

SPATIAL EXPERIENCE POTENTIAL IN DESIGN-DRIVEN PLACE BRANDING: EVIDENCE FROM ADAPTIVE REUSE IN MULTICULTURAL HERITAGE DISTRICTS

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ABSTRAK

Adaptive reuse pada bangunan heritage semakin penting dalam mendukung keberlanjutan kawasan bersejarah. Namun, studi yang mengintegrasikan intervensi desain, karakter spasial, potensi pengalaman ruang, dan pembentukan identitas kawasan dalam konteks place branding masih terbatas, khususnya pada kawasan heritage multikultural. Penelitian ini bertujuan untuk menganalisis intervensi desain pada bangunan heritage yang membentuk karakter spasial, menghasilkan potensi pengalaman ruang, serta berkontribusi terhadap pembentukan identitas kawasan di Kota Lama Surabaya. Penelitian ini menggunakan pendekatan kualitatif dengan strategi multiple-case study pada 4 bangunan heritage yang merepresentasikan zona budaya yang berbeda. Data dikumpulkan melalui observasi lapangan, dokumentasi visual, dan studi literatur, kemudian dianalisis secara deskriptif-interpretatif melalui analisis konfigurasi spasial, transformasi fungsi, serta perbandingan lintas kasus. Penelitian menunjukkan bahwa intervensi desain membentuk konfigurasi spasial yang berbeda melalui variasi pola sirkulasi, hierarki fungsi, tingkat keterbukaan ruang, dan integrasi kontekstual yang menghasilkan beragam potensi pengalaman ruang. Penelitian juga menunjukkan bahwa potensi pengalaman spasial berperan sebagai mekanisme mediasi antara transformasi spasial dan persepsi tempat. Penelitian ini mengembangkan model design-driven place branding yang memposisikan adaptive reuse sebagai mekanisme spasial yang menghubungkan intervensi desain, potensi pengalaman ruang, place branding, dan pembentukan identitas kawasan. Penelitian selanjutnya disarankan untuk memvalidasi model melalui evaluasi pasca-huni, studi persepsi pengunjung, serta penelitian komparatif longitudinal pada berbagai kawasan heritage.

Kata kunci: Adaptive reuse; identitas kawasan; kawasan heritage multikultural; place branding; potensi pengalaman ruang

ABSTRACT

Adaptive reuse of heritage buildings has become increasingly important in supporting the sustainability of historic districts. Studies that integrate design interventions, spatial character, and district identity into place branding are limited, especially in multicultural heritage districts. This study aimed to analyze how design interventions in heritage buildings shape spatial character, create potential for spatial experience, and contribute to the formation of district identity in Surabaya's Old Town. The study employed a qualitative approach using a multiple-case study strategy involving four heritage buildings representing different cultural zones. Data were collected through field observations, visual documentation, and literature review, and analyzed using a descriptive-interpretative approach, including spatial configuration analysis, functional transformation analysis, and cross-case comparison. The findings revealed that design interventions shaped distinct spatial configurations through variations in circulation patterns, functional hierarchy, spatial openness, and contextual integration, thereby generating diverse potential for spatial experience. The findings of the research also indicated that spatial experience potentially functioned as a mediating mechanism between spatial transformation and place perception. This study developed a design-driven place branding model that positions adaptive reuse as a spatial mechanism linking design intervention, spatial experience potential, place branding, and district identity formation. Future research is recommended to validate the proposed model through post-occupancy evaluation, visitor perception studies, and longitudinal comparative research across different heritage districts.

Keywords: adaptive reuse; district identity; multicultural heritage district; place branding; spatial experience

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1. INTRODUCTION

The Old Town of Surabaya (*Kota Lama Surabaya*) represents a historic urban landscape that reflects the city's multicultural dynamics and spatial evolution since the colonial period. The district developed as a multi-ethnic urban environment characterized by distinct cultural zones, including European, Chinese, Arab, and Malay settlements, each possessing unique architectural expressions and spatial characteristics. This diversity positions the Old Town not merely as a collection of historic buildings but as an integrated spatial system that shapes the district's identity. In contemporary urban discourse, cultural heritage is increasingly recognized as a strategic asset that contributes to urban identity formation, the enhancement of quality of life, and culture-based economic development (Kaya et al., 2021; Pintossi et al., 2023; Mazzetto, 2023).

Despite its significance, heritage districts continue to face significant challenges in conservation and adaptive utilization. Physical deterioration, uncontrolled functional transformation, and design interventions that are insensitive to historical values often threaten the long-term sustainability of heritage environments. In this context, conservation can no longer be understood solely as the preservation of physical structures; instead, it requires integrated strategies that enable historic buildings to remain socially, economically, and functionally relevant. One increasingly adopted approach is adaptive reuse, which allows historic buildings to accommodate new functions while maintaining their cultural significance. Previous studies have shown that adaptive reuse contributes not only to heritage conservation but also to sustainable urban development through resource efficiency, reduced construction waste, and the preservation of socio-cultural values (Foster & Saleh, 2021; Mehr et al., 2017; van Laar et al., 2024).

Beyond physical transformation, adaptive reuse also plays a significant role in reshaping urban spatial dynamics. The revitalization of previously underutilized buildings into productive spaces can enhance district attractiveness, stimulate social interaction, and generate new economic opportunities. In this process, design becomes a critical mechanism for translating heritage values into contemporary spatial needs. Accordingly, adaptive reuse should be understood not only as a technical conservation strategy but also as a design-driven process that shapes spatial character and environmental quality within urban contexts (Ghida, 2024; Aigwi et al., 2026).

Along with the growing emphasis on experiential tourism, architectural spaces are no longer perceived as passive settings, but as active environments that shape visitors' perceptions of place. Tourism experiences are influenced not only by the presence of physical attractions, but also by how spaces are organized, accessed, and interpreted within the context of visitation (Pine & Gilmore, 1999; Richards, 2011). In heritage environments, adaptive reuse offers the potential to create more authentic spatial qualities by integrating historical value, spatial atmosphere, and social activities. Post-occupancy studies have also identified spatial quality as a key indicator in evaluating the success of design transformation in heritage buildings (Tan et al., 2026).

Within this context, district identity is shaped not only by historical significance but also by the way space is designed, organized, and experienced. This highlights the relevance of place branding in heritage district development. Contemporary place branding extends beyond promotional activities and is increasingly understood as a process of place identity formation shaped by interactions among physical settings, social activities, and spatial experiences (Kavaratzis & Ashworth, 2005; Zenker & Braun, 2017). From this perspective, district identity is not constructed solely through top-down visual representation but emerges from the relationships among spatial structures, human activities, and environmental context.

Although research on adaptive reuse has grown substantially, most existing studies primarily focus on technical interventions, physical conservation, or policy evaluation. Studies that explicitly examine how adaptive reuse contributes to district identity formation through design interventions and spatial experience remain limited, particularly in multi-zonal heritage districts characterized by cultural diversity. Furthermore, although previous studies have examined adaptive reuse from conservation, sustainability, and heritage tourism perspectives, limited attention has been given to how design interventions generate spatial experience potential

that subsequently contributes to place branding and district identity formation. The integration of adaptive reuse, spatial experience potential, place branding, and district identity within a unified analytical framework, therefore, remains underdeveloped, particularly in multicultural heritage districts.

Addressing this gap, this study develops an analytical framework that links design transformation, spatial character, spatial experience potential, and district identity formation in the context of adaptive reuse in heritage buildings. Specifically, this study aims to examine how design interventions in heritage buildings shape spatial character, generate potential for spatial experience, and contribute to the formation of district identity in the Old Town of Surabaya. Using a multiple-case study approach across representative buildings from different cultural zones, this research investigates the relationship between heritage values, design intervention strategies, functional transformation, and the resulting spatial qualities. The findings are expected to contribute conceptually to the development of adaptive reuse studies, heritage district design, and more contextual, sustainable, and experience-oriented approaches to district identity formation.

2. LITERATURE REVIEW

2.1 Adaptive Reuse in Heritage Buildings

Adaptive reuse has become one of the most widely discussed approaches in contemporary heritage conservation, particularly in response to the need to maintain the functional relevance of historic buildings within rapidly changing urban environments. Unlike conventional preservation approaches that primarily focus on protecting the physical integrity of historic structures, adaptive reuse emphasizes integrating historical significance with new functional requirements, allowing heritage buildings to remain socially, economically, and spatially relevant over time (Douglas, 2006; Plevoets & van Cleempoel, 2019).

Previous studies have demonstrated that adaptive reuse contributes not only to the preservation of cultural heritage but also to broader urban sustainability through resource efficiency, waste reduction, economic revitalization, and the continuity of social values (Foster & Saleh, 2021; van Laar et al., 2024). More recent studies further suggest that adaptive reuse can strengthen urban resilience by enabling heritage buildings to respond to contemporary urban demands while maintaining their historical legibility (Ghida, 2024; Aigwi et al., 2026).

However, much of the existing literature continues to frame adaptive reuse primarily in terms of technical intervention, economic feasibility, or conservation policy. Fewer studies examine how adaptive reuse functions as a design-driven process that reorganizes spatial configuration, circulation systems, and functional relationships to generate new spatial qualities within heritage environments. This limitation indicates the need to reposition adaptive reuse not only as a conservation strategy but also as a spatial design mechanism that can shape district identity through architectural transformation.

2.2 Spatial Experience in Architecture and Heritage Tourism

In architectural discourse, spatial experience refers to the way built environments are perceived, interpreted, and emotionally understood through sensory engagement, movement, materiality, light, proportion, and environmental atmosphere. Pallasmaa (2012) argued that architectural experience is not limited to visual perception but is constructed through multisensory interaction between the body and space. Similarly, Christian Norberg-Schulz emphasized that spatial meaning emerges through lived interaction between individuals and their environmental structures, where architectural space functions as a medium of existential orientation.

From a tourism perspective, experience has become a central dimension in understanding destination attractiveness, visitor engagement, and place attachment. The experience economy perspective highlights that visitors increasingly seek meaningful and immersive experiences rather than merely consuming physical attractions (Pine & Gilmore, 1999). Within heritage tourism, spatial quality plays a critical role in shaping perceptions of authenticity, emotional

engagement, and destination image, as visitor experiences are strongly influenced by how spaces are organized, navigated, and interpreted in cultural settings (Richards, 2011; Styliadis, 2018).

Although previous studies have established the importance of experience in both architecture and tourism, spatial experience is often examined either as a user-perception outcome or as a destination-evaluation construct. Limited research has explored spatial experience potential as a design-generated capacity emerging from architectural configuration itself. This indicates the need for a more integrated perspective that positions spatial experience as an interpretative bridge between design intervention and the formation of place identity.

While spatial experience generally refers to users' actual perception and interpretation of space, this study adopts the concept of spatial experience potential, defined as the experiential capacity embedded in spatial configurations and architectural qualities prior to direct user evaluation. Accordingly, spatial experience potential is positioned as a design-generated condition that enables particular forms of engagement, interaction, and meaning-making. Conceptually, it shares similarities with phenomenological and affordance-based perspectives in environmental design, both of which emphasize the capacity of spatial environments to enable particular forms of perception, action, and meaning-making. However, unlike conventional interpretations of spatial experience that focus on actual user responses, spatial experience potential refers to experiential opportunities embedded within spatial configurations prior to direct user evaluation.

2.3 Place Branding and District Identity Formation

Contemporary place branding has evolved beyond destination promotion and marketing communication. Recent studies increasingly conceptualize place branding as a process of identity formation shaped by interactions among physical environments, social activities, and experiential qualities. Kavaratzis & Ashworth (2005) argued that place identity is constructed not merely through logos, slogans, or visual representations, but through the ways places are physically experienced, socially practiced, and collectively interpreted. This perspective was further developed by Kavaratzis & Hatch (2013), who conceptualized place branding as an identity-based process that emerges from the continuous interaction between place identity and stakeholder perceptions. Similarly, Govers & Go (2016) emphasized that place identity emerges through the interaction between imagined, experienced, and physically constructed environments.

In heritage districts, place branding becomes particularly complex because identity is shaped not only by historical assets, but also by how heritage spaces support contemporary activities, movement patterns, cultural interactions, and the social construction of heritage meanings (Smith, 2006). Previous studies have shown that meaningful spatial qualities contribute significantly to place image, emotional attachment, destination differentiation, and place attachment, which subsequently influence identity formation and long-term relationships between people and places (Lewicka, 2011; Styliadis, 2018). However, most place branding studies still focus on communication strategies, stakeholder perception, or destination image evaluation. At the same time, the roles of design interventions and spatial character in shaping district identity remain underexplored.

Although adaptive reuse, spatial experience, and place branding have each been widely discussed in their respective fields, these concepts are often examined independently. Few studies have integrated adaptive reuse, design interventions, spatial character, spatial experience, and district identity into a unified analytical framework, particularly in multicultural heritage districts. Unlike previous studies that primarily examine adaptive reuse from conservation, technical, or functional perspectives, this study positions adaptive reuse as a design-driven mechanism through which spatial transformation generates experiential qualities that contribute to heritage district place branding.

Based on the reviewed literature, three research gaps remain evident. First, adaptive reuse has rarely been examined as a design-driven mechanism shaping district identity. Second, the concept of spatial experience potential remains underdeveloped within adaptive reuse studies.

Third, the integration of adaptive reuse, spatial experience potential, and place branding within multicultural heritage districts remains limited. This study addresses these gaps by developing a design-driven place branding framework.

3. METHODOLOGY

This study employed a qualitative research approach, using a multiple-case study strategy, to examine how design interventions in adaptive-reuse heritage buildings shape spatial character, generate potential for spatial experience, and contribute to district identity formation. A qualitative approach was selected because the study aimed to explore meanings, spatial relationships, and contextual connections among design interventions, heritage values, and resulting spatial characteristics rather than measure phenomena quantitatively (Creswell & Poth, 2018). A case study strategy was adopted because the research focused on real-world phenomena within a specific context, namely the Old Town of Surabaya as a multicultural heritage district, thereby enabling contextualized and in-depth investigation (Yin, 2018).

The study was conducted in the Old Town of Surabaya, which consists of four major cultural zones: European, Chinese, Arab, and Malay. A multiple-case study design was employed, in which each heritage building was treated as an individual case and subsequently analyzed comparatively across cultural zones. The selected cases comprised Hotel Horizon Arcadia Heritage Rajawali (European zone), Rumah Abu Han (Chinese zone), Hotel Kemajuan (Arab zone), and Rumah H.O.S. Tjokroaminoto (Malay zone).

Case selection employed purposive sampling to capture diverse adaptive reuse practices within the multicultural heritage context of Surabaya's Old Town. Although the selected buildings serve different contemporary functions, this variation was intentionally incorporated to represent different design intervention strategies, spatial configurations, and experiential conditions. Consequently, the comparison focused on design interventions, functional transformations, spatial configurations, and resulting spatial qualities rather than on contemporary functions. Cases were selected based on heritage significance, identifiable design interventions, continuity of use, and accessibility for observation and documentation (Patton, 2015).

The unit of analysis was each building, along with its internal spatial organization, as a representation of design transformation and spatial character. The analysis primarily focused on the building scale (micro level), while also considering the relationship between the building and its surrounding district context (macro level).

Data were collected through field observation, documentation, and literature review. Field observations focused on identifying spatial configurations, circulation patterns, spatial hierarchy, spatial openness, and visual relationships between spaces. To ensure analytical consistency across the four cases, spatial configuration analysis was conducted using four operational indicators: access, boundary, circulation sequence, and spatial openness.

Table 1. Operational Indicators for Spatial Configuration Analysis

Analytical Aspect	Operational Focus
Access	Entry points, accessibility, and approach sequence
Boundary	Physical and visual separation between spaces
Circulation Sequence	Movement patterns and spatial progression
Spatial Openness	Degree of enclosure, permeability, and visual connectivity

These indicators were applied consistently across all case studies to ensure comparability and reduce interpretative bias during cross-case analysis. In addition, observations examined movement patterns, opportunities for interaction, and relationships between internal spaces and their surrounding environments. Documentation included photographic records, visual maps, and supporting materials related to the building's history and adaptive reuse processes. A literature review was conducted to strengthen the theoretical foundation and support the development of

the analytical framework. Data validity was enhanced through source and method triangulation by comparing findings from observations, documentation, and relevant literature.

Data analysis followed the stages of data reduction, data display, and conclusion drawing proposed by Miles et al. (2014). The analysis consisted of three stages. First, design and spatial analysis examined spatial configuration, circulation systems, spatial hierarchy, visual permeability, and relationships between original and newly introduced architectural elements. The operational indicators presented in **Table 1** served as the primary analytical framework for identifying patterns of spatial organization and design transformation. Second, functional transformation analysis examined changes in building use and evaluated the compatibility of newly introduced functions with heritage values and district activities. Third, spatial experience potential analysis interpreted how spatial configurations, circulation sequences, spatial openness, and spatial relationships created conditions that enabled particular forms of interaction, engagement, and experiential opportunities.

In this study, spatial experience potential was not measured directly through user perception but was interpreted through spatial characteristics that enable particular experiential conditions. This approach aligns with architectural and environmental design studies that position spatial experience as an outcome of spatial quality and the relationships among spatial elements, which can be examined through spatial configuration and environmental structure itself (Preiser & Vischer, 2005).

To ensure analytical transparency, findings were organized into a cross-case analytical matrix containing design intervention characteristics, functional transformation patterns, spatial configuration attributes, and spatial experience potential for each case building. The matrix served as the basis for identifying recurring patterns, similarities, and differences across cases.

The final stage involved synthesizing empirical findings into a conceptual understanding of how adaptive reuse contributes to district identity formation through design interventions and the potential for spatial experience. This synthesis was guided by the principles of exploration, definition, development, and delivery associated with the Double Diamond Design Process (British Design Council, 2005), which functioned as a conceptual framework for organizing and interpreting the findings rather than as a procedural design method.

Throughout the research process, the researcher served as the primary instrument for data collection, interpretation, and synthesis. All procedures were systematically documented to ensure transparency, traceability, and auditability. Accordingly, this methodological approach was designed not only to identify the physical and functional transformations of heritage buildings but also to interpret how design interventions shape spatial character, generate potential for spatial experience, and contribute to the formation of district identity within multicultural heritage districts.

4. RESULTS AND DISCUSSION

4.1. *Design Intervention and Spatial Transformation in Adaptive Reuse Heritage Buildings*

The findings indicated that adaptive reuse of heritage buildings in Surabaya's Old Town serves not only as a conservation strategy but also as a design-driven process that transforms existing structures through strategic spatial interventions. In architectural discourse, adaptive reuse is understood as integrating new functions into existing structures while preserving their historical significance through selective modifications to spatial layouts, architectural elements, and building systems (Douglas, 2006; Plevoets & van Cleempoel, 2019). Based on field observations, such transformations were not always expressed through significant formal alterations, but rather through the reconfiguration of spatial organization, the adjustment of circulation systems, and the redefinition of relationships between existing and newly introduced elements. In this context, design served as the primary mechanism for bridging continuity of heritage and contemporary functional demands at the spatial level.

- 1) Hotel Horizon Arcadia Heritage Rajawali (European Zone)

At Hotel Horizon Arcadia Heritage Rajawali (**Figure 1**), the design approach was conservative, emphasizing the preservation of colonial architectural elements as the building's primary identity. This is evident in the façade, which retains its symmetrical composition, vertical proportions of openings, and original classical ornamental details. Design interventions were primarily limited to interior modifications through the integration of contemporary hospitality functions, including service facilities, social spaces, and spatial connectivity to an additional building, without altering the original structural system.

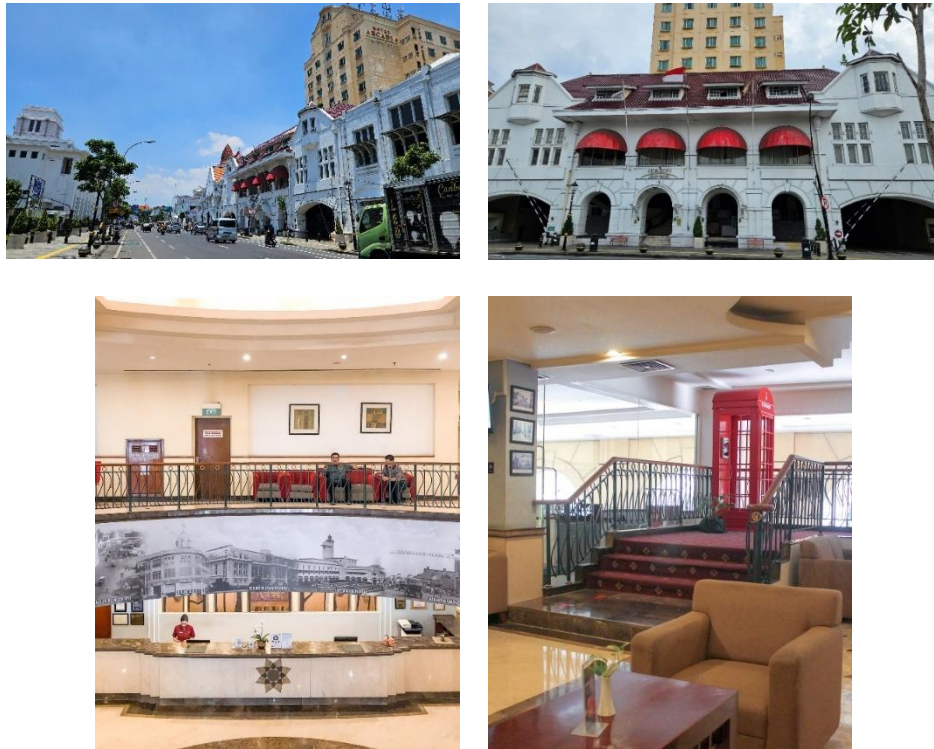


Figure 1. Façade, Lobby, and Spatial Distribution of Hotel Horizon Arcadia Heritage Rajawali

Spatially, the building exhibited a clearly structured hierarchy between reception areas, social spaces, service zones, and private accommodation areas. Based on field observations, access began at the preserved heritage gateway, which served as a visual transitional element, followed by the drop-off area, the main lobby, the reception desk, and circulation to multiple functional zones. The lobby functioned as the primary distribution node connecting social, service, and accommodation areas, including newly developed facilities that supported contemporary hotel operations while maintaining the representational role of the original heritage structure. This relationship demonstrates that adaptive reuse does not merely preserve physical form but reorganizes function through spatial connectivity while maintaining architectural identity.

In terms of spatial configuration indicators, the building demonstrated clearly defined physical boundaries between public, semi-public, and private zones. Spatial openness was relatively controlled, reinforcing a formal atmosphere and structured movement patterns throughout the building.

2) Rumah Abu Han (Chinese Zone)

At Rumah Abu Han (**Figure 2**), the design approach was adaptive, preserving traditional architectural elements as the building's primary structural identity. Design interventions were implemented through functional adjustments to support contemporary cultural and social activities without diminishing the building's original spatial character. Exposed

timber structures, traditional decorative elements, and visual continuity between spaces were retained as integral components of the building's cultural identity.



Figure 2. Transitional Spatial Sequence and Communal Spaces in Rumah Abu Han

Spatially, the building demonstrated a transitional-sequential organization, in which the potential for spatial experience emerged through a gradual progression from public areas toward the main communal space. Based on field observations, access began at the entrance gate, followed by the front terrace, the main entrance, transitional spaces, gathering areas, and finally the main prayer space, which remained visually open, with no dominant physical partitions. Spatial separation was not defined by rigid walls but by changes in visual openness, spatial rhythm, and functional transitions between zones. In this context, transitional spaces functioned not only as circulation areas but also as mechanisms for social and spatial orientation before entering the main communal space. The circulation pattern was progressive, with a high potential for social interaction within shared spaces. These findings indicate that design intervention was not oriented toward formal transformation, but toward preserving social flexibility and cultural continuity within a historically legible spatial structure. The building exhibited permeable spatial boundaries and a high degree of spatial openness, allowing visual continuity across communal spaces and facilitating social interaction.

3) Hotel Kemajuan (Arab Zone)

At Hotel Kemajuan (**Figure 3**), the design approach was pragmatic, focusing on functional continuity through minimal intervention. Design changes were primarily implemented through interior facility upgrades and operational support elements, without significant modifications to the building's original structural system. This approach suggests that design transformation was oriented more toward functional adaptation than toward spatial reconstruction.





Figure 3. Spatial Connectivity between Hotel Kemajuan and the Ampel District

Spatially, the building exhibited a layered linear configuration that developed vertically. Based on field observations, access began from the main street toward the lobby, followed by a central staircase functioning as the primary vertical circulation route to the upper floor. On the second floor, spaces were arranged along a corridor, with guest rooms on both sides. In addition, circulation extended toward a rear building that functioned as an additional accommodation area. This structure indicates that circulation did not terminate within a single building mass but extended into a broader spatial system. Connectivity with the Ampel district further reinforced the building's spatial character, particularly through the intensity of pedestrian movement, commercial activity, and visitor mobility within the surrounding urban environment. These conditions suggest that the building's internal spatial rhythm developed contextually in response to the dynamics of the surrounding urban-religious district.

Spatial boundaries were relatively flexible due to the strong connection between internal spaces and surrounding district activities. The high level of contextual openness contributed to continuous interaction between the building and its urban environment.

4) Rumah H.O.S. Tjokroaminoto (Malay Zone)

At Rumah H.O.S. Tjokroaminoto (**Figure 4**), the design approach focused on preserving the original domestic spatial arrangement through minimal interpretative interventions. The original spatial structure was retained, while additional elements such as displays, artifacts, and historical information panels were selectively introduced to support its new interpretative function.





Figure 4. Spatial Sequence and Interpretative Elements in Rumah H.O.S. Tjokroaminoto

Spatially, the building demonstrated a linear-sequential organization that enabled gradual spatial legibility. Based on field observations, access began from the entrance gate, followed by the front terrace, the main entrance, and the primary interior space, which distributed movement toward the guest reception area and historical information spaces. Movement then continued toward the central space, additional exhibition areas, private rooms, and the rear area connected to an upper-floor staircase. This spatial structure demonstrated a clear sequence without significant branching, ensuring clarity of orientation while allowing historical narratives to be experienced progressively through spatial movement. Although spatial boundaries remained relatively defined, controlled spatial openness supported gradual interpretation and narrative progression throughout the visitor journey.

The comparative analysis presented in **Figure 5** was derived from the four operational indicators of spatial configuration analysis: access, boundary, circulation sequence, and spatial openness. These indicators were systematically applied to each case study to identify similarities and differences in spatial organization, circulation structure, levels of enclosure and permeability, and overall spatial character.

Case Study Building	Hotel Horizon Arcadia Heritage Rajawali	Rumah Abu Han	Hotel Kemajuan	Rumah H.O.S. Tjokroaminoto
Spatial Configuration (From the point of entry)	<pre> graph TD Street --> OldGate[Old Gate] OldGate --> DropOff[Drop-off Area] DropOff --> Lobby Lobby --> Connection[Connection to New Building] Lobby --> Reception Lobby --> Lounge[Lounge / Cafe / Bar] Connection --> Rooms[Rooms (New Building)] Reception --> Rooms Lounge --> Rooms </pre>	<pre> graph TD Street --> Gate Gate --> Terrace Terrace --> Entrance Entrance --> TransitionSpace[Transition Space] TransitionSpace --> GatheringSpace[Gathering Space (Community Area)] GatheringSpace --> PrayerHall[Prayer Hall] Terrace -.-> Entrance Entrance -.-> TransitionSpace </pre>	<pre> graph TD Street --> Lobby Lobby --> CentralStairs[Central Stairs] CentralStairs --> 2ndFloor[2nd Floor Corridor] 2ndFloor --> Rooms Rooms --> RearBuilding[Rear Building (Additional Functions)] Lobby -.-> CentralStairs CentralStairs -.-> 2ndFloor </pre>	<pre> graph TD Street --> Gate Gate --> Terrace Terrace --> Entrance Entrance --> HistoricalRoom[Historical Room (Exhibition)] HistoricalRoom --> MiddleArea[Middle Area] MiddleArea --> BackArea[Back Area] BackArea --> UpperFloor[Upper Floor] Terrace -.-> Entrance Entrance -.-> HistoricalRoom </pre>
Circulation Pattern	Sequential (Linear)	Progressive (Gradual)	Vertical-Contextual (Layered)	Narrative-Sequential
Spatial Character	Formal, controlled, exclusive	Flexible, Communal, interactive	Permeable, contextual, integrated	Reflective, interpretative, educational
Boundary	Strong	Permeable	Flexible	Controlled
Spatial Openness	Moderate	High	High	Moderate
Legend (Diagram):				
→ Primary Circulation (Physical Movement) - - - - - Secondary Circulation/ Visual Connection				
Hospitality/ Service Function Community/ Social Function Visual/ Circulation Hub Heritage/ Interpretative Function				
Note:				

Diagrams illustrate the spatial organization from the point of entry (street level) and highlight the main circulation flow and key spatial nodes in each case building.

Figure 5. Comparative Analysis of Spatial Configuration, Circulation Patterns, and Spatial Character of Four Case Study Buildings

As illustrated in **Figure 5**, the comparative analysis reveals that the four case study buildings represent different spectra of design intervention within adaptive reuse practice. This spectrum ranges from highly conservative approaches with strong preservation intensity to more adaptive approaches characterized by greater spatial flexibility.

These differences are reflected in several key aspects, including the degree of spatial reconfiguration, circulation patterns (linear-hierarchical, progressive-sequential, vertical-contextual, and narrative-sequential), spatial hierarchy (from structured to fluid), and the level of connectivity with external urban environments. Hotel Horizon, Arcadia Heritage, and Rajawali demonstrated the most controlled and formal spatial configuration. Rumah Abu Han exhibited spatial flexibility through transitional communal sequences. Hotel Kemajuan demonstrated strong contextual integration with its surrounding district, while Rumah H.O.S. Tjokroaminoto maintained a sequential structure that supported spatial narrative legibility.

Within the context of adaptive reuse, functional transformation affected not only the use of space but also spatial orientation, inter-spatial relationships, and patterns of spatial connectivity as part of adaptation to new functional demands (Douglas, 2006; Plevoets & van Cleempoel, 2019). These findings indicate that design interventions in heritage buildings do not operate through a single universal model, but evolve contextually based on historical character, new functional requirements, and the building's relationship with its surrounding environment.

The variation in spatial character further suggests that each design intervention strategy generates distinct potential for spatial experience, which subsequently contributes to district identity formation. Therefore, the success of adaptive reuse is determined not solely by the ability to preserve physical structures, but by the capacity of design to transform existing structures into spatial systems that remain historically legible while responding to contemporary needs.

4.2. Spatial Experience Potential as a Mediator between Design and Identity

Spatial experience potential was understood as the experiential capacity emerging from spatial configuration, material qualities, atmosphere, and environmental context. Consistent with phenomenological, sense-of-place, and tourism experience perspectives, spatial meaning develops through sensory engagement, movement, contextual interpretation, memory, emotional attachment, and interactions with the built environment, all of which influence place perception and destination image (Pallasmaa, 2012; Tuan, 1977; Relph, 1976; Richards, 2011; Styliadis, 2018). Accordingly, spatial experience potential was interpreted as experiential opportunities embedded within spatial structures rather than as direct user responses.

Based on field observations and comparative analysis across the four case study buildings, spatial experience potential varied along an experiential spectrum. This spectrum emerged from differences in spatial character, levels of openness, movement rhythm, orientation systems, and the relationship between internal spaces and external contexts. Accordingly, spatial experience potential was not interpreted merely as a subjective user response, but as spatial potential generated through different spatial configurations.

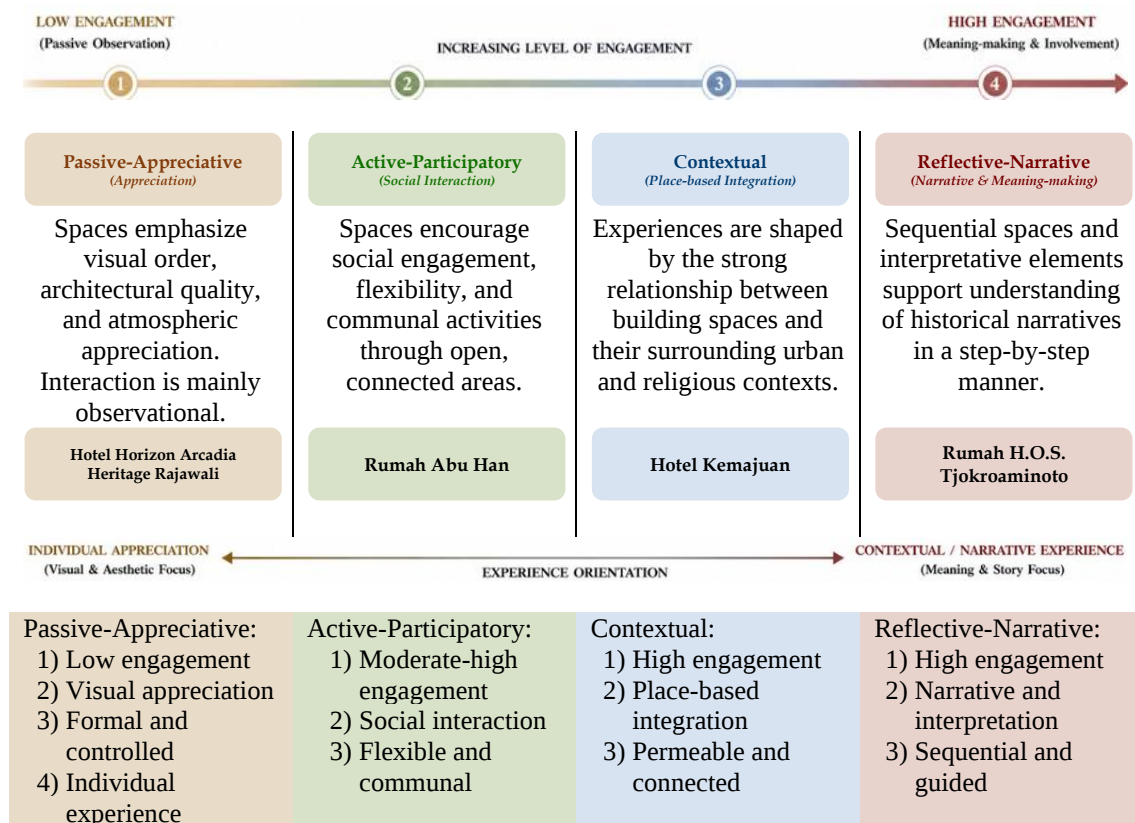
At Hotel Horizon Arcadia Heritage Rajawali, the structured and controlled spatial configuration, with the lobby functioning as the primary distribution node between representational areas, social spaces, and accommodation zones, generated a predominantly passive-appreciative spatial experience potential. The hierarchical spatial structure, strong visual orientation, and clear functional separation created conditions that supported visual observation more than intensive social interaction. Consistent spatial proportions, natural lighting, and the orderly arrangement of visual elements reinforced a stable and formal spatial atmosphere, resulting in an experience oriented toward architectural appreciation and historical ambiance.

In contrast, Rumah Abu Han demonstrated an active-participatory spatial experience potential, generated through its transitional-sequential spatial configuration and visual connectivity between communal spaces. The sequence of spaces, moving gradually from public areas toward gathering spaces and the main prayer area, created a progressive process of spatial orientation. The absence of rigid visual boundaries, gradual spatial transitions, and flexible spatial use enabled multiple forms of interaction to occur simultaneously. These conditions suggest that spatial experience potential was shaped not only by physical openness but also by spatial structures that encouraged social engagement and collective activities over time.

At Hotel Kemajuan, spatial experience potential demonstrated a contextual character, shaped by the strong relationship between the building and the surrounding district dynamics. The close interaction among internal spaces, pedestrian activities, commercial exchanges, and visitor mobility within the Ampel district suggests that the potential for spatial experience was influenced not only by the building's internal structure but also by the broader urban spatial system. In this context, the building functioned as part of an urban network, allowing potential for spatial experience to emerge through integration with the social and religious activities occurring in the surrounding environment.

Meanwhile, Rumah H.O.S. Tjokroaminoto generated a potential for reflective-narrative spatial experience through its sequential spatial organization. The ordered progression of spaces, consistency of movement paths, and the placement of interpretative elements allowed the building to construct a more guided experiential rhythm. Under these conditions, visitors did not merely move physically from one space to another, but also experienced a gradual process of historical interpretation. This structure demonstrates that spatial experience potential can serve as a medium for constructing historical meaning through spatial legibility.

To facilitate comparative interpretation, variations in spatial experience potential were mapped into a typological model, as illustrated in **Figure 6**



	4) Collective experience	4) Contextual experience	4) Meaning-making experience
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Description:

This spectrum illustrates the continuum of potential spatial experience identified across the four case study buildings, from passive appreciation to reflective narrative engagement.

Figure 6. Spatial Experience Potential Spectrum Based on Level of Engagement and Experience Orientation

Based on the synthesis of empirical findings, the identified spatial experience potential can be classified into four major typologies: passive-appreciative, active-participatory, contextual, and reflective-narrative. These typologies were mapped based on two primary dimensions: the level of spatial engagement (passive-active) and experience orientation (individual-contextual/narrative).

Within this framework, Hotel Horizon Arcadia Heritage Rajawali was positioned within the passive-appreciative category, characterized by individual orientation and relatively low engagement. Rumah Abu Han represented the active-participatory typology, characterized by strong social orientation and high engagement. Hotel Kemajuan represented the contextual typology, where spatial experience potential emerged through integration with the broader district spatial system. Meanwhile, Rumah H.O.S. Tjokroaminoto represented the reflective-narrative typology, where experience was shaped through sequential movement and interpretative legibility.

These typologies indicate that spatial experience potential does not emerge universally but develops in context, depending on spatial configuration, movement rhythm, and the building's relationship with its surroundings. In this sense, spatial experience potentially functions as an interpretative mechanism that translates spatial quality into systems of meaning that contribute to the formation of district identity. Furthermore, spatial experience potential plays a critical role in shaping place perception through the spatial character produced by design interventions. Organized spatial structures tend to generate perceptions of order and stability, while transitional and flexible spaces increase opportunities for social engagement. Spatial connectivity with the surrounding environment strengthens contextual perception, whereas sequential spatial organization supports the formation of narrative meaning. Previous studies have shown that meaningful spatial experiences contribute significantly to place image formation and attachment to destinations (Stylidis, 2018).

Accordingly, within the context of adaptive reuse, spatial experience potential should be understood not merely as an outcome of design intervention but as a mediating mechanism that connects spatial transformation to district identity formation in the context of place branding.

4.3. Adaptive Reuse and District Identity Formation

The findings indicated that adaptive reuse of heritage buildings in Surabaya's Old Town served not only as a strategy for physical conservation but also contributed to district identity formation through design interventions and spatial transformations. In this context, the transformation of building functions not only led to operational adaptation but also generated a spatial character that influenced how the district was perceived, interpreted, and collectively understood.

In contemporary place branding discourse, place identity is no longer understood solely as the result of symbols, slogans, or visual representations, but as a socially and spatially constructed phenomenon that evolves through experiences and interactions enabled by the built environment (Kavaratzis & Ashworth, 2005; Govers & Go, 2016). This perspective emphasizes that district identity emerges through the relationship between spatial structures, facilitated activities, and systems of meaning that develop within the contextual setting of place.

Based on the empirical analysis, design interventions in heritage buildings demonstrated that the spatial character generated through adaptive reuse contributed directly to the formation of the district image. Variations in spatial configuration, connectivity patterns, and levels of

integration with the surrounding environment produced distinct place characteristics for each case study building. Collectively, these spatial qualities reinforced the Old Town of Surabaya's differentiation as a multicultural heritage district.

Furthermore, the findings suggest that district identity was not formed through a uniform visual language but through the accumulation of diverse spatial experiences generated by different adaptive reuse strategies. Each building contributed a unique spatial narrative based on its architectural character, functional transformation, and relationship with the surrounding urban context. As a result, district identity emerged not as a singular or homogeneous representation, but as a layered and plural system of meanings shaped through collective spatial experiences.

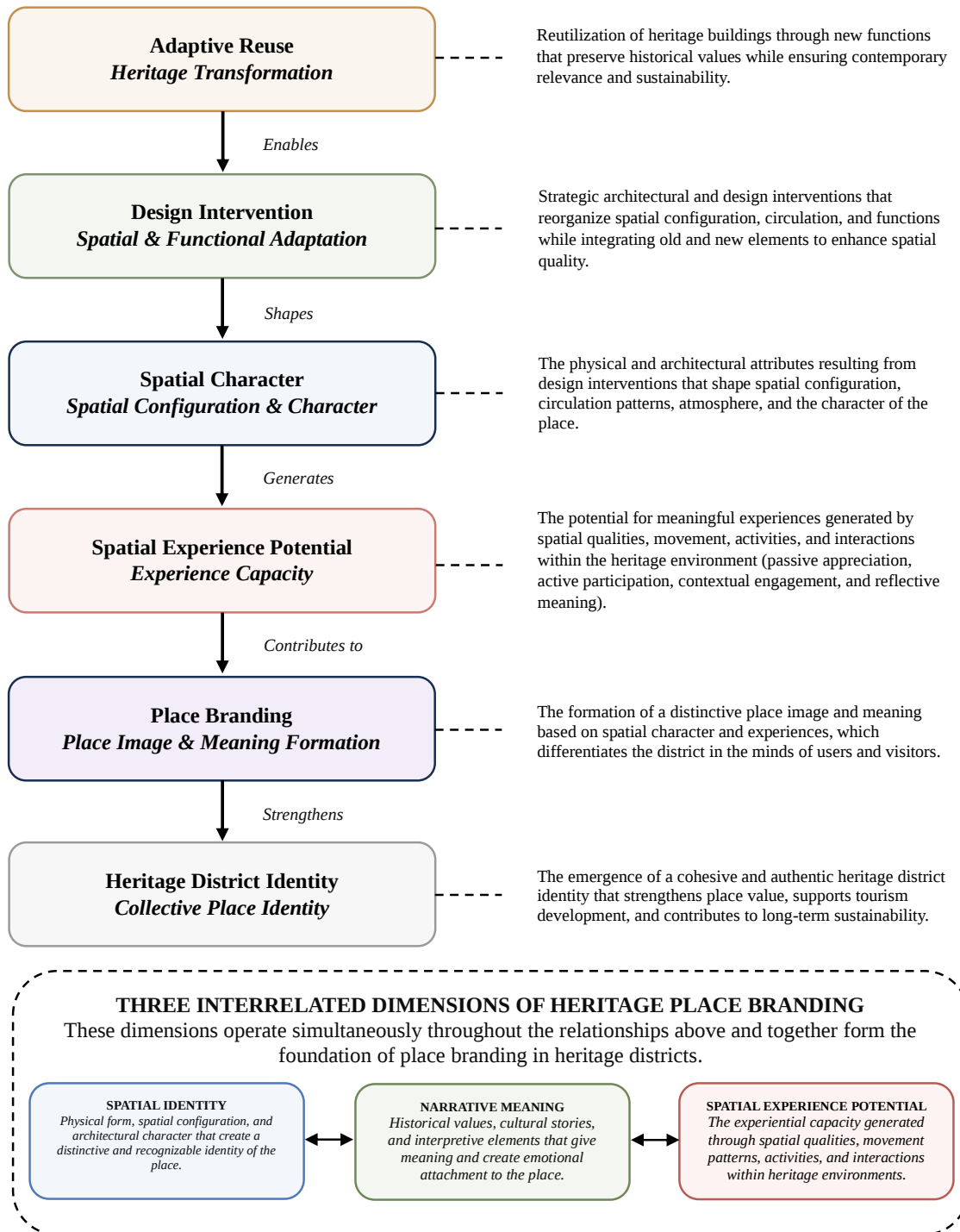
These findings extend understanding of adaptive reuse beyond physical preservation, demonstrating its role as a design-driven mechanism for shaping district identity. In this context, design intervention served not only to preserve historical structures but also to construct spatial qualities, experiential meanings, and contextual relationships that collectively contributed to place-branding processes, thereby reinforcing the formation of district identity.

4.4. Design-Driven Place Branding Model Development

The analysis of the four case study buildings demonstrates that each contributed differently to the place-branding processes shaping the heritage district's identity, depending on the spatial character generated by the design intervention. Differences in spatial configuration, circulation patterns, levels of openness, and relationships with the surrounding environment produced diverse place characteristics that collectively enriched the district's identity.

Hotel Horizon Arcadia Heritage Rajawali, Rumah Abu Han, Hotel Kemajuan, and Rumah H.O.S. Tjokroaminoto each contributed distinct spatial qualities that collectively shaped the identity of Surabaya's Old Town. Hotel Horizon Arcadia Heritage Rajawali projected a formal, controlled district image through its hierarchical spatial structure, clear functional differentiation, and strong architectural legibility, reinforcing perceptions of exclusivity, order, and historical continuity. In contrast, Rumah Abu Han contributed a participatory and culturally vibrant district image through its transitional-sequential spatial organization, communal spaces, and high level of social interaction, strengthening the perception of the district as a living heritage environment. Hotel Kemajuan contributed a contextual district image through its strong integration with surrounding pedestrian, commercial, and religious activities, in which spatial character emerged not only from its internal configuration but also from continuous interaction with the broader urban environment. Meanwhile, Rumah H.O.S. Tjokroaminoto contributed a reflective and educational district image through its sequential spatial organization and interpretative elements, enabling the gradual communication of historical meaning. Together, these findings demonstrate that different forms of adaptive reuse generate distinct spatial experience potentials that collectively contribute to place branding and district identity formation within multicultural heritage districts.

To facilitate the interpretation of the relationships among the findings, the conceptual synthesis of this study is illustrated in **Figure 7**. The four typologies of spatial experience potential identified in **Figure 6**: passive-appreciative, active-participatory, contextual, and reflective-narrative, represent distinct experiential outcomes generated through different spatial configurations and design intervention strategies. Collectively, these typologies provide the experiential foundation through which spatial qualities contribute to place branding and the formation of district identity. Building upon this empirical interpretation, the typologies were synthesized into the broader conceptual model presented in **Figure 7**.

**Note:**

The arrows indicate causal-conceptual relationships, not a sequence of steps. Each construct influences the next by shaping conditions and outcomes within the heritage district context.

Figure 7. Empirically Derived Design-Driven Place Branding Model Linking Adaptive Reuse, Spatial Experience Potential, and District Identity Formation

Based on the empirical synthesis, place branding in heritage districts can be understood as a strategic process that contributes to the formation of district identity through three interrelated dimensions: spatial identity, narrative meaning, and spatial experience potential.

1) Spatial Identity

Spatial identity is formed through architectural character, spatial configuration, functional hierarchy, and circulation patterns generated by design interventions. This dimension determines the district's visual legibility and physical structure, which serve as the foundation of initial place perception.

2) Narrative Meaning

Narrative meaning emerges through spatial sequencing, interpretative elements, and relationships with historical and cultural contexts. This dimension allows buildings not only to function operationally but also to communicate meanings that reinforce district identity.

3) Spatial Experience Potential

Spatial experience potential is shaped by interaction potentials enabled by spatial configuration, including levels of spatial openness, movement patterns, and relationships with the surrounding environment. In this study, experience was understood as spatial potential interpreted through spatial structures rather than through direct user perception.

These three dimensions form an interconnected system in which physical structures, systems of meaning, and experiential qualities operate simultaneously in shaping district identity. Together, these dimensions explain how adaptive reuse contributes to district identity formation through the interaction of physical form, cultural meaning, and experiential potential.

The findings of this study contribute conceptually by formulating a design-driven place branding model that positions design as the primary driver of heritage district identity formation. This model demonstrates that place branding is not necessarily constructed solely through external communication strategies, but may also emerge from the spatial qualities generated by design interventions. This perspective extends the understanding of place branding from a representational approach toward a spatial and experiential approach (Kavaratzis & Ashworth, 2005; Govers & Go, 2016).

Within the proposed conceptual model, design serves as a transformative medium by organizing spatial configuration, functional hierarchy, and contextual relationships that translate historical values into contemporary spatial structures. Through this mechanism, design produces spatial systems that enable the formation of experience and meaning associated with place. Accordingly, district identity develops not through visual homogenization, but through the accumulation of diverse spatial experiences that collectively generate a plural yet cohesive identity system.

Unlike previous studies that primarily examine adaptive reuse from conservation or functional perspectives, the proposed model conceptualizes adaptive reuse as a spatial mechanism through which design intervention generates spatial experience potential that subsequently contributes to place branding and district identity formation.

4.5. Conceptual and Strategic/Implications

Conceptually, this study extends the understanding of place branding by demonstrating that district identity is shaped not only by visual communication and marketing strategies but also by the spatial qualities generated by design interventions. The findings support a shift from a predominantly representational perspective on place branding toward a spatial and experiential perspective, in which identity emerges through the interaction among spatial structures, narrative meanings, and spatial experiential potential. In doing so, this study contributes to the growing discourse on heritage place branding by positioning adaptive reuse as a design-driven process linking spatial transformation to district identity formation.

The study further contributes to the literature by introducing spatial experience potential as a mediating construct between design intervention and place perception. Rather than viewing experience solely as a post-occupancy or user-based outcome, the findings suggest that experiential qualities can be understood as potentials embedded within spatial configurations, circulation systems, levels of openness, and contextual relationships. This perspective expands

existing adaptive reuse research beyond conservation and functional adaptation toward a more experiential and identity-oriented understanding of heritage transformation.

From a strategic perspective, the findings indicate that adaptive reuse planning should integrate conservation objectives with experiential and contextual considerations. Heritage district development should therefore move beyond preserving physical fabric alone and consider how design interventions influence movement patterns, spatial legibility, social interaction, and meaning-making processes. In this regard, the quality of design intervention directly affects not only the sustainability of heritage buildings but also the capacity of heritage districts to generate authentic, meaningful, and competitive visitor experiences.

Accordingly, the long-term sustainability of heritage districts depends not only on the preservation of historic structures but also on their ability to produce relevant spatial experiences and cultural meanings continuously. Design should therefore be regarded not merely as a conservation tool, but as a strategic mechanism for maintaining district identity, strengthening place value, and supporting heritage tourism development within evolving urban contexts.

5. CONCLUSION

This study demonstrated that adaptive reuse in heritage buildings within the Old Town of Surabaya served not only as a strategy for physical conservation but also as a spatial mechanism that shaped spatial character, generated potential for spatial experience, and contributed to district identity formation. Through comparative analysis of four heritage buildings representing different cultural zones, the findings revealed that design interventions influenced spatial configuration, circulation systems, functional relationships, and contextual integration, collectively generating diverse potential spatial experiences across heritage contexts. The findings further indicated that spatial experience may have served as a critical mediating mechanism linking spatial transformation and place perception. Furthermore, the study confirmed that place branding in heritage districts was not constructed solely through visual representation or promotional strategies, but emerged from the interaction among spatial identity, narrative meaning, and the spatial experience potential generated by design.

This study developed a design-driven place branding model that positions adaptive reuse as a spatial mechanism linking design intervention, spatial experience potential, place branding, and district identity formation in multicultural heritage districts. The proposed model contributes to the adaptive reuse, heritage studies, and place branding literature by integrating spatial transformation, experiential potential, and identity formation within a single conceptual framework. In doing so, the study advances the understanding of adaptive reuse beyond physical conservation and functional adaptation toward a broader interpretation of its role in shaping place meaning and district identity.

This study is limited by its reliance on spatial interpretation rather than direct visitor perception data and by its focus on four case studies within a single heritage district. Consequently, the findings should be understood as context-specific and exploratory. Future research is therefore recommended to expand and validate the proposed framework through post-occupancy evaluation, visitor perception studies, and longitudinal comparative research across different heritage districts to examine further the experiential, social, and cultural dimensions of adaptive reuse in diverse urban contexts. Beyond its theoretical contribution, the proposed framework may assist planners, designers, and heritage managers in developing adaptive reuse strategies that strengthen district identity while maintaining cultural continuity and long-term sustainability.

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