HARMONIZING ISLAMIC VALUES WITH MODERN URBAN DESIGN: PRIVACY, TECHNOLOGY, AND CULTURAL PRESERVATION IN SOUTHEAST ASIAN ARCHITECTURE

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ABSTRACT

Rapid urbanization in predominantly Muslim regions of Southeast Asia has significantly altered architectural design, shifting from privacy-oriented spatial layouts—such as courtyards and mashrabiyas—to open-plan urban models. This study examines the integration of Islamic values, particularly privacy and culturally sensitive spatial organization, into contemporary urban planning. By conducting a narrative literature review (NLR) of academic research, policy documents, and case studies, this research explores the impact of modernization on privacy considerations within Islamic architecture. The findings reveal the dual impact of surveillance technologies and smart systems, which enhance security but also pose risks to privacy. This study highlights the tension between privacy-conscious spatial organization and the increasing presence of digital monitoring systems in urban settings. The proposed framework promotes a balanced approach through zoning strategies, community engagement, and sustainable architectural solutions that preserve cultural identity while accommodating modernization. By integrating established privacy-oriented design principles with contemporary urban planning, this research provides valuable insights for policymakers and architects in designing inclusive and socially responsive environments. However, as this study relies on secondary sources, future research should incorporate empirical studies, including fieldwork and community engagement, to develop context-specific strategies. Comparative analyses across diverse socio-political settings will further clarify how different urban policies support or challenge the preservation of Islamic architectural values in contemporary cityscapes.

Keywords:
Islamic Architecture; Urban Design; Privacy; Spatial Sensitivity; Southeast Asia

1. INTRODUCTION

Modern urban design in Southeast Asia faces a key challenge: balancing modernization with cultural heritage preservation. Countries such as Indonesia, Malaysia, and Brunei, which have significant Muslim populations, play a crucial role in shaping local architectural traditions [1]. Historically, these traditions emphasized privacy, spatial organization, and inclusive design that support community dynamics. However, contemporary urban planning often prioritizes efficiency and globalized aesthetics over cultural values [2]. The transition to open-plan models risks diminishing the nuanced privacy norms embedded in many Islamic architectural traditions [3]. This narrative literature review (NLR) examines how these architectural principles can inform broader urban design strategies, with a particular focus on privacy-conscious urban spaces, culturally sensitive design, and the socio-cultural impacts of modernization.

Islamic architecture in Southeast Asia reflects a synthesis of local heritage and Islamic principles, evident in structures such as mosques, vernacular houses, and urban layouts. For example, Javanese Islamic architecture integrates pre-Islamic cultural influences with Islamic design elements, demonstrating adaptability to regional

contexts [4]. Architectural features such as courtyards and mashrabiya not only provide practical solutions for ventilation and privacy but also align with Islamic teachings on modesty and social interaction [5]. However, while courtyards are a hallmark of Islamic architecture in the Middle East, their adaptation in Southeast Asia has been shaped by local climatic and cultural factors, resulting in contextually responsive designs. Not all communities in the region have historically incorporated courtyards, reflecting the diverse traditions and environmental conditions across Southeast Asia. In tropical areas such as Indonesia and Malaysia, courtyards play a crucial role in climate regulation, airflow enhancement, and communal activities within residential spaces [6,7]. These architectural features function as cooling microclimates that enhance comfort in densely populated urban areas.

In Southeast Asian Islamic architecture, semi-private verandas and open communal spaces have evolved as complementary features to courtyards, offering both social engagement and privacy. These spaces facilitate interaction among residents while maintaining a degree of seclusion that aligns with Islamic cultural values [3]. Their multifunctionality allows them to serve as venues for religious and social gatherings, reinforcing community cohesion and cultural continuity [8]. However, rapid modernization and the widespread adoption of Western architectural styles have disrupted these enduring architectural legacies, leading to the gradual erosion of cultural identity. This shift is apparent in the diminishing use of indigenous materials and spatial configurations, as well as debates on the design evolution of contemporary mosques in Indonesia [9,10].

The challenge of preserving privacy and cultural sensitivity in both architecture and urban design extends beyond individual buildings to broader planning strategies. In traditional Islamic contexts, spatial organization balances communal interaction with privacy, ensuring harmony between public and private spaces [11]. However, contemporary urban environments shaped by globalization and modern construction trends often neglect these principles, resulting in designs that fail to accommodate culturally sensitive spatial needs [11]. Therefore, integrating cultural preservation into urban planning must take place at multiple scales—from individual residences to entire districts—to adapt to evolving social dynamics while maintaining architectural integrity.

Efforts to integrate cultural heritage into urban design have gained momentum in Southeast Asia, as governments and architects acknowledge the need to preserve local identities amid globalization. Policies supporting heritage conservation have led to the integration of traditional architectural elements into modern frameworks, as seen in initiatives to preserve vernacular architecture and historical sites [12,13]. However, significant gaps remain in research and practice, particularly in the application of privacy-conscious design in contemporary urban environments.

Existing literature highlights disparities in the study of Islamic architecture between Southeast Asia and the Middle East. While Middle Eastern research often emphasizes religious and historical significance, Southeast Asian studies focus on the integration of local cultural identities within Islamic architectural frameworks [14,15]. This regional distinction underscores the need for a comprehensive analysis that examines how modernization affects privacy considerations and urban design in Southeast Asia. Additionally, research on sustainability in Islamic geometric patterns and communal spaces often neglects their implications for contemporary urban planning [16,17].

This study pursues three key objectives. First, it explores the significance of privacy in Islamic architectural heritage and identifies fundamental design elements that uphold this principle. Second, it evaluates the impact of modernization on Southeast Asia's architectural landscape, highlighting both challenges and opportunities for cultural preservation. Lastly, it proposes comprehensive urban design frameworks that integrate Islamic principles while ensuring inclusivity. By addressing these goals, this study contributes to the discourse on sustainable urban development, providing valuable insights for architects, policymakers, and educators striving to create culturally responsive spaces that honor Islamic traditions while embracing modernization.

This review is structured as follows. The first section provides an overview of Islamic architectural principles, emphasizing their relevance to privacy and urban design. The second section explores the impact of modernization on urban planning in Southeast Asia, identifying tensions between long-standing values and contemporary practices. The third section discusses the integration of Islamic values into modern urban frameworks, focusing on innovative design approaches that address privacy and socio-cultural considerations. The final section synthesizes the findings, outlines policy implications, and suggests directions for future research. This organization ensures a comprehensive, systematic analysis of how modernization and enduring architectural traditions intersect in Islamic architecture across Southeast Asia.

The integration of Islamic architectural values into modern urban planning is a pressing research need in Southeast Asia. While existing literature offers valuable insights into cultural preservation and established practices, it often lacks an in-depth exploration of privacy-conscious designs in contemporary urban contexts. Furthermore, this study is limited by its reliance on secondary sources and the absence of extensive empirical data, which may overlook localized architectural adaptations. Additionally, variations in urban policy implementation across different municipalities could influence the extent to which Islamic values are incorporated

into urban planning. By addressing these gaps, this review seeks to advance discussions on sustainable urban design and provide a framework for fostering inclusive, culturally sensitive environments that reconcile tradition with modernization.

2. THEORETICAL FRAMEWORK

A. ISLAMIC ARCHITECTURAL PRINCIPLES

Islamic architectural principles, rooted in the Qur'an and Hadith, emphasize core values such as spirituality, unity, functionality, and respect for privacy. A fundamental element is the orientation toward the Qibla, ensuring that spaces like mosques are aligned to face Mecca, reinforcing a unified direction of worship [18,19]. Beyond its functional role, this orientation symbolizes the spiritual connection at the heart of Islamic life. Additionally, the incorporation of geometric patterns and calligraphy in architectural design reflects the Islamic belief in Allah's infinite nature, seamlessly blending aesthetic and spiritual dimensions [20,21]. While these principles originate from religious foundations, their application varies across different socio-cultural contexts in Southeast Asia, where diverse faiths and traditions coexist.

Privacy is a fundamental principle in Islamic design, influencing the spatial organization of both residential and public spaces. Traditional architectural elements such as the mashrabiya provide ventilation and natural light while ensuring visual seclusion, demonstrating the intersection of functionality and religious values [22,23]. This feature upholds the dignity and modesty of occupants, aligning with Islamic teachings on personal boundaries. Likewise, communal spaces like courtyards foster social interaction, reinforcing Islamic principles of hospitality and community engagement [24,25]. However, these privacy-oriented features do not imply exclusion or segregation; rather, they embody a flexible design approach adaptable for diverse urban environments.

Southeast Asian Islamic architecture demonstrates the adaptability of these principles to regional contexts. For instance, Javanese mosque designs often incorporate local motifs and materials, blending Islamic aesthetics with indigenous traditions [4,26]. The Salman Mosque in Bandung exemplifies this approach by forgoing traditional domes in favor of a functional yet spiritually resonant design, reflecting the evolution of Islamic architecture in response to contemporary needs [10,27]. These examples underscore the dynamic interplay between Islamic principles and local cultural elements, fostering designs that are both regionally distinct and universally Islamic.

B. MODERNIZATION AND URBAN DESIGN

Modernization has profoundly shaped urban planning in Islamic contexts, often creating a tension between contemporary architectural approaches and traditional values. The expansion of urban areas frequently prioritizes efficiency and aesthetics, sometimes at the cost of cultural and spiritual significance. Additionally, in multi-religious settings, urban development must balance the diverse needs of various communities, ensuring that efforts to preserve Islamic heritage do not overshadow or marginalize other cultural influences. In cities like Mecca, modernization has led to the demolition of historical structures to accommodate infrastructure development, raising concerns about the preservation of cultural heritage [28,29].

The adoption of Western architectural styles has further complicated efforts to preserve traditional Islamic aesthetics. For instance, the shift toward functionalism in mosque design often overlooks symbolic and cultural elements, diminishing their spiritual significance [10,30]. Similarly, modern housing designs frequently compromise privacy, a fundamental aspect of Islamic culture, in favor of contemporary aesthetics and cost efficiency [23,31]. While modern designs promote openness and efficiency, a balanced approach can incorporate culturally informed elements, such as screens or transitional spaces, that maintain privacy without obstructing contemporary architectural goals.

Despite these challenges, Southeast Asian cities have begun incorporating traditional elements into urban planning. In Tebuireng, Indonesia, urban development driven by historical and cultural significance integrates both traditional and modern needs, demonstrating how urbanization can harmonize with cultural preservation [32]. Similarly, adaptations of Javanese landscapes in urban design highlight efforts to maintain local identity amid rapid urbanization [26]. These approaches exemplify how urban design can balance privacy-conscious planning with inclusive, modern urban strategies.

Global examples further illustrate the potential for reconciling tradition and modernity. Cities like Istanbul and Cairo show that careful planning and community engagement can preserve cultural heritage while embracing modernization [33]. The concept of critical regionalism, which emphasizes local context in architectural design, has proven effective in fostering cultural identity amid globalization [27]. These

approaches provide valuable lessons for Southeast Asian urban planners seeking to balance modernization with the preservation of Islamic architectural values.

C. INTERSECTION OF TRADITION AND MODERNITY

The intersection of tradition and modernity in Southeast Asian Islamic architecture highlights the ongoing evolution of cultural identity through hybrid designs. Theoretical frameworks such as critical regionalism advocate for architectural practices that respect local culture while integrating modern techniques [27,34]. This approach emphasizes the importance of creating spaces that resonate with both cultural and spiritual values while meeting contemporary demands.

Hybrid architectural models are a prominent feature of this intersection. For example, contemporary mosques in Indonesia combine Islamic geometric patterns with minimalist modern aesthetics, demonstrating how tradition and modernity can coexist. However, such designs often face criticism for compromising cultural authenticity, underscoring the need for a balanced approach [10,35]. By integrating privacy-conscious design elements, these models provide solutions that preserve religious and cultural values while fostering urban inclusivity.

Local communities play a critical role in this balance, as their active participation ensures that architectural designs reflect shared values and traditions. Community involvement not only fosters a sense of ownership but also aligns conservation efforts with local cultural practices [36]. For instance, grassroots initiatives in Saudi Arabia have successfully preserved architectural heritage by integrating community-driven approaches with governmental support [36].

Strategies for integrating Islamic values into modern urban planning include participatory processes and the use of traditional architectural elements. These methods emphasize social integration, environmental sustainability, and cultural preservation, creating spaces that honor both tradition and modernity [37]. By fostering collaboration between architects, policymakers, and local communities, these strategies ensure that urban developments enhance cultural identity while accommodating modern needs [12,38].
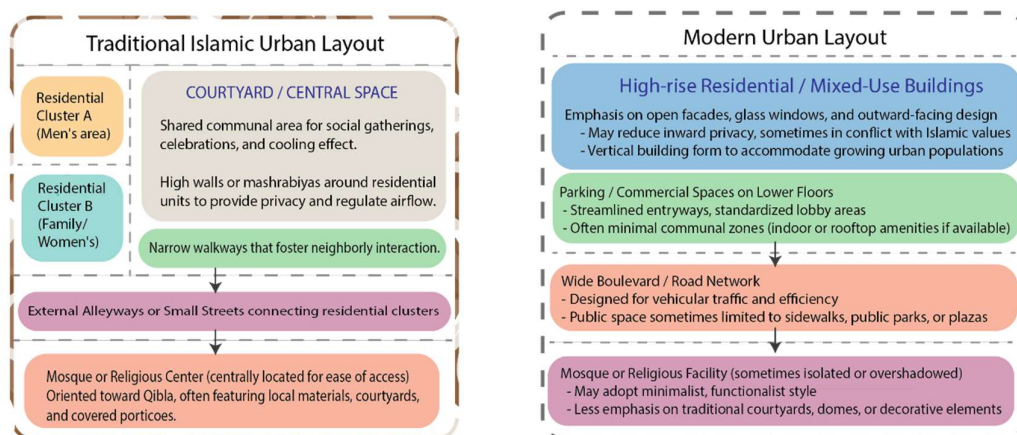

Figure 1. Comparative Diagram of Traditional vs. Modern Urban Layouts, highlighting key design elements and privacy considerations in Islamic architecture

D. IMPLICATIONS FOR SUSTAINABLE URBAN PLANNING

The balance between privacy-conscious urban design and inclusivity remains a critical challenge in contemporary urban planning. As shown in Figure 1, traditional Islamic urban layouts in Southeast Asia are often characterized by courtyard-centric designs, narrow walkways, and clearly defined social zones that maintain privacy in relation to public areas. This spatial arrangement reflects a long-standing tradition of zoning and hierarchical organization, ensuring that privacy remains integral to both residential and communal architecture [5]. Architectural features such as high walls, mashrabiyas, and other screening elements provide both visual and auditory privacy, aligning with Islamic principles of modesty and communal harmony [5,39]. Furthermore, mosques and religious centers are typically centrally located within these layouts, serving as both spiritual and social hubs that strengthen the communal fabric of Islamic society [40,41].

Conversely, modern urban layouts often feature high-rise or mixed-use buildings with open facades and minimal visual barriers. While these designs accommodate urban population growth and economic efficiency, they often neglect cultural considerations regarding privacy and religious sensitivities [42]. Many

contemporary cityscapes prioritize vehicular traffic, reducing the organic communal interactions that traditional layouts naturally encourage [15]. The successful implementation of hybrid models is evident in various Southeast Asian urban developments, where modern high-rises incorporate courtyards, screened facades, and pedestrian-friendly communal spaces to maintain Islamic design principles [43].

Ultimately, this framework underscores the need for context-specific, culturally responsive urban planning that respects diverse values while fostering inclusivity. Recognizing these design principles and their adaptability can contribute to sustainable urban strategies that harmonize modernization with cultural heritage preservation.

3. METHODS

A. DATA COLLECTION
This narrative literature review (NLR) follows a structured approach to source selection and synthesis, ensuring methodological rigor. The study incorporates three primary categories of sources:
1. Academic Literature: Peer-reviewed journals, books, and conference proceedings that discuss Islamic architecture, urban planning, and modernization. These sources provide theoretical and historical perspectives on privacy, spatial design, and cultural identity.
2. Policy Documents: Governmental and municipal regulations, urban planning guidelines, and heritage preservation policies that frame the role of Islamic architecture in contemporary urban contexts.
3. Case Studies: Real-world examples of urban projects that integrate Islamic architectural values, including studies from cities such as Bandung, Kuala Lumpur, and Mecca. These case studies provide a practical understanding of how cultural heritage is maintained across different urban settings.

Priority was given to databases such as Scopus, Web of Science, and Google Scholar, as well as regional and multilingual databases, to ensure a diverse and representative selection of research. Relevant governmental reports and planning documents were included to contextualize findings within real-world policy frameworks. For example, studies by Fajariyah (2023) and Idham (2021) explore the historical and cultural influences on Javanese Islamic architecture, providing insight into localized adaptations. However, this review acknowledges that relying solely on published sources may overlook minority oral traditions and experiential knowledge, which require further empirical research

B. RELIABILITY AND VALIDITY
To ensure the reliability and validity of this study, several measures were undertaken:
- Peer-reviewed sources were prioritized, ensuring that only academically rigorous materials were included.
- Triangulation of data was applied by cross-referencing findings from multiple sources (academic, policy, and case studies) to enhance credibility.
- Quality assessment criteria were employed to evaluate the relevance, credibility, and methodological transparency of each source. Only studies that explicitly discussed privacy, cultural integration, and modernization in Islamic architecture were retained.
- NVivo software was used to systematically code and analyze themes, reducing researcher bias and improving objectivity in qualitative synthesis

C. SEARCH STRATEGY
A structured search strategy was employed to retrieve relevant literature systematically. The following approach was used:
- Databases: Scopus, Web of Science, and Google Scholar.
- Search Terms: Keywords such as "Islamic architecture," "Southeast Asia," "privacy," "urban planning," "heritage preservation," and "cultural identity" were used, along with Boolean operators (e.g., AND, OR) to refine results.
- Inclusion Filters: Only peer-reviewed journal articles, books, policy reports, and empirical case studies published between 2010–2025 were considered.

D. INCLUSION AND EXCLUSION CRITERIA
To maintain methodological rigor, the following criteria were applied:
- Inclusion Criteria:
  - Studies focusing on Islamic architecture in Southeast Asia, with an emphasis on privacy, spatial organization, gender considerations, and modernization.

- o Research that integrates urban policy, heritage conservation, and architectural adaptation.
- o Empirical and theoretical studies with clear methodological frameworks.
- Exclusion Criteria:
- o Studies exclusively focused on Middle Eastern Islamic architecture, with no relevance to Southeast Asia.
- o Non-peer-reviewed sources or articles without methodological transparency.
- o Historical analyses that do not contribute to contemporary urban planning discussions.

By balancing breadth and specificity, this study ensures a diverse yet methodologically sound selection of sources.

E. DATA ANALYSIS

A thematic analysis approach was employed to synthesize qualitative data, enabling the identification of patterns and trend analysis. The coding framework categorized key themes such as:

- Privacy in architectural design
- Modernization challenges in Southeast Asian cities
- Policy integration of Islamic architectural values

NVivo software was used to facilitate structured coding, automated queries, and visualization of key relationships between concepts in the literature.

- Open coding was initially applied to recognize emergent themes.
- Axial coding was then used to establish relationships between different categories.
- Word frequency analysis and clustering tools enhanced the identification of significant patterns while reducing subjective bias.
- Hierarchical coding and concept mapping provided a clearer visualization of how modernization, cultural identity, and Islamic architectural elements interconnect within broader urban development frameworks.

These techniques enhance the reliability and replicability of findings, ensuring that the review maintains both academic rigor and practical relevance.

4. RESULT AND DISCUSSION

A. PRIVACY AND CULTURAL IDENTITY IN ISLAMIC ARCHITECTURE

Islamic architecture in Southeast Asia provides a lens through which the interplay of privacy, cultural values, and spatial organization can be examined. Rooted in Islamic teachings, privacy considerations manifest in architectural elements designed to foster modesty, community cohesion, and functional zoning. These enduring features—such as courtyards, semi-private verandas, and mashrabiyas—facilitate visual and auditory privacy while promoting social interaction [22,44]. Their application varies across Southeast Asia, where cultural and climatic adaptations have influenced their incorporation and functionality.

While courtyards are a hallmark of Middle Eastern Islamic architecture, their role in Southeast Asian architecture is more contextually adapted rather than being dominant. In diverse, multi-religious communities, open communal spaces and semi-private verandas often serve similar functions, fostering community engagement, promoting cultural inclusivity, and ensuring household privacy [2,24]. This aligns with the empirical data presented in Table 1, which suggests that privacy elements vary in prominence across regions and socio-cultural contexts.

Table 1. Representative Study of the Principles of Islamic Architecture in Southeast Asia

Reference	Location	Theme	Methodology	Key Findings
Wiryomartono (2023)	Indonesia & Malaysia	Evolution of mosques in the Malay world	Historical study and architectural analysis	Mosques in Southeast Asia exhibit cultural and Islamic syncretism.
Aryanti et al. (2024)	Kota Baru Parahyangan, Indonesia	Gender roles in mosque design	User surveys, spatial observation	Open mosque design enhances female participation but reduces privacy.
Putra et al. (2024)	Pangkalpinang, Bangka, Indonesia	Melayu-Islamic architectural integration in mosque design	Qualitative analysis, interviews	Mosque design is more influenced by Malay culture than by Islamic elements.

Reference	Location	Theme	Methodology	Key Findings
Nurjayanti & Nugrahaini (2023)	Surakarta, Indonesia	Integration of Islamic architecture and sustainability	Qualitative and quantitative analysis	Islamic architecture can be applied in sustainable housing.
Jaisuda (2024)	Pattani, Yala, Narathiwat, Thailand	Islamic influence in Malay wood carving	Design analysis of wood carvings, semiotics	Malay wood carvings reflect Muslim identity in Southern Thailand.
Al-Saffar (2023)	Indonesia & Malaysia	Mosque transformation in Islamic urban environments	Historical and ethnographic study	Mosques serve as social and political hubs in Islamic cities.
Maulida et al. (2020)	Banda Aceh, Indonesia	Colonial architectural influence in mosque design	Comparative descriptive study	Mosques exhibit a blend of Islamic, Acehnese, and colonial architecture.
Zuraidi et al. (2020)	Southeast Asia	Islamic public space concept in Southeast Asian cities	Islamic urban planning design study	Islamic public spaces support social and economic harmony.
Arif & Panakkal (2024)	Indonesia, Malaysia, Brunei, and Southern Thailand	Integration and adaptation of Islam in urban environments	Historical and ethnographic study	Islamic cities in Southeast Asia developed through cultural integration.
Ratna & Nurjannah (2020)	Kendari, Indonesia	Islamic Center planning based on ecology and sustainability	Ecology-based urban planning	Islamic Center planning can be based on sustainability principles.
Catur Gatra Tunggal Study	Lamongan, East Java, Indonesia	Traditional Islamic city planning model in Java	Field observation, qualitative study	The Catur Gatra Tunggal model remains relevant for modern Islamic city planning.
Hasan, Prabowo, & Mohidin (2021)	Indonesia	Privacy values in traditional Indonesian houses based on Islamic architectural principles	Literature review of 21 publications analyzing privacy in traditional Indonesian houses	Physical privacy is maintained through spatial zoning, elevated floors, and room separators. Non-physical privacy is enforced through social agreements and gender-based spatial division. These align with Islamic architectural values.

The findings indicate that privacy in architectural design is maintained through spatial zoning, transition spaces, and elevated platforms [5]. Additionally, the role of mosques extends beyond religious functions, often acting as community centers that facilitate both spiritual engagement and socio-political discourse [40]. In multi-ethnic regions, mosques function as shared spaces, accommodating diverse community activities while upholding core Islamic values. Studies from southern Thailand demonstrate the integration of Malay wood-carving traditions into Islamic design, reflecting the adaptability of privacy-oriented architectural motifs in local contexts [43].

Over time, the interpretation of privacy within Islamic architecture has evolved to accommodate changing societal expectations. Historically, mashrabiyas provided ventilation and seclusion, allowing residents to observe the external environment without compromising modesty [22,45]. However, contemporary designs sometimes modify these principles to align with modern aesthetics and considerations of urban density [31]. These adaptations illustrate the tension between modernization and the preservation of privacy-conscious design, rather than implying that traditional elements should be abandoned.

B. IMPACT OF MODERNIZATION ON ARCHITECTURAL DESIGN AND URBAN PLANNING

Modernization has significantly influenced urban development across Southeast Asia, shifting architectural priorities. While some communities adopt functionalist principles for efficiency, others argue that architectural homogenization reduces the distinct identity of Islamic-built environments [27,29]. This is particularly evident in mosque architecture, where traditional domes and arches are frequently replaced by minimalist geometric forms that emphasize modern efficiency over cultural continuity [10,30]. In multi-faith settings, however, these new designs may also represent efforts to create inclusive public spaces while maintaining Islamic principles.

The influence of globalization on urban planning has heightened concerns about cultural authenticity in Islamic architecture. Contemporary designs tend to favor visual aesthetics and cost-effectiveness, sometimes at the expense of traditional values [46]. Moreover, urban planning policies have varied across Southeast Asian

countries—some cities have actively incorporated heritage conservation principles, while others prioritize rapid urban expansion [9,13]. This divergence highlights the challenge of integrating privacy-conscious architectural principles into urban planning frameworks that emphasize openness and accessibility.

Despite these challenges, sustainable urban planning initiatives have emerged in Southeast Asia. In Indonesia, urban revitalization projects aim to integrate traditional architectural elements into modern urban frameworks. Similarly, cultural heritage conservation efforts in cities such as Bandung and Penang demonstrate how modernization and preservation can coexist [38]. These examples highlight the potential for urban design strategies that balance modernization with the retention of cultural identity. By engaging local communities, these strategies ensure that conservation efforts align with broader social priorities and foster urban equity.

C. TECHNOLOGY, PRIVACY, AND URBAN DESIGN

The integration of smart technologies into urban environments has raised ethical questions regarding privacy and surveillance. The use of security cameras, data monitoring, and smart home systems introduces tensions between modern security needs and Islamic principles of privacy and modesty [22,24]. In Islamic-majority societies, such technologies may inadvertently conflict with long-standing privacy traditions, requiring careful consideration of culturally sensitive design adaptations [2,5]. Moreover, excessive surveillance risks eroding community trust, particularly in environments where data-use policies are ambiguous or underdeveloped.

Conversely, technology presents opportunities to enhance privacy in urban settings. The implementation of automated privacy screens, smart zoning systems, and AI-driven urban design tools can help maintain spatial integrity while ensuring practical modern functionality [23,31]. Furthermore, community-driven digital platforms can enhance transparency and uphold cultural privacy standards by promoting participatory urban planning. However, concerns remain over the potential misuse of surveillance data and its effects on public trust in government-led urban policies.

D. SYNTHESIS OF FINDINGS

This study highlights the complex relationship between privacy, modernization, and urban design in Islamic architecture. Rather than asserting that courtyards and mashrabiyas are the dominant elements, the findings suggest that privacy-conscious design varies across socio-cultural contexts and urban policies.

The tension between privacy and inclusivity in urban planning remains a central theme. While traditional architectural elements prioritize seclusion, modern urban environments emphasize accessibility. Thus, hybrid solutions—such as semi-private courtyards, transitional spaces, and adaptable zoning regulations—can help reconcile these opposing forces.

The integration of smart technologies presents both opportunities and ethical concerns, necessitating a balanced approach to innovation and tradition. Additionally, inclusive urban design principles offer a sustainable path forward, ensuring cultural sensitivity and community engagement in urban development.

While this research provides a comprehensive review of the existing literature, it primarily relies on secondary sources. Future studies should incorporate empirical investigations—such as field observations and stakeholder interviews—to better understand how contextual factors shape architectural adaptations. Furthermore, an exploration of socioeconomic and interfaith disparities in accessing culturally responsive urban spaces is needed to ensure equitable implementation of Islamic architectural principles in contemporary Southeast Asia. Stronger collaboration between policymakers and local communities can enhance evidence-based strategies, ensuring that privacy and inclusivity remain central to urban planning efforts.

5. CONCLUSION

A. SUMMARY OF FINDINGS

This study has explored the interplay between privacy, cultural identity, and modernization within the context of Islamic architecture in Southeast Asia. Traditional architectural elements such as courtyards, mashrabiyas, and spatial zoning have historically served to balance privacy and social cohesion. However, adapting these traditional features to meet the needs of multi-faith and multi-ethnic communities requires a more context-sensitive approach. Urbanization, globalization, and shifting societal expectations present challenges, necessitating a balance between cultural heritage preservation and contemporary urban demands.

The integration of smart technology—including home automation, surveillance tools, and digital urban planning—adds complexity to the discourse on privacy in urban design. While such advancements can enhance security and efficiency, they also raise ethical concerns regarding surveillance, data privacy, and the erosion of cultural norms. As a result, urban design must prioritize inclusive, culturally adaptable planning strategies that

consider diverse community perspectives. Additionally, this study acknowledges its reliance on secondary data, which limits its ability to capture localized architectural adaptations and socioeconomic disparities. Future empirical research will be necessary to validate these findings and refine culturally sensitive urban planning strategies.

Table 2. Summary of key policy recommendations derived from the review and their potential impact on the preservation of Islamic architecture

Policy Recommendation	Rationale / Link to Findings	Potential Outcomes
Establish Zoning Regulations for Privacy	Findings highlight privacy as a core Islamic architectural value; proper zoning can protect family spaces and ensure segregation.	Strengthened privacy, reduced cultural conflicts, and preserved modesty and spiritual harmony.
Offer Incentives for Incorporating Islamic Architectural Elements	Encourages developers to maintain cultural identity; aligns with research showing that Islamic features foster community cohesion.	Sustained use of courtyards, mashrabiyas, and symbolic elements; enhanced cultural authenticity in new constructions.
Adopt Community-Based Participatory Design	Studies emphasize the need for local input to preserve traditional design; community ownership promotes acceptance and maintenance.	Greater social cohesion, improved stakeholder satisfaction, and designs better suited to users' cultural needs.
Promote Mixed-Use Developments That Balance Privacy and Social Interaction	Addresses the dual requirement for privacy and communal engagement inherent in Islamic contexts; ensures active but modest public areas.	Safer, more vibrant neighborhoods that respect religious norms; balanced communal–private spaces.
Enhance Women's Engagement in Urban Planning	Gender-sensitive design emerged as crucial in multiple findings; acknowledging women's roles helps shape inclusive environments.	Reduced gender disparities in built spaces; improved safety and comfort for women; stronger community networks.
Incorporate Sustainability Frameworks Aligned with Islamic Principles	Studies note the synergy between Islamic values (modesty, stewardship) and sustainability, which fosters ecological and social well-being.	Environmentally friendly developments that align with local religious/cultural beliefs, as well as long-term resource preservation.
Implement Clear Preservation Guidelines for Historical Islamic Structures	Research shows that modernization can dilute traditional aesthetics; explicit guidelines ensure continuity of heritage practices.	Protection of historically significant sites; continuity of Islamic architectural identity for future generations.

Source: Derived from various studies reviewed in the manuscript, including Hasan et al. [5], Bokhari et al. [23], and Al-Saffar [40].

Table 2 summarizes key policy recommendations from this study and outlines their potential impact on preserving Islamic architectural identity. These include zoning regulations to safeguard privacy, incentives for incorporating Islamic design elements, and community-based participatory planning. Additionally, sustainability frameworks aligned with Islamic values and preservation guidelines for historical structures are critical to ensuring the continued relevance of Islamic architectural principles in contemporary urban settings. Furthermore, policymakers must account for Southeast Asia's diverse religious and cultural landscapes when implementing these recommendations to avoid inadvertently marginalizing minority communities. If effectively implemented, these policies will help cities maintain cultural authenticity while embracing modernization.

B. IMPLICATIONS

The findings highlight the importance of culturally responsive urban policies that integrate Islamic architectural values while acknowledging the diverse religious and social contexts of Southeast Asia. Rather than advocating rigid adherence to Islamic zoning principles, this study suggests that urban policies should incorporate privacy-conscious, culturally inclusive design frameworks that respect diverse traditions. Policymakers should consider flexible zoning regulations that accommodate both privacy needs and social integration, rather than reinforcing segregation.

For architects and urban planners, this study underscores the need to design built environments that balance cultural authenticity and modern functionality. Traditional architectural principles, such as courtyards and spatial zoning, can be adapted to align with modern urban lifestyles while maintaining privacy and community engagement. Additionally, emerging technologies—such as AI-assisted zoning tools and automated privacy screens—should be designed to enhance privacy without restricting inclusivity.

Architectural education should evolve by incorporating courses on cultural heritage conservation, sustainability, and participatory urban design. Collaboration between universities, communities, and policymakers is essential in fostering architects who can navigate the complexities of modern urban development while preserving cultural identity.

C. FUTURE RESEARCH DIRECTIONS

While this study provides valuable insights, further empirical research is needed to validate its findings. Future research should incorporate primary data collection methods, such as ethnographic studies, field observations, and stakeholder interviews. Additionally, comparative analyses of cross-religious and multicultural urban contexts will be essential to understanding how Islamic and non-Islamic traditions interact in shaping urban design.

The role of technology in Islamic architectural adaptation also warrants further exploration. Investigating the ethical implications of surveillance, smart home systems, and AI-driven urban planning could provide policy recommendations for balancing technological efficiency with cultural sensitivity. Future studies should also explore how low-income and rural communities interact with technological innovations, ensuring that privacy-conscious designs remain equitable and accessible.

This study underscores the dynamic evolution of Islamic architecture in Southeast Asia. By integrating cultural values with contemporary urban strategies, architects and policymakers can foster sustainable, inclusive environments that respect Islamic traditions while accommodating modern needs. Furthermore, incorporating diverse stakeholder perspectives, including local governments, religious institutions, and grassroots organizations, can strengthen the effectiveness of participatory urban planning. The role of digital tools in shaping public engagement in architectural adaptation remains crucial, ensuring that urban spaces remain both culturally resonant and functionally adaptable amid ongoing modernization.

AUTHORS CONTRIBUTION

Single Author: Conceptualization, Writing - review & editing. Visualization, Methodology, Validation, Formal analysis, Data analysis.

DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

During the preparation of this work, the authors used ChatGPT to enhance the clarity of the writing. After using ChatGPT, the authors reviewed and edited the content as needed and take full responsibility for the publication's content.

REFERENCES

[1] A. M. Dini, S. A. Salih, S. Ismail, N. Asif, and A. Sabil, "Principle of Privacy in Islamic Architectural Design Context: A Systematic Literature Review," *International Journal of Academic Research in Business and Social Sciences,* vol. 13, no. 9, 2023, doi: 10.6007/ijarbss/v13-i9/18435

[2] L. Cazacova and B. Yapicioglu, "Residential Architecture: Evaluation of Tenants' Satisfaction in Private Culture," *WIT Transaction on Ecology and the Environment*, pp. 409, Southampton: WIT Press, 2021, doi: 10.2495/sc210341

[3] M. A. Yousif and A. A. Aziz, "An Evaluation of Visual Privacy Level in Residential Unit's Layouts in Khartoum, Sudan," *Journal of Islamic Architecture,* vol. 6, no. 4, pp. 349-359, 2021, doi: 10.18860/jia.v6i4.12201

[4] N. C. Idham, "Javanese Islamic Architecture: Adoption and Adaptation of Javanese and Hindu-Buddhist Cultures in Indonesia," *Journal of Architecture and Urbanism,* vol. 45, no. 1, pp. 9-18, 2021, doi: 10.3846/jau.2021.13709

[5] M. I. Hasan, B. N. Prabowo, and H. H. B. Mohidin, "An Architectural Review of Privacy Value in Traditional Indonesian Housings: Framework of Locality-Based on Islamic Architecture Design," *Journal of Design and Built Environment,* vol. 21, no. 1, pp. 21-28, 2021, doi: 10.22452/jdbe.vol21no1.3

[6] M. Abdelalim, "Impact of Urban Compactness, Architectural Form and Climatic Considerations: An Analysis in Traditional Islamic Buildings," *Iop Conference Series Earth and Environmental Science,* vol. 1056, no. 1, p. 012010, 2022, doi: 10.1088/1755-1315/1056/1/012010

[7] T. Anders, "Environmental Certifications in Architecture in Southeast Asia," *Journal of a Sustainable Global South,* vol. 8, no. 1, p. 24, 2024, doi: 10.24843/jsgs.2024.v08.i01.p04

[8] A. Azis, S. N. Amalina, and A. Azharotunnafi, "Islamic Historical Studies: The Beginning of the Emergence of Islam and the Development of Islamic Culture in Southeast Asia," *Riwayat Educational Journal of History and Humanities,* vol. 4, no. 2, pp. 117-125, 2021

[9] S. S. Khasraghi, "Glocalization Challenges and the Contemporary Architecture: Systematic Review of Common Global Indicators in Aga Khan Award's Winners," *Journal of Architecture and Urbanism,* vol. 47, no. 2, pp. 135-145, 2023, doi: 10.3846/jau.2023.17176

[10] P. Suryandari, "Islamic and Western Hybrid Symbols in Contemporary Mosque Architecture in Indonesia's Reform Era," *Journal of Islamic Architecture,* vol. 7, no. 4, pp. 690-698, 2023, doi: 10.18860/jia.v7i4.23104

[11] M. Loda, "Framing Planning and Conservation Activities in the Local Socio-Cultural Context: Ethnicity and Gender in Bamiyan," pp. 115-130, 2024, doi: 10.1007/978-3-031-54816-1_8

[12] A. Al-Malki, "The Impact of Globalization on the Revival of Innovative Housing Models in Doha, Qatar," *Journal of Infrastructure Policy and Development,* vol. 8, no. 4, p. 3052, 2024, doi: 10.24294/jipd.v8i4.3052

[13] A. S. Al-Mohannadi, R. Furlan, and M. D. Major, "A Cultural Heritage Framework for Preserving Qatari Vernacular Domestic Architecture," *Sustainability,* vol. 12, no. 18, p. 7295, 2020, doi: 10.3390/su12187295

[14] R. O. Lopes and N. b. M. Hasnan, "The Expression of Cultural Identity in Mosque Architecture in Brunei Darussalam," *Trans Trans -Regional and -National Studies of Southeast Asia,* vol. 10, no. 1, pp. 39-58, 2021, doi: 10.1017/trn.2021.13

[15] E. Zuraidi, I. Caisarina, and Z. Fuady, "The Islamic Public Space Concept in the Southeast Asia Region as a Friendly Urban Design and Planning Enlightening," *Iop Conference Series Earth and Environmental Science,* vol. 452, no. 1, p. 012146, 2020, doi: 10.1088/1755-1315/452/1/012146

[16] A.-M. El-Shorbagy, "Women in Islamic Architecture: Towards Acknowledging Their Role in the Development of Islamic Civilization," *Cogent Arts and Humanities,* vol. 7, no. 1, p. 1741984, 2020, doi: 10.1080/23311983.2020.1741984

[17] I. Ibrahim, K. A. Shomely, and F. Eltarabishi, "Sustainability Implications of Utilizing Islamic Geometric Patterns in Contemporary Designs, a Systematic Analysis," *Buildings,* vol. 13, no. 10, p. 2434, 2023, doi: 10.3390/buildings13102434

[18] W. Nurjayanti, "Historical, Philosophical, and Contextual Values in Al-Wustho Mangkunegaran Mosque, Surakarta," *Journal of Islamic Architecture,* vol. 7, no. 2, pp. 210-219, 2022, doi: 10.18860/jia.v7i2.15609

[19] Y. H. Wazeri, "Architecture in the Islamic Vision," *Journal of Islamic Architecture,* vol. 6, no. 1, pp. 1-6, 2020, doi: 10.18860/jia.v6i1.7867

[20] M. Ahsani, "The Sense of Unity in the Jameh Mosque of Varamin: A Geometric Analysis," *Journal of Islamic Architecture,* vol. 7, no. 3, pp. 371-377, 2023, doi: 10.18860/jia.v7i3.20945

[21] Z. Baydoun, "Placement Principles of Islamic Calligraphy in Architecture: Insights From the Al-Hambra and Al-Azem Palaces," *Buildings,* vol. 14, no. 7, p. 2025, 2024, doi: 10.3390/buildings14072025

[22] H. Aljawder and H. A. El-Wakeel, "Architecture and Privacy in Islam: An Analytical Review," 2022, doi: 10.2495/iha220101

[23] A. Bokhari, M. T. M. Hammad, and D. Beggas, "Impact of Islamic Values and Concepts in Architecture: A Case Study of Islamic Communities," 2020, doi: 10.2495/sdp200311

[24] A. A. Aliyu, "Influence of Islamic Architecture on Residential Structures in the Hausa Community," *Journal of Islamic Thought and Civilization,* vol. 13, no. 2, pp. 48-69, 2023, doi: 10.32350/jitc.132.04

[25] M. I. Hasan, "The Spatial Practices of Hospitality in Indonesian Islamic University Student Housing," *Journal of Islamic Architecture,* vol. 7, no. 4, pp. 680-689, 2023, doi: 10.18860/jia.v7i4.20894

[26] L. Fajariyah, "Exploring Islamic Vision on the Environmental Architecture of Traditional Javanese Landscape: Study of Thematic Tafseer Perspective," *Journal of Islamic Architecture,* vol. 7, no. 3, pp. 529-540, 2023, doi: 10.18860/jia.v7i3.17755

[27] R. Primanizar, "The Presence of Critical Regionalism in Contemporary Mosques in Indonesia," *Journal of Islamic Architecture,* vol. 8, no. 1, pp. 224-233, 2024, doi: 10.18860/jia.v8i1.17848

[28] M. A. Alfelali and J.-M. Garcia-Fuentes, "Growth of the Holy Mosque in Mecca and the First Legislation of Heritage Conservation in Saudi Arabia (1955–2010)," 2020, doi: 10.2495/iha200061

[29] B. Bardeesi, D. Muhrji, G. Gutub, H. Al-Ahdal, and A.-M. El-Shorbagy, "The Lost Identity of Jeddah," *Civil Engineering and Architecture,* vol. 10, no. 5, pp. 2180-2186, 2022, doi: 10.13189/cea.2022.100536

[30] A. Q. Ahmed, "The Effects of Modern Architecture on the Evolution of Mosques in Sulaymaniyah," *Buildings,* vol. 14, no. 11, p. 3697, 2024, doi: 10.3390/buildings14113697

[31] B. Yapicioglu and L. Cazacova, "Protective Architectural Features in Housing Design for Private Cultures," 2022, doi: 10.2495/iha220121

[32] H. Fijriah and E. Ellisa, "The Role of 'Ngalap Barokah' in Rapid Urban Development: Case Study of Tebuireng, Jombang," *Journal of Islamic Architecture,* vol. 7, no. 2, pp. 233-242, 2022, doi: 10.18860/jia.v7i2.16385

[33] d. mohamed, "Cairo: An Arab City Transforming From Islamic Urban Planning to Globalization," *Cities,* vol. 117, p. 103310, 2021, doi: 10.1016/j.cities.2021.103310

[34] M. S. Ferwari, R. S. Wadi, O. Ferwati, A. Keyvanfar, and A. Shafaghat, "Emerging Factors Shaping Identity of Indigenous Urbanism Concurrently Adopting Modernity in Qatar: The Application of Diffusion Theory," *Ace Arquitectura Ciudad Y Entorno,* vol. 14, no. 42, 2020, doi: 10.5821/ace.14.42.8362

[35] E. Nursanty, "Unveiling the Authenticity of Islamic Values: The Evolution and Transformation of Traditional Villages," *Journal of Islamic Architecture,* vol. 7, no. 4, pp. 595-612, 2023

[36] S. M. Sqour, M. Tarrad, R. A. Shawabkeh, and A. E. Labin, "Contribution of Society and Owners of Buildings in Conservation of Architectural Heritage in the Arab World. (Case Study: "Rawdat Sudair, Saudi Arabia")," *International Journal of Sustainable Development and Planning,* vol. 17, no. 1, pp. 127-133, 2022, doi: 10.18280/ijsdp.170112

[37] M. A. Kamal, "Islamic Principles as a Design Framework for Urban System: Environmental Concern and Sustainable Development," *Journal of Islamic Architecture,* vol. 7, no. 4, pp. 699-712, 2023, doi: 10.18860/jia.v7i4.21187

[38] E. S. Abowardah, "Islamic Contemporary Architecture as an Approach for Social Sustainability in the Urban Parks Development," *Journal of Islamic Architecture,* vol. 8, no. 2, pp. 469-486, 2024

[39] S. Omer, "A conceptual framework for sustainability in Islamic architecture: the significance of the islamic concepts of man and the environment," in *International Conference on Technology & Sustainability in the Built Environment, Riyadh, Saudi Arabia*, 2010.

[40] M. Al-Saffar, "Sustainable Urban Heritage: Assessing Baghdad's Historic Centre of Old Rusafa," *Architecture,* vol. 4, no. 3, pp. 571-593, 2024, doi: 10.3390/architecture4030030

[41] B. Wiryomartono, *Historical Mosques in Indonesia and the Malay World: Roots, Transformations, and Developments*. Springer Nature, 2023

[42] A. Rafe, "Exploring the Complexity of Pedestrian Dynamics: Impact of Societal Behaviors and Personal Attributes in Urban Environments," *Transportation Research Record Journal of the Transportation Research Board,* 2024, doi: 10.1177/03611981241260707

[43] T. Jaisuda, "Unveiling the Intricate Tapestry: Malay (Melayu) Wood Carving Patterns of Southern Thailand as Reflections of Muslim Cultural Identity," *International Journal of Islamic Thought,* vol. 26, pp. 146-156, 2024.

[44] A. H. Taki and H. G. K. Kumari, "Examining Mashrabiya's Impact on Energy Efficiency and Cultural Aspects in Saudi Arabia," *Sustainability,* vol. 15, no. 13, p. 10131, 2023

[45] H. Aljawder and H. A. El-Wakeel, "Evaluating the Performance of a Daylighting Traditional Device, the Mashrabiya, in Clear Sky Conditions: Case Study of a Traditional Bahraini House," 2019, doi: 10.2495/str190341

[46] M. Ahsani, "The Relationship Between Islamic Principles and Architectural Sacredness in Islam," *Journal of Islamic Architecture,* vol. 8, no. 2, pp. 530-544, 2024, doi: 10.18860/jia.v8i2.23918.