

# 포기에서 공공 공간으로: 공간 디자인 전략으로 적응형 재사용

## From Abandonment to Public Space: Using Adaptive Reuse as a Spatial Design Strategy

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### Abstract

This research explores the transformation of abandoned urban lands into vibrant public spaces through adaptive reuse as a spatial design strategy. Urban abandonment, often resulting in neglected spaces, has detrimental effects on urban life, including social security concerns, environmental pollution, and the underutilization of urban potential. This study summarizes the characteristics of public spaces for further research on the theoretical evaluation of adaptive reuse strategies of the design. We examine 15 examples, which are grouped into three types of intervention levels. Then, we explore the relationships between those types and the geographical regions they are situated in. As a result, the systematic catalog synthesizes critical variables such as typologies and programmatic requirements to generate diverse public spaces, enhance urban spaces, and foster public engagement. The findings offer insights into effective planning and development strategies for transforming abandoned lands into productive, inclusive public areas, pointing to future urban spatial design and policy-making directions.

키워드 : 적응형 재사용, 공공 공간, 버려진 공간

Keywords : Adaptive Reuse, Public Space, Abandoned Space

### 1. Introduction

This research addresses the transformation of abandoned urban lands into vibrant public spaces through adaptive reuse, a strategy that revitalizes neglected areas and counters urban decay. Highlighting the socio-economic and environmental challenges posed by these deserted spaces, the study advocates for innovative design strategies that inject new life into urban landscapes while preserving their historical essence. The paper delves into 15 adaptive reuse projects, categorized by the extent of intervention—from light touch-ups to comprehensive overhauls—to demonstrate the spectrum of possibilities in reimagining urban spaces.

The exploration extends to understanding how these interventions relate to their geographical and cultural

contexts, aiming to unearth patterns that could guide future projects. This approach considers the unique characteristics of each region, ensuring that adaptive reuse strategies are both locally relevant and broadly applicable. Employing both qualitative and quantitative analyses, the study sifts through data to uncover thematic trends and establish a framework for best practices in adaptive reuse.

### 2. Literature Review

Adaptive reuse has emerged as a key strategy for the revitalization of urban spaces, emphasizing sustainability and the engagement of local communities. Studies like those by Yung et al. (2014) and Poulos (2014) stress the dual focus on preserving heritage while ensuring modern relevance. The community's involvement is seen as essential in ensuring these spaces serve current urban needs while maintaining their historical essence (Yung & Chan, 2011).

The environmental benefits are also well-documented, with adaptive reuse strategies promoting resource conservation and contributing to eco-friendly urban development (Coutts et al., 2015). The economic viability of repurposing existing structures is reinforced by the principles of a circular economy, highlighting cost-effectiveness and resource efficiency (Cellucci, 2021).

Methodologically, the literature spans from value-focused approaches that prioritize the social and cultural importance

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of urban spaces (Ki & Shin, 2013) to case studies detailing specific interventions in rail infrastructure, demonstrating the importance of strategic design planning (Sivam et al., 2013).

In summary, while the correlation between sustainability, community engagement, and economic viability is well established, the existing literature does not sufficiently address the direct relationship between intervention types and their geographical applicability. Nor does it provide a conclusive framework for comparing the effectiveness of different approaches across various cultural contexts.

### 3. Methodology

Our research methodology commences with the careful selection of 15 case studies, chosen for their exemplification of adaptive reuse in urban public spaces. These cases were meticulously documented, capturing a multitude of aspects including their locations, original and new functions, existing conditions, implemented solutions, and the extent of intervention carried out. Each case was then categorized into one of three distinct levels of intervention, providing a framework for comparative analysis.

### 4. Results

#### 4.1 Document analysis:

The adaptive reuse projects reviewed consistently transform underutilized or industrial spaces into community-centric areas, predominantly parks and public centers. This significant shift in function from private to public realms underscores a broader urban redevelopment trend towards creating spaces that enhance community access and engagement. Such transformations not only rejuvenate the physical landscape but also profoundly impact the social dynamics, attracting diverse user groups and fostering a stronger sense of community and belonging. This marks a departure from the traditional build-and-demolish approach, steering urban development towards sustainable practices that prioritize heritage conservation and environmental stewardship.

#### 4.2 Spatial Design Strategies:

a/ Minimalist to Radical Transformation: Design strategies ranged from minimalist approaches, conserving much of the structure's original fabric, to radical transformations that completely redefine the space. Level 1 interventions, like Skanderbeg Square, preserved the historical essence through careful alterations, while Level 3 projects, such as Hyperlane, adopted a bold reimagining of the space, introducing new forms and functions.

b/ Integration of Green Spaces: A common design strategy across many projects was the incorporation of green spaces into urban fabric, converting hard, impermeable surfaces into permeable landscapes. This strategy not only addresses urban heat island effects but also promotes biodiversity and ecological well-being.

c/ Community-Centric Spaces: Projects consistently emphasized creating spaces that encourage community interaction and engagement. From the RE-AINBOW in Viet Nam to the Yangpu Riverside Public Space in China, the creation of open, accessible areas catered to community gatherings and social cohesion.

d/ Cultural and Historical Continuity: Maintaining a dialogue with the past, many projects integrated the site's history into their new function. For example, Mané Market in Brazil repurposed the Pan American Games market into a public welfare space, weaving the location's historical significance into its new role.

e/ Adaptability to various activities was a key strategy, particularly in Level 2 and 3 interventions. Spaces were designed to support a mix of uses, ranging from recreational to commercial, reflecting the changing urban demands.

f/ Tailoring design strategies to the local context was essential. The projects took into account regional climates, materials, and cultural nuances, resulting in contextually relevant and sustainable designs.

Table 1. Level of Intervention of Cases Study.

Level of Intervention	Name of the Project	Location	Old Function	New Function
Level 1 Light Intervention	Rachel de Queiroz Park	Brazil	Parking lot	Park
	Skanderbeg Square	Albania	Square	Square
Level 2 Moderate Intervention	Neighborhood Center of Gaobei Community	China	Vacant	Real estate offices
	Tainan Spring	Taiwan	China-town mall	Waterpark
	Nanhua Glimmer Park	Taiwan	Gutter	Park
	Waterline Park	China	Garbage	Park
	Mané Market	Brazil	Market	Public welfare
Level 3 Heavy Intervention	RE-AINBOW	Viet Nam	Industrial warehouses	Park
	The Disappearing Garden	China	Vacant	Park + Community
	Hyperlane	China	Parking lot	Park
	Ogmios City Public Space	Lithuania	Outlet center	Integrated City
	Playground MacroLotto Zero Prato	Italy	Factory	Park
	Xihe Cereals and Oils Museum	China	Trading center	Architecture
Level 3 Heavy Intervention	Minhang Riverfront Regeneration	China	Multifunctional	Community house
	Yangpu Riverside Public Space	China	Blank space	Park