

## **APPLICATION OF THE URBAN RECONSTRUCTION METHODS IN THE CENTRAL CITY AREA OF NIŠ**

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**Abstract.** *The urban reconstruction nowadays is a future of a modern city. The subject of the urban reconstruction is primarily the historical nucleus of the city, as the most attractive urban unit and the city growth generator. That is why the issue of urban reconstruction of the central city area is extremely important.*

*The city nucleus of Niš has undergone numerous transformations during its development from the fortified city, to the town with Oriental characteristics, to the modern city center of the polycentric city. Reconstruction of Niš as a medium-sized city, with the significant role in the system of Serbian center network, is the issue of the strategic importance for the economic development of the country. Considering the cultural and style diversity of the Niš center, the issue of its urban reconstruction is a very complex procedure. The application of the various methods of urban reconstruction, which have been used in the past decade, is demonstrated on three analyzed examples in the central city area of Niš. These methods have been selected in order to activate, improve and revive the central city area. The paper describes the regeneration principles of these areas and investigates whether they are similar to the current trends in the world.*

**Key words:** *city nucleus, reviving, reconstruction, methods.*

### **1. INTRODUCTION**

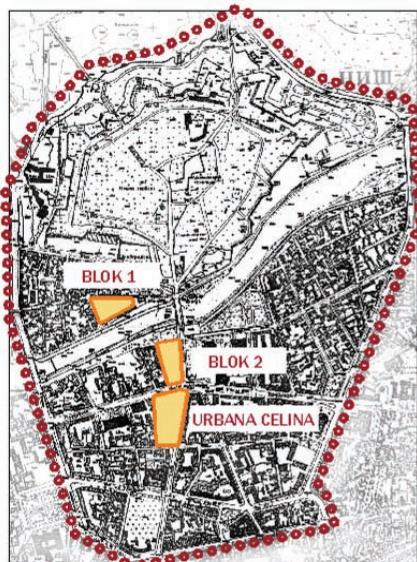
The current principle of urban planning and development are based on the urban basis and the usage of the available city potential, aimed at their sustainable development. The subject of urban reconstruction is primarily the historical nucleus of the city, as is most attractive urban unit, that is, cultural, business, economic and political center. The issue of urban reconstruction of the central city area is extremely important, because it comprises reviving, activating and improving this area with the application of different carefully selected methods.

The city nucleus of Niš has undergone numerous transformations during its development from the fortified city to the town with Oriental characteristics, to the modern city

center of the polycentric city. The first experiences with reconstruction became available after the liberation from the Turks by the end of 19<sup>th</sup> century, according to the European town planning tendencies. The reconstruction of the central city area in the period after the WW II resulted in big changes not only in terms of the visual identity, but also the structure of the nucleus – a reconstruction in the narrowest sense of the term was done. During the last decades of the 20<sup>th</sup> century, the city nucleus of Niš is subject to new transformations, under the motto "quantity over quality". Today, Niš is the modern university city, with population over 300 000, and represents a natural, social, economic, educational, health, cultural and sport center of south-east Serbia. Considering the cultural and style diversity of the city, the issue of its urban reconstruction in the modern framework is a very complex procedure.

## 2. THE ANALYZED AREAS IN THE CENTRAL CITY AREA OF NIŠ

In the central city area of Niš, in the last thirty years, multiple interventions were carried out, in terms of urban reconstruction of the city. This paper has chosen three areas of various spatial, architectonic and urban characteristics for the needs of the analysis of the applied methods of urban reconstruction in this time period (figure 1):



- BLOCK 1: Edifice of the old District Government, and now the seat of the University of Niš, protected as a *cultural monument of extreme importance*;
- BLOCK 2: group of old building on the west side of the King Milan Square, protected as *cultural monuments*;
- URBAN UNIT: segment of the pedestrian and commercial Victory street, protected as the *cultural-historical unit*, from the King Milan Square to the Svetozar Markovic street.

Fig. 1. Analysed areas in the central city area of Niš.  
Source: authors

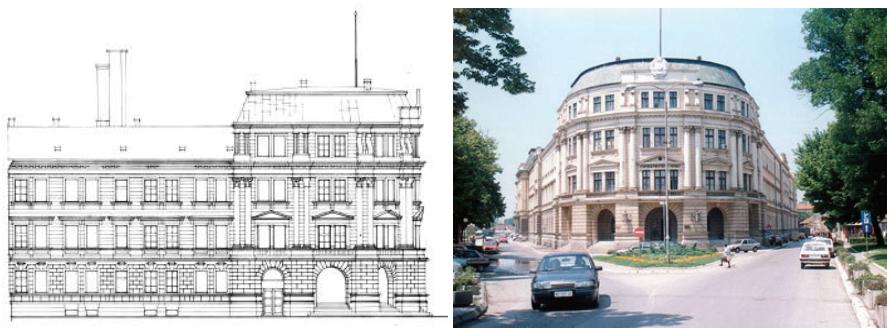
## 3. APPLICATION OF THE URBAN RECONSTRUCTION METHOD IN THE BLOCK 1

The first analyzed block is triangular in form, and situated on the right-hand bank of the Nisava river, formed by the streets Mika Paligoric Quay, Sumatovacka and Dobricka streets. This block is characterized by the structure with the continuous front-side and coincidence of construction and alignment lines.

The building was constructed for the needs of the Niš District Government in 1889 in West European style. At that moment, only the south-west part of the building was constructed, the ground and the first floor with the entrances from the river side. At the beginning of the WW I, from July 26<sup>th</sup> 1914 till October 16<sup>th</sup> 1915 Niš was a War Capital of Serbia, and the Building of the District Government was a seat of the Serbian Government and the Ministry of Foreign Affairs. The later addition of the floor and construction of the monumental corner section, the building obtained the appearance it has nowadays. The addition enabled better usage of the potential of the location, increase of aesthetic value of the architecture of the entire composition and improvement of the relationship structure – environment. The applied method was an adaptation. Since 1966 this building is the seat of the University, and some other institution with central functions. According to the act of 1972, the building is declared a monumental structure.

### **Restoration and remedial works**

The reconstruction of the University building was conducted in 1976 – 1977 interval according to the design of the Cultural Monuments Protection Institute of Niš. As it is a cultural monument of extreme importance, the design required to absolutely preserve the authentic appearance of the structure (figures 2, 3). Urban reconstruction of this block was carried out in three phases: first the oldest, south-west part of the structure, then the northern part, and in eventually the east side part of the building. On the basis of the executed interventions, it can be concluded that the applied methods were the restoration and remedial works. As to the future procedures on this valuable monumental structure, a transitional group of urban reconstruction methods is recommended.



Figs. 2, 3. Remedial works and restoration of the University building 1977 – view from the Mika Paligorić Quay (left) and present day appearance (right). Sources: documentation of The Cultural Monuments Protection Institute of Niš, and <http://www.nis.co.yu>

#### **4. APPLICATION OF THE URBAN RECONSTRUCTION METHOD IN BLOCK 2**

The second analyzed block is situated in the very nucleus of the city, and its boundaries are: to the north, the Nisava riverbank, to the west the Balkan street, to the south Milojko Lesjanin street, and on the east side the King Milan Square.

The block is formed on the place of a Turkish town. After the liberation of the city from the Turks, the interventions in the nucleus began, under the influence of the European tendencies. The old shops were being removed, and the covered market center has slowly disappeared. The square was leveled and prepared for planned construction. The modern structures in European style with completely new purposes, in comparison to the old town, were built. In the 20s of the 20<sup>th</sup> century, the urban tissue of this city block underwent a transformation. As in the previous period the entire block was divided in lots and build, and the continual street side front was formed, the only potential for expansion was the vertical dimension. The height alignment of street-side fronts was carried out, with the addition of new floor. The ground level was intended for the public use, and the floors for housing purposes. Of the old square, only a row of houses in this block has been preserved, from the Milojko Lesjanin street, to the Zivota Djosic street, which have been placed under protection in 1983 and are nowadays cultural monuments.

#### 4.1. Revitalization

Adapting to the needs and the city development, the structure of the block changed the content and purpose in time. The first serious interventions of the urban reconstruction of the area were carried out in the 80s of the 20<sup>th</sup> century, and the applied method was revitalization. The realization of the project successfully renovated this row of valuable old structures of the city nucleus, preserving the spirit of the place at the same time. In the revitalization procedure, the restoration, change of function and adaptation methods were applied (figure 4).



Fig. 4. Appearance of the revitalized structures in BLOCK 2.  
Source: The Cultural Monuments Protection Institute of Niš.

#### 4.2. Latest interventions – program "Fairer Serbia"

The new reconstruction interventions were carried out on the part of this spatial cultural-historical unit during 2004, within "Fairer Serbia" program. For these interventions, the Cultural Monuments Protection Institute of Niš proscribed the conditions of the technical protection measures for these structures, according to the Law on cultural values. Almost all the structures on the west side of the square have remained the true to the original appearance, especially when it comes to the details of the façade plastics and façade joinery. For each of these structures it was necessary to produce the documentation of the current status and the detailed design of planned works.

#### 4.2.1. *Remedial and restoration works*

For the structures of the Modern Visual Arts Gallery, "Svetlost" book-shop and "Stevan Sremac" book-shop, the remedial and restoration works of the facades were chosen as the reconstruction methods. (figures 5-10). The technical protection measures of these structures proscribed by the Institute, comprised the following:

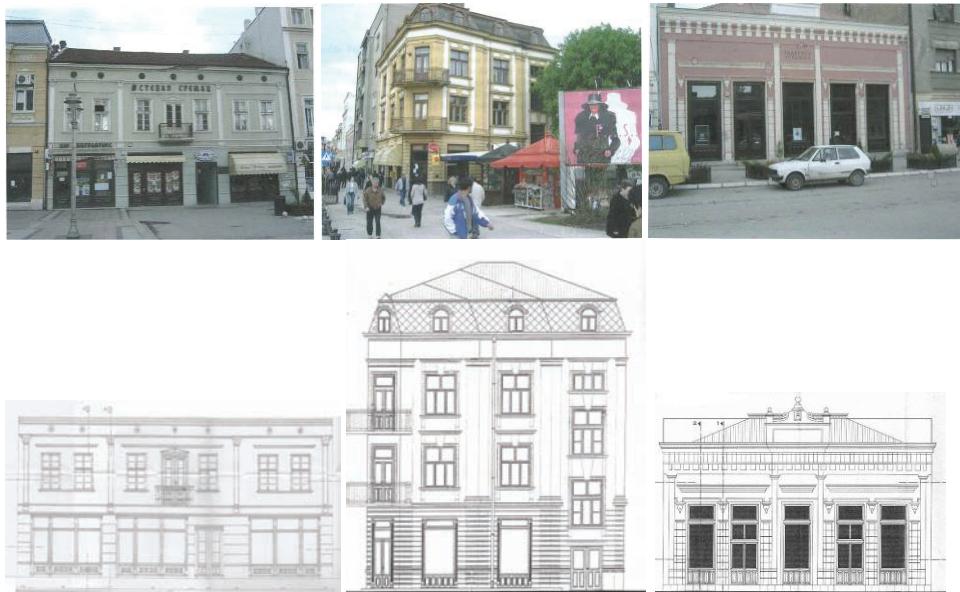
- The authentic monumental values of the structures were to be emphasized, both the preserved or restored ones.
- The facades and roof planes of the had to be restored or reconstructed according to the existing architectonic details without alterations or according to the appropriate analogies.
- Roof plains are reconstructed without alteration of the inclination or of the authentic roof covering.
- Profiled flashing of the gutters had to be done according to the forms seen on the objects.
- Details of the decorative flashing were worked out according to the authentic remains.
- Bands and wall piers had to be constructed using the appropriate moulds copied from the existing profiles.
- For the shallow rendering plastics, the appropriate moulds had to be made and attached to the wall in the course of rendering.
- Sculpture plastics was made using the cast elements identical to the authentic details of the structure.
- The joinery installed was identical to the existing authentic joinery, but its technical characteristics could be adapted to the modern standards.
- All the remaining works are subject to the monumental character of the structure.

The book-shop "Stevan Sremac" building is the oldest preserved structure, built around 1890. The east façade is its most valuable part, owing to the successful composition with good proportion, and historical value. The restoration and remedial works project of this quite ruinous façade, instructed the complete smooth coating and painting with the façade color, in a tone specified by the designer. The worn-out elements of roof structure and roof covering of grooved roof-tiles were replaced by crown tiles. The worn-out elements of façade plastics were reconstructed according to the authentic detailed. The ruinous façade joinery elements were repaired and the complete flashing is replaced.

The "Svetlost" book-shop was built in 1927. The successful vertical composition, consisting of a ground floor, two floors and a mansard, this building represent a recognizable corner landmark with a rich façade plastics. The restoration of the worn out faced meant smooth coating and painting as finish, and all the elements of rendering were done according to the original samples. The worn out covering of the mansard of eternit is completely replaced with the same material and the interlocking tile replaced with crown tiles. A part of the damaged façade joinery and the flashing underwent remedial works.

The building of the Modern Visual Arts Gallery was erected in the last decade of 19<sup>th</sup> century. Great height of the ground floor, symmetrical composition and the decorative plastics and hipped roof with the decorative cornice provide a monumental appearance to the structure. The status of the object was characterized by the poor state of the façade

and roof cover, and the original hipped roof provided water drainage onto the adjacent structures. The restoration project inserted new double-pitched roof planes above the great hall, with the ridges normal to the adjacent structures on the north and south sides. This eliminated the non-functional eaves troughs between the structures of various heights, so the water drains towards the corner gutter pipes. The inappropriate roof cover of everite, which was a result of previous inadequate remedial works, is replaced with crown tiles and copper roofing. The complete façade surface is repaired and painted in the appropriate colors.



Figs. 5-10. Buildings "Stevan Sremac", "Svetlost" and "Srbija" prior to remedial and restoration works (up) and appearance planned by the project (down).

Source: documentation of the company "Door engineering" Niš.

#### 4.2.2. Adaptation and revitalization

For the following structures: sweet-shop "Pelivan", casino "Namitex", casino "Mezija" and two housing-business building nos. 15 and 19 at the King Milan Square the chosen reconstruction methods were adaptation and revitalization (figures 11-14). The conditions of technical protection of these structures prescribed by the Cultural Monuments Protection Institute of Niš, were the same as in the previous group of structures where remedial and restoration works were carried out. Since the adaptation of these buildings was permitted, the Institute prescribed an additional measure – that all the alterations of the existing status of structures in terms of their dimensions or functional usage can be undertaken only on the basis of a separate act issued by the competent Institute.

The group of structures on the King Milan Square nos. 3, 5 and 7 was built in 20s of the previous century. The revitalization of the housing-business structures nos. 3 and 5 comprised replacing the aged roof structure, replacing the roofing with crown tiles, painting of

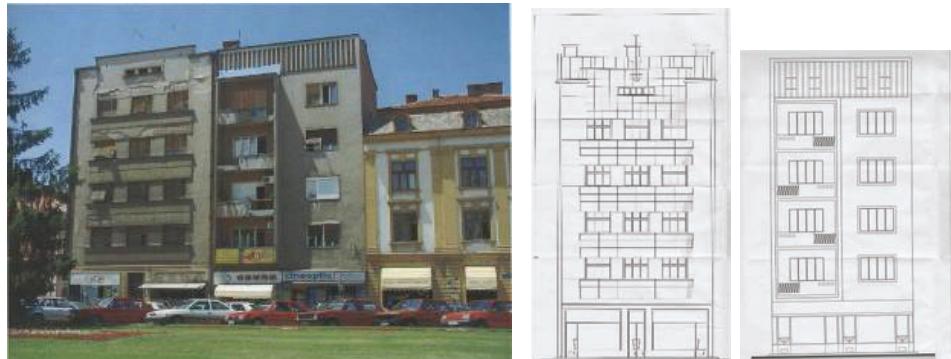
east façade and joinery, and replacing the flashing with new copper sheets of the same shape and profile. The business building no 7 was in quite good condition. The interventions in realization were small and comprised painting of façade walls and joinery.

The housing – business building on the King Milan Square no. 15 was built in 1940, and building no. 19 in 1957. IN the framework of revitalization of both structures, the worn out roofing, flashing and window shutters were replaced. The facades were rendered and painted. The joinery was also painted.



Figs. 11, 12. Structures on the King Milan Square nos. 3, 5, 7 prior to revitalization and adaptation (left) and appearance according to project (right).

Source: documentation of the company O.D. "Bearing" Niš.



Figs. 13, 14. Structures on the King Milan Square No.15 and 19 prior to revitalization and adaptation (left) and appearance according to project (right).

Source: documentation of the company O.D. "Bearing" Niš

Considering the action taken within the "Fairer Serbia" program, it can be concluded that on the occasion of renovation of the entire row of houses as an ambiance unit of protected structures, the undertaken methods were in the domain of revitalization.

## 5. APPLICATION OF URBAN RECONSTRUCTION TO THE AMBIANCE UNIT

The Obrenovićeva street is the principal pedestrian street of Niš, with the highest concentration of central functions. It is oriented north-south and connects the central city Square, King Milan Square ad the biggest business-commercial center of the city, "Kalca".

The Obrenoviceva street was created in part from the town around the bridge around 15 century. In 18<sup>th</sup> century it develops further from the Fort towards Gorica hill a main and commercial street of Niš, as the so called Covered Market. After the liberation from the Turks, the street was being rapidly transformed under the influence of European town planning, and became a modern, wide commercial street with alignment. The content characteristic for the city center appeared. After the WW II, the building spree which was not only a characteristic of Niš, but of entire Serbia, irreversibly destroyed the authentic building heritage of the Obrenoviceva street. Later on, an attempt was made to increase the quality of the street by conversion into a pedestrian zone, after the western models.

### 5.1. Reconstruction and revitalization

For the purposes of this paper, only one segment of the street, from the King Milan Square on the north, to the junction with the Svetozara Markovića street on the south, is analyzed. Both street sides are formed by the structures with continuous fronts. The east façade front was built in the period after WW II, after the complete destruction of old urban tissue. The structures created in this period are characterized by a simple architecture of modern lines, in a spirit of an international style. The west side of the street managed to partially preserve the original physiognomy. Owing, above all, to its good condition, it managed to escape the destiny of the buildings on the opposite side of the street and to survive to the present day.

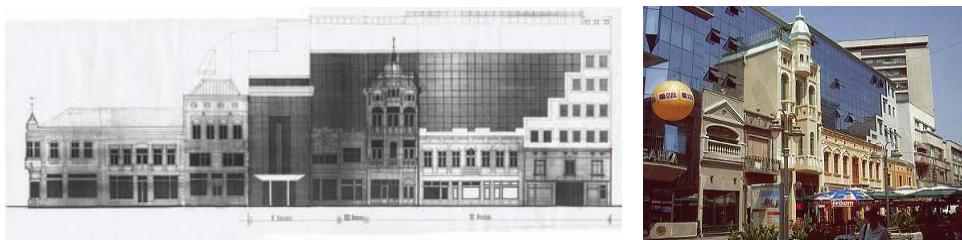
At the very end of 20<sup>th</sup> century, the entire ambience unit of the Obrenoviceva st. was reconstructed and revitalized, as the main pedestrian city zone. This ambitious project comprised the reconstruction of infrastructure, complete detailed arrangement of the street and revitalization of the west façade front in this segment of the Obrenoviceva street.

The reconstruction of infrastructure on this section of the Obrenoviceva street began in 1994. the procedure was a part of the wider project of construction of commercial structure of the underground pedestrian street, the first section lying below this segment of the street.

The ground level arrangement of this part of the street comprised tiling with granite and concrete slabs, installation of new urban equipment and mobile flower-stands with low and medium size greenery. The new, successful and refreshed street scenery is to some extent spoilt by the numerous cafes situated in the ground level of the surrounding buildings. These cafes are oversized, and the pedestrian movement and all the other activities of the street are subjected to the commercial content. The formal and aesthetic value of the street scenery is harmed by the detrimental effect of various sunblinds and sunshades. These weaknesses can be rectified with small intervention, which would improve the overall quality of the street scenery.

In 1995. the complex procedure of reconstruction and revitalization of the part of B block began, that is, the structures on the west side of the Obrenoviceva street. The design comprised destruction of a part of old physical structure of unsatisfactory condition, and

the construction of a new structure, providing that the authentic and original facades (according to the documentation) are preserved. The Cultural Monuments Protection Institute of Niš was a part of the project. The newly constructed structure "Gorča" occupies the location of the structures no. 12-26, as well as the part of the interior of B block (figures 15, 16).



Figs. 15, 16. Reconstruction and revitalization of the part of the block B: west façade front of the Obrenoviceva street.

Sources: documentation of the company D.O.O. "Nišprojekt" Niš, and <http://www.nis.co.yu>

The project of reconstruction and revitalization of the part of B block had three phases. On the basis of the present status, it can be concluded that during this complex procedure the numerous methods of urban reconstruction were applied: revitalization, restoration, change of function, reconstruction, adaptation and interpolation. The entire new structure of TPC "Gorča" was smoothly fit into the existing urban tissue by pulling slightly back the main modern façade in respect to the authentic façade front.

In the case of the realization of urban reconstruction project of B block, it can be stated that it approached a model of compact city. The characteristics indicating this are:

- It is in the very city center,
- It was built with representative business and housing buildings,
- The business and catering premises are built in the interior of the block,
- There is almost no housing in the ground level,
- The new content is mainly commerce and business,
- All the interventions related to the optimal usage of the existing physical structure,
- Town planning parameters have maximum values.

The negative consequences of increasing the density of B block are reduction of green surfaces and unsolved parking problem. In spite of the cost-effectiveness of the structure on an attractive location, no garage was planned either for the residents or for the employees in the block. Yet, when it comes to the preservation of historical values, organization of architecture in the context of the surrounding structures, and the improvement of the identity of this part of the centre, it is deemed that the reconstruction and revitalization of this block was successful.

## 5.2. Remedial and restoration works

During 2004 within the program "Fairer Serbia" the reconstruction, remedial and restoration works on the protected structure of the Jovanović family, at the corner of the

Obrenovićeva and Svetozara Markovića street were carried out (figures 17, 18, 19). The restoration and remedial works were done on the basis and according to the conditions for technical protection by the Cultural Monuments Protection Institute of Niš.

The house was built in 1900. The ground floor often changed its function, while the floor was always reserved for housing. Before the WW II, in the ground floor there was a garment shop and a manufacture of accessories. The rich façade plastics and original corner tower are a confirmation of European influence in Niš architecture at the beginning of 20<sup>th</sup> century.



Figs. 17, 18, 19. The Jovanović palace prior to the remedial and restoration works in 2004.(left) and appearance according to the project (right).  
Source: documentation of the company "Door engineering" Niš.

The structure was in a very poor condition prior to reconstruction. Due to the ruinous façade and the entire secondary façade plastics, it was not possible to reproduce the original appearance of the structure. The project planned the remedial and reconstruction works according to the available documentation, so that the building receives its original appearance from the best period. The worn out roof structure and roofing were replaced, the façade surfaces with complete decoration were renovated, the old inadequate portals were replaced with the new ones, according to the original details, and the destroyed garden premises were reconstructed. The remedial and restoration works executed according to the authentic details, revived one of the most significant landmarks of the Obrenoviceva street.

## 6. CONCLUSION

On the analyzed examples of two blocks and the ambiance unit in the area of the city center of Niš, the application of various methods of urban reconstruction may be observed, which are chosen according to the architectonic and urban characteristics of the space. The mentioned realized examples are useful for analysis and production of guidelines for the choice of the appropriate methods of urban reconstruction for some future interventions.

In case of the *first block*, bearing in mind the fact that it is a monumental structure of high importance, a less aggressive form of interventions in reconstruction is recommended: remedial works, adaptation and restoration. The structures in the *second block*, as the cultural monuments of lower degree, are not under such a rigorous protection re-

gime, and considering their position in the very nucleus, it seems that the potentials of the zone are not fully exploited. That is why in this reconstruction, apart from the transitional, the application of the active methods of urban reconstruction is possible, such as reconstruction, change of function, revitalization and interpolation. The active methods are recommended both for the reconstruction of the analyzed *urban unit*, because the latest revitalization of a part of that area yielded good results in general.

From the aspect of the national policy of urban development, evident is the necessity of revitalization and improvement of the quality of Serbian cities development, especially the medium and small ones. Renovation of Niš as a city of medium size with a significant role in the Serbian centers network system is a question of strategic importance for the economic development of the country. The reconstruction principles must as much as possible be similar to the current trends in the world. Although at this moment, Niš has not real potential to plan a reconstruction of a larger part of the city, the urban reconstruction can, surely, be an inspiration for creation of a city we desire, or as a good impulse for some future projects of the central area and the entire city.

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## PRIMENA METODA URBANE REKONSTRUKCIJE NA PODRUČJU CENTRALNE GRADSKE ZONE NIŠA

**Milena Dinić, Petar Mitković, Jelena Velev, Ivana Bogdanović**

*Urbana rekonstrukcija danas predstavlja budućnost savremenog grada. Predmet urbane rekonstrukcije je prvenstveno istorijsko jezgro grada, kao najprivlačnija urbana celina i generator razvoja grada. Stoga je problematika urbane rekonstrukcije centralne gradske zone izuzetno značajna.*

*Gradsko jezgro Niša trpeće je brojne transformacije tokom svog razvoja od utvrđenog grada, preko čaršije sa orijentalnim obeležjima, do savremenog gradskog centra polikentričnog grada. Obnova Niša kao grada srednje veličine sa značajnom ulogom u sistemu mreže centara Srbije jeste strateško pitanje za ekonomski razvoj zemlje. Principi obnove moraju se u najvećoj mogućoj meri približiti aktuelnim svetskim tokovima. Obzirom na kulturno i stilsko šarenilo centra Niša, problematika njegove urbane rekonstrukcije je veoma kompleksan postupak. Na analiziranim primerima na području gradskog centra Niša prikazana je primena različitih metoda urbane rekonstrukcije, koje su odabранe u cilju oživljavanja, aktiviranja i unapređivanja ovih prostora.*