

REVITALIZATION OF HISTORIC DISTRICTS AS A TOOL TO ENHANCE URBAN RESILIENCE OF THE CITY ON THE EXAMPLE OF LODZ

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Abstract

Revitalization is a multifaceted process that must consider spatial, social, and economic conditions. An effective renewal initiative is long-term and requires the various social groups' collaboration, repair programs, and planning documents that incorporate diagnostic results, outline action directions, and establish principles for protection and the transformations' scope. It is also essential to have reliable operational tools integrating planning assumptions, budget, and action schedules, enabling the execution of revitalization projects and enhancing the urban life quality. This article explores the revitalization process in Lodz, a post-industrial city situated in central Poland, which boasts the largest area in the country with a valuable historic downtown dating back to the 19th century. The Lodz Centre Area Revitalization Project stands as Poland's most extensive program in terms of area and budget. Covering a portion of the historic center spanning 164 hectares, the project received over one billion euros in EU funding. The article details various activities undertaken, the methodologies of their implementation, and the extent of renovations conducted on selected culturally significant buildings. It highlights changes introduced in terms of spatial and functional aspects across multiple scales – district, street, and culturally significant structures. The program has been successfully implemented, with the final investments completed in 2024.

Keywords: Adaptation of urban areas; Area revitalization; Urban living standards; Reuse; Recover; Urban resilience; Lodz

Introduction

Revitalization of problem areas has become increasingly visible in urban policies in Poland over the past three decades. Particular attention was paid to areas that build the identity of a place. Politicians and local governments noticed the potential of areas that testify to their history, but at the same time they noticed the significant degradation of many of them. Revitalization of historic districts as an element of urban policy gained new legal instruments through the adoption of the Revitalization Act in 2015. Legal changes also allowed for obtaining funds from EU funds for revitalization projects. Particular attention in the planned spatial changes was paid to preserving the identity of the place, protecting cultural resources, improving the quality of space, reducing the number of urban wastelands, and introducing green infrastructure into the dense historical tissue. Area revitalization has become a special type of spatial transformation, which, implemented on a district scale, is a tool for improving urban

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resilience. Improving the quality of life in the central, historically valuable areas allows for a reduction in the number of residents moving to the outskirts and for striving for a compact and sustainable city model. This is the way to implement a city that effectively uses its most valuable spatial and cultural resources. The changes introduced in the historic centers are also evidence of the adaptability of historic districts to new social, financial, and climatic conditions. The Lodz Centre Area Revitalization Program is the largest project of this type implemented in Poland in terms of financing and area scope. The scope of the project covered 164 ha of area and received over a billion in funding from EU funds. Revitalization activities were carried out based on detailed urban spatial development plans prepared for the needs of the renewal. They were a planning instrument for the transformation of the city's structure, introduced new layouts of public spaces, and defined the principles of protection and possible transformations for buildings of cultural value. Revitalization received clearly defined principles of urban activities, which allowed for the protection of historic buildings and consciously conducted transformations while maintaining historical values. Scientific sources were processed in the following areas:

- research of the Lodz centre revitalisation [1-6];
- protection of heritage [7-10];
- urban resilience [11-14];
- local and country planning documents [15-25].

Revitalization in the principles of national policy

In Poland, interest in undertaking remedial actions in historic city centers led to the adoption of the Revitalization Act on 9 October 2015 and contributed to the adoption of the National Urban Policy on 20 October 2015. The national policy indicated the objective of revitalization as the sustainable, social, and economic revival of the revitalized area, increasing its attractiveness for residents and entrepreneurs and improving the quality of life. The following specific objectives were defined: protection of cultural heritage, social integration, and economic activation. The national policy indicates that improving the quality of space and life in historic city centers should reduce the rate of residents' outflow to peripheral areas and counteract the depopulation of parts of central cities. The document indicates that historic centers should be treated as cultural phenomena that can be a potential catalyst for revitalization. The national policy indicated support from EU funds as the main source of financing for revitalization projects, with support for financing under national operational programs. After the end of the financial perspective for 2014–2020, the National Policy indicated the development of a revitalization financing system at the national level. Revitalization goals were defined in several dimensions: spatial, social, and economic. One of the revitalization goals was to build a compact and sustainable city while at the same time indicating the need to improve the quality of life, shape urban accessibility standards, and increase urban resilience.

Revitalization of culturally valuable areas in Lodz's urban policy

Lodz is a city located in the center of Poland, the fourth largest in the country in terms of population (658,444 according to data from the Central Statistical Office from 2023). Thanks to the textile industry, the city developed dynamically in the 19th century, and it is from this period that it has a rich resource of historical buildings in the center. The area of the downtown area in Lodz is 1,460ha and is the largest among all Polish cities. The city center is characterized by a large share of historical buildings, a compact urban structure, coherence of frontage buildings, and a regular street grid. However, despite the good state of preservation of historical districts that build the identity of the place, for several decades it was the part of the city that was subject to the fastest depopulation and spatial degradation. The cause of the crisis was the political and

economic changes introduced in 1989 in Poland, which contributed to the collapse of large state-owned industrial plants. In Lodz, the collapse of the textile industry, which was the basis of the city's economic power (Fig. 1). The economic crisis resulted in the depopulation of the city and the degradation of the urban fabric. In the city policy, the Metropolitan Zone has been singled out for special revitalization activities as the area with the largest share of historical buildings, which build the city's identity. It is a zone with an urban, regular street grid, filled with compact tenement, post-industrial, and residential buildings, mostly from the 19th century.

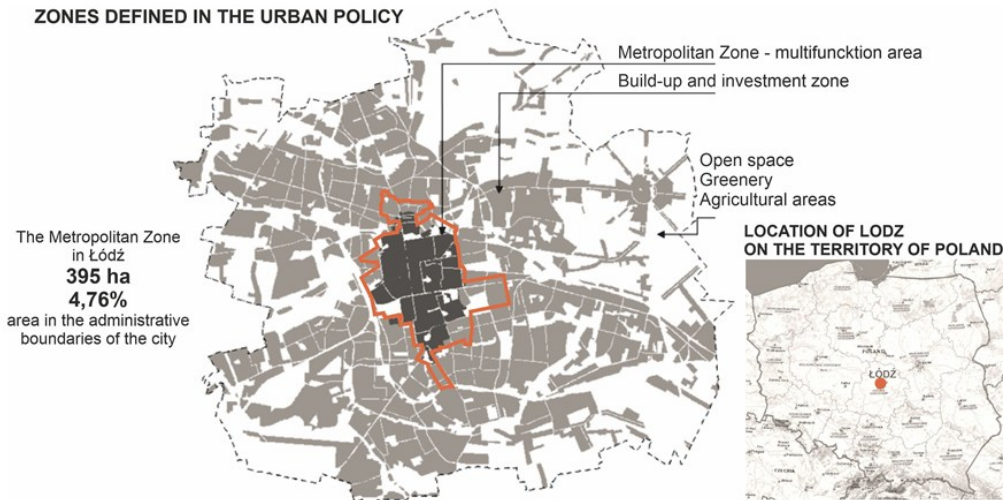


Fig. 1. Division of Lodz into zones according to the development method. In the city center, the Metropolitan Zone is marked in dark brown, while light brown indicates the general urban zone.

Source: Urban policy established in the document Study of conditions and directions of spatial development, graphic of the Municipal Urban Studio in Lodz (Miejskiej Pracowni Urbanistycznej w Łodzi)

Revitalizing the city center districts has become one of the priorities of the city policy in Lodz. At the beginning of the 20th century, the first Local Revitalization Program [16] assumed investments in the central part of the city. Detailed remedial actions were specified in the document of the Municipal Revitalization Program in 2016 [18]. Also, in the directional document for managing development on a city-wide scale [17], the city center was defined as an area intended for rehabilitation and revitalization and deep transformations. The scope of planned spatial changes included ten projects, which included, among others, the renovation of the city center housing development and the adaptation of post-factory buildings to new functions. Actions for the renovation of housing development, often of great cultural value, were continued in the next edition of the program, and improving the quality of life in the city center became one of the foundations of spatial policy.

Revitalization of the city center gained a broader scope after the adoption of new legal regulations. The entry into force of the Revitalization Act [20] introduced new legislative instruments and provided opportunities for obtaining funds from the European Union. According to the provisions of the Act, revitalization had to be carried out in a selected area, which covered a maximum of 20% of the entire city area and should be inhabited by more than 30% of the residents. In Lodz, such an area was designated in 2016. It covered the entire Metropolitan Zone, constituting 5% of the city area, inhabited by 18% of all residents. The main assumption of the planned changes in terms of space was the renovation of the city center buildings, especially those of great cultural value, and the improvement of the quality of public spaces.

The Lodz City Centre Area Revitalization Project

The first area to require intervention was the Core of the Metropolitan Zone, which was divided into 20 smaller areas (Fig. 2). Eight of these areas, with an area of 164ha, were considered priority areas and included in the Lodz City Centre Area Revitalization Project. The area covered by the project was inhabited by 17 thousand residents. The schedule assumed the completion of design work in 2016–2017 and then implementation in 2018–2023. The investment assumptions assumed the creation of 923 new apartments, 102 office premises, 7 premises for non-governmental organizations (NGOs), and 32 premises for creative initiatives.

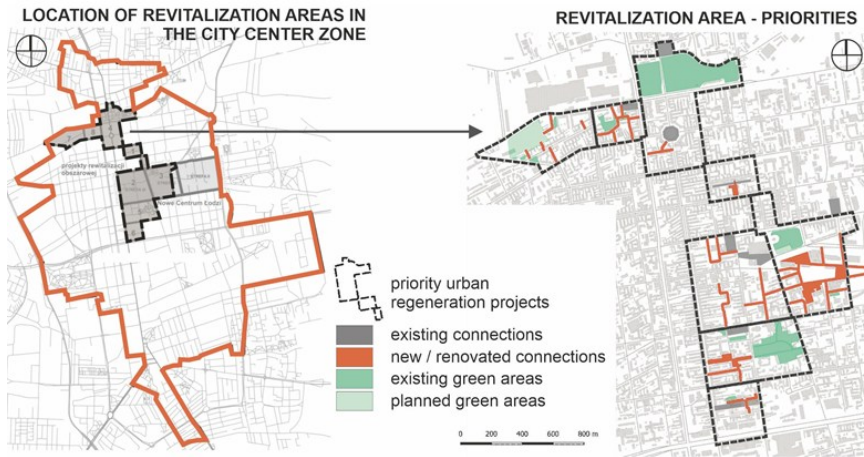


Fig. 2. The core of the Lodz Metropolitan Zone with designated area revitalization priorities. On the left – the Metropolitan Zone with the 8 priority revitalization areas indicated; on the right – key public spaces transformed or introduced into the city structure as part of revitalization.

Source: UML graphics, www.rewitalizacja.uml.lodz.pl, and own study (on the right) [accessed: 03.03.2025]

The Lodz City Centre Area Revitalization Project received co-financing from the European Regional Development Fund under the Regional Operational Programme of the Lodz Voivodeship for 2014–2020. Lodz received the largest funding from the European Union among Polish cities for revitalization, over one billion Polish zlotys, according to the budget assumed in 2015 (Table 1).

Table 1. Projected costs of revitalisation projects by priority area in Łódź (PLN) based on the Municipal Revitalization Plan as in May 2015, www.uml.lodz.pl/rewitalizacja, accessed on 02.03.2025

Specification	Total	Including:	Description of buildings selected for redevelopment	
		Renovation of buildings in the Register of Monuments	Real estate	Buildings
Area 1	208,518,706.00	54,808,000.00	57	196
Area 2	106,219,629.00	38,619,469.52	118	370
Area 3	78,635,543.00	20,298,889.50	45	142
Area 4	199,633,148.00	17,300,000.00	96	341
Area 5	68,090,000.00	12,630,000.00	83	207
Area 6	55,113,467.00	30,552,359.00	43	133
Area 7	219,449,450.00	50,850,000.00	74	208
Area 8	76,274,000.00	43,100,000.00	30	111
Areas 1 through 8, total	1,011,933,943.00	220,306,359.02	546	1,708

The Lodz City Centre Area Revitalization Project, in terms of spatial changes, assumed creating new and improving the quality of existing public spaces, densifying the network of access roads and access points by building new roads within city blocks, rebuilding streets and changing traffic organization, introducing new green areas into the dense city center development, rebuilding tenement houses and creating new residential premises, training flats for people leaving foster care, service premises with a cultural function, and renovating buildings entered in the register of historical monuments, important for building the city's identity.

The revitalization process used planning instruments. In the period 2016–2018, spatial development plans were developed for eight priority areas of area revitalization. The provisions of the plans specified remedial actions in the urban fabric, allowed for the introduction of new public spaces, and specified the principles of transformation in buildings of cultural value. For buildings of historical value, the provisions of spatial plans introduced the principles of protection and transformation based on conservation guidelines. Their scope and detail resulted from the type of conservation protection. The article shows the actions planned and implemented in the first two priority areas (Figs. 3 and 4).



Fig. 3. The Third Revitalization Area (No. 3). An example of a planning document prepared for the needs of the area revitalization process. On the right: orthophotomap, 2016; on the left: local spatial development plan from 2018.

Source: Municipal Urban Planning Studio in Lodz

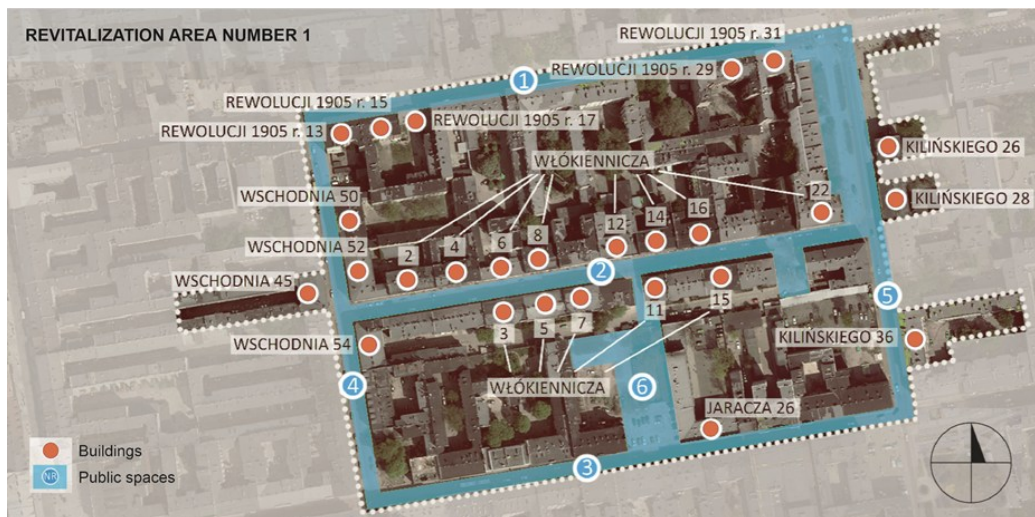


Fig. 4. The first revitalization area (No. 1). Scope of the investment – reconstruction of streets marked in blue and buildings marked with red dots. Construction of Hilary Majewski Square in the place marked with the number 6, graphics by UML. Source: www.rewitalizacja.uml.lodz.pl, [accessed: 03.02.2025]

First revitalization area (No. 1)

The first project covered the quarters adjacent to Włókiennicza Street with an area of 7.5 hectares (Fig. 4). The area required immediate intervention due to the critical level of development and social degradation. It was an enclave of poverty, with the problem of inherited unemployment, as well as the terrible condition of residential buildings and common spaces. The spatial activities were facilitated by the property ownership structure, because most of the buildings located on the frontages of Włókiennicza Street were owned by the commune. The project assumptions included the reconstruction of the existing Włókiennicza Street and the construction of a new public space. The construction of the common space on the previous wasteland included the creation of a square, a playground, a pocket park, and a passage connecting Włókiennicza Street and Stefana Jaracza Street. The project also included improving the technical quality of the development; the reconstruction and renovation of 26 buildings was planned, including 13 of them on the frontages of Włókiennicza Street and the modernization of the former Junior High School No. 2 at 2 Stefana Jaracza Street. As part of the tenement houses' reconstruction, the project assumed the delivery of 486 one-, two-, and three-room apartments to the residents.

The reconstruction included changing the cross-section of the street by replacing the road pavement and making sidewalks and roadways at the same level, which allowed for a different perception of the proportions of this urban interior. As part of the change in the method of development, street greenery and small architecture were introduced. The facades in the frontages were also changed, and details, divisions, and color were recreated or introduced on the facades of renovated buildings. The street became a pedestrian and vehicle zone, with slower traffic (Fig. 5).

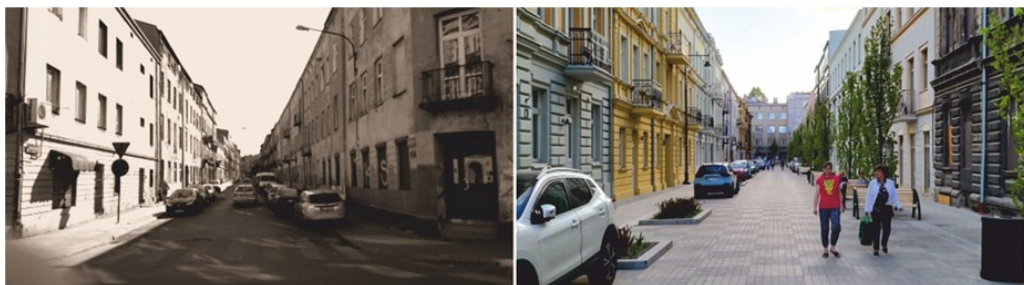


Fig. 5. Włókiennicza Street before revitalization in 2016 and after the revitalization in 2022

The area revitalization project also assumed increasing public spaces by using urban wastelands. An example of such action within the first revitalization area was the construction of a new city square, whose patron was the architect Hilary Majewski, a former architect of Lodz in the years 1872–1892. The public space was created in the place of an empty plot, and as part of the investment, a playground, a recreation area in the form of a square, and a passage connecting Włókiennicza Street and Stefana Jaracza Street were created (Figs. 6 and 7). As part of the reconstruction of the former junior high school building, a side entrance to the building was made to ensure a direct connection of the public utility building with the newly created urban space.



Fig. 6. Hilary Majewski Square. Use of urban wastelands for new public spaces, on the left – state before revitalization in 2016, on the right – after completion of the revitalization in 2022
Sources: <https://ortofoto.mapa.lodz.pl/> [accessed 04/02/2025]

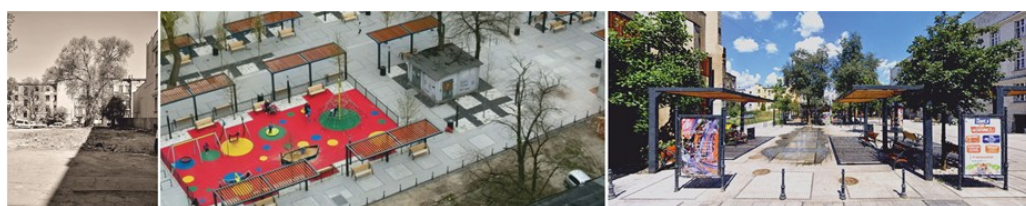


Fig. 7. Hilary Majewski Square, on the left – before revitalization in 2016, on the right – after the revitalization in 2022, graphics by UML Sources: www.rewitalizacja.uml.lodz.pl [accessed: 03.02.2025]

Hilary Majewski's tenement house

The architectural activities included the reconstruction of 26 buildings. One of them was Hilary Majewski's tenement house, entered in the register of historical monuments. He designed and built his own tenement house in the 1880s. The facade was made in the neo-Renaissance style; the interiors were richly decorated. After the architect's death, the villa was sold and transformed into a multi-family building. After World War II, the building was subject to further divisions into municipal apartments, often without taking into account historical values. As part of the revitalization project, the building was restored to its original character (Fig. 8).

The interiors of the building were also renovated – the ceiling polychromes, gilded borders, stucco, wallpapers, window and door joinery, and parquet floors were restored (Figs. 9, 10). Based on photographs and preserved fragments, the wainscoting, stained glass, floor tiles, and wall marbleization were recreated. The interiors were given their historic character back. Opencast research showed that the building's basements had two levels and were also decorated. A heating furnace, which was connected to the gravitational heating system of the entire building, was preserved in the lower basement floor. Hot air was distributed through blower ducts in the walls. During the work, two layers of ceiling polychromes were discovered, of which the newer one was renovated due to the risk that an attempt to remove the younger layer would destroy the older decorations. Based on the surviving fragments, the wallpapers, wainscoting, and wall marbleization in the staircase were recreated.

The renovation of the building was carried out in the years 2017–2022 and cost 6.8 million zlotys. The villa was connected to the city heating, the installations were replaced, and the original layout of the rooms was restored. A structure for green vines was built on the external wall. Currently, the building houses a cultural institution that conducts cultural, educational, and artistic activities.



Fig. 8. Hilary Majewski's tenement house, on the left – before revitalization in 2016, on the right – after the investment in 2022 (Photo by Stefan Brajter)



Fig. 9. Interiors of the Hilary Majewski Tenement House, elimination of secondary room divisions, and renovation of rich ceiling decorations. On the left, before revitalization in 2016; on the right, after the investment in 2022 (Photo by Stefan Brajter)

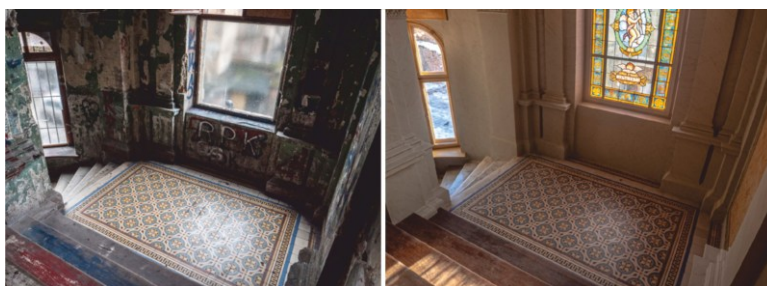


Fig. 10. Interiors of the Hilary Majewski Tenement House, restoration of the marbled walls of the staircase and the stained glass window, on the left – before revitalization in 2016, on the right – after the investment in 2022 (Photo by Stefan Brajter)

Second revitalization area (No. 2)

Area No. 2 includes the quarters located between the main axis of the historic center—Piotrkowska Street—and the main multimodal hub in the city—Łódź Fabryczna station. As part of the revitalization, changes to the urban layout of this area are planned. In 2016, the state of development of the area was chaotic, without proper spatial connections, and the way of using

the land was random. Most of the area on the western and southern sides is filled with downtown tenement houses. In the northeastern part, the historical spatial structure was demolished in the era of socialism; in the 1970s, most of the frontage buildings were demolished as part of the widening of Narutowicza Street. The street changed from a narrow 19th-century downtown road into a wide communication artery. In the place of the demolitions, socialist modernist buildings were built, of a completely different scale and character. Currently, the most characteristic building in this complex of buildings is the building of the Polish television “TVP Łódź,” constituting a local high-rise dominant.

The revitalization project included the reconstruction of the area located between the 19th-century buildings, located in the compact frontages of the quarter, and the socialist modernist buildings, creating a monumental complex of public utility buildings. In the middle of the quarter, there was a zone of wasteland, acting as randomly allocated parking lots. The revitalization project envisaged the construction of new roads and a new city square here to organize the space and provide communication services to the plots within the quarter (Fig. 11).



Fig. 11. Scope of investment in Area No. 2 – reconstruction of streets marked in blue and buildings marked with red dots. Construction of a square behind the Polish Television building in the place marked with number 4, the layout of new streets marked with number 3, reconstruction of Traugutta Street marked with number 2, UML graphics, Sources: www.rewitalizacja.uml.lodz.pl [accessed: 03.03.2025]

The densification of the road system made it possible to use the existing urban wastelands and contributed to the more effective use of urban wastelands. As part of the investment, small architecture was introduced, and green areas along the streets were created in the form of low decorative ground floors and rows of trees. The main access from Piotrkowska Street towards the railway station – Traugutta Street – was also rebuilt. Its reconstruction was in line with the historical trace of the street – its spatial course was straightened, and the form was given the shape of a woonerf with green areas, pergolas, shaded benches, and small architecture. Historic lanterns and spot floor lighting were introduced. Traffic in the area was slowed down by raising the roadway to the level of the pavements in the intersection zone. In area No. 2, 7 buildings were designated for reconstruction and renovation. In the tenement houses at Narutowicza Street 4 and 12, after reconstruction, 17 municipal flats and 3 sheltered

flats were put into use as the “first residential premises” for people leaving the children’s home. In the tenement house at Sienkiewicza Street 22, service premises, offices, and the City Activity Centre were created; in the Maksymilian Goldfeder Palace from the end of the 19th century, at Piotrkowska Street 77, catering functions were preserved, while in the annex and the attic, 16 office premises were put into use. After reconstruction, in area 2, 19 service premises and 57 office premises were put into use.

Maksymilian Goldfeder's Palace on Piotrkowska Street

The renovation in area No. 2 included, among others, the palace of Maksymilian Goldfeder, located at 77 Piotrkowska Street. It was the seat of a banker from Lodz, who came to Łódź in 1870 and twenty years later built a building here that referred in form to late Renaissance Florentine palaces (Figs. 12-15). The facade of the building was decorated with rustication and rustic detail on the ground floor and was flat on the first floor. The building was topped with a richly decorated string course cornice with a balustrade. A frieze with a motif of garlands supported by putti was introduced under the cornice. The palace had very rich interior decorations, including polychromes, stucco, paintings, and ornaments. The smoking room was decorated with Moorish motifs, and the staircase was decorated with a stained-glass window with an image of Diana, made in 1892. The building was designed by Warsaw architect Bronisław Żochowski and signed and approved by Hilary Majewski.



Fig. 12. Goldfeder Palace, eastern and northern elevations, inventory of the existing condition, 2016, materials: 3darchitekci



Fig. 13. Goldfeder Palace, eastern and northern elevations, inventory of the existing condition, 2016, materials: 3darchitekci



Fig. 14. Maksymilian Goldfeder Palace, courtyard and outbuilding in 2019 (photo by the author)



Fig. 15. Maksymilian Goldfeder Palace, ground floor plan, planned scope of changes with the planned land development, 2016, materials: 3darchitekci

Originally, the ground floor was a bank and trade building, with representative salons on the first floor and apartments in the richly decorated annex. A few years after Goldfeder's death, the building was purchased by the Narrow Gauge Electric Commuter Railway Company, and after World War II, the seat of the Lodz District Council of the Polish Students Association was located here, and a student club was located on the ground floor. Currently, the building on Piotrkowska Street houses a restaurant, and the annex houses offices. The building was in good condition, with stucco, stained glass, tiled stoves, chandeliers, and door and window joinery with fittings preserved to this day.

The building was entered into the register of monuments already in 1966 (registration number: 4/34/66 of 18.03.1966 and A/34 of 20.01.197). The revitalization process of the building included replacing the installations, drying the basements by injecting the walls, and making insulation in places that allowed for surface exposure. As part of the conservation work, the ceilings of the representative salons on the first floor were renovated, and the decorated window and door joinery were renovated too. The historic paintings, decorations, and polychromes were renovated. The elevations from the courtyard side were also renovated; the facades were given a new color scheme, in shades of green and olive, following the original version of the color scheme; the joinery and finishing were renovated; and the balustrade balusters made of sandstone were recreated. The revitalization project included the renovation of the decorations inside the building and the reconstruction of the outbuilding, renovation, and new development of the courtyard. In the outbuilding and the attic, 16 office premises were put into use after renovation. As part of the work related to the renovation of the building, the following was carried out: insulation of the foundation walls, drying of the load-bearing brick walls, renovation and reinforcement of the staircase structure, renovation of the balcony slabs, construction of a lift shaft, and local modification of the ceiling due to the installation of the lift. The work also included the replacement of the central heating, electrical, water, and sewage installations, and the installation of air conditioning. The biggest changes were introduced in the courtyard, which previously served as a catering service facility. The floor was lined with granite slabs in two colors. A two-level garden was built in the southern part for the needs of the restaurant located in the building. The courtyard was greened; trees, ornamental shrubs, perennials, and climbers were planted. The palace renovation was completed in the first quarter of 2021 and cost 9 million Polish zlotys.

The tenement house at the end of the compositional axis of Stanisława Moniuszki Street

The tenement house at 22 Sienkiewicza Street, covered by the reconstruction, is a building located on the axis of Moniuszki Street, so despite the uncharacteristic form of the building itself, it is a compositionally important building for the urban layout in the historic center (Fig. 16). Moniuszki Street is a link between the main route of the historic center—Piotrkowska Street—and the Łódź Fabryczna railway station. The tenement house is a typical building with rental apartments from the end of the 19th century. The property was placed under conservation care because it is located in an area entered in the register of monuments of the historic urban layout and cultural landscape “Osada prządków” (1827). The building is a former tenement frontage development, within which the front building consists of 3 stories, and the outbuildings are four-story. The subject of the planned changes was the adaptation of the building for service and office functions, including the location of the community center (Fig. 17).



Fig. 16. Tenement house at 22 Sienkiewicza Street, at the end of Stanisława Moniuszki Street, 2025 (photo by the author)



Fig. 17. Tenement house at 22 Sienkiewicza Street, ground floor plan, planned scope of changes with the planned land development, 2016, materials: 3darchitekci

The construction of the building was typical for this type of development in the 19th century. The building was built on fieldstone foundations, without horizontal and vertical insulation, with walls made of solid ceramic brick, with cellars with arched brick vaults. The front building had a gable roof, a rafter-purlin structure. Before the reconstruction began, the building was in poor technical condition and was partially out of use. The project of changes included the

reconstruction and extension of the tenement house and the demolition of part of the outbuildings and farm buildings, along with the development of the area and technical infrastructure.

The conservation work included archival research, reconstruction of the original form of the front elevation with consideration of historical detail, reconstruction of window and door joinery based on archival materials and preserved fragments, reconstruction of balconies and balustrades, and renovation of preserved historical elements of interior furnishings—stoves, balustrades, and fittings. As part of the improvement of the technical condition of the building, the following works were carried out: underpinning of the foundations of load-bearing walls, drying of the basement walls, insulation of the foundation walls, introduction of damp-proofing, reinforcement of transverse walls or their replacement in fragments with reinforced concrete walls, replacement of ceiling beams and their support on concrete cushions, rebuilding of chimneys, and replacement of the structure and roof covering. The planned superstructure of the front building also required reinforcement of the structure in this part of the building.

Tenement house at 12 Prezydenta Gabriela Narutowicza Street

An example of a typical tenement house is the tenement house at Narutowicza Street 12, which, together with its outbuildings, was built in the early 1890s on the site of a former wooden house housing a weaving workshop (Fig. 18). Like most residential buildings erected at that time in the city center, the tenement house was intended for renting out tenement flats and for shops on the ground floor of the building. The tenement house was placed under area conservation protection. The property is located in an area of protection of the cultural landscape and urban layout entered into the municipal register of monuments under the name “Osada Łódka.” The front building, together with its outbuildings, was entered into the municipal register of monuments.



Fig. 18. Courtyard of the house at 12 Narutowicza Street, 2025, graphics by UMŁ
Sources: www.rewitalizacja.uml.lodz.pl, [accessed: 03.02.2025]

The front building is four stories, without a basement, in a brick structure, with a gable roof with a rafter-purlin structure, with a single staircase, two bays, and wooden inter-storey ceilings. The guidelines resulting from the conservation conditions indicated that all works should be carried out while preserving the historic elements of the building and using traditional techniques; missing elements should be supplemented in a reconstructive manner; preserved elements, including the joinery, were indicated for renovation; and external insulation was allowed only in the outbuildings. The project of changes included the reconstruction of the existing building with the implementation of sheltered apartments in the front building and the preservation of services on the ground floor. The project includes new room divisions, thermal insulation, wall drying, ceiling repairs, staircase renovation, joinery renovation, renovation of

historic steel and wrought iron elements, replacement of the roof truss, addition of a staircase in one of the outbuildings, drainage, and new flooring of the courtyard. As part of the revitalization, the building was thoroughly renovated, some of the outbuildings were extended, one lift shaft was added, installations were replaced, and the entire building was connected to the heating network. The building contains 11 municipal apartments, 2 sheltered apartments for people leaving foster care, and 6 service premises. The flooring in the courtyard was replaced, drainage was performed, and greenery was introduced.

Discussion – towards a resilient city – flexibility

Improving the resilience of cities is becoming one of the basic goals in urban policies. Urban resilience is currently defined not only as adaptation to climate change but also as striving for the most effective use of available resources, including space and cultural values. A resilient city is characterized by endurance, adaptability, and the ability to transform [11]. Revitalization projects are expensive and long-term and require the involvement of many environments, which is why they should be carefully implemented to achieve the highest possible effectiveness. In the process of regeneration of the most valuable areas, strengthening the resilience of the city and preparing it for new conditions should be one of the obligatory elements of planning changes. Improving resilience and revitalization of degraded areas have several common denominators; it is a process of adaptability and strengthening flexibility in the case of changing local conditions. The use of historical areas in a new form by improving the quality of space and reducing the area of wasteland and the number of vacant buildings is consistent with the construction of a compact city, evolutionarily resistant to subsequent changes and challenges [12].

Conclusions

Lodz has a vast historical center filled with 19th-century fabric. The city center is a resource of culturally valuable buildings and complexes of buildings, but for years it was the part of the city that was subject to the fastest degradation and depopulation. Urban policy at the local level over the last three decades has focused on preserving the identity of the place and implementing revitalization activities in degraded areas. Lodz has become the largest beneficiary of EU funds for revitalization purposes among Polish cities. This has enabled the implementation of projects on a larger scale, with activities in priority projects covering 164ha.

The revitalization activities described in the article show a range of spatial and functional solutions, from large-area solutions in the form of programs and plans to point solutions applied on selected plots. Lodz uses various solutions in the process of city revitalization, and their multitude can be a range of examples for other local governments or organizations. The main initiator and leader of changes is the city government, which results in a very large budgetary and organizational burden for the commune.

In Lodz, the revitalization process was supported by a parallel action program and planning studies. The city of Lodz planned a schedule of activities, defined priority investments, and determined urban and architectural assumptions. Programs for the transformation of entire city districts were developed, and spatial development plans for priority areas and urban architectural and conservation concepts were prepared.

Area-scale actions, the renovation of public spaces, the introduction of new communication systems within city quarters, and the revalorization of green areas result in synergy effects. City actions cause the intensification of private entities' actions. The transformation of public spaces is becoming more and more visible in the structure of the city, which is noticed by private owners, who increasingly locate new investments in the city center.

Revitalization also serves to build the city's resilience, in particular through the efficient use of existing resources, adapting degraded areas to new conditions and functions, improving the quality of life in the center, and reducing the number of residents moving to suburban areas.

This is to strengthen the adaptability and flexibility of areas requiring repair, to support the directions of change for the construction of a compact and sustainable city.

The Lodz City Centre Area Revitalization Project has been implemented, with the last investments completed in 2024. The next stage of the work should be to evaluate the changes introduced and determine the directions of action for the coming decades. The revitalization of the Lodz city center is an example of implementing changes on a large scale and can be an example for other cities.

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