo is a monument of industrial architecture and was once the tallest building in South Africa. After the revitalization, the area of the museum with the atrium, galleries, roof garden, reading and exhibition halls and maintenance is 9.5 thousand m<sup>2</sup>.

Given the decisive role of socio-economic factors, the analysis of the experience of Poland, where the level of economic development in the 1990s was comparable to the Ukrainian one, seems more relevant for Ukraine. The most striking examples of the industrial areas revitalization are concentrated in the former centre of the textile industry—Lodz, where almost all specialized enterprises were closed in the 1990s. In this city, the monuments of industrial architecture are the main part of the historical and architectural heritage, so there are special requirements for their preservation. A certain contrast between the image of the object and its function did not repel investors and today in Lodz in the former factory buildings of red brick are higher education institutions (Politechnika Łódzka), hotels (Aniel), public and shopping centres (Manufaktura), luxury housing (Księży Młyn) and objects of the creative industry, the most famous of which are Art\_Inkubator, “OFF Piotrkowska” and EC1 [10].

The Art\_Inkubator complex provides a space for presenting educational initiatives, exhibitions and for activities that combine art and entrepreneurship. In 2012–2013 three buildings placed in the area of the former textile warehouses in Wincentego Tymienieckiego Street were adapted for this complex. The project was financed half from the city budget and half from the EU funds [13].

“OFF Piotrkowska” is a multifunctional complex located in the city centre at 138/148 Piotrkowska Street, on the premises of the former spinning and weaving mill of Franciszek Ramisch. Adaptation works in this area began in 2006. Now the complex houses not only music clubs, restaurants, cafés and exhibition halls, but also studios of architects, fashion and art designers [14].

The former power plant known as EC1 was renovated in 2010–2018. The oldest power plant building (so-called EC1 East), built in 1906–1907, was turned into the “City of Culture” complex, housing the National Centre for Film Culture, Planetarium and exhibition spaces. EC1 West, consists of buildings from the interwar period, They was adapted as an Interactive Science and Technology Centre—a multifunctional museum-educational-scientific facility [15].

**Analysis of the Experience of Industrial Territories Revitalization in Ukraine.** In Ukraine, old unprofitable enterprises are most often demolished in order to free

up land for modern housing, office or shopping centres. Existing industrial facilities, some of which belong to the listed objects, no longer meet modern requirements—their territory is too large, the buildings are not designed for modern equipment; in addition, the increase in traffic load in recent decades will lead to intersections industrial and passenger traffic. Recently, experts pay attention to the rationality of the approach to the preservation of existing industrial facilities, which in accordance with their purpose were built of durable materials and structures and are able to withstand significant loads [8, 9, 12]. In addition, there were entrances and approaches to these facilities, and appropriate engineering networks were installed. Such objects have large areas and many floors of significant height. Many industrial facilities in Kyiv have been demolished in recent decades (Kyiv Yeast Factory, Kyiv Refrigeration Plant, etc.), some are leased to various tenants (Bakery and Confectionery, Sausage Factory on Pavlivska Street), some are abandoned (separate buildings of Motorcycle plant, industrial shops on Telychka, former Richert plant on Kyrlyivska Street, elevator on Naberezhno-Khreshchatytska, industrial shops on Rybalskyi Peninsula).

Preservation of historic industrial enterprises with their subsequent revitalization has not yet become widespread in Kyiv. Among the implemented examples, the most famous is the revitalization of the Darnytsia Silk Factory on the left bank of the Dnipro River, which was built in 1947. The territory of the enterprise has been in an abandoned state since the 1990s, until in 2001 the Darynok shopping complex appeared in the former industrial buildings. Measures to revitalize the industrial area continued in 2014 with the formation of exhibition and entertainment facilities “Art Factory Platform” on the basis of buildings, which became the venue for festivals of street food, concerts and “Courage Bazaar”—the first charity “flea market” in Kyiv. In 2018, part of the buildings was repurposed as an office and business centre.

Another successful Kyiv example of revitalization is the UnitCity created in 2017—a campus for business development in the field of IT and creative industries on the basis of the buildings of the Kyiv Motorcycle Plant.

The need for new forms of public leisure requires owners to create institutions focused on the needs of the modern consumer. Terminological usage includes new terms—“food hall”, “food market”. The food hall of Kyiv, Kyiv Food Market, had opened in September 2019 and united more than two dozen Kyiv establishments in the former premises of the Arsenal plant. The owners and organizers have linked the name “food market” with the specifics of the newly created atmosphere of the former industrial facility. Despite the fact that the exterior of the building has the features of industrial architecture, the interior has been redesigned and renovated with three levels (the first two floors—more than twenty different bistros and 550 seats for visitors, the third—for DJs). The peculiarity of such a food market (co-founded by the owners of many restaurants) is that food is cheaper here, because the food market combines all the services: from waiters and washing dishes to security and the Internet and restaurants need less staff.

In addition to Kyiv, measures to revitalize former industrial enterprises were carried out in other cities—in Lviv on the basis of the Plant of Radioelectronic Medical Equipment (REMA), whose history begins with the factory of the Winter

brothers (“ReZavod”), in Ivano-Frankivsk on the basis of the plant of industrial equipment (“Promprylad. Renovatsiya”, with an area of 37 thousand m<sup>2</sup>), in Kharkiv on the basis of the plant for sorting and storage of breeding crops “Soyuzsortnasin-neovoch” closed in the 1990s—a modern IT hub with coworking and event spaces, service sector “Fabryka.space”) and in Poltava (“Art Platform 11”). “Art Platform 11” is located in the former shop of the Poltava Turbomechanical Plant, areas of activity are typical for the creative industry: educational, cultural, musical, entertainment, art, creative, information (round tables, press conferences), space for work, meetings.

**Concepts of Using Creative Economy Objects as Means of Industrial Territories Revitalization in Modern Conditions of Ukraine.** Despite the significant difference in the scale of former industrial buildings use to accommodate the creative economy objects in Poland and Ukraine, there is something in common: the adaptation of industrial buildings (especially monuments of industrial architecture) requires large investments and large companies can be considered as investors (especially foreign), municipal authorities or the state. One of the most famous projects of transforming the Soviet-era defence enterprise located on the territory of the Old Pechersk Fortress in a complex of historic buildings (1784–1803) into a cultural, artistic and museum complex “Mystetskyi Arsenal” (“Art Arsenal”) was implemented primarily through funding from the state budget. The vast majority of creative economy actors both in Ukraine and in the world are small and medium-sized enterprises, which, taken separately, do not require large areas for accommodation and for which large investments in the redevelopment of existing buildings for their needs are irrational.

One of the ways to solve this problem in Ukraine can be proposed by O. Ivashko to create the so-called “art clusters” and “art centres”, where there is a synergistic combination of the potential of many small and medium-sized creative industry objects and as a result of joint action of art clusters (where the art product is produced) and art centres (where the product receives public expression) there is a holistic art formation. An example of the application of this concept is the experimental project developed by O. Ivashko for the art-formation of the former Richert brewery in Podil at 35 Kyrylivska Street in Kyiv. The functional filling of the facility after revitalization was proposed on the basis of such creative objects of Lodz as “Off Piotrowska” and “Art\_ incubator”. The same applies to a certain change in the appearance of the historic building, which contrasts with the modern added volume.

Among the experimental projects of re-profiling of Ukrainian industrial facilities, we can also single out the revitalization project of the former Kyiv grain elevator complex of 1950 on the 10 Naberezhno-Khreschatytska Street, near the Rybalskyi Peninsula in Kyiv (author S. Reshetnyk, head of the project part J. Vig, head of the scientific part Y. Ivashko). The need to preserve this complex with a change in the original function is justified by the accent location in the structure of the coastal part of the city near the Dnipro River and the structure of the building, which consists of a reinforced concrete working tower 66.9 m high, two silos, connecting bridges and gallery, receiving and pneumatic device for receiving grain. The author proposed to repurpose the elevator complex just for the cultural and public centre

with the presence of an exhibition area, catering area, educational area, recreation, office and business area, sports and entertainment area. The modernization of the former elevator buildings appearance with a contrasting combination of modernized authentic buildings and the emphasized modern new buildings is provided.

Thus, summarizing the foreign and Ukrainian experience of industrial areas revitalization with the placement of creative economy objects, we can identify certain criteria for the selection of revitalization.

1. Industrial areas located near the central parts of cities, highways, on the compositionally significant parts of the urban landscape are the most suitable for revitalization with re-profiling as objects of creative industry. The most justified is the re-profiling of industrial facilities in large cities, which provides an influx of visitors and tenants.
2. Industrial buildings recognized as architectural monuments usually need restoration in addition to changes in use. This significantly increases the cost of redevelopment and requires the involvement of investors or large companies (usually, in this case, in addition to the creative industry, the complex may also include housing, shopping and entertainment centre or other highly profitable facilities), or use the funds local and state budgets, grant funds of international organizations, etc. The experience of Lodz shows that from the point of view of the local community long-term interests, the revitalization of the industrial architecture monument with the placement of creative economy objects is a profitable investment that helps increase the tourist attractiveness of the city, create new jobs and renew urban infrastructure.
3. In the absence of large investors and the conversion of industrial facilities into the creative industry objects by means of formation on their basis art clusters and art centres the buildings of former food and light industry enterprises with a floor height of not more than 4.8 m, not entered in the state register of architectural monuments, are the most suitable. This will minimize the buildings redevelopment cost.
4. An important issue is to minimize operating costs when using repurposed facilities. In Ukraine, it is especially important to reduce heating costs. A combined approach to the installation of heating systems is appropriate, when buildings with a large internal space, periodically or occasionally used for short-term activities, can be heated only during these activities (air heating, use of infrared emitters, etc.). The constantly heated internal volume should be minimized.

## **2.4 Scientific Novelty**

The scientific novelty is to determine the list of urban planning, organizational and financial, spatial planning and engineering and design criteria for the selection of industrial facilities for conversion into creative economy objects in the modern socio-economic conditions of Ukraine. The important role of a fundamentally new direction of revitalization based on the interaction of creative industries with the emergence of

art education based on the addition of the functions of the art cluster (production of creative product) functions of the art centre (public presentation of creative product) is emphasized. This is especially important, given that the scientific concept of “art cluster” and its content has not yet been formed.

## **2.5 Practical Importance**

The defined selection criteria can be used by local governments, government agencies of cultural heritage protection, potential investors and design organizations in creating projects for industrial facilities revitalization by re-profiling them as objects of creative economy, and understanding art education as a harmonious combination of two components—the one which produces the product and the one which publicly presents it will allow to bring the theoretical basis under the term “art cluster” and to ensure the economically justified functioning of such art formations of a new type.

## **3 Conclusions**

Converting non-functioning industrial facilities into creative economy facilities can be considered as one of the promising ways to revitalize industrial areas in Ukraine. The main factors influencing the choice of revitalization objects are: the location of territories in the city structure; the list of potential investors and users; the monument protection status of objects located in the territories proposed for revitalization; spatial planning and engineering features of industrial buildings and structures to be repurposed. Solving the problem of industrial areas revitalization is impossible without the development of creative economy organization new forms, including art clusters.

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