

COMPLEX PROCESS OF RESTORATIVE-RECONSTRUCTIVE TRANSFORMATIONS IN THE SUSTAINABLE DEVELOPMENT OF HISTORICAL SMALL TOWNS

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The complex process of restorative-reconstructive transformations is proposed in order to simultaneously preserve, restore and improve the historical and architectural value and integrity of the urban environment in historical small towns and the quality of life in them, thereby reviving them, and ensuring their activity, attractiveness, and sustainable development. A definition of the “restorative-reconstructive transformation” (RRT) concept is given. The problems that need to be solved during restorative-reconstructive transformations in the historical small towns of Ukraine in terms of their post-war revival are identified and characterized. The causes of these problems are identified. Their proposed systematization makes it possible to single out five components of the complex process of restorative-reconstructive transformations, namely: ecological, historical-cultural, infrastructural, social, and economic. For each one, the tasks are identified, the solution to which will enable the revival and sustainable development of historical small towns. The process of restorative-reconstructive transformations of the historical center of Medzhybizh in the Khmelnytskyi region of Ukraine, is shown as an example of solving destructive problems in its existing development, increasing its historical, architectural, utilitarian, and socio-economic attractiveness, and the quality of living in it, as well as increasing the interest for visiting it and attracting investment. Altogether, this will contribute to the revival of Medzhybizh, launching the cumulative process of its sustainable development as a cultural, tourist, and recreational center.

Key words: restorative-reconstructive transformations, sustainable development.

INTRODUCTION

The issues of restoration, reconstruction, and new development in historical towns, especially in small ones, require new approaches to their solution in the context of revival, increasing attractiveness, and sustainable development. This relates to the interconnection between modern social and economic needs, environmental stability, legal opportunities, and historical and cultural heritage. It will help to rethink the existing historical urban environment as a potential cumulative source for the revival and development of the unique hospitable small town and improve the quality of life in it. There is a

need for a new methodology for carrying out restorative-reconstructive transformations in small historical towns, focusing on people, ecology, culture, and architectural and urban heritage as the foundations for their sustainable and cumulative development and growth in the residents' well-being.

Cumulative development can be defined as a total qualitative development based on the accumulation of the historical small town's various positive attributes, a combination of traditions and innovations (the preservation of historical heritage, its maintenance, and supplementation with new, modern features), which ensures its revival and continuity (Leshchenko, 2020).

According to the International Commission on Environment and Development's definition, sustainable development

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meets the needs of the present generation without compromising the ability of future generations to meet their own needs (Butlin, 1987). The sustainable development of a historical small town includes its sustainable ecology, social activity, and high quality of life for its residents, as well as the correct modern use of the existing cultural heritage, which will contribute to its preservation for future generations and, at the same time, the town's economic growth.

Sustainable ecology is a safe and healthy environment. It does not exist apart from human life. And all processes to improve the quality of life in the town must be coordinated with the preservation of the environment and its ability to self-repair. As for the historical urban environment, this is an increase in green spaces, first of all, as well as a reduction in carbon emissions due to transport restrictions, and lower thermal emissions through the thermal modernization of facades and roofs of existing low-value buildings. This also includes the use of energy-saving materials and technologies in new construction and reconstruction. Houses should receive energy mainly from renewable sources and become energy efficient.

Social activity in the urban environment means a lively town with people of all ages actively participating in all urban processes and forming the atmosphere there. Any changes in an urban environment must include the participation of its inhabitants, because who knows better than them what they need? They form the "face" and "soul" of their town. They go out to the town to carry out their essential social practices and spend their free time there. And the more places in town for leisure, recreation, and spending quality free time that are open, accessible, and interesting for different people, regardless of their age, wealth, or mobility, the better life is in the town.

A town's economic growth must be balanced with its social needs and environmental sustainability. A small town will develop and prosper when all its residents grow rich. And here it is important to bring the criteria of the standard of living closer to the level of comfort. For economic growth, it is necessary to activate the potential opportunities of the historic small town, and revive the historical traditions or create new ones, in order to use and develop its natural, historical, and cultural features and advantages. Any funds resulting from this should be used to improve the quality of life of the town's residents.

In addition to the three pillars of sustainable development – environmental, social, and economic – the Johannesburg World Summit on Sustainable Development recognized its fourth pillar, cultural diversity. It is understood not only in terms of economic growth but as a means of achieving a satisfactory intellectual, emotional and spiritual existence (UN, 2002). Cultural development should become the fundamental and unifying lever for an economic and social upsurge and environmental sustainability. The UN General Assembly resolution notes that culture and architectural heritage, as an element of culture, are the most important components of evolution, ensuring economic growth and development processes (UN, 2002). Architectural heritage is significant as a reflection of national and cultural diversity and social values, as well as an essential element of territorial

identity, and an integral part of the development process. It should be preserved for further transmission and serve as an educational resource for future generations (ICOMOS, 2011).

THEORETICAL BASE

Today, the issues of sustainable development in different towns, including small ones, and the processes of restoration and reconstruction in them, have been raised in the works of many scientists worldwide. The studies of Mayer and Knox (2006; 2010), Miller and Spoolman (2011), and Ustinova (2015) devoted to the sustainable development of small towns can be highlighted. The experience of Bryx and Jadach-Sepioło (2009), Rybchinsky (2017), Skalski (2009), Tovbych (2019), and Ziobrowski (2010), who analyzed the processes of revitalization in small towns, also deserves attention. The social aspect of the problem is considered in detail in the works of Day (1990), Gehl (2010), Harvey (2018), Holovatiuk (2022), and Whyte (2004). The issues of protection related to historical and architectural heritage, its preservation, restoration, and use are highlighted in the works of Jokilehto (1986), Orlenko (2017), Rymaszewski and Borusevich (1990), Vodzynskyi and Ustenko (1980) and others.

However, there is a need for a systematic theory with regard to carrying out restorative and reconstructive transformations in the historical urban environment of small towns in Ukraine. This theory should be for the urban environment, which is heterogeneous in terms of historical and architectural value and the degree of destruction, which is typical for the historical centers of small towns in Ukraine. And the methodology proposed in this article for carrying out restorative and reconstructive transformations is a systemic general theory that meets the basics of sustainable development theory, focusing on people, ecology, and culture as primary sources for the cumulative development of a town. It interconnects the existing restorative and reconstructive methods and determines the algorithm for their application, depending on the initial architectural and urban planning context (differentiating it according to the degree of value and destruction) and carrying out qualitative changes simultaneously at all levels, both for buildings and open spaces and for the entire historical center and the small town in general.

This study aims to identify, generalize and systematize the existing problems that disrupt the sustainable development of historical small towns in Ukraine which must be resolved during any restorative-reconstructive transformations. Their proposed systematization is the basis for identifying the relevant components of the complex process of restorative-reconstructive transformations. And for each selected component the main tasks are also outlined. Their solution will contribute to the cumulative development of these towns with an increase in their attractiveness and quality of life for their residents. The case study of the concept of restorative-reconstructive transformations in the historical center of Medzhybizh is a practical illustration of the theoretical developments presented here.

METHODOLOGY

A complex process of restorative-reconstructive transformations (RRT) is proposed for the purpose of simultaneous preserving, restoring and improving the historical and architectural value, integrity, attractiveness, and quality of the historical urban environment. It is a cumulative source for the recovery, revival, and sustainable development of historical small towns. The complex process of RRT combines all the restoration and reconstruction in terms of qualitative changes into one whole, both in buildings and open spaces, and in the overall urban architectural environment. Four degrees of restorative-reconstructive transformations in the historical urban environment were synthesized, depending on the historical and architectural value and integrity. These are: preservation, amplification, correction, and change.

Preservation (the I-t degree of RRT) is an increase in the value, integrity, and quality of the historical urban environment through maintaining its authenticity, protecting historically valuable elements from damage and destruction, and ensuring that their condition meets the needs of contemporary use with possible "hidden" engineering and technical restoration, without introducing new elements. Amplification (the II-d degree of RRT) is an increase in the value, integrity, and quality of the historical urban environment through the restoration of destroyed and the rebuilding of lost historically valuable elements, adaptation for modern urban life, and "hidden" compensatory, point new construction. Correction (the III-d degree in RRT) is an increase in the value, integrity, and quality of the historical urban environment through the considerate addition of new elements to eliminate destruction and contextual corrective new construction for activation and development. Change (the IV-h degree of RRT) is an increase in the value, integrity, and quality of the historical urban environment through active new construction in compliance with the fundamental principles of historical planning and volume/spatial morphology (usually for abandoned, degraded, and "empty" territories).

For each degree of RRT, the corresponding restoration (preserving and restoring) and reconstructive (renewing and transforming) methods are determined. For the effectiveness of any transformational issues, it is recommended that they be carried out simultaneously at different system levels – urban planning, volumetric, functional, and socio-economic as a total result (Figure 1).

Using the method of logical analysis, generalization, and systematization, the existing problems were identified that disrupt the sustainable development of historic small towns in Ukraine, which must be resolved during restorative-reconstructive transformations. Based on the proposed systematization of these destructive problems, the corresponding five components of the complex RRT process were synthesized: ecological, historical-cultural, infrastructural, social, and economic. For each one, the main tasks were determined and summarized, the solution for which will help to recover, revive and achieve sustainable development of these towns.

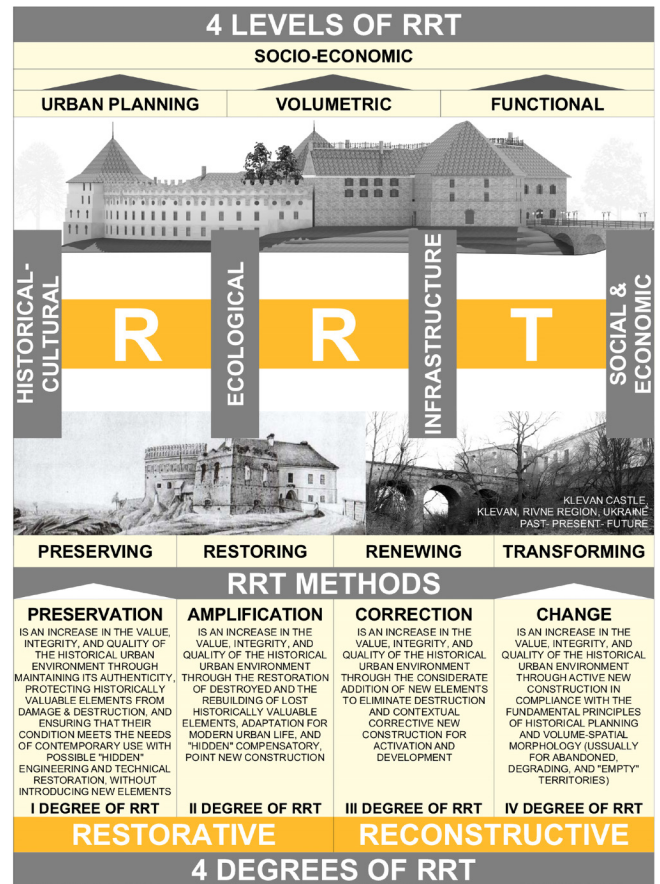


Figure 1. A complex process of restorative-reconstructive transformations
(Source: Author)

The conceptual design was carried out for the historical center of Medzhybizh, in the Khmelnytskyi region, to test the theoretical studies and the proposed methodology for the complex process of restorative-reconstructive transformations of the historical urban environment.

PROBLEMS THAT DISRUPT THE SUSTAINABLE DEVELOPMENT OF HISTORICAL SMALL TOWNS IN UKRAINE

The sustainable development of each historical town implies a balance between the necessary economic growth, improvement of social activity and quality of life, ecological stability, preservation, and development of its historical and cultural heritage. At the same time, as a rule, each town has its own set of problems, which should be solved during the restorative-reconstructive transformations to ensure sustainable development.

Each historical town in Ukraine has its own peculiarities based on its development and current state, as well as its own specific problems. These problems can be defined as both general, which were formed and grew in them gradually in the pre-war peacetime, and special, which have emerged in recent months and are related to the consequences of the Russian military aggression in Ukraine.

The first, general problems, can be systematized as urban planning, architectural-imaginative, utilitarian-functional, socio-economic, ecological, and infrastructural.

Urban planning problems include: the disruption of the chamberness and integrity of the historical urban environment through the alteration of its traditional urban morphology; the destruction of historical dominants, the disappearance of elements of the historical urban planning and ordinary buildings; and the destruction of the historical scale through the introduction of new, large-scale buildings into the historical outline.

Architectural-imaginative problems include: the disruption of the integrity and continuity of development of the historical urban environment through the degradation of architectural monuments and historical buildings; the formation of "empty" spots in historical buildings due to temporal losses; the erection of disharmonious new buildings as compensatory ones; stylistic destruction when a new building is introduced into a one-time architectural ensemble; the creation of "historical dummies" as new compensatory buildings; ignoring traditional regional features for new buildings; and the low aesthetic quality of new buildings.

Utilitarian-functional problems include: the destruction of architectural monuments and the degradation of the historical urban environment as a result of misuse or no use at all; the introduction of a new building with an incorrect function that destroys the historical urban environment as a whole; inconsistency of existing functions with the needs of the modern quality of life: a small number of places associated with secondary urban functions; priority development of only one function, which leads to functional impoverishment or a mono-functional urban environment and the appearance of "empty" urban spaces.

Infrastructural problems include: the low quality of staying and walking in the urban environment due to very little tourist and service infrastructure; and the absence of an integral pedestrian zone that would unite the main sights of a small town and all of its functions.

Ecological problems include: the transport load of the historical center; the presence of warehouse, industrial and transport-intensive facilities; degradation of riverine territories as a result of their misuse, and lack of access to them for everyone; and unwanted emissions of heat into the atmosphere and significant heat losses in existing buildings.

Socio-economic problems include: migration of residents to large cities due to the lack of jobs in their small towns; the loss of the uniqueness of small towns through forgetting traditions; lack of interest in the small towns from tourists and investors, resulting in a lack of funds for their development; lack of opportunity for residents to make decisions on carrying out restorative-reconstructive transformations in their towns.

These general problems indicated above were acquired by Ukraine's small historical towns little by little over a long period of peacetime, and their solution must necessarily be complex. However, until recently, it was possible for a gradual solution.

In recent months in practically all cities in Ukraine, as well as small historical towns, special problems have arisen related to the destructive consequences of the Russian

military aggression. Cities have received significant damage to critical civilian infrastructure, housing and communal infrastructure. Numerous public, residential and industrial buildings have been destroyed, including architectural monuments and historical buildings that form the national historical and cultural heritage. Cities have lost both historical and modern buildings, and their residents have lost their homes, and places of work and study, leading to millions of forced displacements. Most importantly, many cities, especially the small ones, have been almost destroyed, and their forcibly displaced residents have nowhere to return after the liberation of these cities. And this situation, which has developed for many of Ukraine's cities and towns has significantly compounded the general problems stated above, thus requiring a different approach to their solution.

This means that the problems of restoring destroyed cities, their revival, and sustainable development should be addressed complexly, simultaneously and quickly, both now and as part of the post-war recovery of Ukraine. The systematization proposed above can be the basis for identifying the relevant components of the complex process of restorative-reconstructive transformations.

COMPLEX PROCESS OF RESTORATIVE-RECONSTRUCTIVE TRANSFORMATIONS

The concept of restorative-reconstructive transformation (RRT) can be defined as a complex process of interrelated restoration and reconstruction changes in buildings, open spaces, and the urban architectural environment as a whole, in order to increase their historical and architectural value and integrity, and move to a new qualitative level. It unites all the restorative and reconstructive qualitative changes – transformations (Leshchenko, 2020). It includes four degrees, depending on the activity of intervention in the existing historical urban environment. The possibility of applying each degree of restorative-reconstructive transformation depends on the qualitative indicator of the existing state of the urban environment, namely, the degree of its historical and architectural value and degree of its destruction.

The author have selected five components from the complex RRT process, within the framework of which the above problems can be solved. These are historical-cultural, ecological, infrastructural, social, and economic components of the one process. Each component includes the main tasks that should be solved in the context of the post-war recovery and sustainable development of Ukrainian historical small towns (Figure 2). Their solution is illustrated accordingly in the examples shown in this figure. It shows the preservation and amplification of the contextuality of the Town Castle area in Ostrog (historical-cultural component). It also presents the concept of correction in the historical center of Bar, with the creation of a green pedestrian area with different functions and convenient connections (ecological and infrastructure components), multi-comfortable and filled with places of secondary social practices, which provide attractiveness and activity (social and economic component). The decision to increase the social and economic attractiveness is also illustrated in the example of the renovation concept of the shopping area in Olyca's historical center.



Figure 2. Components of the complex RRT process
 (Source: Author)

For the historical-cultural component, these are the following tasks:

- preservation, restoration, and enhancement of the historical, architectural, and cultural value of architectural and urban planning monuments, historical buildings, and the urban environment as a whole;
- improving the aesthetic and functional quality of existing low-value ordinary buildings and new buildings; and
- ensuring the integrity and continuity of the development of the historical centers of small towns as places where the historical and cultural heritage are concentrated; any PPT in them should be subordinated to the existing historical context.

For the ecological component, the tasks are:

- preservation and improvement of the ecology of the urban environment; one of the prospective development scenarios for a historical small town may be a "green town"; and
- improving the ecological quality of new and existing buildings, their engineering and technical renovation, bringing them to energy efficiency indicators, and ensuring their partial or complete energy independence from non-renewable energy sources; in addition, all newly erected buildings should strive to match "passive house" indicators.

For the infrastructure component, these are:

- recovery of the destroyed and improvement of the

quality of the existing civilian critical infrastructure and housing and communal infrastructure, thereby reviving and improving the quality of life in the affected towns;

- improving the quality and attractiveness of small historical towns through the development of tourism and service infrastructure;
- the recovery and development of transport infrastructure to create regional tourist routes that unite all the small historical towns of these regions;
- organization of mixed traffic with priority pedestrian traffic in the historical centers of small towns and the active development of "green" pedestrian spaces; and
- content and variety of functions in historical centers to activate them and increase their attractiveness, maintain their traditional poly-functionality, and provide convenient pedestrian access to various town functions.

For the social and economic components, these are:

- the restoration of destroyed residential, industrial, and public buildings or the erection of compensatory new ones, respecting the traditional scale, number of stories, and regional architectural features;
- preservation, revival, and the creation of new traditions as the basis for increasing the attractiveness of historical small towns, their future development, and employment of the locals;
- integration of architectural and urban planning monuments and significant historic buildings into the modern socio-cultural and economic life of the town to improve the well-being of residents;
- the recovery and enhancement of the social and economic value of existing ordinary buildings and the urban environment as a whole to revive and activate them and improve the quality of life in the town;
- involvement of local people in resolving issues of recovery and development in their hometown; and
- economic development of small historical towns through the revival, activation, and improvement of social, cultural, and environmental components (Leshchenko, 2021a).

Some similar solutions have proved to be successful in improving the quality of the urban environment in various historic small towns in Poland, Lithuania, and the Czech Republic – the closest neighboring countries to Ukraine, with the closest cultural and architectural ties, as well as Germany, France, Denmark, and the Netherlands. However, for Ukraine's cities, because of the significant changes in the qualitative indicator of the existing state of their urban environment over the past year caused by the war, an integrated approach to solving the tasks listed above is crucial.

Also, for efficiency, the above tasks should be solved simultaneously at different system levels: urban planning, volumetric, functional, and socio-economic. At the urban planning level, these are the issues of restoring and increasing the value, integrity, and quality of the planning and volume/spatial structure of the historical urban environment in each town as a whole. At the volumetric

level, these are the issues of restoring and increasing the quality of the planning, architectural and figurative, constructive, and engineering structure of buildings that form an urban environment. On a functional level, as an integral part of urban planning and volumetric levels, these are the findings of relevant functions for existing and new buildings and open spaces, to restore and increase their value and revive and activate a small town. And at the socio-economic level, for the recovery and transformation of the existing urban environment into a multi-comfortable for living, working, and spending free time – this is an increase in its social and economic activity. This can be done through the creation of high-quality conditions for all people staying in the town, and their active participation in urban life, as users, producers, or investors.

THE COMPLEX PROCESS OF RESTORATIVE-RECONSTRUCTIVE TRANSFORMATIONS IN THE HISTORICAL CENTER OF MEDZHYBIZH, KHMELNYTSKYI REGION, UKRAINE

Taking into account the problems summarized above and according to the identified main tasks that must be solved in the context of the sustainable development of historical small towns, a conceptual project for the complex process of restorative-reconstructive transformations in the historical center of Medzhybizh was proposed.

Medzhybizh is located in the Letychevskiy district of the Khmelnytskyi region in Ukraine. It has historically valuable architectural and urban heritage. It was founded in 1146, and flourished in the 16th-18th centuries. The construction of most of its architectural and urban planning monuments belongs to this period. In 1593, Medzhybizh received Magdeburg rights thanks to Hetman Senyavsky (Androshchuk, 2009). At the same time, a magistrate's court building was created, handicraft workshops were organized, and two markets a week and several fairs a year were held in the town (Androshchuk, 2009). By the beginning of the 17th century, there were 12,000 inhabitants in Medzhybizh (Leshchenko, 2021b). Now there are just over 1,700.

Medzhybizh has several architectural and urban planning monuments of national and local significance. These are the ensemble of the Medzhybizh Castle (1362-1540, in the Renaissance style), the Trinity Church (1600-1632, in the Baroque style), the 17th century baroque priest's house, the building of the former market (17th century, in the Baroque style), as well as residential buildings (19th century, eclectic) on the main market street (Leshchenko, 2020).

Today, these architectural monuments have different degrees of destruction. Trinity Church is a ruin. The former market building is also in a ruined state. Historically, rectangular in plan with a courtyard, it was combined with the town hall. The town hall, which formed its northern part, was also destroyed.

Part of the ordinary residential buildings on the main market street, which traditionally connected the two historical town centers – the castle and the market square – has been preserved to this day. The buildings on this street were once regular and dense, consisting of residential houses with shops on the ground floor. Traditionally, the buildings

were one or two-story with an attic. They had a pitched roof. Their façades, three to five windows wide, were decorated with rusticated pilasters and finished with rectangular and triangular stepped pediments.

The castle ensemble, with the palace complex, the Church of St. Nicholas, and the defensive walls and towers, has traditionally been and still is the main town's dominant feature. It is the reason why tourists have always come to Medzhybizh. The castle was actively used until last year, during peacetime. It was used for various town festivities, and events related to the town's history were reconstructed here. The castle is "alive".

The situation regarding the preservation and, accordingly, the activity of the historical main market street and the market square is much worse. The latter today is a degraded empty area with dilapidated buildings remaining on it.

Historically, the market square had a rectangular shape plan. Along the perimeter, it was built up with residential buildings that had shops on the ground floor. The market with the town hall formed its north side, occupying one building with a courtyard that united the square and the market street. Its north façade, with the town hall, overlooked the main market street, and its south façade, with the market, overlooked the market square. Now, this building is in a dilapidated state.

The square's southeast corner was crowned by the Trinity Church, which is in a ruined state now. From the remaining dimensions of its ruins, we can judge its importance, as well as the importance of the market square for Medzhybizh. It was the town's main square, where all of its main activities took place. Historically, it was polyfunctional, combining buildings with commercial, residential, religious, and administrative functions. It served as the main center of attraction. All town life was concentrated here. Today it has completely lost its social value, and its architectural value has been reduced.

A first step to correct the current situation could be to revive the significance of the market square, restore the historical and architectural value of the existing monuments, and increase their social and economic value and the quality of the historic urban environment. This would significantly increase the attractiveness of Medzhybizh and attract more tourists and investment, as well as improving the life quality of local people.

According to the author's pre-project analysis of the existing state of the historical center of Medzhybizh, its qualitative indicators, namely the degrees of value and degrees of destruction of its building areas, were determined. The I-III degrees of value and II-IV degrees of destruction were determined.

Sites with the I degree of value have historically valuable planning and the presence of architectural monuments and significant historical buildings. Sites with the II degree of value have historically valuable planning and the presence of ordinary historical buildings (a lack of architectural monuments). And sites with the III degree of value have historically valuable planning and modern buildings without architectural monuments or

historical buildings (Leshchenko, 2022).

Sites with the II degree of destruction are distinguished by the presence of point destruction and single disharmonious buildings. Sites with the III degree of destruction have significant planning and volume/spatial destruction, and a number of disharmonious buildings. And sites with the IV degree of destruction are completely destroyed or degraded as a result of modern disuse with the presence of a significant number of disharmonious buildings.

Based on the above, to increase the historical and architectural value, integrity, and quality of developing the historical center of Medzhybizh, it is possible to use the I-III degrees of restorative-reconstructive transformations, namely: preservation, amplification, and correction, using, respectively, preserving, restoring and renewing methods.

It is proposed that the tasks are solved simultaneously at different system levels using a discrete complex of restorative-reconstructive methods. For the urban planning level (to increase the value, integrity, and quality of the planning and volume-spatial structure of the historical center as a whole), rehabilitation, revalorization, regeneration, and revitalization have been identified as the key methods. For the volumetric level (to improve the quality of existing buildings depending on their historical and architectural value and degree of destruction), holistic restoration, rehabilitation, and modernization should be applied. At the functional level (to find relevant functions for existing and new buildings and spaces and to activate the historical center), functional recovery and addition,

adaptation, and functional filling are proposed. The cumulative result is the revival and increase in the social and economic attractiveness of existing buildings and the urban environment as a whole, transforming it into a multi-comfortable area for living, working, and spending one's free time.

The author proposes creating an integral pedestrian space in the historical center of Medzhybizh, which would unite the castle with the castle square, the market square, and the market street that connects them. This space, with its restored characteristic chamber-like atmosphere of a small town, will open its most beautiful and iconic places to visitors. The attractiveness and activity of these places will be ensured by increasing the historical and architectural value and physical and functional content based on the urban context and traditions formed over the centuries (Figure 3).

The rehabilitation of the destroyed Trinity Church, the town hall and the former market, and the holistic restoration of the priest's house are proposed. These dominant historical features traditionally set the perception of the compositional, spatial, architectural-figurative, and functional market square. Therefore, during rehabilitation, they must restore the integrity of their historical form and receive their historical functions as the main ones. At the same time, their functional filling can be carried out through several new, additional functions necessary both for revitalizing and activating the square itself, which correspond to the modern needs of Medzhybizh as a whole. The church

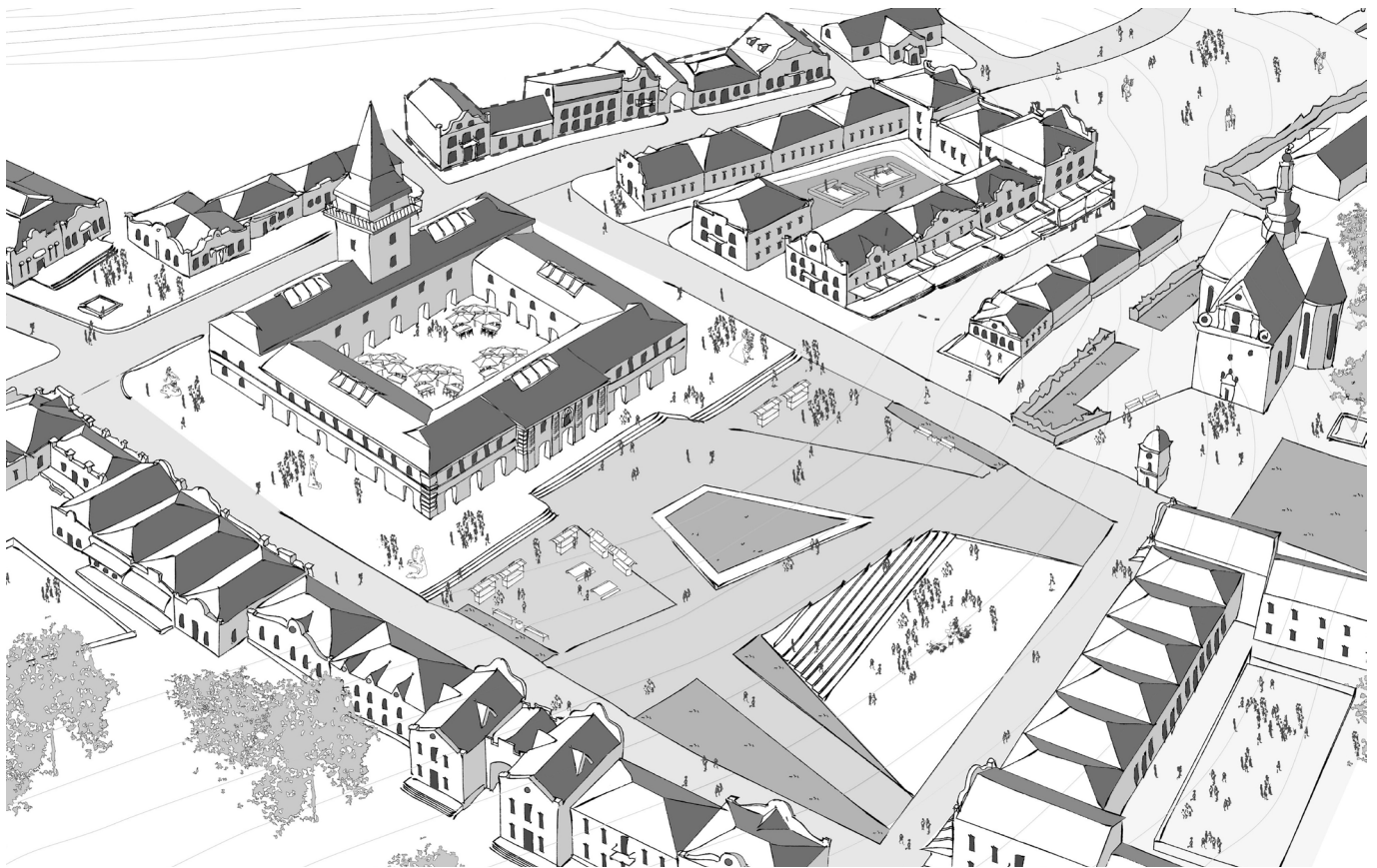


Figure 3. Medzhybizh market square. RRT concept
(Source: Author)

would be returned to its original cult function. The building of the former market with the town hall, in addition to historical functions, commercial and administrative, would be supplemented with new ones: cultural and educational, information and touristic, and services. It would house a town council, a town museum with a lecture hall, a library, exhibition galleries, a tourist information center, a cafe, a bakery, and souvenir shops.

The ruined south and west sides of the market square would be regenerated with new compensatory buildings of one to three stories with traditional roof forms, stylized architectural details, and regional materials in the façades. In addition to the main residential and commercial functions, represented by permanent dwellings with shops on the ground floor, they would also receive new additional tourist, service, cultural and educational, and exhibition functions. These functions would be represented through cafes, a hotel, art workshops with crafts workshops, and spaces for the exhibition and sale of traditional folk crafts.

The Market Square would once again become the town's center of attraction thanks to its attractive and functionally appealing architectural monuments, the interesting modern architecture of new compensatory buildings delicately inscribed in the historical context, and the multi-functionality and quality of the urban environment, where conditions for a comfortable stay would be created. It will be again home to all the town's festivals and active daily urban life. The "spirit of the place" can be felt here. And for that feeling, Medzhybizh will be visited again and again by its new guests – tourists.

All the above proposed qualitative changes in the historic center of Medzhybizh are based on the four main principles of the complex process of restorative-reconstructive transformations formulated by the author, namely: sustainable and cumulative development; contextual addition to the new; attractive spatial disclosure and multi-comfort of the historic urban environment. The combination of various architectural, urban planning, functional and socio-economic techniques proposed in this concept is aimed at simultaneously recovering post-war destruction, harmonizing historical and modern buildings, attractively revealing and presenting architectural monuments and the most valuable parts of the historical center, transforming the historical environment into a multi-comfortable one, reviving it, and attracting the attention of various interested people. Such an approach will most effectively contribute to the revival of the historical urban environment, and the continuity of the historical and cultural urban context. This approach will also increase the attractiveness of small towns, and launch the cumulative process of their sustainable development as cultural, tourist and recreational centers, as well as increase the quality of life in them.

CONCLUSIONS

The complex process of restorative-reconstructive transformation of the historical urban environment should be aimed at its sustainable cumulative development through a combination of the best historical and modern features. It includes the preservation, restoration, and enhancement of

the value of the existing cultural heritage through its active integration into the social, cultural and economic life of the town. At the same time, the necessary new contextual amplifications, corrections, or changes in the historical urban environment are possible. They improve its integrity and quality, and most importantly, the living conditions. Together, this will help create a base for the revival and increase of a town's attractiveness, drawing investors and increasing the welfare of locals.

The existing problems that disrupt the sustainable development of historic small towns of Ukraine and must be resolved during restorative-reconstructive transformations in them were identified. They were systematized into urban planning, architectural-figurative, utilitarian-functional, socio-economic, ecological, and infrastructural problems. That made it possible to identify five components of the complex RRT process in small towns. These are ecological, historical-cultural, infrastructural, social, and economic components. For each, the tasks that must be solved in the post-war recovery and launching of the cumulative process of Ukraine's historic small towns' sustainable development were identified.

The proposed concept of a complex process of restorative-reconstructive transformations of the historical center of Medzhybizh confirmed the effectiveness of the above theoretical research. The strategy for its revival and increase in attractiveness is based on different levels of solutions to the destructive problems in it. It includes an increase in the historical, architectural, functional-utilitarian, and socio-economic value through the rehabilitation and holistic restoration of destroyed architectural monuments. It also includes the regeneration of lost elements of historical planning and buildings, the modernization of low-value and disharmonious buildings and the introduction of compensatory new buildings of modern contextual architecture. Their function content should be based on historically formed and emerging new traditions. And to improve the quality of the urban environment, it should be filled with places for secondary social practices. As a result, these factors will together revive the town and launch the cumulative process of its sustainable development as a cultural, tourist, and recreational center.

The concept of an integrated RRT process was shown in the example of the recovery of a historic small town. And this approach is especially relevant for such Ukrainian towns due to their current state. However, it is also applicable to all historical cities to recover them and enhance their historic urban architectural value, integrity, and quality. The fact, that many historical cities have a heterogeneous urban environment in terms of the degree of historical and architectural value and destruction explains this. As a rule, their historical urban environment is not a one-time architectural ensemble. It has evolved over many centuries. Each historical period has introduced new planning, volume/spatial and functional changes, but not always successfully. Now it has different plots according to the degree of value of planning and development. To preserve and improve their quality, it is necessary to apply various methods, both restorative (preserving and restoring) and reconstructive (renewing and transforming). In addition, the historical

urban environment very often has a different degree of destruction. To eliminate or reduce it, you also need different methods, restorative or reconstructive. Therefore, when it comes to the urban environment as a whole, for any historical city, the complex process of restorative-reconstructive transformations becomes appropriate for introducing the necessary qualitative changes at different system levels, as well as using a complex of various interrelated restorative and reconstructive methods as a tool, from the most sparing (preserving and restoring) to the most active (renewing and transforming), depending on the existing context.

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REFERENCES

- Androshchuk, O. V. (2009). *Medzhibizh. Encyclopedia of History of Ukraine*. Kyiv: Naukova Dumka.
- Bryx, M., Jadach-Sepioło, A. (2009). *Instytut Rozwoju Miast. Rewitalizacja miast w Niemczech*. Kraków: Instytut Rozwoju Miast.
- Butlin, J. (1987). *Our common future. By World commission on environment and development*. London: Oxford University Press.
- Day, C. (1990). *Places of the Soul: Architecture and the Environmental Design as a Healing Art*. London: Aquarian.
- Gehl, J. (2010). *Cities for People*. Washington: Island Press.
- Harvey, D. (2018). *Social Justice and the City*. Moscow: New Literary Review.
- Holovatiuk A., Leshchenko N. (2022). Objects-memes in the activation and architectural organization of urban public spaces that evoke positive emotions in a person (on the examples of a city square and a park), *Landscape Architecture and Art*, Vol. 20, No. 20, pp. 73–81. <https://doi.org/10.22616/j.landarchart.2022.20.08>
- ICOMOS (2011). *The Paris Declaration. On heritage as a driver of development*, Paris: ICOMOS [online]. https://www.icomos.org/images/DOCUMENTS/Charters/GA2011_Declaration_de_Paris_EN_20120109.pdf [Accessed: 08 Jan 2023].
- Jokilehto, J. A. (1986). *History of Architectural Conservation: The Contribution of English, French, German and Italian Thought towards an International Approach to the Conservation of Cultural Property* (Doctoral dissertation, University of York, York, UK). https://www.icrom.org/sites/default/files/ICCROM_05_HistoryofConservation00_en.pdf [Accessed: 08 Jan 2023].
- Leshchenko, N., Tovbych, V. (2019). Modern approaches to the revitalization of historical ex-industrial architecture, *Wiadomosci Konserwatorskie. Journal of Heritage Conservation*, Vol. 2019, No. 60, pp. 51–58. <https://doi.org/10.17425/WK60POSTINDUSTRY>
- Leshchenko, N. A. (2020). *Methodological foundations of the restoration-reconstructive transformations of the historical centers of small towns* (Doctoral dissertation, Kyiv National University of Construction and Architecture, Kyiv, Ukraine).
- Leshchenko, N. A. (2021a). Kompleksnyy protses restavratsiynno-rekonstruktyvnykh transformatsiy, *Mistobuduvannya ta terytorialne planuvannya* (in Ukrainian), No. 76, pp. 138–149. <https://doi.org/10.32347/2076-815x.2021.76.138-149>
- Leshchenko, N. (2021b). Contextuality is a condition for preserving the uniqueness of a historical city, *Architecture City Engineering Environment*, Vol.14, No. 3, pp. 17–25. <https://doi.org/10.21307/ACEE-2021-019>.
- Leshchenko, N. (2022). Methodology of determining the genetic code of the city: a basis for restorative and reconstructive transformations in its historical center, *Wiadomosci Konserwatorskie. Journal of Heritage Conservation*, Vol. 2022, No. 69, pp. 7–14. <https://doi.org/10.48234/WK69GENETIC>.
- Mayer, H., Knox, P. (2006). Slow Cities: Sustainable Places in a Fast World, *Journal of Urban Affairs*, Vol. 28, No. 4, pp. 321–334. <https://doi.org/10.1111/j.1467-9906.2006.00298.x>
- Mayer, H., Knox, P. (2010). Small-Town Sustainability: Prospects in the Second Modernity, *European Planning Studies*, Vol. 18, No. 10, pp. 1545–1565. <https://doi.org/10.1080/09654313.2010.504336>
- Miller, G. T., Spoolman, S. (2011). *Essentials of Ecology. Sustainable City*. Belmont: Yolanda Cossio.
- Orlenko, M. (2017). Methodical approaches to architectural conservation, *Current issues in research, conservation and restoration of historic fortifications: collection of scientific articles*, No. 9, pp. 209–213.
- Rybczynski, O. V. (2017). *The formation and revitalization of the downtown historic towns of Ukraine* (Doctoral dissertation, “Lviv Polytechnic” National University, Lviv, Ukraine).
- Rymaszewski, B., Borusevich, V. (1990). *Reconstruction and restoration problems of old cities in Poland. Architectural and historical environment*. Moscow: Stroyizdat.
- Skalski, K. (2009). *Instytut Rozwoju Miast. Rewitalizacja we Francji – rewitalizacja a polityka miejska, polskie zastosowania doświadczeń francuskich*. Kraków: Instytut Rozwoju Miast.
- UN (2002). *Johannesburg Declaration on Sustainable Development*, UN Documents [online]. https://unhabitat.org/sites/default/files/2014/07/A_CONF.199_20-Johannesburg-Declaration-on-Sustainable-Development-2002.pdf [Accessed: 08 Jan 2023].
- Ustinova, I. (2015). Principles and strategies of sustainable development of regions, *Motrol*, Vol. 17, No. 8, pp. 13–25.
- Vodzynskiy, Ye. Ye., Ustenko, T. V. (1980). Protection of historical and architectural heritage in the cities of Ukraine. *Urban planning issues of preservation and use of architectural monuments*, No. 1, pp. 94–100.
- Whyte, W. H. (2004). *The Social Life of Small Urban Spaces*. NY: Project for Public Spaces.
- Ziobrowski, Z. (2010). *Założenia polityki rewitalizacji w Polsce. Rewitalizacja miast polskich jako sposób zachowania dziedzictwa materialnego i duchowego oraz czynnik zrównoważonego rozwoju*. Krakow: Instytut Rozwoju Miast.

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