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Zavod za varstvo kulturne dediščine Slovenije Institute for the Protection of Cultural Heritage of Slovenia

> Conseil de l' Europe / Council of Europe Managing Diversity Division Directorate for the Democratic Governance

2nd International symposium on cultural heritage and legal issues

Protection and reuse of industrial heritage: Dilemmas, problems, examples

Book of abstracts



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Conservators' decisions and responsibilities concerning industrial heritage conservation in Slovenia: Ljubljana case studies

Industrial heritage is one of the most vulnerable segments of cultural heritage since, due to its specific industrial character, it was the first to be adapted to the production process; moreover, industrial complexes always used to be located at the edges of historical city centres, but are now gradually being found in city centres due to the expansion of cities. The integration of entire complexes into modern urban life, with no future for industrial production, demands their proper inclusion into the urban fabric of society and its functional context. Due to the size of the complexes, significant funds are generally required.

The timely identification of an industrial complex's value, raising awareness among owners, finding an appropriate use for the complex, regular real estate maintenance, and finding ways to preserve movable industrial heritage are major conservation challenges that require well-reasoned professional decisions to be taken, especially since these areas represent the development potential of contemporary cities and an abundance of development interests.

Ljubljana's rich industrial heritage, which is comparable to European industrial heritage in general because it often followed examples from abroad and, at the same time, was adapted to local production processes and architectural features, was vital for the historical development of the city. In the past there have been several successful regeneration projects as well as projects which, despite the involvement of owners, the local community, cultural heritage conservation services and the general public, were not satisfactorily completed and did not lead to the conservation of industrial heritage.

The aim of this paper is to analyse these case studies and identify the reasons for the unsuccessful attempts made to preserve industrial heritage in order to avoid future poor decisions resulting in the loss of industrial heritage, not only in Ljubljana but also elsewhere in Slovenia. The objective is to critically analyse the role of the specialist services and the possibilities available for them to function more effectively under existing legal frameworks.

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Industrial heritage as potential for sustainable economic development

Industrial heritage exists in all phases of human development. As an important part of industrial culture, industrial heritage includes a wide range of social, architectural, technological and historical values. Heritage product in industry should be understood as a dynamic process which can benefit from a better integration of the relevant knowledge bases. This integration concerns the possibilities of improving levels of cooperation between modern industry and industrial heritage sites.

There has been a significant degree of urban regeneration since the end of the Second World War, with abandoned industrial buildings built during the 1940s and 50s the main focus of heritage protection; this happens because of the structural changes of abandoned buildings, and another important factor in urban regeneration is continuous economic development.

One of the most economically deprived cities after the war in Kosovo was Gjakova, which industrial heritage before the war had developed in that degree to import workforce from other countries. This presentation will focus on the re-use of an old textile factory in Gjakova, the first factory to open in the city after the war had concluded. The factory was closed for 15 years, and commenced operations in 2015 as a factory for producing textile products for Volvo and Volkswagen.

The purpose of this paper is to study the importance of reusing industrial heritage in order to contribute to the sustainability of the country's culture, history and economy, and the methods to be followed in order to achieve this.

Zagreb Industrial Heritage: History, State of Affairs, Outlook – Zagreb City Museum Project

This paper presents the goals, methodology, activities and achievements of the Zagreb Industrial Heritage: History, State of Affairs, Outlook project, run by the Zagreb City Museum (Zagreb, Croatia). The project started in 2009 and its third stage is due to be completed in autumn 2015. The project has been supported by scientific institutions, non-governmental organisations, the relevant local government bodies and foreign experts. Financing has been provided by the Croatian Ministry of Culture, the City of Zagreb and through sponsorship of the companies that had inherited these valuable industrial objects and sites.

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Industrial Landscapes in the Aegean Archipelago

Industrial development in Greece had taken hold by the end of the 19th century in specific geographical areas of the country. The coastlines were usually selected as the best locations for factories, machineries, shipyards, mills, warehouses, mines and all types of installations for agricultural production (olives, wine, tobacco, cereals, etc.). An extensive network of inhabited islands, thousands of kilometres of coast line and the sea waters in between were a huge advantage for a country with a very poor inland transport infrastructure, in contrast with its very rich maritime tradition.

For this reason, the island-city of Ermoupoli in the middle of Aegean Sea, and Piraeus, a port in Athens, the new country's capital, were the places where Greek industrialization was born between the 1850s and the 1880s. Subsequently, industrial units were developed in the small cities around the mainland coast line and the islands. A network of mining areas was established in parallel on most of the islands, which was the result of the international demand for the ores and minerals of that time.

Different industrial landscape patterns were formed due to the industrialization process. The first was the "urban industrial" pattern in main coastal cities, with zones for factories, ports and railways which complemented the surrounding urban fabric. Most of what was left from this type of industry was destroyed after the 1980s and then during the deindustrialization of the country. A second type with small "industrial colonies" on isolated islands, usually monofunctional – one product and one or a small number of industrial units – was developed between the late 19th and mid-20th centuries. This type is particularly interesting and unique. It was incorporated into the rural and wild natural landscapes of the islands. Despite being ruins, this was also the type that survived after the closure of the factories, as these areas used to lie far away from the post-war touristic sprawl. The peculiar architecture with its minimal technical facilities, together with its insular identity, which is reflected in the constructions and landscapes, gives a high cultural value to the historical industrial sites of the Aegean Archipelago.

Piran saltworks

The Piran saltworks comprised the facilities in Sečovlje, Strunjan and the Fazan saltworks in Lucija (since destroyed). The two surviving facilities are categorised as traditional saltworks since they operate by using natural resources and mostly manual labour. The earliest historical document referring to the saltworks is the 1274 town charter of Piran. In 1376, facilities started to be built modelled on the (then state-of-the-art) saltworks on the island of Pag. "Petola", a naturally cultivated substrate that prevents salt and mud from mixing and still remains a special feature of the Piran saltworks, was introduced into crystallisation ponds at that time. In 1904, the northern part of the Sečovlje saltworks, namely the Lera and the Strunjan salt pans, was modernised, while the Fontanigge salt pans in the south part retained their medieval character until 1967 when they were abandoned. In both types of salt pans, salt-fields operate on the same principle and consist of evaporation and crystallisation ponds in a 7:1 ratio by surface. Driven by gravity and in some places by pumps, water circulates through various levels of evaporation pools, growing in salinity until salt is separated in crystallisation pools.

The two types of salt pans have a different appearance. The medieval salt pans retain a picturesque look of complete salt-fields of various shapes and sizes, while the ponds of the modernised facilities are uniform and arranged in an orderly layout. The medieval type of salt pans was occupied on a seasonal basis, as demonstrated by the remains of a picturesque salt workers' settlement with houses along three channels. For production in the modernised salt pans, no seasonal stay is required; proper houses have been replaced by wooden sheds where salt workers rest and keep their tools.

The saltworks have created a specific littoral cultural landscape with natural and human factors in an ideal equilibrium. They are a technological, ethnological, historical, settlement, and landscape monument extraordinaire. The two modernised facilities are still active, but unfortunately the defunct medieval salt pans in Fontanigge are doomed to fall further into ruin due to the disinterest on the part of the state and their manager.

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Mapping former industrial objects in the cities of Nikšić and Podgorica – the possibilities for revitalisation and reuse

After World War II had concluded, Montenegro witnessed rapid economic and industrial development. Cities begin to develop quickly, primarily the cities of Nikšić and Podgorica (formerly Titograd).

Before the war, Nikšić had been a small town whose existence was based on limited income from agriculture, small trade and crafts. After 1945, however, it quickly grew into a city with a modern economy, particularly in terms of industry. The same situation applied to Titograd, which became the capital of the republic. In Nikšić start to work steel mill "Boris Kidrič" and in Titograd the most important industrial entity was its aluminium plant. In addition to economic functions, all these companies played an important role in changing the social structure of the population. The company will initiate the creation of new industrial facilities and the development of other economic sectors

After the transitional period of the 1990s and the constant crisis in the manufacturing and sale of industrial products, the economic power of the cities of Nikšić and Podgorica has waned. This will continue to have a very negative impact on the socioeconomic stability of cities, particularly the city of Nikšić, which was the country's industrial hub.

These big industries have struggled to survive the collapse of the socialist economy. The process of privatization has either concluded or still in progress for some of these industries. Today those industry giants cannot employ as many workers as they could back in the days of the Socialist Federal Republic of Yugoslavia, and the economies of these cities are slowly becoming more service oriented.

A consequence of these processes is the phenomenon of abandoned and ruined industrial facilities that are no longer used. One of the main tasks of this paper is to map abandoned industrial objects and to determine whether there is scope for their regeneration for the purpose of carrying out different activities.

Pijacal in Podlabin: The industrial centre of a planned coal-mining town

Podlabin and Raša in Istria, Croatia, are among the most extraordinary examples of the planned coal-mining communities built during the late 1930s. Of the twelve new towns planned and built according to the highest standards of functionalist planning, the Podlabin central area (Pozzo Littorio in Italian) was the last to be built. The regulation plan was drafted by Eugenio Montuori, an Italian architect and urban planner who proposed a layout concentrated around Podlabin's coal-mining area. In fact, the new settlement got its name from the very first new building – the export shaft built in 1938 in the mine's central production area.

The new settlement was planned for more than 600 miners and their families, including a number of managers and clerks. The total population amounted to approximately 3,000. The compositional vertex of the plan is the main road, which connects the regional road to the centre of the settlement. The industrial area is located a few hundred meters from the centre – on a square called Pijacal, right next to the mining shaft. Montuori drafted a master plan and designed buildings according to the then prevailing tenants of Italian rationalism. In addition to grid-based functional zoning, he designed new buildings using traditional elements. The application of local materials and construction techniques, as well as well-proportioned scale of new architecture, enabled Montuori to successfully relate to the local building tradition.

The Pijacal Complex is nowadays a protected historical area, consisting of an administration building, a dressing room with a large bath facility, lamp storage and a connection towards the pit's shaft, as well as surrounding processing facilities.

For the past eight decades, the Pijacal area has been continuously adapted. After the mine was closed in 1988–89, the complex underwent further transformations, and the coalmining machinery – even though completely preserved at the time – was eventually sold off as scrap metal.

Most of the Pijacal Complex area is nowadays neglected. However, there are plans for its rehabilitation and they have already been partly implemented through conversion of the central complex into the City Library. This paper will discuss the further possibilities for the preservation-oriented rehabilitation of the entire Pijacal Complex which would sustain contemporary functions and uses.

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Separation plant Žerjav (EŠD 9320)

The presentation of the building of separation in Žerjav, where workers used to separate pure concentrates of lead and zinc from tailings, today produces stone aggregates and industrially prepared dry mortar mixtures.

The building is 55.7m in height, which is unique in the Slovenian area and one of the few preserved examples of its type in Europe. A building of interest in terms of its construction, it is located on a steep rocky slope on the right bank of the river Meža. It was built in four stages during 1912. This particular construction was chosen in order to make use of gravity to transport the material excavated. The building has not been used to perform its original function since 1994, when it was declared a cultural monument of local importance. Unfortunately, the most important monument of technical heritage in the entire Mežica mine could not be included in the Mining Museum programme.

The building of separation has not changed its appearance until today and has not lost any of its monumental testimony. Despite frequent changes in the facility's ownership, production is still running. In particular, due to the presence of lead, the further production of ready industrial mortar mixtures is questioned. The current owner of the separation is well versed in the conservation of such technical heritage and last year provided financial support for the reconstruction of the facility forges, which today house the museum and info point for the lead-zinc Mežica Mine and Geopark Karavanke.

In the last ten years conservation efforts have been made to restore the facade and roof of the building. Some of the windows have been replaced or newly glazed.

Owing to the size of the facility and the internal premises, and the ongoing production, it was not possible for the ore extraction process to be presented for tourist and educational purposes. As in many other cases, the facility is located at the edge of the industrial zone, wherein the active working process is running; therefore, access is difficult, if not impossible.

Preservation, restoration and revitalisation of the Idrija mercury mine smelting plant area – part of the UNESCO site 'Heritage of Mercury, Almadén and Idrija'

Idrija has preserved the diverse and unique industrial and technical heritage of its 500-yearold mining history, which tells the story of mercury, and it was included in UNESCO's World Heritage List in 2012. Many mining facilities, machines, equipment and documents were preserved during the closure and liquidation process of the Idrija Mercury Mine. One of the crucial parts of the mine that has not yet been renovated is the smelting plant, which is in danger of losing its protected status due to its deteriorating state. The area of the monument covers the cableway end-station, the building of the ore separation and crushing plant, conveyor belts, collection silo, rotary furnace, smoke chamber, smoke pipelines and chimney, and the Spirek-Čermak furnace. The smelting plant represents the final phase of the mine's development. Its renovation and renewal is a significant challenge in terms of financing and expertise. In February 2014, the public institute Idrija Mercury Heritage Management Centre (IMHMC) took over the management of the smelting plant area from the Idrija Mercury Mined.o.o – in liquidation. The IMHMC was founded pursuant to a decision of the Slovenian government aimed at the comprehensive and sustainable management and preservation of cultural heritage and natural values linked to the Idrija ore deposit. The IMHMC successfully applied to a call for proposals to co-finance the project 'IDRIJA - SMELTING PLANT AREA OF THE IDRIJA MERCURY MINE - 1st PHASE OF RECONSTRUCTION' under the EEA Financial Mechanism Programme 2009–2014 - B.3. Cultural Heritage in the amount of EUR 2 million. Its project partners are the Idrija Municipal Museum and Magma Geopark from Norway. The goal of the project is to preserve the endangered cultural monument and enrich it with new content, enhance its modernity and attractiveness, revive its heritage with educational content, increase awareness of the importance of preserving cultural heritage, and enhance tourism opportunities in the area. The project began on 30 December 2014 and will be completed on 30 April 2016.







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Urban design competition and megaprojects in a context of identity of cultural heritage: case study Belgrade's riverfronts

Construction land within the city boundaries is one of the main strategic resources and factors in urban development, and at the same time an element of the competitiveness of cities and factor in attracting new investors and development activities. For many cities abandoned industrial sites represent a significant "reserved space". Urban regeneration is an important mechanism for the improvement of the quality of their urban environment and for achieving sustainable development (Williams and Dair 2007, Dixon et al. 2007, Stojkov 2007, Dorsey 2003, Grimski and Ferber 2001, and Healy 2007). On the other hand, industrial heritage is a part of the urban memory and material evidence of the past, and the decay of these urban areas means losing a part of history. In this sense, the revitalization of these areas is a vital step in preventing the continued deterioration of the remains of the industrial past and its fundamental intention is to preserve the integrity of the material witnesses of a historical epoch. Within this framework, the revitalization can be explained as a variety of features and options that allow for abandoned spaces to serve contemporary purposes, while protecting the past in the future (Stratton 2000). The benefits of restoring and preserving valuable industrial heritage are manifold: preservation of the urban landscape, economic and social revitalization of urban areas, deliberate targeting of development with the introduction of control of land use and rules.

However, the social values of industrial heritage are an important part of the identity of the citizens as they represent part of the collective memory, the history of industrial progress and the pride of local residents. The technological and scientific value of industrial heritage is reflected in the history of manufacturing, engineering and construction, and can have a significant aesthetic value in terms of architecture, urban design and planning (TICCIH 2003). Historical values infuse the design community with a strong sense of local identity and are an important catalyst for renewal and attracting investment (English Heritage 2004). The negative effects of losing the authentic symbol of industrial facilities from the city's silhouette, stored in the memory of citizens expressed through the loss of key elements of personal identity of the individual works of identification with the physiognomy, character and the importance of cities in which they live.

The connection between the collective memory of the industrial landscape and the image of the city on the one hand, and local and regional identity and a sense of civic pride on the other, may represent the main driver behind sustainable urban regeneration. Moreover, in cities that have suffered industrial decline, urban regeneration represents an opportunity to create new solutions for economic growth and development.

Most of the abandoned industrial sites in Belgrade are located on its riverfronts. The urban regeneration of these sites have been planned and initiated through a series of urban plans, projects and design competitions. Some are located within two planned urban megaprojects: "Danube port" and "Belgrade on water". During the last twenty years Belgrade's riverfronts have been the focus of planners and architects as well as politicians. This paper explores urban design competitions and megaprojects in the context of cultural heritage identity. Some of the results show that the imbalance between the ambitions of the city (authorities, professional associations) and current economic capabilities (overscale, expensive, not considering implementation in phases) is one of the main problems for the implementation of the plans and projects.

Gunpowder Works Industrial Area in Kamnik – features and future

Garden architectural heritage is the narrative description of the gunpowder industrial area in Kamnik which best depicts the diversity and connectivity of the buildings and green areas in the area. The dispersion of buildings and the installation of security structures in the area are interwoven with extensive, sometimes deliberately planted green areas. This is the best quality of an otherwise industrial area. The area can be divided into three sections. The foremost south, a smaller part of the area, is relatively densely built with newer buildings and is in use. The central and largest part of the area is sparsely builtup, but is very rich in technical heritage in terms of its well-preserved machinery and understanding of technological processes. The northern part is mainly forested with few scattered buildings. In order to understand the qualities of the area and include them into further development, it is necessary to look at the area as a whole, which comprises work processes, preserved equipment, infrastructure and buildings. The largely still preserved "rake" and railway tracks of the local mini railway are features that can be included in maintaining and improving the characteristics of the area. The planting of high and low trees and bushes attest to the high quality of the garden areas. A farm was located in the northern part. Besides administrative building was organized flower nursery. Tree avenue of the plane trees that runs past the administrative building connects the northern and southern part of the area. The scattered construction and diversity of the terrain, which was created artificially in order to protect buildings in the event of accidents, makes it ideal for certain activities. Unfortunately, with the collapse of industry in the area, the "whole" broke apart into several parts which managers regulate more from a profit perspective than preserving a high-quality whole. Interventions have been carried out that seriously affect the structure of the area on several levels. Interventions in technology, facilities and green areas; Cutting trees, negligence at taking away, the removal of parts or whole machines, and garbage disposal in the area are all interventions that are not desirable for the future of the area. Coordinating the activities of all involved parties in the area and thoughtful finding a further content and activities for the area is a necessary but difficult task given the divergences in ideas as to what a future life might look like in the area. It is especially vital to harmonise the wishes of the stakeholders and high-quality features of the area, which itself direct to new contents and activities.

Institute for the Protection of Cultural Heritage of Slovenia, Slovenia

Workers housing districts in the mining town of Trbovlje – too many challenges and not enough opportunities

In many countries, the protection and restoration of industrial heritage presents a special challenge and creates new opportunities. Transformed into something new, abandoned industrial sites become cultural centres with museums and galleries, workshops, and places where people can unleash their creativity; some are even turned into shopping centres or become elite condominiums. Unfortunately, this is not the case in Slovenia. Generally treated as a burden, industrial heritage merely represents an opportunity for capital investments in valuable land. The professionals who deal with industrial heritage in Slovenia are not only architects, sociologists, and historians, but also ethnologists – since the 1970s, many ethnological studies have been carried out on the way of life in workers' housing districts.

A number of workers' housing districts, the so-called colonies, of various types and layouts have been preserved in the mining town of Trbovlje. Despite the fact that they have been listed as cultural monuments, they are repeatedly put at risk by unsupervised architectural interventions, improper renovations, and even demolitions. Initiated by the Municipality of Trbovlje, an extensive renovation of the municipality colony began in 2008. Its principal aim was to conserve the uniform appearance of the entire complex of 15 houses, together with the courtyard and gardens, in order to improve living standards. Its residents – tenants – yet simultaneously preserve the typical characteristics of the protected site. They are involved in a creation of their own heritage in the future.

The project, which was completed in two years, is currently serving as a model for further interventions in another eleven protected districts in Trbovlje. Since 1998 the renovation project of the Njiva colony has shown different steps. First, the architectural competition was organised, and then there were attentions of its demolition. After that, there were a few years of self-destruction with a little help from local policy before, finally, a team of professionals was created. They are now looking for a solution to conserve and renovate it according to everyday needs and modern perspectives. This serves to prove that the success of every project is dependent on the decision of the owner, the support of local, regional and national policy, and financial backing and nevertheless by cooperation of professionals – conservators.

ICOMOS-TICCIH cooperation

TICCIH (www.ticcih.com) is the International Committee for the Conservation of the Industrial Heritage and was founded as an international congress held at the Ironbridge Gorge in the United Kingdom in 1973. It has members in over 50 countries and acts as an advisor to ICOMOS on the international industrial heritage. At Florence in 2014 the third successive Memorandum of Understanding was signed by the Presidents of ICOMOS and TICCIH. In the Global Study or Strategy & 'Filling the Gaps' Reports on the future progress of the expansion of World Heritage, Industrial Archaeology was identified as one of the under-represented areas of World Heritage. To facilitate comparative international studies, and the informed national nomination of industrial sites, ICOMOS asked TICCIH to prepare a series of World Heritage Studies on an industry by industry basis.

The first was the international canal monuments study completed in 1996 which facilitated the subsequent inscription of the Canal du Midi (France); the Canal du Centre (Belgium); the Rideau Canal (Canada); the Canal Ring of Amsterdam (Netherlands); the Pontcysyllte Canal & Aqueduct (United Kingdom) and the Grand Canal (China). Subsequent joint World Heritage Studies have followed on Bridges, Industrial Settlements and Coal-Mines. These studies draw on the interchanges of the TICCIH Special Interest Groups such as that on mining which met in 2004 in Slovenia at Velenje, Bistra, Mežica and Idrija.

TICCIH also provides the ICOMOS World Heritage Centre with suggestions of specialists for expert missions, state of conservation reports and representatives on the World Heritage Panel. In 2011 the Joint TICCIH/ICOMOS Joint Dublin Principles on the Conservation of the Industrial Heritage were approved and it is partly up to national sections of ICOMOS and TICCIH to jointly implement them. For the future more joint single industry World Heritage Studies are being developed to facilitate appropriate OUV (Outstanding Universal Value).

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Potential and importance of industrial heritage in small towns – Revitalization of the Francis Shaft in Idrija

The paper draws attention to the importance and potentials of the conversion of industrial buildings in the town of Idrija, with the emphasis on preserving their original character and integrity through the reuse process, and how this can benefit the local community. An example of industrial heritage reuse is shown through the case study in the project titled "Revitalisation of the Francis Shaft in Idrija", formerly one of the most important industrial buildings in the town, but now in a state of neglect and disrepair. The basis of the revitalisation project is how the town would differentiate itself in relation to similar towns. Idrija, today a UNESCO site, still struggles when dealing with the process of reusing old industrial buildings. Furthermore, they are also not treated as a potential asset for the town's development. The lack of interest in dealing with the issue from the local community is also a downside. The effective and attractive reuse of industrial buildings has the power to change local perceptions of the town's mining heritage and engage people through the potentials it holds.

The developmental effects of the revitalization process of a former industrial site are discussed from a wider standpoint, not considering only the architectural effects, but also the economic, social and cultural impact on the whole town. The paper is focused on the reuse process of the case study site, using site-specific approach as a mode of operation. Historical development, potentials and programme needs are the guiding design principles. Emphasis is on exposing historical elements, character preservation, and adapting to the new usage with the goal of achieving synergy between existing and new structures.

Industrial heritage holds great potential in a way that, if revitalized properly, can transform towns, thereby contributing to the economy, cultural and social growth. Furthermore, through public-private partnerships with local companies, it can become a major education point, promoting knowledge of the local environment and its rich mining heritage.

Industrial legacy of electric powerplants in Bosnia and Herzegovina

The Industrial Revolution has had a significant impact on the formation of the social and spatial circumstances that characterise our present day life. In the context of Bosnia and Herzegovina, the intense industrialisation of the 19th century, which was brought about by the Austro-Hungarian Empire, shaped the urban morphology of its cities, countryside and lifestyle. The most visible examples of these changes were connected to its railroad, industrial coal and wood processing complexes, but it is electric power that still has an impact and will bring about most of the changes to come: besides the hydropower stations, they caused changes in the landscape due to artificial lakes, they bring light to the cities in Bosnia and Herzegovina and introduced an early form of public transport by tram, a form of transport that still shapes Sarajevo's urban morphology.

Today, in a country with a devastated industry, it is inconceivable that when the first hydro power plant was constructed in 1899 near Jajce, it was the largest power plant in central and southern Europe, only two years after the famous Tesla-Westinghouse hydro-electric power plant in Niagara Falls had opened in 1897. Others soon followed, thus providing a supply of electricity to almost the entire country.

This legacy continues today since one of the country's major industries and exports is electric power. Several of these early plants are located in urban areas which are currently neglected and unused. It will be necessary to find adequate restoration and revitalization methods that deal with the preservation of the physical aspects, and its immeasurable legacy, which is not only manifested in these historic buildings but, as Tesla said at the speech at the opening ceremony of the Niagara Falls Plant, as "...a true monument of enlightenment and peace...".

The restoration process needs to be interactive, programmatic and progressive in order to represent the spirit of innovation and progress brought to them.

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How to ensure protection of the authenticity and integrity of industrial heritage in reuse processes

Industrial heritage sites are among the most, if not the most, complex heritage structures. That is why their preservation process requires specific approaches to analytical and evaluation processes and, of course, to all further steps leading to their final protection, reuse or other kinds of projects. Another important fact defining our relationship towards industrial heritage is that these sites are mostly located on the outskirts of historical towns; they make an important source of urban development and are under great pressure to accommodate various development interests that are mostly not aimed at heritage conservation, but rather its removal.

All of this significantly affects our relationship to the heritage, and makes its conservation difficult. It is important to properly and thoroughly address the conservation process already in the early stages, and follow the key protection baselines throughout the process until its completion; this allows for conservation of the features, which ensure heritage authenticity and integrity.

To this effect, the paper will discuss the proposal of an integrated protection and project-based approach whose key objective is to define all the phases of the study and design, by including all the stakeholders involved in the conservation as well as incorporating all other spatial development and socially relevant bases. The proposal was developed based on research and professional experience in Slovenia. Its design focuses on the elaboration of concrete methodological steps to find the most efficient solutions for bringing together all stakeholders, as this is the key – now often overlooked – for a more efficient industrial conservation heritage.

Hospitality in the limits: Creating a youth hostel and cultural facilities in the preserved warehouses of the harbour in Volos, Greece.

This paper negotiates the creation of a youth-hostel in the area of the custom office in Volos, where there is already interest in its reconstruction. The city of Volos is a major tourist attraction and the port, in particular, is the focal point of commercial and tourist activity. At the core of this research was the connection between land and sea, old and new, resident and visitor. The fleeting presence of the boat and its carried activities, become the main idea for the renegotiation of a tourist facility and the entire complex which is located in the limits of the city and the sea, with the essence of the harbour. With respect to the existing situation, the preserved warehouses are reused for communal purposes and serve as cultural venues, restaurant and entertainment facilities. A new structure is proposed for the complex in order to accommodate a reception area for visitors, and simultaneously represents the principle for the spread of the floating system that bears the hospice units. As a unit, the container is chosen in order to preserve the style of the harbour through their materiality and stacking. Another feature of the proposal is unrestricted access by creating an open space. The design principles include environmental planning, energy conservation and thermal comfort. The intention is to form a dynamic urban fabric in which the residents through the stay and the general participation, they have the opportunity to live in the land of the memory and to generate new activities.

Possibilities of incorporating old workers' housing in the context of post-industrial cities - case study of Beočin

During the 1990s and the first decade of the 21st century, many of the small ex-industrial cities all around Europe suffered from problems associated with unemployment, depopulation and the devastation of local industrial heritage, including the old workers' dwellings.

When cement production increased in the mid-19th century, the tiny industrial town of Beočin began to grow on the plateau near the banks of the Danube, about 10 km west from Novi Sad. The first cement factory was established by Jozef Cik and accommodation and facilities for the workers were built there at the same time. The first dwellings were built between 1855 and 1860 and named "Filijala". The "central workers' dwellings", which are located in the immediate vicinity of the factory, were built between 1894 and 1914 and form the centre of the city with supporting public facilities and buildings. The third colony in the Lower Šakotinac was also established in the 19th century in the valley to the west of the cement factories.

Besides the workers' dwellings, a number of technical heritage objects have been preserved (the water tower, the old clinker halls and other facilities within the factory).

By the end of the 20th century, development in the city had stagnated owing to the modernisation of the cement production process and cuts to the number of labourers. As a result, the old workers' dwellings are gradually crumbling away.

In the last decade several buildings have been reconstructed and converted to new uses. The reconstruction of ruined workers' dwellings, as well as finding new content and rehabilitating abandoned factories and public buildings through well-designed projects financed by the state and EU funds, would give impetus to local cultural and economic life.

An attempt of a presentation of the Ferdinand Potočnik Joiner's workshop at the District court of Maribor

This paper will first introduce the project in the context of which the Regional Museum Maribor wished to permanently present the products of the joiner, Ferdinand Potočnik, to the public in their original location, which is the courthouse of Maribor District Court. The project in question is in accordance with the contemporary trends concerning heritage. It had been intended that the viewer and his values would be placed into the centre of the broadened concept of cultural heritage. In order to achieve this goal the tradesman and his work would be appointed the role of the medium. The project sought to use the heritage of the joinery trade to enable the occupiers of the court the right to participate in cultural life. The second part of the paper will critically analyse the implementation of the Act ratifying the Council of Europe Framework Convention on the Value of Cultural Heritage for Society, which was transposed into Slovenian legislation by the National Assembly in 2008.

Ferdinand Potočnik (1872–1944) trained at the Trade School in Graz. He then bought a workshop in Maribor and began to ply his trade. In 1899 he registered his joinery workshop for the first time, mechanising the production processes one year later. In the 1920s he renamed his workshop the Ferdinand Potočnik Factory of Joinery Products. The lion's share of his early works can be found at the courthouse. The building concerned was constructed between 1900 and 1902 according to the plans of an unknown architect, who was probably from Vienna. The Potočnik workshop was responsible for making the doors, the windows, the wall panelling, all of the chairs (for the judges, the jury, and the public), the benches and the tables in the courtrooms and the hallways. The quality of the furniture, which had been used for over a hundred years, is breath-taking. If the museum experts had been allowed to carry out the project, they would have been given the opportunity to give a new identity to the anonymous objects of utility and transform them into identifiable objects of decorative art.

Within the scope of the project, it had been planned that the furniture in the courthouse would be provided with data on its manufacturer and the joiner's trade in Maribor. The project also intended that the courthouse would be fitted out with those objects which had been donated to the museum by the court in the 20th century and are currently part of the furniture collection.

Maribor District Court, the owner of the furnishings, as well as the Ministry of Justice of the Republic of Slovenia, the owner of the real estate, agreed that "it is in accordance with the Courts Act and the Court Rules that the court as a state authority is solely responsible for the execution of judicial power and court decisions", and so did not allow the project to be implemented.

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Selvetti former soap factory and Viba film studios: recovery and reuse of activity

The aim of this paper is to present the changing history of one of the oldest heritage industrial buildings in the vicinity of Piran, ancient Piranon suburbs, near by the coast the economic development of the Selvetti factory. The first large factory, Furian & Selvetti, was built in 1863 and produced glass and soap, before diversifying into oils and detergents in 1910. Note should be made that in the Roman period villa from the 2nd to the 1st Century B.C. was situated at the same location, probably with residential part and outbuildings. A large amount of Bolinus brandaris for colouring the cotton was discovered in the area. According to the Roman writer Vitruvius, (1st century BC), the murex from northern waters, probably Bolinus brandaris, produced a bluer colour than those from the south. There is no data available as to when the Roman's economic activity was abandoned. Production at the Selvetti factory continued after WWI and WWII, but the factory was renamed "Jadranka". In 1962 the factory was closed and the industrial outbuildings were converted into film studios by the state-owned company, Triglav, in 1958. The abandoned factory was transformed into a studio centre for film production, not only for Slovenian films but also for many collaborations with European and American partners. One of the many reasons for this was the close proximity of the very picturesque town of Piran and the salt pans in Sečovlje, and for this reason the film studios become a small Cinecitta in the Slovenian coast for several years. Although the term "heritage" gives the illusion of an unchanging past, as can be seen in our example, heritage conservation is part of a constantly changing present.

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Industrial heritage reuse – mapping Sarajevo sites

Many towns have inherited industrial buildings or complexes within their urban centre. Owing to different socio-political and economic changes in society, many of these structures have been abandoned and left to decay. Not only do these structures influence the visual perception of the town, they also have an impact on its socio-economic development. City governments are required to deal with these outdated or abandoned industrial complexes and find proper solutions for their reuse. This represents a significant challenge, especially for economically weak countries such as Bosnia and Herzegovina since there are various risks and high costs associated with revitalising these structures. On the other hand, however, the revitalisation of neglected central locations in towns is vital in order to preserve and enhance urban development. The revitalisation process improves the urban image of the city as well as the quality of life of its inhabitants. In this article, the authors present a selection of abandoned industrial buildings in Sarajevo and the results of the urban/architectural interventions on those sites. Through various successful examples of the reuse of industrial heritage from other countries, the authors will draw parallels as to how certain interventions could have been carried out in case of Sarajevo, and they can be performed in the future.

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Adaptive Re-use: a Fundamental Principle of Integral Industrial Heritage Conservation

Sustainable development has become a goal for all advanced societies. The most appropriate model must harmonise and strike a balance between environmental health and economic growth.

The re-use of architectural heritage for contemporary needs is one of the basic features of this type of model development. This is a fundamental principle in the creative strategy for preserving heritage. Architectural heritage allows us to look into our past, gives a sense of identity to living space, and serves a variety of activities through their use. In efforts made to achieve sustainable development, communities benefit substantially from the flexible re-use of their architectural heritage.

Demolition and re-building are generally wasteful interventions that do not contribute to the efficient use of energy, materials, space, or to the general interests of society. Building preservation and renewal conserves energy by taking advantage of the non-recoverable energy embodied in a building, and extending the use of it.

The adaptive re-use of heritage buildings must have a minimal impact on the cultural meaning and importance of the architectural heritage and its environment. Adaptive re-use should be as compatible as possible with the original or principal use. This is a planned process of interventions which gives abandoned or underused architectural heritage a new purpose in terms of how it is utilised.

With this approach towards understanding the complete renovation of architectural heritage, it is possible to provide the development of society with a variety of environmental, social, economic and promotional benefits.

In the applicative part of the article, details are presented on the reconstruction of the old Fužine Hydroelectric Power Station on the right bank of the Ljubljanica river in Ljubljana, which is a monument to the early industrial heritage of 20th century Slovenia.

Industrial heritage in Iran: Few examples, many dilemmas

Nowadays, in many countries around the world, old industrial complexes are converted into residential, cultural, official and exhibition spaces. In Iran, on the other hand, there are many valuable old factories which date back to the 1920s but the destruction of these masterpieces is preferred to their restoration and renovation. Despite this trend, however, the Eghbal factory in Yazd, the Khosravi leather factory in Tabriz, the hosiery factory in Tehran and the Khorshid factory in Kerman are a few examples of the restoration of Iranian industrial heritage. In this paper, a review is conducted on the restoration experiences of Iranian industrial heritage. The difficulties, legal obstacles and documentation regarding industrial heritage in the country are also explored. There are good opportunities for conservation in this area. Owing to the large spaces they inhabit, factories and industrial complexes can play a considerable role in urban spaces. Therefore, through a comparative study and comprehensive analysis of European restoration experiences in industrial heritage, some guidelines have been drawn up for the future of industrial heritage in Iran.

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Slovenian iron culture trail and the Mother factory

The iron industry has a 3,000-year tradition in Slovenia and remains an important industry sector which shapes the lives of its workers and the users of their products. Koroška (Carinthia), a region in northern Slovenia, boasts an intriguing history of industrial development and a heritage of factories (called "fabrike") which operated during the past centuries.

The Carinthian Regional Museum (Koroški pokrajinski muzej) and the Carinthian Museum of Ravne na Koroškem have been preserving and presenting this kind of heritage for over 60 years. They are involved in the project or movement titled "Slovenian Route of Iron Culture" which involves working with Slovenian museums, companies and institutions in order to promote ironworks heritage. They are also a part of the "European Route of Iron Culture", and so have been successful in spreading knowledge of cultural heritage beyond Slovenia's national borders.

In the centre of Ravna na Koroškem, an area of around 5,000 m2, several objects and rooms were renewed and refurbished, and the exhibition was prepared on the premises of a former ironworks. This is the area where, during the age of industrialisation, the first ironworks developed, which became an important steelworks later in the 20th century. The factory flourished and, with it, also the town and the region. The company actively supported the development of the town, sports and culture. It provided its employees with social security and professional development, and helped them improve their social status to such an extent that several thousand employees gave it the moniker "Mother Factory".

In 2002, the company Metal Ravne d.o.o. decided to transfer the ownership of three objects in the area of the former Ravne Steelworks to the Municipality of Ravne na Koroškem free of charge. The buildings and area have been declared cultural monuments for the purpose of representing the development of the iron industry in Koroška and the rest of Slovenia. Through the above activities and the support of the local community, companies and the Ministry of Culture of the Republic of Slovenia, the Carinthian Museum of Ravne na Koroškem is promoting a positive attitude towards its ironworks heritage, which is essential for its successful preservation and protection.

"Mother factory, Ravne Ironworks" is the title of a permanent museum exhibition that was opened in June 2012 as part of the "Wow, industry!" exhibition project for the European Capital of Culture 2012 Maribor and the Slovenian Route of Iron Culture movement. The exhibition is located in an original factory environment, in a former manufacturing plant – a swaging forge ("štauharija"), and is a part of the future ironworks museum in Koroška.

Impact of industrial heritage on the traditional museums

Industrial heritage with its very specific nature, such as large factory buildings, workers' housing, heavy machinery and often not very spectacular, mass-produced and to all known movable heritage, strongly affected the traditional museum work.

Collections of mass-produced objects, stories from workers everyday life, heritage of grey and dusty hall on a conveyor belt are often banal and of very little interest for a museum audience, unless they are telling life stories and preserve the collective memory and lieu de mémoire.

This cannot be achieved without the inclusion and active involvement of the most marginalised groups or individuals, such as representatives of working class. Moreover, this also cannot be achieved without giving up the glitter of museum elitism. Even the management of large industrial plants and handling of very sophisticated machines is unthinkable without a participatory way in close cooperation with the former working class managers and maintainers.

If in addition to this, we remember the emergence of eco-museums, it is clear that the industrial heritage has changed the character of museums.

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Council of Europe and industrial heritage: A UK exemplar of the rehabilitated industrial heritage as a resource for society

This paper commences with a background of Council of Europe initiatives concerning the industrial heritage with particular reference to Western European countries from the mid 1980s to 1990, including an intergovernmental work programme and recommendations of the Committee of Ministers on industrial towns and on industrial heritage, and an international conference on heritage-led town regeneration. These highlighted the potential of industrial buildings for rehabilitation, as assets for reuse and development, as well as policy guidelines proposed for the regeneration of industrial environments. A number of UK examples were cited in this context including Dean Clough Mills, Gloucester Dock Warehouses, Ebley Mill and Battersea Power Station, which will be identified.

Since the mid 1980s much has been achieved in terms of the safeguarding and rehabilitating the industrial heritage in Western Europe. A Parliamentary Assembly (PACE) document of 2011 cited good practice in Germany Austria, Belgium, Netherlands and the UK. However, a PACE report and resolution on the Industrial Heritage in Europe of 2013 identified a different situation in the former communist countries and called for action to conserve this heritage by conversion to new sustainable uses, drawing on case studies and examples from elsewhere.

The paper uses the UK as an exemplar by examining the situation and policy on the industrial heritage at risk, including marketing and awareness issues; the protection industrial sites; redundant (vacant) industrial buildings and how to protect or use them on temporary basis; constructive conservation (the protection and adaptation of historic buildings and places through actively managing change by working collaboratively with owners, architects and developers to develop proposals for sustainable and creative uses); guidance for developers; the role of non-profit organisations (where there is no apparent commercial solution); and outstanding problems. Different types of industrial buildings converted to commercial, residential and cultural uses will be examined.

Dilemmas and problems in the active reuse of Belgrade industrial architecture – case study of the Sava river area

The possibilities for protection, rehabilitation and planning sustainable strategies for the development of industrial areas and buildings are important topics which have dominated discourse in theoretical and practical work carried out in the field of protection of industrial heritage in recent decades. The focus is not only on the physical protection of industrial areas and buildings, but also on the broader issues related to contemporary reuse as places with cultural and tourism potentials. This is important for the urban and economic development of industrial areas, but the reuse of these buildings and areas must not threaten their integrity and authenticity.

In recent years, Belgrade's development has had a negative effect on industrial heritage built in the late 19th and early 20thcenturies. The main problem is the lack of understanding about the need to preserve elements which possess technological value as evidence of a certain level of development of technological culture as well as intangible heritage connected to the life and work of workers. In order to put a stop to this trend and demonstrate the will to achieve further sustainable development, it is necessary to redefine the approach to the protection of Belgrade's industrial zones, creating a new zone for urban and spatial planning which takes into account all its values, tradition, authenticity and identity. With provided reconstructions and inadequate changes in the city industrial zones, particularly along the banks of the Sava River, Belgrade's historic cityscape, with its characteristic morphology and typology, is gradually fading away.

Enhanced cooperation between Serbia and the International Committee for the Conservation of the Industrial Heritage (TICCIH), as well as the ratification of the Nizhny Tagil Charter for Industrial Heritage (2003), would certainly contribute to a better approach to preserving the authenticity and integrity of industrial complexes amidst the changes demanded by new, contemporary features by obliging national and local institutions to follow certain procedures and approaches in the protection of industrial heritage.

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Protection of industrial areas: when conservation is not enough

When required to protect defunct industrial areas or industrial estates, the standard legal tools of heritage protection usually fail miserably. Even if the heritage value of a site is recognised in time and the area is formally protected, the conservation authorities are faced with formidable challenges.

The most important criteria that need to be met in order to protect an architectural site are as follows: it must have a stable ownership; the owners need to be interested in protecting it; and the use of the site must be viable, and justify and facilitate its conservation. These criteria are usually not met in the case of defunct industrial sites. The owners are usually either in debt, non-existent (in cases of bankruptcy) or too many (if the estate was divided up and sold in parts). The site's former industrial purpose is also usually no longer either possible or viable, and other issues (such as the price of construction land) usually overpower whatever interest the owners may have had in pursuing heritage protection. Even public interest in the protection of industrial heritage is usually not strong enough to justify the huge public effort or costs required.

In such situations, even the best protection regime and the strictest measures are insufficient. Development consents, subsidies, tax cuts, penalties, inspection measures, conservation orders, pre-emptive rights or expropriation are either ineffective or unrealistic.

In cases such as this, only an alternative approach can bear fruit. This requires compromises to be sought and other uses found for the defunct area, e.g. converting an industrial area into a residential or mixed-use district. To achieve such goal, the traditional boundaries of heritage protection must be overcome, and ventures made into spatial planning, zoning, urban renewal and project development and financing. However, effective legal instruments for urban renewal are sorely lacking in Slovenia, which makes the renewal of large industrial sites more a matter of chance than of concentrated public effort. What can be done to improve the situation?

Transformation of the town of Cetinje: Industrial heritage potentials

Throughout the 20th century, industry has been the cornerstone for economic development in many areas of Montenegro. Cetinje, a town with a rich historical heritage, had a specific development back then. Since the Second World War, Cetinje has lost its role as a political and cultural centre, as well as its title of royal capital, to Titograd (today Podgorica). Industry, however, gave the town a new identity through the construction of three vast industrial complexes: the "Old Obod" (1953) refrigerator factory in the downtown area, the "New Obod" refrigerator factory on the outskirts of the city, and the "Kosuta" footwear factory (1963). Cetinje reached its economic peak in the late 1980s, but this was short lived owing to the breakup of the SFRY. By the end of the 20th century, industry was no longer Cetinje's most important economic, which caused a number of factories to close, with many industrial complexes having remained vacant ever since.

Since the new millennium, there have been important revitalization projects carried out on two of these factories, giving them new uses: the "Old Obod" will be transformed into the Marina Abramovic "MACCOC" cultural and educational centre, a project of global importance designed by Rem Koolhaas and the OMA; and the "New Obod" building will be transformed into an art academy complex (forming part of the University of Montenegro) with all necessary facilities.

Owing to the large spatial capacities, easily adjustable architectural design and attractive locations available in urban space, industrial heritage provides a wide range of revitalisation possibilities. The introduction of new uses for old industrial buildings has had a significant impact on the creation of a new urban identity creation, as is the case with Cetinje.

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The significance of industrial heritage for the sustainable recognition of space: a case study of Slovenian coastal towns

With its spatial features, industrial heritage has had a lasting effect on the environment of its origin. When such heritage is destroyed, designed space loses its economic purpose and thus the reason for its existence. Society becomes disconnected from its developmental roots, and the individual becomes detached from his environment. Space loses its force of expression, the very quality that ties it to the human condition. The confusion in the entire environment is evident, with economic surrogates only superficially filling the vacuum with unconnected and consequently non-expressive contents.

Ever since the Classical Era, the Slovenian coast has been dotted with towns on its islands and peninsulas. Its fertile soil, mild climate, and links to the sea led to the development of agriculture and fishing; salt fields and trading ports were built in protected coves near the towns. All of the above served as the economic foundation for the urban spatial development that continued throughout the Middle Ages and during the era of industrialisation after the mid-19th century. The pronounced use of space for tourism purposes, which began with Slovenia's independence, has caused the country's formerly world-renowned food and other industries to die off. The relocation or closure of industrial plants has led to their demolition; only a few former industrial facilities still remain, most of which have been left to decay or re-purposed for purely commercial touristic use.

The use of space has been determined naturally in the past, and this is evident in the cultural and urban landscape, and in the stylised image of the towns. The demolition of industrial architecture, and its replacement with content that is unconnected with the integrated wealth of its history, permanently disables the space as its design lacks an economic basis. The sustainable Man-Space-Time triangle, divested of its spatial and temporal components, thus loses its sustainable moniker. Efforts should be made to upgrade the use of industrial facilities by continuing clear and logical spatial interventions, in innovative modern parlance and in harmony with worthwhile achievements from the past.

Authenticity and Integrity in Reuse Processes

This paper is based on the fundamental thesis that the huge potential for the revitalisation of industrial heritage lies in its ability to harmonise conservation principles and the needs of contemporary and consumer society. The question is: where is the limit in industrial heritage transformations, or what are the relevant parameters in striking a balance between its authenticity and its commercialisation?

The revitalisation of industrial heritage is noted as being a generator of cultural tourism. Therefore, the concept of authenticity, as a basic quality of cultural heritage in general, is once again being considered in conservation and tourism studies. In modern conservation theory, this concept was put forward by Brandi. His Theory of Restoration (1963), which is aimed at historical and aesthetic authenticity, was incorporated into The Venice Charter (1964) and has since become a foundation for the further development of conservation theory and practice. The concept of authenticity was considered in the sociological study of tourism during the 1970s by MacCannell, which was when cultural tourism was introduced into conservation practice. To him, tourism represents the search "for the authenticity of human experience".

Cultural tourism is today one of the key aspects in industrial heritage management, and its purpose should be to translate historical facts in the memory and values. The loss of original features due to rapid technological development often results in the destruction of industrial complexes. One of the greatest challenges regarding the inclusion of empty industrial buildings in tourism is deciding on the purpose for which they should be used.

This work serves as a contribution to a critical analysis of industrial heritage reuse in the context of cultural tourism development. The theoretical research conducted on relations between new and old, commercial and authentic, and historical and contemporary in the industrial heritage revitalisation process was tested on local examples. The final result of this research is a methodological framework for the revitalisation of old breweries in Vojvodina.

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Possible evolutions of the Serbian legislation about Cultural Heritage and the state of Industrial Heritage in the time of transition

This paper will analyse the structure of the current law of cultural heritage and identify weak points concerning the preservation of industrial heritage, that patrimony that is particularly in danger bearing in mind the economic challenges faced by Serbia in the time of transition and its candidacy for accession to the EU. The need for improvements is stronger than ever owing to the pressure exerted by the investment sector and its self-proclaimed interest in urban regeneration. Projects in this area are being discussed and are certain to affect the abandoned industrial complexes of many cities. One of the most important production centres, Belgrade, will attract the lion's share of investment and will undergo significant transformations.

In this context, it is important to reflect upon the existing law and to discuss possible improvements. Italy is a good model to follow as it has a long tradition of legislating for the protection of cultural heritage, and has recently passed a new law regarding the preservation of industrial heritage. These experiences of a country that has already faced deindustrialisation and dealt with its consequences are embedded in Italian legislation. Bearing in mind the particularities of the Serbian context, this legislation can be used as an important step forward in the evolution of Serbian law as a defender of heritage and collective memory.

The preservation practice, based on the current law, will be observed on the example of Belgrade and through the work of local institutions for the preservation of cultural heritage in order to assess the situation and complete a panorama of potential solutions.

Post-socialist Industrial towns: Case study - Berane, Montenegro

Berane is a small town in the northeastern area of Montenegro. As in almost all Montenegrin cities, industrial zone of the town began to form after the Second World War in the northern area of town - Rudes, between the rivers Lim and Budimska, makes it almost a quarter of the total area of Berane from that time. Industrial zone was composed of more manufacturing plants: pulp and paper factory, plywood factory, leather factory, brick and tire factory. Of particular importance was a Pulp and Paper Factory "Ivangrad" built in the early sixties of the twentieth century by projects from Zagreb, Ljubljana and Belgrade.

During the nineties, after the breakup of Yugoslavia, the industrial activity almost ceased. Some buildings were demolished; some were transformed into commercial markets for the sale of building materials. Plywood factory is the only one in function today. At the beginning of the third millennium, in 2001, a small settlement "Riverside" with 26 facilities for Roma IDPs from Kosovo, was built on the edge of the industrial zone, with the financial support of the international organization "World Vision" (WV).

In the attempt to revitalize the industrial zone one part of Pulp and Paper Factory was privatized in 2004. But, the most significant attempt at reviving the industrial zone was preparation of the Local Location Study (LSL) "Business Zone" in 2013 for an area of 16.6 hectares, with 19 industrial buildings. LSL provides reuse of 7 buildings (the other 12 will be demolished), re-parcelling in the smaller parcels and the establishment of a new urban matrix. The process of new socio-economic development of Berane by creating a new zone of "business incubators" is in progress.

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