Research Article

Assessing the Quality of Third Places in Nakhon Ratchasima Old Town Through the Analytical Hierarchy Process (AHP)

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Abstract

Third Places foster informal social interaction beyond home and work. Spatial and design features greatly influence how these places function and are perceived. Many characteristics of these places are linked to public spaces; however, simply having numerous public areas does not guarantee that third places meet residents' needs. Nakhon Ratchasima Old Town demonstrates this issue. Many public areas look attractive but are socially disconnected and underused. This study employs the Analytical Hierarchy Process (AHP) to assess the Old Town's Third Places based on eight key factors. Results show that safety, efficiency, and accessibility are the top priorities. Still, the rankings differ among professionals, suggesting that practical improvements should address the diverse needs and traits of residents, rather than focusing solely on aesthetic upgrades. By integrating expert judgment with a systematic evaluation, the research provides evidence-based guidance for identifying, ranking, and implementing initiatives that improve social functionality, increase community engagement, and preserve the livability of the historic town center. The findings emphasize that successful revitalization depends on social value driving design decisions, ensuring public spaces serve as proper third places rather than mere visual features.

Keywords: Third Places Evaluation; Analytical Hierarchy Process; Safe Places; Priority Dynamics

1. Introduction

The vitality and livability of a city often hinge on the quality of its everyday gathering places, commonly referred to as the Third Place (Hussein, 2018). Initially described by Oldenburg in 1989 as spaces distinct from both home (the first place) and work (the second place), these informal venues have become widely recognized as essential for promoting social interaction, fostering a sense of belonging, and enhancing community well-being (Cabras & Mount, 2017). Therefore, a good Third Place is a neutral, inclusive, and easily accessible environment that welcomes regular visitors, encourages lively conversation and playful joy, keeps a simple low-key appearance, and provides a warm, home-like atmosphere (Oldenburg, 1999). When these places function effectively, Third Places can transform urban environments into lively, inclusive spaces that enrich daily life by encouraging connections among diverse social groups (Boussaa & Madandola, 2024; Hussein, 2018; Joshi & Nagarsheth, 2024; Joshi U. V.& Nagarsheth, 2024). By promoting inclusivity, diversity, and informal social networks, Third Places serve as the living heart of the city, complementing formal institutions and urban infrastructure (Dudek, 2019; Joshi & Nagarsheth, 2024).

Third Places also play a vital role in preserving identity, fostering intergenerational bonds, supporting daily routines, and making neighborhood livelier. However, many parts of Nakhon Ratchasima Old Town—especially public parks and urban open spaces—remain unused, empty, isolated, and neglected, which reduces their potential as the Third Place. Infrastructure investment, despite being important, cannot alone create lively social environments if the cultural, social, and functional aspects of public life are neglected (Pettersen et al., 2024). Like other studies, many renovated spaces remain underused when they do not provide more personalization, permeability, comfort and flexibility (Mehta & Bosson, 2010). Residents often struggle to find spaces that meet their needs or foster a sense of belonging (Zarie et al., 2024).

For years, the Nakhon Ratchasima Municipality has been working on these challenges by improving urban public spaces to attract more visitors. However, these efforts often focus more on aesthetics and tourism than on encouraging everyday social interactions. As a result, these renovated places often fail to connect with people. This raises a critical question: Which specific factors drive the quality and effective revitalization of Third Places in Nakhon Ratchasima? This gap emphasizes the need for a systematic method to assess third places based on various factors affecting the quality of third places (Dudek, 2019; Hussein, 2018; Mehta & Bosson, 2010; Nasehi et al., 2023; Oppio et al., 2022; Zhang et al., 2022).

Designing or improving third places involves creating inviting spaces that encourage social interaction and a sense of community amid a changing urban landscape (Joshi & Nagarsheth, 2024). Urban design elements are key factors in enhancing the quality of third places. By combining design principles with social goals, urban third places can address social challenges, boost well-being, and promote sustainable urban living (Banwell & Kingham, 2023; Mehta & Bosson, 2010). To effectively evaluate Third Places, it is crucial to identify the factors that influence their quality.

Although researchers have widely applied multi-criteria decision-making (MCDA) to evaluate urban public spaces, its use in assessing the quality of third places remains limited. Various Multi-Criteria Decision-Making (MCDM) methods are available, each serving distinct analytical purposes. Simple Additive Weighting (SAW) and Weighted Linear Combination (WLC) are widely used for suitability analysis due to their computational simplicity, calculating overall utility by summing weighted scores. TOPSIS (Technique for Order of Preference by Similarity to Ideal Solution) is valuable for ranking alternatives based on their geometric distance to positive and negative ideal solutions. Meanwhile, Ordered Weighted Averaging (OWA) offers flexibility by allowing decision-makers to control the trade-off between criteria, accommodating varying degrees of risk and optimism (Malczewski & Rinner, 2015; Saravisutra, 2016). Addressing the gap in Third Place assessment can offer a more organized and comparative view of the factors that shape these socially important environments. To address this gap, this paper examines the factors influencing the quality of third places in Nakhon Ratchasima Old Town, Thailand, using the Analytic Hierarchy Process (AHP). This method provides a straightforward framework for comparing and evaluating third places, allowing the identification of key factors that impact their quality through a systematic assessment (Saaty & Vargas, 2012). In contrast to descriptive approaches, AHP transparently ranks priorities in complex urban settings. By systematically analyzing and judging, this research aims to offer data-informed recommendations for policymakers and planners to

prioritize interventions, enhance the social and functional aspects of third places, and increase urban vitality, inclusiveness, and livability in historic city centers.

2. Literature review

Third places—first introduced by Oldenburg (1989)—are gathering spots valued for their welcoming atmosphere, flexibility, and ability to host various activities (Marinos et al., 2025). Third places are essential for people. They support regular, voluntary, and meaningful social encounters, making them essential for urban vitality and community feeling (Zarie et al., 2024). People and places are key elements of the Third Place that promoting social sustainability and fostering community interaction, highlighting the importance of high-quality public spaces (Goosen & Cilliers, 2020; Sheikhbaglou & Xi, 2021). Such spaces are vital for sustainable urban development since they enable diverse social activities, strengthen community ties, and cultivate a sense of belonging beyond home and work (Nasehi et al., 2023).

The quality of Third Places directly influences the quality of socialization, which is shaped by urban design elements and essentially, a human-centric approach plays a crucial role in urban design practices (Joshi U. V. & Nagarsheth, 2024; Sheikhbaglou & Xi, 2021). Thoughtful urban design directly influences how these spaces function, helping to strengthen community bonds and foster a unified urban environment (Banwell & Kingham, 2023; Bosman & Dolley, 2019; Sheikhbaglou & Xi, 2021). Factors influencing the quality of places were synthesized into 8 factors: Accessibility, Safety, Inclusivity, Diversity, Comfort, Flexibility, Aesthetics, and Efficiency.

2.1 Third Places quality and factors

Creating vibrant and inclusive third places from an urban design perspective involves considering physical, functional, and social factors that enhance social interaction and community engagement, ultimately shaping the desirability and effectiveness of these spaces (Joshi & Nagarsheth, 2024; Mehta & Bosson, 2010; Sheikhbaglou & Xi, 2021). Assessing the place quality is essential for understanding and improving third place. The eight factors below are key influences on the quality of Third Places (Table 1).

Table 1 Factors and criteria that influence the quality of the Third Places

Factors	Criteria	Sources
Accessibility	• Sidewalk continuity and quality • Public transportation coverage • Universal design for accessibility	(Bosman & Dolley, 2019; Cilliers, 2019; Dudek, 2019; Goosen & Cilliers, 2018; Sheikhbaglou & Xi, 2021; Yuen & Johnson, 2017; Zarie et al., 2024).
Safety	• Lighting coverage and adequacy • Active and passive surveillance • Street safety infrastructure	(Bosman & Dolley, 2019; Cilliers, 2019; Dudek, 2019; Goosen & Cilliers, 2018; Sheikhbaglou & Xi, 2021)
Inclusivity	• Age-friendly and inclusive design • Accessibility for disabled people	(Bosman & Dolley, 2019; Yuen & Johnson, 2017; Zarie et al., 2024)
Diversity	• Activity diversity and temporal use • Spatial variety and functional zones	(Cilliers, 2019; Goosen & Cilliers, 2018; Joshi & Nagarsheth, 2024)
Comfort	• Microclimatic qualityacoustic comfort (noise levels) seating availability and variety shading coverage	(Dudek, 2019; Mehta & Bosson, 2010; Pettersen et al., 2024; Sheikhbaglou & Xi, 2021; Yuen & Johnson, 2017; Zarie et al., 2024).
Flexibility	• Furniture flexibility seasonal adaptability • Multipurpose use capacity	(Cilliers, 2019; Dudek, 2019; Goosen & Cilliers, 2018; Sheikhbaglou & Xi, 2021)
Aesthetic	• Artistic decoration • Sensory appeal & atmosphere	(Cilliers, 2019; Goosen & Cilliers, 2018; Rosenbaum, 2006; Sheikhbaglou & Xi, 2021)
Efficiency	• Cleanliness • Maintenance condition • Space utilization	(Cilliers, 2019; Dudek, 2019; Goosen & Cilliers, 2018; Pettersen et al., 2024; Sheikhbaglou & Xi, 2021; Zarie et al., 2024)

Accessibility is fundamental for inclusive and safe access to third places, covering both physical and social dimensions. Well-connected locations with pedestrian-friendly designs and proximity to neighborhood and public transport links enhance physical convenience (Bosman & Dolley, 2019; Cilliers, 2019; Goosen & Cilliers, 2018). Social accessibility requires creating judgment-free environments that welcome people of all abilities and backgrounds (Dudek, 2019; Sheikhbaglou & Xi, 2021; Yuen & Johnson, 2017; Zarie et al., 2024).

Safety—both perceived and actual—is vital for enhancing user comfort and confidence, particularly among vulnerable groups, ensuring users feel secure and welcome (Cilliers, 2019; Goosen & Cilliers, 2018; Sheikhbaglou & Xi, 2021). It includes physical measures such as proper lighting, hazard mitigation, and protection from the elements, especially passive surveillance like "eyes on the street" (a concept introduced by Jane Jacobs in 1961), along with psychological supports that reassure visitors (Bosman & Dolley, 2019; Dudek, 2019).

Inclusivity is essential for the success of the Third Places. It fosters openness to people of all ages, genders, ethnicities, and socio-economic backgrounds, encouraging social interaction and cohesion while balancing diversity with the comfort of regulars (Bosman & Dolley, 2019; Yuen & Johnson, 2017; Zarie et al., 2024). Inclusivity works best when balanced with the familiarity of regulars, which fosters a sense of community while keeping the space open to new users (Yuen & Johnson, 2017; Zarie et al., 2024).

Diversity attracts a wide range of users and supports varied experiences (Cilliers, 2019; Goosen & Cilliers, 2018; Joshi & Nagarsheth, 2024). This factor plays a significant role in shaping spatial preferences: older individuals may prefer calm, private, and stable environments, while younger groups often seek lively, technology-driven, and trend-focused settings (Joshi & Nagarsheth, 2024). Successful third places offer unique and engaging experiences that draw a broad demographic (Cilliers, 2019; Goosen & Cilliers, 2018).

Comfort is a key factor in how long people stay and how engaged they are in the Third Places. It includes comfortable seating, sufficient shelter, layouts that allow easy movement, and a socially friendly atmosphere (Dudek, 2019; Pettersen et al., 2024; Sheikhbaglou & Xi, 2021; Yuen & Johnson, 2017; Zarie et al., 2024). Shading elements—such as trees, awnings, and canopies—are especially important for maintaining thermal comfort and providing protection from direct sunlight. When seating, shelter, and spatial design are thoughtfully integrated, these spaces become more inviting, encouraging longer visits and more meaningful social interactions (Mehta & Bosson, 2010).

Flexibility allows third places to adapt to changing needs, supporting a variety of activities over time. This adaptability is possible through movable furniture, modular layouts, and temporary or experimental design solutions that can be reconfigured (Cilliers, 2019; Dudek, 2019; Goosen & Cilliers, 2018). Flexible spaces adapt to changing needs, support activity-based use, encourage social interaction, and create welcoming environments (Dudek, 2019; Sheikhbaglou & Xi, 2021).

Aesthetics enhance emotional connections and a sense of place by blending visual appeal with cultural meaning. Well-designed, culturally meaningful spaces foster pride, attachment, and a strong sense of community (Cilliers, 2019; Goosen & Cilliers, 2018; Rosenbaum, 2006; Sheikhbaglou & Xi, 2021). Beyond visual appeal, social imageability—the way social interactions shape meaning and identity—enhances the symbolic and experiential significance of third places (Rosenbaum, 2006).

Effective third place management ensures sustainability by maintaining cleanliness, good upkeep, and efficient use. These efforts preserve functionality, enhance appearance, and demonstrate responsible stewardship (Cilliers, 2019; Dudek, 2019; Pettersen et al., 2024; Zarie et al., 2024). Optimal space utilization with balanced layouts that support various activities without causing congestion or underuse further enhances user comfort and flexibility in these spaces (Goosen & Cilliers, 2018; Sheikhbaglou & Xi, 2021)

2.1 Third Places in Nakhon Ratchasima: contextual overview

Nakhon Ratchasima Old Town (Figure 1) is a historic area established in 1656 by French architects. Designed as a rectangular city, it measures approximately 1,000 by 1,700 meters and is surrounded by a wide moat 20 meters wide and 6 meters deep. The old walls featured 15 defensive forts and four city gates, though most have since deteriorated. Today, Nakhon Ratchasima Old Town retains its original layout, with the moat encircling the district and visible remnants of the city gates and walls after partial demolition. The city's streets are arranged

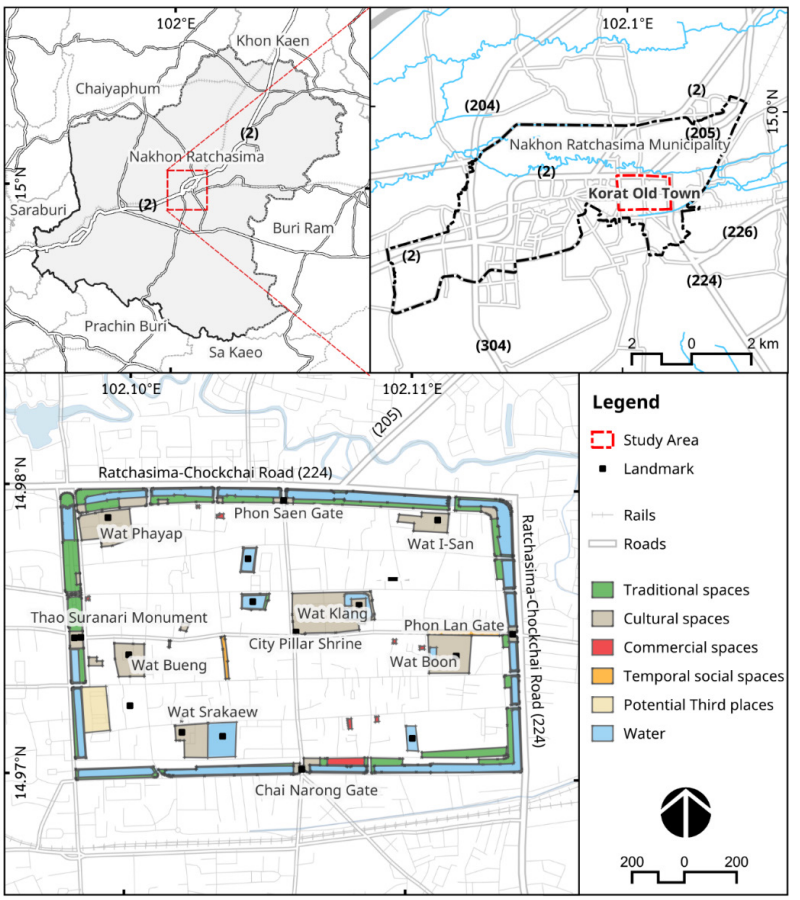

Figure 1. The study area: Nakhon Ratchasima (Korat) Old Town (Source: The Authors)

Figure 2. Third places in Nakhon Ratchasima Old Town (Source: The Authors)

in a grid, flanked by shophouses and homes, many of which are still occupied by residents. Enclosed by the remains of the city wall, the old town has preserved its essential urban features, reflecting the area's continuous use throughout its history.

Traditionally, third-places are associated with commercial venues such as cafes and bookstores (Mehta & Bosson, 2010). The concept has expanded to include a diverse array of physical and virtual settings and is essential for understanding how various environments support social interaction and community building (Nasehi et al., 2023). Therefore, this study categorized third-places in Nakhon Ratchasima Old Town into four groups, which are relevant and meaningful to the study area's context as they address the city's dynamics and social needs—traditional third places as public green spaces provide essential non-commercial accessibility, cultural sites prevent social isolation, commercial third places rely on food and drink to stimulate conversation, and temporal social spaces demonstrate the adaptability of the third-place concept to various contexts (Bosman & Dolley, 2019; Mehta & Bosson, 2010).

Traditional Third Places (Figure 2 (a)) —such as parks, plazas, and waterfront promenades serve as key sites for social interaction and community leisure. Phumirak Park and the Thao Suranari Monument offer a variety of activities including daily exercise, informal social interactions, and organized community events. These spaces, especially around the monument, promote inclusivity by supporting intergenerational use, hosting public festivals, and enabling civic gatherings that strengthen social bonds. Cultural And Creative Third Places (Figure 2 (b))—Temples such as Wat Klang, Wat Phayap, Wat Bueng, Wat Sakaew, Wat Isan, and Wat Boon not only serve as spiritual sanctuaries but also as gathering places for merit-making ceremonies and

annual festivals. Similarly, the municipal library and museum contribute to preserving heritage, fostering creative expression, and promoting public education through special events.

Commercial Third Places (Figure 2 (c)) —the old town's service economy has expanded a network of commercially focused third places. Cafés, restaurants, and co-working spaces are designed to support both leisure and work, catering to a diverse group of people, including students, freelancers, and entrepreneurs. These spaces often blend attractive design with useful amenities, promoting longer stays and a seamless mix of social and professional interactions.

Temporal Social Spaces (Figure 2 (d)) —urban infrastructure gains new social roles through temporal change. Streets that function for transportation during the day are transformed into pedestrian zones, walking streets, and night markets in the evening, like Night Wat Boon and Night Suanmak. These adaptive uses demonstrate the flexibility of urban space in responding to community rhythms and changing activity patterns.

3. Materials and methods

This study employed the AHP to prioritize revitalization strategies for Nakhon Ratchasima Old Town. The method was selected over other decision-making models for its ability to decompose complex urban issues into hierarchical layers, effectively quantifying subjective expert judgments regarding intangible design qualities. Crucially, its built-in consistency verification ensures the reliability of the assessment. The methodology involved two key phases. First, a comprehensive literature review identified eight determinants of Third Place quality: Accessibility, Safety, Inclusivity, Diversity, Comfort, Flexibility, Aesthetic, and Place Efficiency. Second, these factors were prioritized through pairwise comparisons conducted by a panel of urban planning experts. The resulting weights provided a structured set of criteria for evaluating existing public spaces and guiding evidence-based interventions.

3.1 Weight calculation

The AHP is a decision-making method that balances rational analysis with intuitive judgment. It uses pairwise comparisons to determine priorities and rank alternatives, allowing for a certain degree of judgmental inconsistency while providing methods to improve consistency (Saaty & Vargas, 2012). The advantage of AHP is that it does not require a large sample size. Since this method focuses on a specific issue, it depends on expert judgment. Researchers suggested that AHP can be applied with small sample sizes to produce beneficial decision outcomes (Darko et al., 2019).

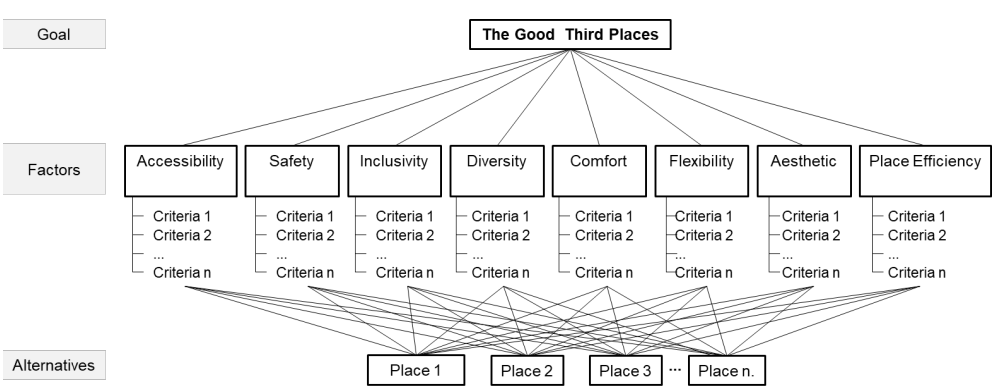

Figure 3. The levels of the hierarchy

This research involved 15 experts, including associate and assistant professors, professionals from the Department of Public Works and Town & Country Planning of Nakhon Ratchasima Province, and representatives from Nakhon Ratchasima Municipality. These participants held undergraduate degrees in architecture, urban planning, and urban design. The survey was conducted through structured interviews and questionnaires, covering each topic in detail.

The interview consisted of three parts: collecting experts' backgrounds, ranking criteria hierarchically and importance, and gathering additional input. Pairwise comparisons used integers 1 to 9 based on psychology stimulus–response theory, not arbitrarily (Saaty & Vargas, 2012). The expert judgments were aggregated using the geometric mean before proceeding with the pairwise comparison analysis (Ptak-Wojciechowska, 2024). The criteria assessed can be quantitative and qualitative. This method uses latent paired comparisons, where the decision-maker builds a hierarchical tree to compare factors and alternatives. These comparisons determine each factor's weight, integrating results for better decision-making (Rezaei & Tahsili, 2018).

In this study, the hierarchy is elaborated into three levels (Figure 3): (1) the goal is the good third placed for people. (2) factors divided into eight factors that fulfill the subgoals of the good places.

3.2 Judgments and comparisons

To gather expert judgments, AHP utilizes pairwise comparisons between elements at each level of the hierarchy. Decision-makers compare two criteria or alternatives at a time, indicating their relative importance with the Saaty's 1-9 scale for AHP described in Table 2 (Saaty & Vargas, 2012). This process creates a square comparison matrix for each level, capturing experts' subjective preferences in an organized and quantifiable way. Then, it calculates the weight distribution for each factor based on the eigenvectors of the comparison matrices (Yıldız et al., 2020).

A set of weights assigned to individual activities reflects the quantified judgments of the group. The evaluation begins at the highest level of the hierarchy, where the main decision criteria are established. From there, elements at each subsequent level are compared with one another, continuing step by step until the lowest level is reached. Which can write the criteria in mathematical form as follows:

Table 2. Saaty's scale comparing numbers of criteria

Intensity	Definition	Explanation
1	Equal importance	Two activities equally contribute to the goal.
3	Moderate importance of one over another	Judgment is slightly toward one factor over another.
5	Strong or essential importance	Judgment strongly favors one factor over another.
7	Very strong or demonstrated importance	A factor is very strongly over another
9	Extreme importance	The evidence supporting one factor more than another is of the highest possible strength.
2, 4, 6, 8	An intermediate value to compromise and balance judgment.	An intermediate value to compromise and balance judgment.

Source: T. Saaty & Vargas (2012)

$$A = \begin{bmatrix} 1 & a_{12} & \cdots & a_{1n} \\ 1/a_{12} & 1 & \cdots & a_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ 1/a_{1n} & 1/a_{2n} & \cdots & 1 \end{bmatrix} \quad (1)$$

Equation (1) represents the pairwise comparison matrix A, which is a reciprocal square matrix used in the AHP. Each entry a_{ij} denotes the relative importance of element i compared with element *j*. The diagonal elements are equal to one (a_{ij})=1 and the reciprocal property ensures that (a_{ij})=1/a_{ij}. This structure allows decision-makers to provide judgments that express the relative preference between pairs of criteria or alternatives.

$$\frac{w_i}{w_j} = a_{ij} \quad (for\ i, j = 1,2, \dots n) \quad (2)$$

Equation (2) expresses the relationship between the weights of criteria. Specifically, the ratio of two weights w_i / w_j is equal to the corresponding judgment value a_{ij}. This formulation ensures that the weight vector w reflects the decision-makers' pairwise comparisons.

$$A = \begin{bmatrix} w_1/w_1 & w_1/w_2 & \cdots & w_1/w_2 \\ w_2/w_1 & w_2/w_2 & \cdots & w_1/w_2 \\ \vdots & \vdots & \ddots & \vdots \\ w_n/w_1 & w_n/w_2 & \cdots & w_n/w_n \end{bmatrix} \quad (3)$$

Equation (3) illustrates the ideal (or consistent) form of the comparison matrix. In this case, each element of the matrix is constructed directly from the weight vector *w*. For instance, the element in row *i*, column *j* is given by w_i / w_j. When judgments are perfectly consistent, the pairwise comparison matrix is identical to this derived matrix.

$$w_i = \frac{1}{\lambda_{max}} \sum_{j=1}^{n} a_{ij} w_j \quad i = 1, \dots n \quad (4)$$

Equation (4) provides an approach to the priority weights. The weight w_i is obtained by dividing the weighted sum $\sum_{j=1}^{n} a_{ij} a_{ij}$ by the maximum eigenvalue λ_{max}. This formulation ensures that the resulting weights are consistent with the principal eigenvector of the matrix, providing a mathematically rigorous basis for priority estimation in AHP.

3.3 Consistency assessment

The method depends on the decision maker's judgment to reduce inconsistencies and errors when comparing options and indices. Comparing two factors is simple, but reliability drops as the number increases. It's crucial to verify pairwise comparison consistency using the Consistency Ratio (C.R.), calculated as the Consistency Index (C.I.) divided by the Random Index (R.I.) in Table 3. Values less than 0.1 are acceptable; higher values should be re-evaluated to ensure logical coherence. (Saaty & Vargas, 2012).

$$C.I. = (\lambda_{max}\text{-}n)/(n\text{-}1) \quad (5)$$

Equation (5) defines the Consistency Index, which measures the degree of deviation from perfect consistency in pairwise comparisons, where λ_{max} is the maximum eigenvalue of the comparison matrix and n is the matrix order. A value of $\lambda_{max} = n$ indicates perfect consistency, while larger deviations suggest inconsistencies in judgment.

$$C.R. = \frac{C.I.}{R.I.} \quad (6)$$

Equation (6) defines the Consistency Ratio as the Consistency Index divided by the Random Index, with values below 0.1 indicating acceptable, reliable comparisons. Higher values suggest the need to revise pairwise judgments.

Table 3. Average random consistency index (R.I.)

N	1	2	3	4	5	6	7	8	9	10
Random Index (R.I.)	0	0	0.58	0.9	1.12	1.24	1.32	1.41	1.45	1.49

3.4 Determining priorities

The final step involves deriving priority weights from the comparison matrices. These weights represent the relative importance of each criterion and the relative preference for each alternative. By aggregating the priorities throughout the hierarchy—multiplying the criteria weights by the scores of alternatives—the decision-maker obtains the overall or global priorities of the alternatives. This results in a ranked list that guides the final decision based on a consistent and transparent analytical framework.

4. Results and discussion

4.1 Third Places weight priorities

The results show experts' opinions on the importance of different factors in assessing third places in Nakhon Ratchasima Old Town. Table 4 presents the aggregated judgment of 15 experts, calculated as the geometric mean of pairwise comparison scores for each factor. The results not only reflect the experts' professional knowledge but also include their insights gained from personal experience as users of these locations. Overall, the analysis highlights safety, efficiency, and accessibility as the three most important factors for improving third places. Among these factors, safety factors remain the top priority, making it the most urgent concern in Nakhon Ratchasima Old Town.

Safety ranked highest, with a score of 0.229, an essential factor for a high-quality Third Place that attracts visitors. Adequate lighting, surveillance, and road safety significantly influence the decision to visit. Twelve of the fifteen respondents prioritized safety, highlighting serious concerns in these areas. Expert 4 noted that homeless people near the moat create feelings of insecurity, deterring visitors. They emphasized that accessibility alone cannot compensate for a lack of safety. Expert 8 also remarked that the isolated and unsafe conditions in the old town discourage people from going out, driving them to seek safer, more comfortable locations elsewhere.

Efficiency is essential for establishing and maintaining the quality of third places. It ensures that facilities are clean, well-maintained, and usable. With a weight of 0.134, it is the second most crucial factor. Expert 14 emphasized that effective management is key to improving the space for optimal use, such as the "back-end management" of third places.

Accessibility is a crucial factor for Third Places to attract visitors sustainably, especially in Nakhon Ratchasima City, where commuting can be difficult. It reached a weight of 0.129, ranking third among eight factors. Despite this, traffic congestion and inefficient public transportation still pose major challenges.

Table 4. Aggregation of expert judgement for third places assessment priorities

Factors	(F1)	(F2)	(F3)	(F4)	(F5)	(F6)	(F7)	(F8)	Rank
Accessibility (F1)	1	0.983	1.661	1.239	0.849	1.411	0.961	0.799	3
Safety (F2)	1.017	1	3.722	2.445	1.957	2.750	2.183	1.818	1
Inclusivity (F3)	0.602	0.269	1	0.845	0.830	1.035	0.778	0.449	8
Diversity (F4)	0.807	0.409	1.184	1	0.908	1.133	1.098	0.733	6
Comfort (F5)	1.178	0.511	1.205	1.102	1	1.344	1.317	1.035	4
Flexibility (F6)	0.709	0.364	0.966	0.883	0.744	1	1.010	0.779	7
Aesthetic (F7)	1.041	0.458	1.285	0.910	0.759	0.990	1	0.870	5
Place Efficiency (F8)	1.252	0.550	2.228	1.364	0.966	1.283	1.150	1	2
Criteria Weight	**0.129**	**0.229**	**0.079**	**0.101**	**0.123**	**0.090**	**0.103**	**0.134**	

λ_{max} = 8.10, *C.I.* = 0.015, *C.R.* = 0.01

Some experts argue that accessibility isn't the main concern in Nakhon Ratchasima, as people often travel longer distances for better options. However, traffic problems and inadequate public transit remain significant barriers.

*Comfor*t is another critical factor, especially in Thailand's hot and humid climate, with a weight of 0.123, ranking fourth. Designing Third Places that prioritize comfort is essential for encouraging people to spend more time outdoors.

Aesthetics play a crucial role in attracting visitors by creating a positive image, drawing in people, and increasing social media engagement. With a weight of 0.103 and a fifth-place ranking, this factor also gives third places a distinctive character and a sense of place, strengthening emotional bonds, community pride, and encouraging repeat visits.

Diversity and *Flexibility* are ranked sixth and seventh, with weights of 0.101 and 0.090, respectively. Although they rank lower than other factors, these dimensions are essential for enhancing the vitality of Third Places. They support a variety of activities, attract diverse groups, and encourage ongoing engagement, helping to create vibrant and inclusive spaces for community interaction.

The final factor, *Inclusivity*, ranked eighth with a weight of 0.079. This factor promotes social equity and ensures that public spaces serve people of all groups. While important for social equality, it was not ranked first by any expert, indicating that other factors may currently take priority. Neglecting this factor can lead to space becoming exclusive, limiting participation, reducing social interaction, and ultimately weakening their role as genuine community hubs.

4.2 Priority dynamics in Nakhon Ratchasima Old Town

This study primarily relies on expert judgments, assuming that the experts' responses were both honest and grounded in their professional knowledge and experience. Although expert judgment involves some subjectivity, the AHP method organizes these insights to identify shared priorities. The analysis reveals an explicit agreement among the eight factors. Four experts ranked Safety as the top priority, while Accessibility and Efficiency were each ranked first by three experts. When examining the aggregate rankings of the top four factors, the consensus becomes even stronger: 12 experts prioritized Safety as a critical factor, followed by Comfort and Efficiency (each with nine experts), and Accessibility (7 experts). Notably, factors such as Inclusivity and Flexibility—often celebrated in Western literature as key drivers of urban vibrancy—were not ranked as the most important by any expert.

Experts 4, 7, and 8 identified Safety as the non-negotiable prerequisite for the viability of Third Places. Their consensus indicates that, in the absence of security, high aesthetic quality becomes irrelevant to potential users. Conversely, priorities shifted based on specific user demographics. Experts advocating families highlighted the importance of diversity and inclusiveness, pointing out that Third Places must serve multiple generations. Conversely, for unaccompanied users or young adults, experts emphasized the importance of acoustic comfort and privacy, underscoring the need for spaces that offer solitude within a public environment.

The prioritization of safety over accessibility, aesthetics, or flexibility marks a significant departure from established studies. Previous studies typically identifies accessibility and walkability as the critical determinants of third-place usage (Hussein, 2018; Nasehi et al., 2023; Yunitsyna & Shtepani, 2023; Zarie et al., 2024) or emphasizes aesthetics and flexibility for socialization (Sheikhbaglou & Xi, 2021).

This divergence can be explained through an adapted model of Maslow's Hierarchy of Needs tailored for urban spaces, which stratifies user requirements into five levels: (1) fundamental needs, (2) safety, (3) socialization, (4) accessibility, and (5) aesthetics (Hussein, 2018). The findings indicate that, for residents of Nakhon Ratchasima, the requirements for public space have not yet reached the higher tiers. Instead, they remain anchored at the second level: safety. This prioritization reflects a fundamental lack of confidence in the urban environment. Until this basic need for physical security is met, higher-order qualities such as accessibility (permeability) or aesthetics—while desirable—remain functionally irrelevant. Safety serves as the essential gateway trust factor required for any social interaction.

Table 5. Experts' priority score

Experts	F1	F2	F3	F4	F5	F6	F7	F8
Expert 1	0.134	0.123	0.030	0.028	0.018	0.128	0.182	0.254
Expert 2	0.271	0.204	0.039	0.044	0.064	0.142	0.083	0.049
Expert 3	0.082	0.120	0.023	0.191	0.200	0.043	0.072	0.159
Expert 4	0.194	0.326	0.016	0.144	0.098	0.058	0.032	0.024
Expert 5	0.308	0.225	0.038	0.040	0.141	0.038	0.090	0.051
Expert 6	0.023	0.043	0.153	0.089	0.086	0.231	0.036	0.234
Expert 7	0.074	0.300	0.098	0.025	0.154	0.025	0.069	0.147
Expert 8	0.035	0.309	0.053	0.042	0.119	0.053	0.206	0.083
Expert 9	0.266	0.117	0.152	0.202	0.044	0.035	0.017	0.063
Expert 10	0.072	0.114	0.052	0.041	0.187	0.041	0.221	0.164
Expert 11	0.050	0.354	0.112	0.127	0.028	0.134	0.023	0.063
Expert 12	0.034	0.195	0.028	0.049	0.139	0.046	0.255	0.156
Expert 13	0.055	0.078	0.179	0.212	0.162	0.020	0.093	0.094
Expert 14	0.145	0.156	0.067	0.100	0.033	0.137	0.042	0.215
Expert 15	0.113	0.175	0.066	0.057	0.190	0.141	0.109	0.057
Average	0.124	0.189	0.074	0.093	0.111	0.085	0.102	0.121
STD.DEV	0.091	0.093	0.051	0.064	0.061	0.060	0.075	0.072

Remark: F1: Accessibility; F2: Safety; F3: Inclusivity; F4: Diversity; F5: Comfort; F6: Flexibility; F7: Aesthetic; F8: Efficiency

In this context, safety takes precedence over inclusivity or flexibility due to the city's urban morphology. Understanding Nakhon Ratchasima's urban decentralization and the subsequent decline of inner-city residential populations is crucial to this prioritization. Over the past two decades, a 300% growth in built-up areas has led to a *hollowing out* of the city center, as residents have migrated to the suburban fringe (Seemuangngam & Lin, 2024).

This demographic shift has severed the connection between urban vitality and safety. Depopulation has resulted in a deserted environment after dark, effectively eliminating the passive surveillance that Jane Jacobs (1961) deemed essential for perceived safety. Without a sufficient density of people engaged in outdoor activities, the natural safety mechanism disappears. Consequently, experts prioritize safety over inclusivity and flexibility, as the secure environment is currently compromised. A flexible and inclusive space can be truly valuable, but only if people are there to use it. Without enough human presence, it can become unsafe and less meaningful.

AHP allows experts to independently define priorities. Saaty (2002) mentioned that experts may prefer to present results according to their own hierarchy rather than combining their initial judgments. Consequently, instead of focusing on a single aggregated result, comparing distinct priorities across expert groups yields valuable insights.

Table 6. Comparison of priority scores among a group of experts

Groups of Experts	F1	F2	F3	F4	F5	F6	F7	F8
Academic Experts								
Average	0.141	0.202	0.051	0.086	0.143	0.069	0.091	0.117
STD.DEV	0.079	0.078	0.026	0.058	0.056	0.045	0.058	0.066
Municipal Staffs								
Average	0.108	0.178	0.093	0.099	0.083	0.098	0.112	0.125
STD.DEV	0.098	0.103	0.059	0.069	0.050	0.068	0.085	0.076

Remark: F1: Accessibility; F2: Safety; F3: Inclusivity; F4: Diversity; F5: Comfort; F6: Flexibility; F7: Aesthetic; F8: Efficiency

Table 6 details a comparison between academic experts and municipal staff regarding third-place improvement. Both groups agree that Safety is the top priority. However, their subsequent rankings differ significantly. Municipal staff emphasize Place Efficiency and Aesthetics, reflecting a managerial focus on utility and urban image. In contrast, experts prioritize Comfort and Accessibility, emphasizing a human-centric approach to user experience. This divergence highlights the need to balance operational goals with human-centric design.

Furthermore, priorities for third-place improvement are not universal, they are profoundly influenced by the city's socio-spatial context. Unlike the dense, vibrant metropolitan areas often referenced in international studies, Nakhon Ratchasima is a sprawling city facing a crisis of a hollowed-out center. Consequently, revitalizing third places in this context requires more than physical connectivity or aesthetic upgrades. It involves creating a secure environment encouraging people to return to the public realm.

4.3 Third places evaluation score

The evaluation of Third Places in Nakhon Ratchasima Old Town reveals predominantly low- to medium-quality third places, with an overall average score of 2.43 out of 5, significantly below the exceptional range of 4.2 to 5. Utilizing an eight-factor assessment framework, the study highlighted a city-wide deficit in social infrastructure, with most sites failing to meet the critical weighted priorities of safety, efficiency, and accessibility.

Thao Suranari Monument ranked first with a score of 3.79, earning high marks for Safety (F2 = 1.07) and Maintenance (F8 = 0.58). However, a critical gap exists between its symbolic value and its functional performance. While experts revere the monument as the province's premier symbolic asset, its capacity to serve as a fully developed Third Place is compromised by a lack of basic amenities and poor pedestrian connectivity. It functions more as a ceremonial plaza than a "leveler" for informal daily interaction. Phumirak Park followed with a score of 3.67, excelling in Aesthetics (F7 = 0.51), Space Efficiency (F8 = 0.54), and Activity Diversity (F4 = 0.40). Its diverse programming—incorporating learning areas, a museum, and an auditorium—reflects the strong preference among families for inclusive, multi-functional spaces that justify a dedicated trip into the city center.

The moderate category (2.61–3.40) includes religious sites such as Wat Phra Narai Maharat, Wat Isan, Wat Phayap, and the Sikh Temple and City Pillar shrines. While culturally significant, these sites suffer from functional rigidity. Experts noted that their formal atmosphere discourages the playfulness and informal socialization essential to Third Places, particularly for younger generations. This reflects a broader tension between static preservation and the need for living heritage that adapts to contemporary social needs.

In contrast, Class Cafe (3.25) stands out for high scores in Safety (F2 = 0.99) and Comfort (F5 = 0.52). Its success as a 24-hour co-working space demonstrates that comfort in the modern urban context has evolved beyond mere climate control to encompass functional infrastructure, such as digital connectivity and ergonomic design. This popularity highlights a demand for safe, night spaces that the empty streets currently fail to provide. Muang Thong Hotel (2.90) similarly scores well in safety but struggles with aesthetics, constrained by outdated building regulations that hinder adaptive reuse.

Sites with low to very low scores (1.00–2.60) are concentrated along the moat, night markets, and ponds such as Sa Khwan and Sa Bua. These areas represent a "missed opportunity" for waterfront activation. They suffer from poor lighting, weak safety, and a lack of active edges, leaving them underused despite their ecological potential. The primary driver of this failure is urban severance. The wide, arterial scale of Road 224 acts as a formidable barrier, hindering pedestrian permeation from the surrounding residential districts into the moat area. This automobile-oriented planning prioritization has fragmented the historic fabric. Coupled with the hollowing out of the Old Town's population, these peripheral spaces lack the critical mass of users needed to sustain vitality. Without resident eyes on the street, these green spaces feel isolated and unsafe rather than inviting.

Figure 4 highlights a clear inequality in the Third Places quality caused by functional zoning and investment patterns. High-performing sites are clustered in the commercial and transportation centers of the western and northwestern areas,

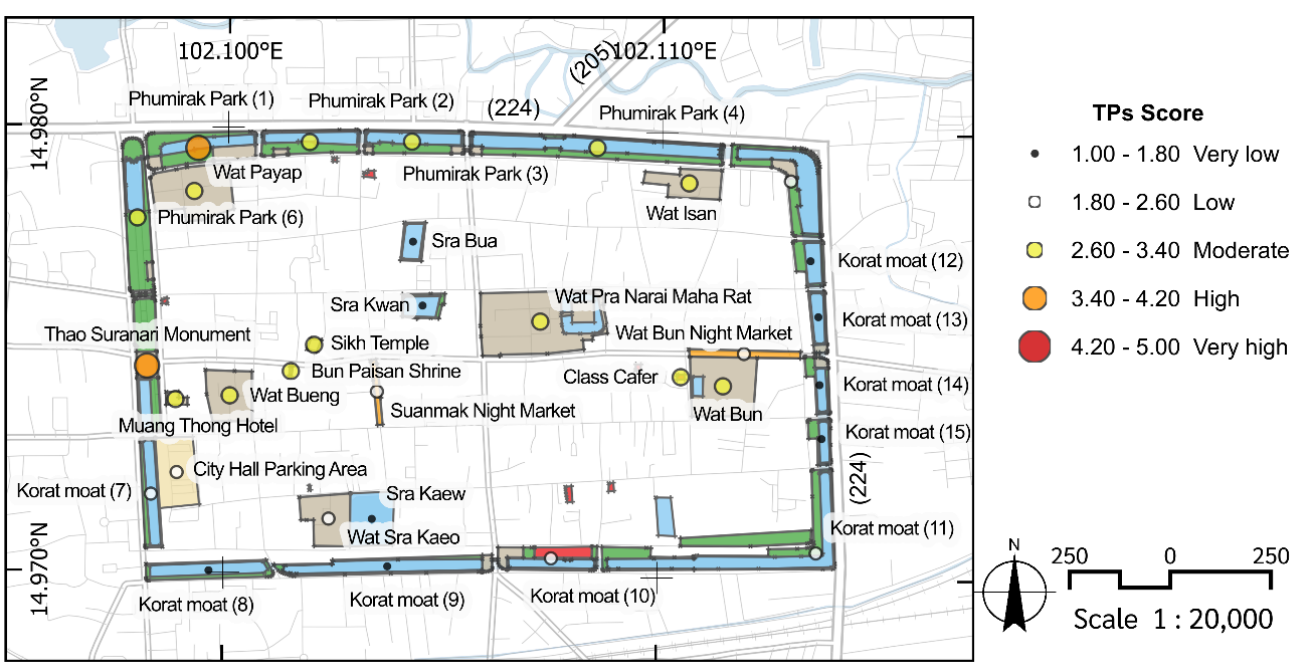

Figure 4. Third places map score (Source: The Authors)

anchored by the Thao Suranari Monument and supported by substantial renovation budgets, government offices, and schools. In contrast, the eastern and southern edges lack investment. The residential northeast has minimal commercial activity, while the southeastern prison creates a dead zone, leaving the inner city fragmented and lacking a cohesive social network.

5. Conclusion

This study evaluated the quality of Third Places in Nakhon Ratchasima Old Town using the Analytic Hierarchy Process (AHP). The results indicate that Safety, Place Efficiency, and Accessibility are the key priorities for revitalization. This research contributes to urban studies by demonstrating that, in an area experiencing city-center decline, safety serves as a critical threshold that surpasses the aesthetic and accessibility concerns often emphasized in Western-centric literature.

While AHP effectively structured the complex decision-making process of 15 experts, it has limitations. This study considered only eight primary factors and assigned equal weights to their respective sub-criteria, potentially oversimplifying the nuances within specific dimensions. Future work should include a second-level pairwise matrix for sub-criteria to refine these weights. The method assumes that the criteria are independent—an assumption rarely fully realized in urban design. Additionally, the study focused exclusively on Nakhon Ratchasima and did not include comparisons with other cities, which may limit the applicability of the findings to broader urban patterns. Future research should incorporate comparative studies with other cities to enhance the understanding of Third Place contexts. Furthermore, AHP reflects experts' professional opinions, and the cognitive demands of pairwise comparisons make it less suitable for the public. To strengthen these findings, expert-driven structural weightings should be complemented with resident perception surveys to capture the lived experiences of the broader population.

This research highlights that Nakhon Ratchasima Old Town has valuable assets—cultural heritage and water infrastructure—that are currently underutilized. To transition from a desolate center to a vibrant hub, planning must move beyond general maintenance to specific, active interventions:

1. **Reactivating the Moat:** Implement adaptive night-time lighting programs and active edges along the water to reclaim the night-time economy and improve perceived safety.
2. **Mitigating Severance:** Introduce traffic-calming measures along Road 224 to reduce the barrier effect and facilitate safe pedestrian flow from residential zones.
3. **Reprogramming Cultural Sites:** Encourage temple grounds to host secular community events and flexible markets, reducing their functional rigidity.
4. **Flexible Interventions:** Deploy small-scale, low-cost interventions such as movable seating and shade structures to test new uses and encourage lingering.
5. **Participatory Management:** Establish mechanisms for public participation in place management to ensure spaces evolve with resident needs.

By addressing the physical infrastructure of safety through these targeted interventions, the social dynamics of inclusivity and diversity—though ranked lower—can eventually flourish, ensuring that Third Places in Nakhon Ratchasima serve as sustainable engines for community well-being.

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Appendix

Table A1 : Third places raw score by factors without weighting

No.	Places Name	F1	F2	F3	F4	F5	F6	F7	F8
1	Thao Suranari Monument	4.33	4.67	3.50	3.50	2.50	2.00	4.50	4.33
2	Phumirak Park (1)	4.00	3.33	3.00	4.00	3.50	3.00	5.00	4.00
3	Phumirak Park (2)	3.67	3.33	2.00	3.00	4.00	2.33	3.50	4.00
4	Phumirak Park (3)	4.00	3.00	2.00	2.00	3.50	1.67	3.00	3.00
5	Phumirak Park (4)	3.67	2.33	2.00	3.00	3.25	1.67	3.00	3.00
6	Phumirak Park (5)	2.67	2.33	2.00	2.00	3.25	1.67	3.00	3.33
7	Phumirak Park (6)	4.00	3.00	2.00	2.00	3.00	2.00	4.00	4.00
8	Old town moat (7)	3.00	2.00	1.00	1.00	2.25	1.33	1.50	2.33
9	Old town moat (8)	2.67	2.00	1.00	1.00	2.25	1.33	1.50	2.33
10	Old town moat (9)	2.67	2.00	1.00	1.00	2.25	1.33	1.50	2.33
11	Old town moat (10)	2.67	2.67	1.00	1.00	2.75	1.33	1.50	3.33
12	Old town moat (11)	2.67	1.00	1.00	3.00	3.75	1.33	2.50	2.67
13	Old town moat (12)	3.33	1.33	1.00	1.00	2.50	1.00	1.50	1.33
14	Old town moat (13)	2.33	1.33	1.00	1.00	1.50	1.00	1.50	1.33
15	Old town moat (14)	2.67	1.33	1.00	1.00	2.25	1.00	1.50	1.33
16	Old town moat (15)	2.67	1.33	1.00	1.00	2.25	1.00	1.50	1.33
17	Sra Bua	2.00	1.67	1.00	1.00	2.25	1.00	1.50	2.00
18	Sra Kaew	2.33	1.67	1.00	1.00	2.25	1.00	1.50	1.67
19	Sra Kwan	3.00	1.67	1.00	1.00	2.25	1.00	1.50	1.67
20	Sra Tonglang	1.00	1.00	1.00	1.00	2.75	1.00	2.00	2.00
21	Class Cafer	2.67	4.33	2.00	1.50	4.25	3.33	2.00	4.33
22	Muang Thong Hotel	3.67	4.00	2.00	1.50	2.75	2.33	2.50	3.00
23	Suanmak Night Market	3.33	3.67	1.50	1.50	2.00	1.67	1.00	2.67
24	Wat Pra Narai Maha Rat	3.67	3.33	2.00	3.00	3.75	1.33	3.50	3.33
25	Bun Paisan Shrine	3.33	3.33	2.00	1.50	2.75	2.67	2.50	3.67
26	Sikh Temple	3.00	3.00	2.00	1.50	3.00	2.67	2.50	4.00
27	Wat Bueng	3.67	3.33	2.00	2.00	2.50	1.33	3.00	3.33
28	Wat Bun	3.00	3.33	2.00	2.00	3.25	1.33	3.00	3.33
29	Wat Bun Night Market	3.67	3.67	1.50	2.00	2.00	1.67	1.00	3.00
30	Wat Isan	3.00	3.33	2.00	2.00	4.00	1.33	3.50	3.33
31	Wat Payap	3.67	3.33	2.00	2.00	3.25	1.33	3.00	3.33
32	Wat Sra Kaeo	3.00	3.33	2.00	2.00	2.75	1.33	3.00	3.00
33	City Hall Parking Area	3.33	1.67	1.00	3.00	1.25	1.67	1.00	3.00

Remark: F1: Accessibility; F2: Safety; F3: Inclusivity; F4: Diversity; F5: Comfort; F6: Flexibility; F7: Aesthetic; F8: Efficiency

Credit with degree of contribution:

Nittaya Padkoh: Conceptualization, Methodology / Study design, Writing – original draft, Supervision, Project administration, Funding acquisition. **Apinan Seemuangngam:** Conceptualization, Methodology / Study design, Software, Formal analysis, Data curation, Writing – original draft, Writing – review and editing, Visualization, Supervision. **Srivieng Gapphimai:** Conceptualization, Supervision. **Kanjana Wuttipongpreecha:** Conceptualization, Supervision. **Supachai Chaijan:** Conceptualization, Supervision.

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