

ADAPTIVE RE-USE OF INDUSTRIAL HERITAGE IN LODZ, POLAND

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Abstract

Over the past 30 years, Lodz, one of the largest cities in Poland, has struggled with the effects of the political transformation. Historic post-industrial buildings have presented both a problem and a challenge. Due to the lack of other determinants of identity, the adaptation of former textile factories has become a key element in shaping the historic urban landscape of Lodz. This article presents the results of the latest research on this process. Several hundred places were analyzed in terms of changes in function, as well as the relationship between the typological features of buildings and their current state of preservation. The research results confirmed the effectiveness of adaptive reuse in the process of industrial heritage protection. Moreover, the scale of this phenomenon makes Lodz a leading centre of post-industrial revitalization. Local experience can be a source of lessons for similar processes undertaken in other cities of Central and Eastern Europe.

Keywords: *Industrial heritage; Adaptive reuse; Historic urban landscape; Urban regeneration; Heritage protection.*

Introduction

The aim of this paper is to analyse the transformation of historic post-industrial sites that have taken place in Lodz, Poland over the past 30 years. There are presented the results of research projects conducted recently at the Institute of Architecture and Urban Planning at the Lodz University of Technology. Both research projects focused primarily on functional and spatial issues from the perspective of architecture, urban planning, revitalization, and heritage conservation.

The issue of the transformation of historic post-industrial sites in Lodz was the subject of several studies conducted by researchers representing technical, economic and social sciences, whose authors were experts from Poland and abroad. Moreover, it was widely reported in local, national and foreign newspapers and other mass media. In the research studies published so far, the effects of the transformation of post-industrial areas in Lodz have been described primarily from the point of view of geographical and socio-economic sciences [1-3]. The literature on the industrial heritage of Lodz is also extensive. The latter, however, focused primarily on history and typology [4]. It is worth emphasizing here that this topic was also taken up by foreign researchers already in the late 1990s [5]. More recently, the industrial heritage of Lodz was investigated in the context of broader European studies by Plevoets and Van Cleempoel [6], and Oevermann [7]. Publications highlighting the problems related to deindustrialization and its impact on the state of preservation of historic factory complexes have been appearing for nearly 20 years. They focused on selected case studies or specific issues in the field of protection and conservation of monuments [8-11]. However, there was no synthetic summary of the processes

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taking place within the post-industrial areas and buildings in Lodz and an assessment of their results. This article is intended to fill this gap.

Lodz and its post-industrial legacy

Lodz is a large city in Poland (once the second with 850 000 inhabitants, shrinking dramatically since 1988, and now the fourth in Poland in terms of population). Its dynamic development took place during the industrial revolution. The city then became one of Europe's most important centres of textile production, earning the name of the Polish Manchester. After 1945, Poland became a part of the communist bloc, and the industry was nationalized. In 1989, the process of structural transition began, including liberalization of the economy and privatization of the majority of industrial plants. Lodz textile factories, underinvested, and mostly obsolete, were unable to effectively compete on the global market. As a result, the beginning of the 1990s saw a dramatic decline in mass textile production, which contributed to the economic crisis and social and spatial deterioration in Lodz. The local economy was not provided with governmental supportive programs and the process of its deindustrialization was not programmed or structured, which was the case of other industrial regions in Poland (e.g., mining in Upper Silesia).

To understand why the adaptive reuse of post-industrial areas is so important for this urban centre, it is enough to realize that as much as 20 per cent of the area of the city centre was made up of factories. According to previous studies, the number of companies involved in textile production was about 330, and industrial premises were about 200 [12-14]. The discrepancies resulted from the adopted methods, the scope of the research and the available data. Regardless of the method of calculation, one must be aware that this number included both large multi-branch production plants occupying premises of several dozen hectares, as well as small factories located in courtyards in densely built-up downtown. The most characteristic functional and spatial solution for Lodz was the factory and residential complex, located on a plot with a narrow front (about 20m) and an elongated plan (up to 300m). Such a complex consisted of production buildings in the back of the property and the owner's residence at the front, which usually also housed the factory office. What is more, it should be considered that such industrial developments did not constitute separate zones in the urbanized structure of the city but intertwined with the residential districts. It is therefore not surprising that over the past 30 years, the problem of using post-industrial areas and facilities has become one of the most important challenges for Lodz in terms of urban regeneration and heritage protection.

The principal issues related to the protection and conservation of industrial heritage in Lodz

To understand the adaptive reuse projects discussed in this paper it is necessary to give an essential background of the heritage protection system in Poland as well as the evolving approach to the legacy of the industrial revolution in Lodz.

An outline of the heritage protection system in Poland

According to the current regulations, heritage protection in Poland falls into the responsibility of public administration – state heritage offices are established for each province. They are responsible for listing heritage objects and their ongoing protection. The local government maintains a list of historic sites and may extend the scope of protection by introducing provisions in local spatial development plans. It is also their competence to establish a cultural park (allowing integrated protection of cultural heritage and nature). What is more, the President of Poland may recognise the unique value and importance of some sites and

designate them as monuments of history [15]. To sum up, there are the following forms of heritage protection in Poland:

- entry at the register of monuments;
- entry at the list of heritage treasures (applicable to movable heritage objects only!);
- recognition as a historical monument;
- creation of a cultural park;
- protection within the spatial planning framework (e.g.: in the local spatial development plan).

The Scope of Protection of Industrial Heritage in Lodz

It was not before the late 1950s, that industrial buildings became to be recognised as worthy of preservation. Initially, Great Britain was the first country where industrial archaeology grew rapidly. This was initiated by interested and enthusiastic individuals forming local societies throughout the country. During the 1970s, Europe too was becoming more conscious of its industrial heritage, probably because this was a period of fundamental change in attitudes about heritage as a whole. Then in the 1980s and 1990s industrial buildings became the subject of outstanding regeneration schemes throughout the continent [14].

A similar process took place in Poland. The turn of the 1960s and 1970s brought a fundamental change in the attitude towards 19th-century architecture among Polish art historians and conservators. Its artistic value was noticed. On this wave, the most valuable examples of historicism and eclecticism in architecture, including factories, were protected in Lodz. In 1971, 13 industrial sites (individual buildings and complexes) were entered into the register of monuments in the city. It is worth emphasizing that their selection was determined exclusively by their architectural values. The specificity of industrial buildings was not taken into account (which will be discussed in more detail later in the article), despite the fact that in light of the legal regulations in force at the time, they constituted a separate category of monuments in Poland. This practice has prevailed until the present time.

At the end of the 1980s, the list of historic sites included 65 buildings and production complexes (of which only eight were not related to the textile industry). Twenty years later, within the administrative borders of Lodz, there were 24 factory complexes in the register of monuments, which constituted approximately 140 buildings protected at the national level. At the same time, there were 91 factory complexes, including about 400 buildings, listed at the municipal level. According to the current list (as of 2023), 270 industrial sites (individual buildings and complexes) are included in the list maintained by the municipality of Lodz, including a mere 24 not related to textile production. There are still some sites that do not have the status of heritage.

Urban Regeneration and Heritage Protection

In conservation circles, the term “urban regeneration” evokes mixed feelings at best. This is due to the fact that large-scale regeneration projects, which have been carried out in many towns in Poland in recent years, have neither brought the desired socio-economic effects nor contributed to improving the condition of the local heritage. Therefore, it is reasonable to ask how to reconcile urban regeneration with the need to protect cultural values.

In this context, it is worth noting that already in the early 20th century, professor Artur Kühnel from the Lviv Polytechnic, in his research on urban issues, emphasized the role of old elements that should be respected and saved for posterity due to their role in shaping the individual characteristics of a given urban centre [16].

However, a closer analysis of the objectives of urban regeneration and heritage conservation shows significant discrepancies. Regeneration is aimed at the activation of urban

areas, while already in the 19th century it was recognized that objects that are a testimony to past eras and old styles become “monuments” excluded from natural socio-economic processes. In other words, both activities focus attention on the existing fabric of the city, but urban regeneration focuses on its future, while conservation prioritizes the past. What is more, since the late 1960s, monument protection has consistently expanded its area of interest to previously overlooked objects, such as townhouses, outbuildings, and industrial facilities, and thus the number of protected objects and areas increased dramatically. The values of urban complexes also began to be appreciated as a new conservation quality worthy of protection apart from individual objects. For this reason, it was necessary to cooperate and then combine the activities of conservators and planners responsible for spatial and economic development. At the same time, with such a large historic resource, the traditional concept of protection consisting of a kind of “museumification” conducted almost exclusively from state funds had no *raison d’être*. When many privately owned objects were protected, not only the financial model had to be changed, but also the rules of protection. If individual objects belong to separate persons and entities, while their cultural value is in the public domain, then on the one hand, heritage should be made available to the public so as to facilitate its recognition and understanding, and on the other hand, the owner should be provided with the use of the monument, and at the same time prevent its harmful transformation.

The next stage was the integration of heritage protection with environmental protection, which took place in the 1980s. One of the steps of fundamental importance for the discussed issues was the adoption by UNESCO in 2011 of the Recommendation on the Historic Urban Landscape [17]. At this point, it should be clearly emphasized that the cultural landscape is not a fixed (existing) element but is subject to constant changes under the influence of a range of factors. For this reason, it requires a different approach than a single object or historic complex. In this approach, awareness of the importance of protecting the heritage of historic urbanized areas in spatial planning is the basis for sustainable development, which can only occur when local communities understand both the cultural and economic value of the surrounding elements that make up the cultural landscape.

In light of the above observations, it should be stated that striving for harmony between urban regeneration processes and conservation activities is of considerable importance for the identity and image of the city. Degradation processes in historic areas affect not only the condition of the local community but also the perception of the city by visitors, which may contribute to lowering the interest of investors. For this reason, city authorities cannot afford to accept a kind of “black hole” in the city centre and must undertake revitalization activities. Therefore, it should be unequivocally stated that in most cities in Poland, it is not possible to carry out effective revitalization without taking conservation issues into account. Revitalization activities should, however, be primarily aimed at maintaining, restoring, or shaping the features, which define European cities as organisms based on tradition, and harmonious spatial, economic, and social development.

Research

In this section results of two research projects are discussed. Both projects aimed at the analysis of adaptive reuse processes that took place at postindustrial sites in Lodz. However, the projects were conducted separately, based on different methodologies, and therefore they allow different perspectives on the same subject.

Study no. 1.*Methods*

The research was conducted in the years 2017-2020. The project involved field research, literature studies, and archival queries. The comparison of aerial photos of the city (especially orthophoto maps) was of particular importance. During the research, 258 properties historically associated with the textile industry and other branches of industrial production were identified. All production facilities erected before 1939 (i.e., before the outbreak of World War II) were included. They were analyzed in terms of transformations that have taken place since the mid-1990s, i.e., the period of deindustrialization in Lodz.

Results

The results were presented mainly by means of mapping (Fig. 1). Identified sites were classified and marked on a city map with the use of a colour code. The sites were analysed to identify patterns typical for the adaptive-reuse processes in Lodz. On this basis, three areas were designated for further in-depth studies.

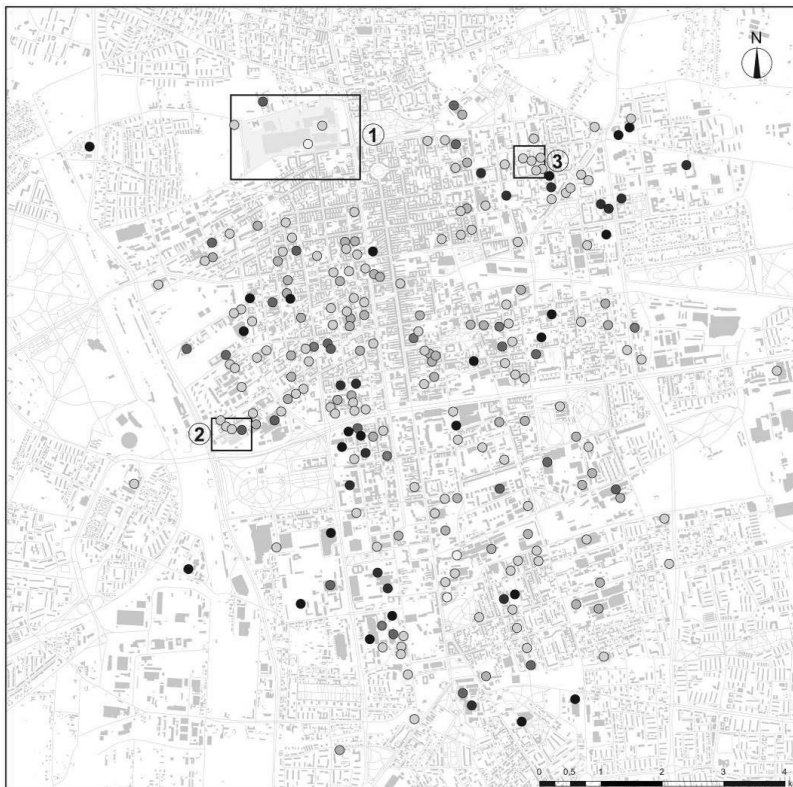


Fig. 1. Distribution of the revitalised historic factory complexes in Lodz
(1-3: sites designated for further, in-depth research)

Among the analysed sites, there are 17 factories (i.e., over 6 per cent of the researched sites), which are still related to production activities. It should be emphasized, however, that only a few of them remain in textiles. At the same time, it is worth emphasizing that the industrial complex of Ariadna S.A. (formerly Lodz Thread Factory, owned by J&P Coats Ltd, Paisley, UK) is the only one in the whole city that remains in its original use. However, this

factory was built on the single storey shed principle and was far from the city centre's crowded streets.

The discussed analysis includes cases where the production function has been retained, but its profile has changed. In the first phase of the political transformation, attempts were made to maintain production activity in a systemic manner on the premises of textile plants, which resulted in the location of the Lodz Special Economic Zone within the former Grohman factory complex. This attempt confirmed that old industrial buildings are not a suitable environment for most branches of modern industry. The result of the first period of operation of the Lodz Special Economic Zone was the introduction of new factory halls to the premises of the historic textile complex (Fig. 2a). Old buildings have mostly been demolished or are still decaying. The general impression was not changed by the exemplary adaptation of the relics of the factory for the needs of the headquarters of the Zone, carried out several years ago.

At the other extreme, there are 29 buildings that have been demolished, and in most cases, new investments have appeared in their place, usually residential buildings and commercial establishments, including the “Sukcesja” (Succession) shopping mall. Unfortunately, in many places, no new investment is developed, which means that there were created gaps in the urban structure with a significant negative impact on the surrounding areas. They are sometimes as extensive as at Hipocyczna Street after the demolition of the former Teodor Buhle factory. However, Wróblewskiego Street was the most affected in this respect. As many as four factory complexes have been demolished along this one street, viz.: factories that once belonged to Stanisław Landau and Karol Weile, Samuel Czamanski, the company Allart, Rousseau & Cie., as well as Karol Kröning, Emil Eisert and Otto Johan Schultz (Fig. 2b).



Fig. 2. Examples of the analysed sites: a. the Grohman factory - new industry; b. the Kröning, Eisert and Schultz factory – one of many demolished factories; c. the Poznański factory complex – shopping mall; d. the Schweikert factory – university campus

It should be emphasized that this group does not include historical industrial buildings, which have been preserved as ruins. The most important example of this type is Nowa Tkalnia (the New Weaving Shed) in the Scheibler industrial complex. Other objects worth noting due to their spatial values are the former Biedermann's weaving shed hall or the remains of the "Dąbrówka" worsted wool spinning mill. The above and other cases of this type have been included in the group of unused objects, which includes 41 properties. It is a remarkably diverse resource. These are both monumental buildings such as the Scheibler and Osser spinning mills, which are considered some of the largest in the city, as well as relatively small facilities, often in dense downtown development. It is also worth noting that in some cases the buildings are secured by their owners, but there are also many examples of decaying objects whose condition is systematically deteriorating. They account for nearly 16 per cent of the examined properties, which is a serious threat to the preservation of Lodz's industrial heritage.

However, the vast majority of former factories were successfully reused for modern needs. According to the current state of research, there are 147 of them i.e., 57 per cent of the analyzed objects. This category is dominated by retail and services. Speaking of this type of use, it is impossible not to mention the "Manufaktura" Shopping and Entertainment Centre in the former Poznanski cotton factory (Fig. 2c). In retrospect, the greatest value of this project is maintaining the integrity of the building complex. This is especially visible when compared to the lack of coherence of architectural and conservation solutions within the former Scheibler industrial "empire", which is a consequence of the fragmentation of the ownership structure as well as the lack of a local spatial development plan.

Not very numerous, but important due to the significant impact on the image of the city, is the group of factories reused for the needs of education and research, viz. schools and universities (Fig. 2d).

Study no. 2.

Methods

This research was done as a part of a master's dissertation, prepared under the supervision of one of the authors [18]. The research was completed in 2021. There were 205 industrial sites examined to identify whether their transformations resulted from coherent and well-planned investments or spontaneous processes. The selection of factory complexes was based on the literature studies.

Results

In this case, the presentation of the research results was based on an extensive table as well as diagrams and charts. The table provided, among others, information on the original use as well as the new purpose of the analysed factories.

Of the 205 sites included in the analysis, only 174 are still in use. The authors assessed 56 of them as coherent adaptative-reuse processes - 32 of them orbit around one dominant function, while the remaining 24 have mixed functions, co-occurring with each other. The diagram below shows the percentage share of functions in these post-industrial complexes (Fig. 3). It reveals that offices are the dominant function (46.4% of the analysed sites), although it often also co-occurs with other functions (38.4% of offices have been enriched with additional accompanying functions). This is probably due to the ease of reuse of production rooms to the needs of premises for rent with a diverse floor area that can be adapted to the needs of a potential client. It is also worth noting the high share of didactic and administrative functions, which may result from similar reasons as for the office function.

As can be seen, in the case of post-industrial complexes used in a random manner, the dominant functions are services. Most often, they are the headquarters of smaller enterprises, which are attracted to these places by a relatively low rent compared to modern office buildings.

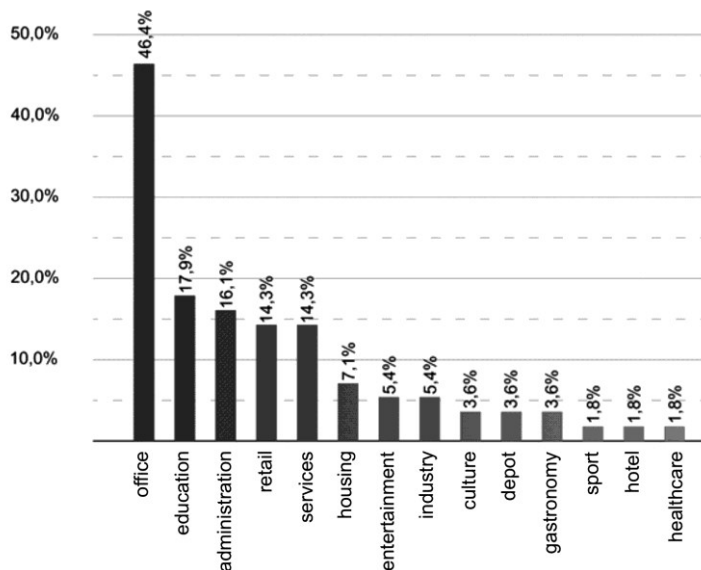


Fig. 3. Analysis of the results of planned adaptive reuse of post-industrial sites in Lodz

118 out of 174 sites covered by the study are used in a way that is not the result of planned activities. This range also includes 20 sites that, despite their continued existence, remain disused. 58 complexes are dominated by a single function, while the remaining 60 are home to diverse functions (Fig. 4).

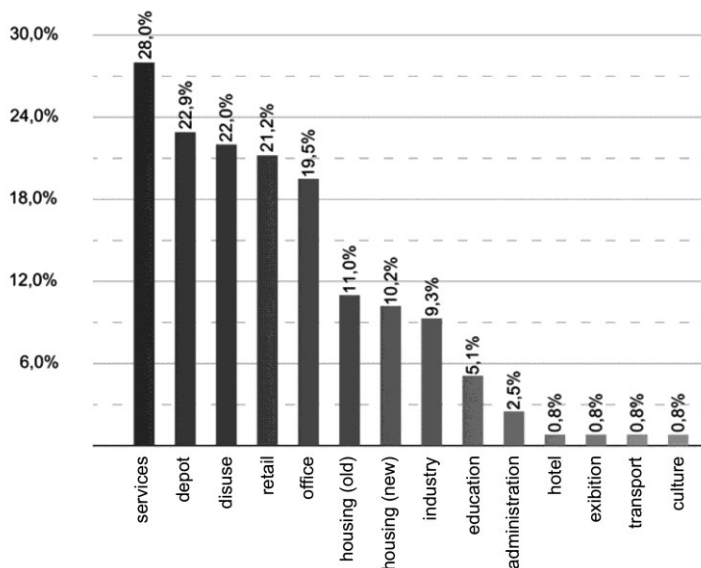


Fig. 4. Analysis of the results of spontaneous adaptive reuse of post-industrial sites in Lodz

A similar number of factories is also used for warehousing and commercial purposes. The above, with a high degree of probability, results from the large floor areas necessary for these purposes. This type of adaptative reuse is easiest to carry out in former production buildings. However, what is the most worrying is the fact that 22% of the buildings that still exist are unused, which in the long term may lead to their destruction.

Discussion

As it was already mentioned, the studies presented above were conducted independently of each other. Researchers have adopted different research methods and tools. Their goals also differed. As a result, they are complementary. But at the same time, they show significant similarities when it comes to the results obtained. This applies in particular to the identification of new functions introduced to the repurposed post-industrial sites in Lodz, as well as the preferences of investors who are particularly willing to choose multi-storey buildings. It should also be noted that these are mostly spontaneous actions, not carefully planned revitalization programs.

Nowadays, some researchers suggest that the Polish textile industry was too hastily exposed to market activities, which had to end dramatically without protective measures [19]. However, even if the industry did survive, it seems unlikely that production in 19th-century buildings would be preserved. After 1945, a lot of modern industrial halls were built outside the historic city centre, which undoubtedly better suited the needs of modern production. It should be, however, emphasized that Lodz still remains a significant centre of textile production in Europe thanks to this type of industrial activity (e.g. for the needs of the pharmaceutical and armaments industries), which may prove the durability and importance of the territorial capital accumulated on the basis of development of the textile industry [20].

Nevertheless, the dominant method of solving the problem of historical post-industrial buildings in Lodz is their adaptative reuse. The examples discussed above are only a small fraction of all adaptative reuse projects. As already mentioned, there are about 140-180 (depending on the research scope and method) such developments successfully implemented in textile factories in the last three decades, which makes the city a leader on an international scale. This is due to both, the significant scope of heritage protection as well as the location of the objects in the city centre, which is attractive to contemporary investors. Typological features are also of significant importance. The adaptative reuse of a multi-storey building with a floorplan of relatively small depth (on average about 17m) is more feasible (easy-to-arrange, well-lit production rooms) and more rational from the economic point of view than a large one-storey hall. The latter type, also present in Lodz, is unfortunately much more often the subject of demolition, or, at best, of disgraceful abandonment. A side effect is the presence of ruins in the city, the picturesqueness of which is often not inferior to the relics of medieval castles.

At the same time, it does not mean that all objects have undergone a renewal process with respect for their cultural values. On the contrary, they are often maintained with minimal financial outlays, offering cheap spaces for rent. Against this background, investments that treat the post-industrial nature of the facilities as an integral part of the marketing strategy and build the company's image stand out positively. Such projects include, among others: the "Synergia" business centre in the former Daube factory, offices in the Mühle brothers' factory, as well as the "Skrzywana Factory" in the Lifszyc woollen factory.

There is little interest in the use of post-industrial sites for housing purposes. Investments in which former factories have been adapted into flats include, above all, "Lofty u

Scheiblera” (Scheibler’s Lofts), “Barcinski Park”, and “Tobacco Park” (in a former cigarette factory owned by the state tobacco monopoly). In a few other cases, relics of production halls were used and integrated into the new buildings. This was done for example with the perimeter walls of the weaving shed of the Kindermann factory and two façades of the Schicht and Kahlert mill. However, housing projects that do not require the adaptation of historical buildings are most often implemented, so developers are looking for premises where industrial buildings have been demolished or do not occupy their entire area. The latter strategy is successfully implemented on the premises of Scheibler’s finishing department. The project called “Fuzja” (Fusion) includes mainly the construction of new residential buildings - which has been fully implemented, as well as the adaptative reuse of historical industrial buildings - implemented to a very limited extent at the time of writing this text.

From the point of view of Lodz’s identity, objects used for cultural purposes play an equally significant role. These are primarily museums. The Central Museum of Textiles plays the role of the depositary of the oldest preserved industrial complex in Lodz - the “White Factory”. While the branch of the Museum of Independence Traditions in the former Abbe factory in Radogoszcz is a unique example of a permanent adaptation of a post-industrial ruin as a monument of national memory, as this plant served as a prison during World War II. And Art_Inkubator in the Scheibler factory warehouses is not only an example of high-quality adaptative reuse and heritage conservation but also an investment in the future of a city that bases its development on creative people.

Conclusions

The two research studies presented in this paper provided insight into the results of a prolonged process of post-industrial regeneration of Lodz. The completed adaptive reuse projects represent the full spectrum in terms of functional and architectural transformations of post-industrial sites in the city.

It is notable, however, that in architectural terms excessive conservatism dominates, disproportionate to the cultural value of the buildings, which often results in a tendency to “correct”, or “improve” the past (reconstruction of poorly documented elements or stylisation referring to historical forms). This phenomenon can be regarded as a material manifestation of the idealization and glorification of 19th-century Lodz, currently dominating the media space. Particularly noticeable is the lack of attempts at a valuable, contemporary architectural creation, establishing an intelligent dialogue with the industrial past. It is all the more noticeable that Lodz, becoming a leading centre for the adaptation of post-industrial buildings (e.g. in 2018, the city was visited by investors from Estonia preparing the adaptation of a former textile factory in Tallinn, who wanted to learn from the experience of local experts in adaptive reuse), paid for it with an almost complete lack of good contemporary architecture - which clearly distinguishes from other large Polish cities. Summing up, it can be concluded that after 30 years the problem of transforming post-industrial areas in Lodz has been solved to a considerable extent. The experience gained is reflected in the growing interest of young scientists from Central and Eastern Europe, who come here with the intention of using the results of the research conducted in Lodz in the renewal processes of post-industrial cities in their home countries [21, 22].

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