

**РЕКОНСТРУКЦИИ ПРОМЫШЛЕННОГО НАСЛЕДИЯ В  
СОВРЕМЕННЫЕ ОФИСНЫЕ СТАНДАРТЫ  
RECONSTRUCTION OF INDUSTRIAL HERITAGE INTO MODERN  
OFFICE STANDARDS**

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**Аннотация:** В статье рассматриваются подходы к реконструкции промышленных зданий заводских корпусов, фабричных цехов с целью их адаптации под современные офисные пространства. Акцент сделан на принципах ресайклинга как стратегии сохранения материального и культурного наследия, а также на методах модернизации, позволяющих интегрировать исторические конструкции в актуальную офисную среду.

**Abstract:** The article discusses approaches to the reconstruction of industrial buildings, factory buildings, factory workshops in order to adapt them to modern office spaces. The emphasis is placed on the principles of recycling as a strategy for preserving material and cultural heritage, as well as on modernization methods that integrate historical structures into the current office environment.

**Ключевые слова** промышленное наследие, реконструкция, модернизация, офис.

**Keywords** industrial heritage, reconstruction, modernization, office.

Currently, almost every city has abandoned areas of empty factory buildings, which are gradually falling into disrepair. Their demolition is not only economically costly, but will also lead to the loss of a material layer of the city's history. In addition, there is a growing demand for unique office spaces that differ from typical business centers. Modern office workers appreciate these authentic spaces for their high ceilings, large windows, brick walls and open communications. Therefore, recycling of architectural objects instead of their destruction, which is established at the legislative level, is popular

The aim of the study is to identify and systematize the principles of recycling and modernization of industrial buildings during their transformation into modern office spaces. Work objectives:

- analyze the concept of "old shadows";
- identify conflict zones between the preservation of authentic structural and artistic elements.

It is established that in China, a special term "Old Shadow" (影子) has been introduced to refer to an old factory building (旧影子). This is a metaphor that has taken root in Chinese urban studies since the publication of the China Academy of Urban Planning & Design report in 2021. It means:

- **physical "shadows", namely** unrecorded buildings, underground storage facilities, and pipe wells that were not included in the redevelopment project, but were physically preserved.

- **regulatory "shadows"**, i.e. permits issued during the planned economy that are not synchronized with the digital cadastres of the 2020s;
- **social "shadows"** – a generation of workers who still live in factory-side dormitories that have not been resettled.

It reflects the deep radiance of historical memory and industrial culture. The «old shadow» of the industry landscape expertly combines innovative elements, creating a new glory that adapts to the needs of today. A renovation project typically uses an innovative design concept that combines flexibility and culture.

The typology of «shadows» is shown in table 1.

**Table 1-Typology of «shadows»**

Class	Example	Risks	Integration methods
<b>Underground</b>	acid storage bunkers at a textile factory 1936, Suzhou	Ground water contamination	Transformation into a wine cellar for the event zone
<b>Boiler chimneys</b>	60-meter pipe of a combined heat and power plant, Wuhan	Beam aging, falling brickwork	Integration into a viewing platform
<b>Residential dormitories</b>	«Soviet-style building» 1953, Wuhan Chongqing	Owners are not included in the property certificate, it is difficult to settle	the co-ownership model with a 30-year lease
<b>Joint corridors</b>	Steam pipe gallery between workshops, Harbin	is not included in the building and is not subject to compensation	Recognition as "engineering heritage" and conversion to High Line Park, 2023.

Similarly, the recycling project of the Himmech Industrial Park in Qianha, Hubei Province is considered (fig. 1).



**Figure 1. Recycling Himmech Industrial Park, Qianha City, Hubei Province, Zhou M. project**

This factory is a symbolic sign of urban change, which consists in the use of unusual structures, flesh-colored wall coverings, old equipment and machine tools, which constitute a valuable achievement of cultural heritage. The design transformation effect, optimized for the multi-faceted needs of a modern office based on cutting-edge science and technology, materials and cutting-edge design

concepts, revived the vitality of the former factory building, which was almost lost. Preparation for the adjustment of the layout of the office space was carried out using environmentally friendly materials to improve the texture of the space in the old factory building.

As a result of the research, conflict zones were established between the preservation of authentic structural and artistic elements: historical farms; brickwork and old machine tools as evidence of industrial culture. When carrying out modernization, old machines can be used as art objects, slogans in the form of graffiti, historical hatches and cranes as relief elements. It is also mandatory to use environmentally friendly materials of a new generation, such as breathable plasters, recycled concrete, and cork coverings.

Requirements that are put forward for modern office premises: thermal insulation; illumination; acoustic comfort; workplace ergonomics; accessibility for low-mobility groups.

As a result of this work, the concept of «Old shadow» is studied, which allows for systematic reconstruction of collapsing industrial buildings, types of such buildings are identified and strategies for their recycling are analyzed. The case study of the park in Qianha confirms the effectiveness of preserving authentic elements together with eco-friendly materials. The proposed principles reinforce identity, turning reconstruction into a design challenge using innovation.

### References

1. 中国城市规划研究院. 《中国城市工业遗产“旧影子”调查报告》. 北京: 中国建筑工业出版社, 2021. 234 с.
2. Huang, L.; Zhang, K. «From Smokestacks to Coffee Cups: Chimney-Reuse Strategies in Post-industrial Wuhan» *Cities* 2023, Vol. 131, 104-112.
3. Molochko A. A., Samutina N. N. Design project for modernization of interiors of the Gomel-Passazhirsky railway station / A.A. Молочко, Н.Н. Самутина // Abstracts of the 56th International Scientific and Technical Conference of Teachers and Students. Abstracts of reports. Vitebsk, 2023. pp. 208-209.

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## ИСПОЛЬЗОВАНИЕ ПРИЕМОВ ДИЗАЙН-МЕНЕДЖМЕНТА В ДИЗАЙН-ОБРАЗОВАНИИ USING DESIGN MANAGEMENT TECHNIQUES IN DIGITAL EDUCATION

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**Аннотация:** Буквально несколько лет назад термин Agile применялся исключительно в сфере разработки программного обеспечения. Сейчас Agile – это будущее эффективного