

REVIVING THE PAST: IDENTIFYING AND ADAPTING FORMER INDUSTRIAL BUILDINGS IN TETOVO, NORTH MACEDONIA

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Abstract: This paper examines the identification, documentation and reuse of former industrial buildings in Tetovo, North Macedonia, focusing on their potential reintegration into the cityscape. As a city once heavily dependent on industrial production, Tetovo today faces the challenge of dealing with abandoned and decaying industrial facilities scattered throughout the urban area. Although they occupy large and often strategically located areas, these former industrial buildings have been largely neglected in urban planning and academic research. Their abandonment reflects a broader trend of deindustrialization and shifting economic priorities that has left behind a significant but undervalued industrial heritage.

The first step in this research is to identify the specific areas in Tetovo where these industrial structures are located. Through historical analyses, mapping and field surveys, the study documents the distribution, typologies and current condition of these buildings. This process highlights the lack of comprehensive records or urban strategies that address the presence and potential of industrial heritage in the city. The need to record and document the physical evidence of Tetovo's industrial past arises from the urgent threat of demolition, irreversible decay or inappropriate development. Although these buildings were once at the center of the city's economic and social life, their architectural, historical and urban significance is largely unknown to the general public and decision-makers. By uncovering the hidden values that lie within these spaces, this article positions adaptive reuse not only as a preservation strategy, but also as a transformative urban tool. The conversion of industrial buildings is a discipline that is still in its nascent stage in North Macedonia. However, it has the potential to address numerous urban challenges, including land scarcity, environmental degradation and social fragmentation. Adapted reuse can strengthen local communities, consolidate collective memory and improve the aesthetic and functional qualities of the urban environment.

This research proposes a vision for the reintegration of industrial sites into the modern city through sustainable design and strategic planning. It emphasizes the importance of adapting these structures to today's societal needs, especially in the context of the digital age, where flexibility, connectivity and cultural continuity are key to successful urban development. Detailed case studies of former industrial complexes are used to show how such a site can be revitalized through thoughtful interventions. The paper concludes with a masterplan that incorporates this complex and outlines a scalable model for the adaptation of other similar sites in Tetovo. Through a multidisciplinary approach combining an urban analysis, an architectural heritage assessment and a design strategy, this study contributes to the discourse on the reuse of industrial heritage in Balkans. It calls for a shift in perspective - from viewing former industrial buildings as obsolete remnants of the past to recognizing them as valuable assets for a more resilient and inclusive urban future.

Keywords: industrial buildings, adaptive reuse, preservation, abandonment, urban development, heritage.

1. INTRODUCTION

The industrial legacy of Tetovo, a city in north-west North Macedonia, represents an important yet overlooked chapter of its urban history. During the mid-20th century, as part of socialist Yugoslavia, Tetovo developed a series of large factories—most notably the Teteks textile complex, the Shik Jelak wood-processing plant, and the Medical Plastics facility. These industries catalyzed rapid economic growth, shaped the city's spatial structure, and provided social infrastructure such as housing, hospitals, and recreational facilities. (ERIH, 2025). With the political and economic transitions of the 1990s, however, production declined sharply. Many industrial sites were abandoned, leaving behind expansive parcels of land near the city center, enclosed by walls and largely inaccessible to the public. While these complexes once symbolized progress and collective identity, today they are perceived as derelict zones contributing to urban fragmentation and environmental degradation. Yet these same sites embody significant **architectural, cultural, and ecological value**. Their sturdy structures, generous footprints, and existing greenery present rare opportunities for contemporary urban life: public parks, cultural venues, creative-industry hubs, and flexible workspaces. In an era of climate awareness and rapid urbanization, adaptive reuse of industrial heritage can advance sustainability goals, strengthen community cohesion, and enrich Tetovo's urban landscape.

2. MATERIALS AND METHODS

Historical and spatial analysis

The rise of industry, especially factories, drew an influx of people to the city of Tetovo and placed new demand on urban infrastructures. Industrial Revolution that took place only during 20th century was a period of rapid changes and technological advancement where its impact resonated several years after, and influenced everything from food, clothing, economy as well as housing. As the population continued to increase, the municipality was facing the challenge of how to handle the influx of people. Problems like the availability of housing, overcrowding had to be addressed as quickly as possible, or the newly industrialized city would have risked losing its citizens and the factories that employed them. Plenty of new suburbs were formed to help accommodate the rising number of Macedonians moving to the city such as the so-called neighborhood Hajdučka. (Rastko, 2022). The city started to develop toward three directions, getting closer and closer to the industrial zones. With people moving to Tetovo, from the villages on the surrounding, concentrating large number of workers and their families in the inner city, industrialism ultimately led to a modern life for the vast majority of the population. Although the industrial period did not last long, and these factories shut down earlier and excessively fast, one can say that they had a huge positive impact on the society and the development of the city of Tetovo. Fast city transformation, its expansion and a significantly raising population led to the development of emerging urban buildings. Intensity of residential buildings and speed of formation during that period are one of the reasons for many contemporary spatial and social problems in Tetovo. As a result, the city is facing lack of common public spaces. The industrialization led to far reaching transformations of society, (Boškowska N., 2017). Although the factories were shut down, nevertheless, the city did not stop developing, and evolving many social buildings as schools, hospitals, even commercial buildings, were built. Because of that, the population was constantly growing and it led to the maximum intensification and overpopulation of used spaces, causing the development of the city around the industrial sites and beyond its borders. Today the industrial sites enter the inner part of the city already; and their importance is huge, they cover a really big area, filled by vegetation, with a lot of potential, but unfortunately left abandoned, surrounded by high concrete walls, that one cannot see their true potential and importance they have in the society.

Figure 5. Impact of Industrial Revolution in Tetovo and their relation to city center



Source: Self-elaboration

Case studies

As case studies in this research, are selected three factories in the city, which in one way or another have a specific significance. One of them is the first factory built in the city of Tetovo, known as “Teteks” producing textile, and it

is the biggest one, and its importance is very special, (Devex, 2025). The other case is the factory “Shik Jelak” an industry that has produced wood and later furniture, (Delfina, 2024) and finally yet importantly is “Medical Plastics” which is a relatively new facility built only in 1990, (GlobalBX, 2025). It is clearly visible that these buildings now have already entered the urban part of the city, the place or land where these facilities are located today have high economic values. The price of land is so high today, which makes these spaces even more important to preserve, to bring back to life, as they have the potential; they are only a walk distance away from the city center and easily reachable by the public. It should be noted that today, these areas where case studies are located, are under development, the number of residential buildings is increasing, and also other facilities besides residential are going through development. This enables factories to offer many different functions that would serve the citizens. The Teteks factory is located in an area that is recently developing more and more, new neighborhoods with private housing are constantly being built, which mean that families are moving into that region. Shik Jelak factory is located very close to the city center and the people that surround this area are different, from families, to various businesses, and since it is only 900m away from the city center, it offers more opportunities for different usage and functions. The medical plastics, belongs more to the area for leisure and recreation, is surrounded by, sport halls, green spaces, shopping centers. Through a series of carefully designed surveys and questionnaires distributed to the citizens of Tetovo, we collected detailed feedback on the services and facilities they consider most essential. Respondents were presented with a curated list of potential public functions—ranging from cultural and recreational amenities to infrastructure and social services—and were invited to prioritize their needs. Our urban design concepts were based on the insights obtained from this collaborative process.

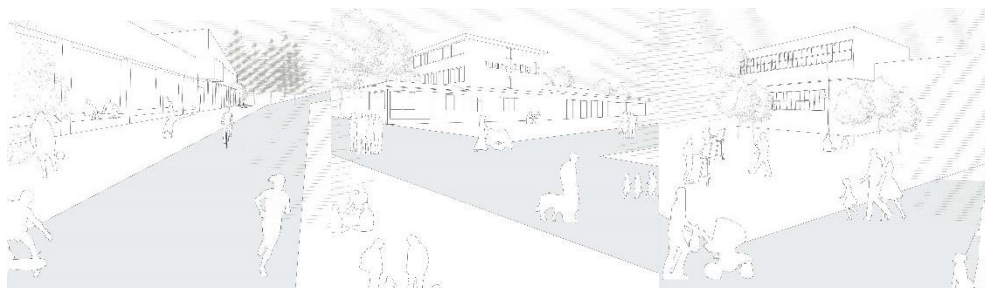
Urban design strategies

Common spaces	Wrap functions	Future flexibility
<p>1. Squares</p> <p>Creating open spaces, such as squares, that will attract people to come and spend valuable time there.</p>	<p>1. Flexible in size</p> <p>Various spacious ambient throughout the complex, where visitors would move freely and enjoy the spaces.</p>	<p>1. New Activities</p> <p>Be ready to adapt new activities and continuously fit the citizen’s demands as the city expands, and requirements grow.</p>
<p>2. Walkways</p> <p>Opening up to the public, creating walkways and a nice</p>	<p>2. Necessary uses</p> <p>Accommodating necessary uses for the society that would meet</p>	<p>2. Evolve in time</p> <p>To be flexible in functions, and being able to advance over time</p>

Figure 3. Teteks Reimagined

Figure 6. Shik Jelak Reimagined

Figure 5. Medical Plastic Reimagined



Source: Self-elaboration

3. RESULTS AND DISCUSSIONS

The investigation showed that the former industrial complexes occupied high-value land located within easy walking distance of Tetovo’s city center and were increasingly surrounded by new residential neighborhoods. Their strategic position made them rare and important assets in a city that continued to expand and densify. Detailed field observations revealed that the sites contained extensive self-grown vegetation and large, underused open areas, which together created exceptional potential for transformation into public green space. This natural

regeneration contrasted sharply with the surrounding built-up districts and underscored their ecological and recreational value. At the same time, Tetovo suffered from a marked shortage of accessible parks and communal gathering places, a condition that heightened the urgency of reclaiming these areas for public use.

Each factory presented distinct possibilities for adaptive reuse. Teteks, the largest of the three, offered generous interior volumes suited to large-scale community functions such as cultural events, markets, or educational facilities. Shik Jelak, situated closest to the city center and directly connected to major transport routes, lent itself to a mix of cultural and creative industries that could stimulate economic activity and attract visitors. Medical Plastics, surrounded by sports halls and green zones at the city's edge, was particularly well positioned to host leisure and recreational uses, complementing the existing network of athletic and open-air amenities.

Together, these findings indicated that the former factories were not merely remnants of an obsolete industrial era but key urban resources capable of addressing Tetovo's need for green space, cultural infrastructure, and socially vibrant public environments.

Integrating the three sites through a continuous green infrastructure—linked by bike paths and pedestrian routes—can transform them into a connected urban park system. Adaptive reuse respects industrial heritage while meeting modern demands for flexible workspaces, cultural venues, and recreation. The project illustrates how post-industrial landscapes can drive environmental sustainability, social cohesion, and economic development when treated as assets rather than blight.

Figure 7.A connected urban park system through greenery and bike lanes



Source: Self-elaboration

4. CONCLUSIONS

Tetovo's former industrial areas hold significant potential to act as catalysts for comprehensive urban renewal. Transforming abandoned factories into multifunctional public spaces offers an opportunity to address the city's shortage of green areas, promote environmental sustainability, and enhance the quality of urban life for residents. Such interventions can also serve as a means of preserving and celebrating Tetovo's industrial heritage, fostering a sense of identity and continuity between past and present.

Beyond ecological and cultural benefits, these adaptive reuse projects can stimulate local economic development by attracting creative industries, small businesses, and tourism, creating vibrant hubs of social and commercial activity.

Importantly, the flexible design of these spaces allows them to respond to evolving urban needs, ensuring their relevance for future generations.

The approach demonstrated in this study provides a replicable model for other post-industrial cities in North Macedonia and similar contexts worldwide, illustrating how strategic urban planning can transform derelict industrial landscapes into dynamic, multifunctional assets that benefit both communities and the environment.

ACKNOWLEDGEMENTS

We are pleased to announce the publication of our research paper and wish to express our gratitude to everyone who supported us along the way. Our appreciation goes to ‘Archive of Tetovo’ and ‘Visual Museum of Tetovo’ for providing resources and a collaborative environment, and to our families and friends for their constant encouragement. We also thank the editorial team of ‘The Power of Knowledge’ for their professional review and for giving us the opportunity to share our work.

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