

Parallel Universes. Exploring Potential Resurrections of a Factory

**Radu Andrei, Ramona Costea, Mihaela Agata Cehan,
Tiberiu Teodor-Stanciu**

PhD, associate professor | PhD, teaching assistant | PhD, assistant professor | PhD, teaching assistant,
Faculty of Architecture, "Gheorghe Asachi" Technical University, Iași, Romania
radu.andrei@academic.tuiasi.ro | ramona.costea@academic.tuiasi.ro | mihaela-agata.cehan@academic.tuiasi.ro |
tiberiu.teodor-stanciu@academic.tuiasi.ro

Keywords: industrial heritage; adaptive reuse; architectural conversion; intermediate urban spaces; context-sensitive; *urban engawa*

Introduction

After an initial period marked by the inertia of civil architectural language, 19th century industrial architecture became a symbol of progress, a genuine expression of the Industrial Revolution. It was defined by formal simplicity, prefabrication, and serial production, the reinterpretation of ornaments, and the honest expression of construction materials. These characteristics laid the groundwork for the modern architecture of the 20th century.

In Romania, however, many of these structures are neglected, either abandoned or demolished to make way for real estate developments. This situation reflects a broader lack of post-communist public awareness regarding the real value of industrial heritage. Without minimal recognition of their cultural and urban importance and sufficient good-practice local examples, these buildings are wrongly perceived as obsolete remnants of the past rather than as assets that enrich urban spaces' identity and continuity.

The collapse of state socialism in 1989 triggered widespread deindustrialization, leaving behind industrial complexes that once employed thousands of workers. In Iași, this economic restructuring caused significant social disruption, severing generational connections to industrial work and erasing collective memories tied to these spaces.

Methodology

This research employs a mixed-methods approach combining: (1) historical documentation — archival research to trace the site's evolution from its 19th-century railway workshop origins through communist expansion to post-1989 abandonment; (2) architectural survey — field documentation including photographic survey, condition assessment, and analysis of construction elements to identify character-defining features and current deterioration; (3) speculative design — development of four original intervention strategies based on theoretical frameworks of intermediary spaces and international precedents, tested through diagrammatic exploration.

Historical context and current status

Nicolina factory, known in the past as Frumoasa Workshops, is a representative example of the early 19th century industrial heritage, inspired by the railway architecture, with its simple, prismatic forms, the red brick facade, and its stylized yet harmonious decorations, also modulated by the pixel-like bricks (Fig. 1). It is an important old factory in Iași, one of the few that have survived the post-1989 period, when the interest in saving historic buildings was almost absent. The industrial site, expanded during the communist period with new pavilions built in various styles, employed over 2,000 workers in the production of locomotives and railway equipment.



Fig. 1: The main facade of the wheel factory - Frumoasa Workshops, 2025

The complex was abandoned shortly after the anti-communist revolution due to denationalization and inefficient management. Situated in an area with good connections to the city center, the site was sold with the perspective of building a multi-story housing area. As a result, almost 10 hectares of industrial facilities were demolished, leaving behind the two buildings we see today, surrounded by a vast expanse of space, as a crisis struck and the ongoing project was temporarily abandoned.

The two remaining buildings are presently in grave danger. They are not listed as protected heritage, while the damaged roofs allow them to slowly decay. Their current uncertain status creates both urgency and opportunity for demonstrating alternative futures.

Aims and objectives

While this study examines the architectural influences, construction elements, and historical significance of the Frumoasa Workshops, its primary purpose is to identify opportunities for preserving these buildings and to provide insight into their potential integration into future public space. The approach considers both their heritage value — encompassing architectural, structural, and historical significance — and their social potential, particularly in relation to the processes of deindustrialization. In order to succeed, we must address a major challenge: the exterior walls, originally designed as load-bearing structural elements, form a barrier between the interior and exterior spaces. Even though several technical solutions for creating new openings are available, the scale of the building and its valuable architecture have led us to adopt minimal interventions on the facades.

Theoretical Framework: *Urban Engawa* and Intermediary Spaces

As adaptive reuse focuses on the functional transformation of existing buildings to meet contemporary needs, it specifically requires careful management of the delicate balance between preserving heritage and intervention. In this regard, intermediary spaces that could act as transitional zones between spaces with well-defined functions become essential for organizing the built environment — they are intrinsically flexible and susceptible to programmatic reinter-

pretation.¹ Intermediary spaces directly influence users' perceptions, behaviors, and emotional states, often functioning as buffer zones between activities with different requirements.² Cultural differences can significantly influence preferences regarding openness, physical proximity, privacy, or the level of formality in social interaction.³ These areas provide the medium for reconnecting the community, as the lack of genuine social interaction and civic coherence is one of the main barriers to successful heritage preservation.

Our approach uses the new concept of *urban engawa*,⁴ which we propose as a contemporary urban threshold for negotiating between public and private realms. Applied to industrial conversion, this concept addresses the fundamental challenge of transforming enclosed production spaces — originally designed to exclude the public — into accessible environments that reconnect with urban life.

Similar approaches have been developed by Brooker and Stone, who identify three core strategies for remodeling existing buildings — *insertion*, *installation*, and *intervention* — based on the degree of integration between new and old structures. These models emphasize the architectural dialogue between the host building and the new program, aligning with our notion of the *urban engawa* as a spatial mediator. Likewise, Fisher-Gewirtzman⁵ proposes a systematic framework for documenting and analyzing adaptive reuse precedents through formal, spatial, and strategic lenses. Her emphasis on the *process of transformation* — rather than the final image — parallels our methodology for defining intermediary spaces as dynamic interfaces where memory, use, and perception overlap. Integrating these perspectives reinforces the idea that adaptive reuse operates simultaneously as an analytical process and a poetic act of spatial negotiation.

Site Analysis

The site presents evident urbanistic values, with its open space around and beautiful views of many landmarks of the city of Iasi: the Cetățuia Monastery, the Frumoasa Church to the south, and, within a long perspective towards the west, the Galata Monastery (Fig. 2). On the south side, the site is delimited by the railway, which serves the former industrial area of the city, but there are pedestrian connections with the neighborhood that are highly possible and advisable.

The main building of the Frumoasa ensemble highlights another issue: we need to address the ambiguous composition hierarchy created by the building's equal wings, which face all cardinal points. Although the higher, main volume contains the former entrance, the equivalent orientation of the other parts unlocks the potential for multiple uses connected to the outside space in a new urban composition with numerous access points, as the future housing district may surround this public core.

Four Original Strategies for Adaptive Reuse

Grounded in the above principles, we have developed four original strategies to achieve an *urban engawa* — an intermediary space that mediates between nature, the long perspectives framing urban landmarks, the semi-public spaces of the residential area, and the future reused

1 Jan Gehl, *Life Between Buildings: Using Public Space*, trans. Jo Koch (Washington DC: Island Press, 2010), 61-63.

2 Christian Norberg-Schulz, *Genius Loci: Towards a Phenomenology of Architecture* (New York: Rizzoli, 1980), 23-27.

3 Amos Rapoport, *House Form and Culture* (Englewood Cliffs, NJ: Prentice-Hall, 1969), 66-69.

4 The concept reinterprets the traditional Japanese transitional space, originally a wooden perimeter platform mediating between interior and exterior.

5 Dafna Fisher-Gewirtzman, "Adaptive Reuse Architecture Documentation and Analysis," *Journal of Architecture and Engineering Technology* 5 (2016): 172.



Fig. 2: Visual relations with landmarks in the area

industrial buildings.

Submersion

The new public spaces are designed for the underground level, allowing multiple buildings to be connected and share public functions. Inspired by Arata Isozaki's approach at the Caixa Forum in Barcelona,⁶ this strategy seeks connections between elements without visually disturbing the existing image. Such extensions give access to all the important volumes without interrupting the brick facades. The underground level (Fig. 3) should be articulated with exterior green areas via an inclined plaza to ensure a smooth transition between the interior and exterior spaces. The orientation of the slopes frames the main perspectives.

Inversion

The solution emphasizes the philosophic ephemerality of the world, aestheticizing ruins and nature. Drawing on 18th century *vedutisti* and landscape artists,⁷ as well as contemporary projects like Marco Casagrande's Taitung Ruin Academy,⁸ this approach aims to aesthetically blend the

6 ArchDaily, "Centro Cultural Caixa Forum Barcelona / Arata Isozaki," archived April 17, 2016, <https://www.archdaily.com/912598/centro-cultural-caixa-forum-barcelona-arata-isozaki>.

7 Smart Museum of Art, "Giovanni Battista Piranesi," accessed March 8, 2025, <https://smartcollection.uchicago.edu/people/1952/giovanni-battista-piranesi/objects>.

8 ArchDaily, "Taitung Ruin Academy / Marco Casagrande," archived October 1, 2014, <https://www.archdaily.com>.

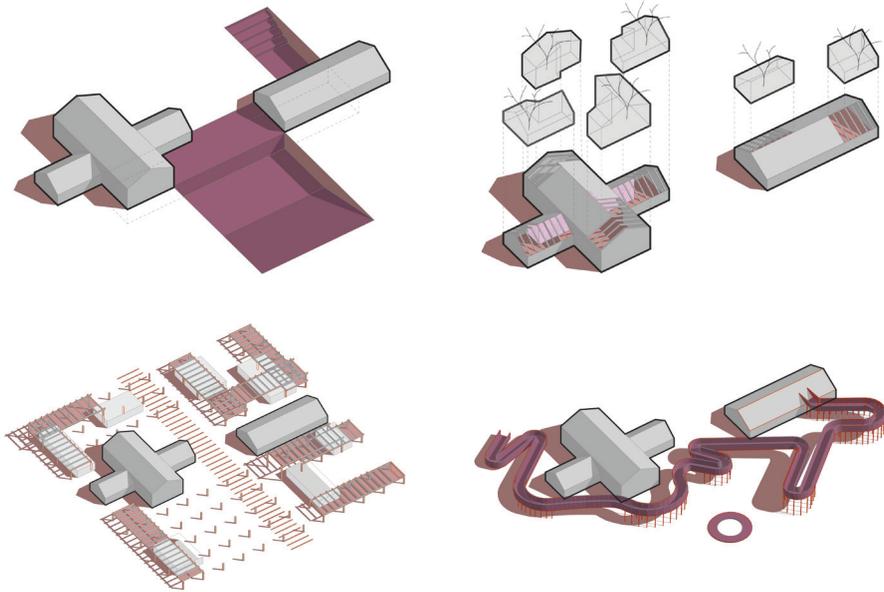


Fig. 3-6: Submersion, inversion, expansion and suspension diagrams (from upper, left to bottom right)

building into its natural context, leaving the decay visible. The interior areas become extensions of the outside public space towards the periphery, and the new reuse functions recede towards the center of the spaces, thus featuring dissolved volumes that allow vegetation to penetrate. This concept (Fig. 4) would reference a particular deconstruction of the boundaries between interior and exterior, relying on a landscape design approach that is emphasized by artistic installations and spectacular architectural lighting.

Expansion

Meant to reclaim the public space around the building, this strategy uses different modest volumes in scale and architectural expression, as well as transparent urban canopies, thus creating visual tensions and defining intermediate spaces. Following Frank Gehry's approach in his renovation of a police station garage in Los Angeles, now known as Geffen Contemporary at MOCA,⁹ our strategy (Fig. 5) proposes adding new small buildings that would not compete in size with the factory. The main assets of the solution are the buffer area generated by the brick facades, the visually controlled new neutral architecture, and the human scale of the proximal outside spaces.

Suspension

The strategy explores the subjective architectural scale of the volumes by initiating a dynamic route that navigates the urban composition with a walkway connecting different levels, offering new views of the main volumes and the nearby landmarks. Similar to Günther Domenig's approach at Hüttenberg Steelworks,¹⁰ this solution (Fig. 6) allows the architect to direct and/or distract the viewer's attention to specific key points, as in a Japanese garden, finally transform-

com/552367/taitung-ruin-academy-marco-casagrande.

9 Harvard University, "Contemporaries, Now and Then," archived July 30, 2024, <https://www.gsd.harvard.edu/2024/07/mimi-zeiger-john-may-moca-los-angeles-contemporary>.

10 ArchDaily, "Who Was Günther Domenig? The Unknown Deconstructivist," archived September 22, 2022, <https://www.archdaily.com/989389/who-was-gunther-domenig-the-unknown-deconstructivist>.

ing the whole factory into an artistic installation in which urban perspective, architecture, and nature merge into a single landscape.

Social dimensions and labor heritage

These strategies respond to the social ruptures generated by post-1989 deindustrialization. For decades, the Frumoasa Workshops sustained a dense network of economic, social, and cultural relations that shaped the daily life of the working-class communities. Their sudden disappearance left a void — physical and emotional — within the city's collective memory. The proposed interventions aim to reactivate this latent heritage by creating spaces that commemorate labor history while hosting new forms of community life. The intermediary zones become arenas for intergenerational dialogue, where former workers and new residents can share experiences, transforming remembrance into participation and reconnecting the site to the living fabric of the city.

Conclusions

Intermediary spaces play a fundamental role in industrial adaptive reuse, as they dissolve the barrier between the former enclosure and the public space. Their flexible, open nature allows them to adapt quickly to their users' changing needs, providing the perfect pretext to visualize and emotionally internalize the once-neglected building.

In our hectic daily lives, governed by technology and short-answer communication, the intermediate space is a place to slow down, relax, enjoy, and accept those values of the past that shape the community's identity.

The *urban engawa*, regardless of its nature and form, gathers diverse users of the building and defines the essential space for observing and valuing the historical building and its surroundings. The space, sometimes obvious and sometimes discreet, transforms a dead ruin into a vibrant background for urban life. It creates the opportunity for the old factory to evolve from a beautiful building into a genuine landmark for the community — a place that embodies meaning, respect, and affection, thereby advancing the ultimate goal of heritage conservation.

REFERENCE LIST:

- ArchDaily. "Centro Cultural Caixa Forum Barcelona / Arata Isozaki." Archived April 17, 2016. <https://www.archdaily.com/912598/centro-cultural-caixa-forum-barcelona-arata-isozaki>.
- ArchDaily. "Taitung Ruin Academy / Marco Casagrande." Archived October 1, 2014. <https://www.archdaily.com/552367/taitung-ruin-academy-marco-casagrande>.
- ArchDaily. "The Factory / Ricardo Bofill." Archived November 15, 2012. <https://www.archdaily.com/294077/the-factory-ricardo-bofill>.
- ArchDaily. "Who Was Günther Domenig? The Unknown Deconstructivist." Archived September 22, 2022. <https://www.archdaily.com/989389/who-was-gunther-domenig-the-unknown-deconstructivist>.
- Brooker, Graeme, and Sally Stone. *Rereadings: Interior Architecture and the Design Principles of Remodeling Existing Buildings*. RIBA Enterprises, 2004.
- Fisher-Gewirtzman, Dafna. "Adaptive Reuse Architecture Documentation and Analysis." *Journal of Architecture and Engineering Technology* 5 (2016): 172.
- Gehl, Jan. *Life Between Buildings: Using Public Space*. Translated by Jo Koch. Washington DC: Island Press, 2010.
- Harvard University. "Contemporaries, Now and Then." Archived July 30, 2024. <https://www.gsd.harvard.edu/2024/07/mimi-zeiger-john-may-moca-los-angeles-contemporary>.
- Norberg-Schulz, Christian. *Genius Loci: Towards a Phenomenology of Architecture*. New York: Rizzoli, 1980.
- Rapoport, Amos. *House Form and Culture*. Englewood Cliffs, NJ: Prentice-Hall, 1969.
- Smart Museum of Art. "Giovanni Battista Piranesi." Accessed March 8, 2025. <https://smartcollection.uchicago.edu/people/1952/giovanni-battista-piranesi/objects>.

ILLUSTRATION CREDITS: