

Experiential Intelligence & Cultural Regeneration: Understanding the Experience of Manama Through a Human-Centered Urban Inquiry

Lana Mohamad Youssef Ashkar, Amena Nayal Rashed Mukred &
Dr. Hawraa Alshaik

University of Bahrain, Bahrain

20155585@Stu.uob.edu.bh; 202501377@Stu.uob.edu.bh

halshaik@uob.edu.bh

Received	Accepted	Published
22.05.2026	25.06.2026	30.06.2026

<https://doi.org/10.61275/ATej-2026-3-2-1>

Abstract

Physical spaces in which people dwell in cities in close proximity, are emotionally charged and for this reason, it is possible to experience an urban terrain as a spatial topography. Manama, the capital city in Bahrain is no exception. It has numerous culturally rich, historically significant spaces and places which produce the everyday experiences and experiential intelligence of its residents, defined as the design approach that takes into account emotional, sensory, and cultural aspects. In this context, this paper examines the experiential and psychological aspects of the heritage route in Manama by exploring six significant spaces: Bab Al Bahrain, Manama Souq, Khalaf House, Mo'min Mosque, Sacred Heart Church, and the Hindu Temple. It examines the relationship between cultural identity, movement legibility, sensory experience, and emotional atmosphere in shaping the perception of urban space.

The research employs qualitative interviews, sensory mapping, and comparative evaluation. It is divided into four phases: route mapping, field documentation, analytical interpretation, and design simulation. These phases collectively offer a holistic perspective to the heritage route of Manama explored from an experiential intelligence and cultural renewal point of view. The findings show that religious and heritage anchors have the highest cultural and emotional connections, and that civic and commercial spaces offer less qualities related to symbolic identity and intimacy. Souq provide the most sensory stimulation without spatial connectedness, while Bab Al Bahrain and the mosque offer clarity and orientation. Khalaf House is experienced as a place of memory, of comfort and familiarity, reinforcing the psychological connection between space and memory.

The research concludes that experiential intelligence can be used to promote sustainable urban regeneration. The study incorporates aspects of community engagement and spatial analysis to suggest interventions that will increase comfort, legibility, and cultural continuity, making Manama a benchmark for human-centered heritage revitalization in the Gulf region.

Keywords: Cultural Identity, Emotional Atmosphere, Experiential Intelligence, Human-Centered Design, Manama Heritage Route, Sensory Urbanism, Spatial Legibility, Urban Regeneration, Manama, Bahrain

Introduction

Cities are not merely physical structures; they comprise emotional topographies experienced by people, representing memories, identity, rituals, and belonging. Amid rapid technological progress and the creation of smart cities, a significant question arises: are our cities becoming technologically efficient while being experientially poor?

Manama, the capital city in Bahrain represents such a situation and comprises a highly pronounced emotional topography. It has numerous culturally rich, historically significant spaces and places which have produced significant everyday experiences and experiential intelligence of its residents throughout the past and continues to do so. It has cultivated experiential intelligence defined as an approach to the production of the built-environment arising from strong emotional, sensory, and cultural occurrences. In this context, this paper examines the experiential and psychological aspects of the heritage route in Manama.

Its aim is to create knowledge about the ways of experiencing the urban spaces in Manama. Its objectives are:

1. To identify how the characteristics of heritage precincts contribute to construct urban experience of Manama.
2. To identify the way in which emotional well-being, perceptual clarity, and cultural sustainability of Manama can be improved.
3. To produce a set of principles for planned interventions to support urban experiential intelligence, and human-centered urban regeneration.

Theoretical Framework and Review of Literature

The theoretical basis of this inquiry employs theories of experiential urbanism, as well as Bahrain-specific studies, to frame the investigation. Indeed, it is based on the seminal works on spatial psychology and experience-based urbanism. In this connection, Lynch (1960) emphasizes the significance of perceptual legibility in which everybody navigates and feels emotionally attached to cities through their paths, edges, districts, nodes, and landmarks. Gehl (2010) builds on this by arguing in favor of human-oriented urbanism, focusing on the need to experience cities through people, sensuality, and sociality as key elements in the development of cities that are people-oriented. Equally, Norberg-Schulz (1980) brings up the concept of *genius loci*, or spirit of place, and stipulates that to maintain authenticity of city life, architecture should be used to show cultural identity and memory. These views are directly in line with the project demand of evaluating emotional spaces, sensorial planes, and cultural intelligence of the urban landscape of Manama.

Besides, phenomenological methods emphasize the experience of urban space. Bachelard (1994) reminds us that we do not only live in places, but memories, dreams, and expectations as well, where urban inquiry is placed in the category of lived imagination and emotional resonance. Pallasmaa (2005) also laments the overpowering influence of the visual sense in design and suggests a multisensory perception of the role of architecture that embraces sense of touch, sound, and feel. Collectively, these concepts offer a prism through which this research can examine Manama as a cultural and psychological landscape, and not just a functional city.

Indeed, a city is not just a practical environment; According to Bachelard (1994), it is a place to live, and a place to experience. Since it has memory, identity, ritual, and a sense of belonging. With the arrival of smart cities, researchers have begun to think that technological efficiency has the potential to create urban spaces where touching spatial experience can become irrelevant, forgotten and thus decline. This is indeed a misplaced view.

Experiential Urbanism and Spatial Psychology

Experiential urbanism stresses the idea that cities can no longer be seen as physical infrastructure, but as lived environments, which use perceptions, memories, and emotions to shape them. Lynch (1960) introduced the concept of perceptual legibility through the paths, edges, districts, nodes, and landmarks to investigate the experiential dimensions of cities. Manama, Bab Al-Bahrain, and the Souk are some examples of landmarks; they are cognitive anchors that assist the inhabitants and visitors in navigating the dense urbanity. The framework developed by Lynch is especially applicable in recording the manner in which people explore the pre-established paths in this project, which indicates the presence of both coherent and fragmented transitions.

Adding to this, Gehl (2010) argues that cities should be people-friendly. His anthropocentric view emphasizes the experience of the pedestrians, sensorial richness, and possibilities to socialize. In Bahrain, where the urban development rates have been based on cars and high-rise constructions, what is practiced is opposite to what Gehl offers. While Gehl (2020) implies that the quality of experience relies on the possibility to walk, shadowed routes, and areas where people can experience other cultures, Manama does the opposite. This is in tune with the underscoring of this project on spatial emotional areas and movement behavior, particularly on such streets as Isa AlKabeer Avenue, where there is an overlap between pedestrian traffic and business.

Indeed, Pallasmaa (2005) criticizes the prevalence of vision in architectural design by saying that multisensory interactions, which includes touch, sound, smell, and atmosphere, is key to the psychological health of people. His point of view is important in the analysis of the sensory layers of Manama. Undeniably, the auditory experience of the Souk, the feel of the coral stone walls, lights and the shadow effects in the small alleys, are all part of the experience of the city. Sadly, these aspects of sensoriality are normally disregarded in technology-oriented urban planning, but they form the core of why people have a sense of belonging or displacement in particular spaces.

In fact, other phenomenological approaches also add more to this framing. Bachelard (1994) makes us remember that we are not only in places, but also in memories, dreams, and expectations, and that city inquiry is therefore placed in the area of lived imagination. This is manifested in Bahrain in the way historic districts in the country bring up collective memories, with new developments at times creating a sense of placelessness. The concept of placelessness by Relph (1976) also cautions that homogenization kills the cultural uniqueness, which is replicated in the Bahraini academia. As an example, Alalawi (2026) records the loss of such vernacular features as wind towers and shaded courtyards to the stresses of globalization design, which brings the issue of experiential authenticity into question.

Indeed, local research supports the role of spatial psychology in the context of urban Bahrain. In this regard, Mohamed and Allani (2024) demonstrate that spatial design is directly connected to lived experience because movement patterns in the retail districts directly affect social sustainability. Al-Madani (2022) also examines the experiences of migrants in the daily life of Bahrain in its society, showing how superdiversity determines belonging and identity. Such findings indicate that the experience of living in Manama cannot be separated from the cultural plurality and demographic heterogeneity. Different communities have varying experiences of emotional atmospheres, clarity in perceptions, and richness of sensory experiences that render spatial psychology a very vital prism of inclusive urban regeneration.

Spirit of Place and Cultural Identity

The notion of *genius loci* or spirit of place, as presented by Norberg-Schulz (1980), makes it clear that the true identity of a given culture and its memory should be embodied in architecture and urban design to achieve authenticity. As he points out, cities are not apolitical spaces; they are cultural landscapes in which the spaces, materiality, and rituals are used to give expressions to identity. Once such a spirit of place is washed away, urban spaces become placeless, a phenomenon that Relph (1976) cautions in his homogenization and alienation analysis of contemporary cities,

Notably, this is especially observable in Bahrain, where the conflict between the need to retain local culture and the need to adopt globalized urban aesthetics is evident. Vernacular architecture of Manama and Muharraq have been previously characterized by traditional elements like wind towers, coral stone facades, and shaded courtyards. Nevertheless, Alalawi (2026) records how these characteristics are gradually being substituted with glass facades and imported design languages, which provoke questions regarding the sustainability of cultures. Likewise, Alfadhel and Elghonaimy (2025) note that high-rise constructions in Manama frequently adhere to international styles, which remove the unique impressions of the city and destroys the feeling of belonging to it.

In fact, cultural plurality of Bahrain is also connected with its spirit of place. In this connection, Al-Madani (2022) investigates the experiences of migrant communities in Manama with regard to the experiences of the public spaces, which indicate that identity and sense of belonging are negotiated among various cultural groups. It is an indication of the reality of Bahraini superdiversity in cities, as mosques, temples, and churches are located in the same districts and construct a unique cultural configuration. This plurality helps in the enhancement of spirit of place, but it requires proper design approaches to prevent homogenization and exclusion.

The interventions needed in experiential urbanism should thus have the capacity to reinforce cultural identity and yet cater to the modern requirements. It is important to save historic landmarks like Bab Al-Bahrain and the Souk because of their architectural worth, but also because of their emotional and cultural significance. Meanwhile, regenerative plans should bring cultural sustainability into the new developments so that the future urban identity of Manama is placed on its background and experienced diversity.

Sensory and Social Dimensions

In fact, it is impossible to formulate experiential intelligence in cities without reference to the sensory and social strata that define day-to-day life. Pallasmaa (2005) is critical of the predominance of vision in design because architecture should employ all the senses to help create a psychological well-being: sound, touch, smell, and atmosphere. This can be seen in the sound environment of the Souk in Manama, where the call to prayer, market chatter, and traffic noise mix in a peculiar auditory experience. Additional sensorial attributes of coral stone walls, wood lattice, and shaded courtyards give the city a fixed tactile identity, and changes in light and climate affect the manner in which spaces are seen and lived in throughout the seasons.

In fact, the significance of sensory dimensions is supported by the Bahrain scholarship. For example, Mohamed and Allani (2024) establish the significance of the movement patterns in the retail districts directly affecting social sustainability by displaying that spatial design has an impact not only on circulation but also on the opportunities of interactions and cultural encounter. Al-Madani (2022) sheds light on the differences between how migrant communities perceive a space, showing that sensory atmospheres, whether it is a busy market or a silent mosque, may include or

exclude them. These results highlight the fact that sensory environments are not objective; they are closely related to social identity and inclusion.

Patterns of social interactions are also essential. Gehl (2010) points out that urban design that gives priority to the people must ensure that there are spaces where people can meet, hang out, and interact. In Bahrain, examples of this principle is usually seen in the form of the public squares that surround Bab Al-Bahrain and Isa Al-Kabeer Avenue and serve as the meeting points of different communities. However, the trend has been interrupted by fast modernization that substitutes intimate courtyards and shaded alleyways with extensive roads of vehicles that reduce chances of social interactions. This anxiety points to the necessity of regenerative suggestions that render sensory density and social energy.

Urban Context of Bahrain

To sum up, the urban environment of Bahrain is a multifaceted and multifactorial subject of experiential investigation. Efforts to modernize Manama swiftly have given rise to such iconic skylines as the Bahrain World Trade Center, which symbolizes a technological ambition and global connection (Suvana and Allani, 2023). However, this metamorphosis tends to destabilize the sensorial quality of the city, casting doubts on cultural sustainability and the quality of perception. The traditional vernacular wind towers, coral stone fronts, shaded courtyards, and others used to reflect the genius loci of the settlements in Bahrain, but research demonstrates that they are being progressively substituted by internationalized glass facades and imported aesthetics (Alalawi, 2026; Alfadhel and Elghonaimy, 2025). Such a change poses a threat of creating placelessness that Relph (1976) had warned of homogenization destroying identity.

Meanwhile, cultural plurality adds to the urban identity of Bahrain. Al-Madani (2022) puts a strong emphasis on the fact that the migrant communities bargain for sense of belonging in the public, whereas Mohamed and Allani (2024) show that the pattern of movements in the retail districts has a direct impact on social sustainability. Such observations underscore the different experiences of sensory atmospheres and social interactions in Manama based on different communities, and inclusivity is one of the critical aspects of experiential intelligence.

The interactions between memory and modernization in the co-existence of historic Bab Al-Bahrain and the Souk with the high-rise development is a symbol of the conflict between the two. Shown by al-Ghatam (2024), the villages that have been absorbed by Manama and Muharraq still have spatial patterns that still affect identity and belonging, thus indicating the existence of cultural memory in urban transformation. Together, these conceptual ideas produce the theoretical framework that buttress this investigation of experiential intelligence and cultural regeneration, re-imagining Manama through a human-centered urban inquiry.

Research Methodology

The research examines Manama as an architectural experience, rather than an entity of planning. It captures the experience of residing in urban spaces, interpret emotional and psychological aspects of spaces, and initiate regenerative, culturally intelligent interventions that could enhance identity and wellness.

It employs a research methodology that comprises a combination of three methods: spatial documentation, experiential analysis, and regenerative design. Implementation of the research is divided into four phases as follows.

1. Route mapping,
2. field documentation,
3. analytical interpretation, and
4. design simulation.

These phases collectively offer a holistic perspective to the heritage route of Manama explored from an experiential intelligence and cultural renewal point of view.

Route Mapping and Spatial Framework

The research begins by identifying a set of pre-defined landmarks in Manama, which represent heritage, and religious, commercial, and cultural sites. They are as follows.

- Bab Al Bahrain,
- the Souq,
- Khalaf House,
- the Hindu Temple,
- Sacred Heart Church, and the
- Mo'min Mosque.

The framework proposed by Lynch (1960) comprised of paths, nodes, landmarks, edges and districts is used to organise the route to analyse perceptual legibility, orientation, and identity spaces. Maps were annotated to accomplish visualization of circulation, threshold, and cultural clusters. The defined Manama route is an overlaying urban adventure, making its way through heritage, religious, and commercial areas.

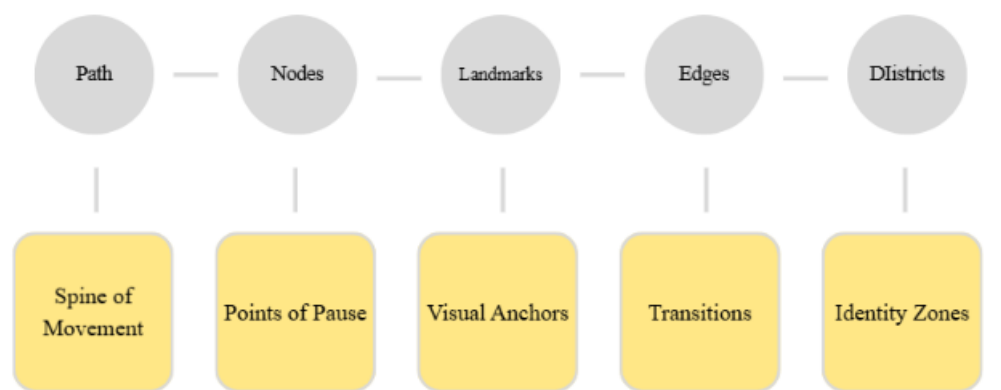


Fig. 1: Theory of Kevin Lynch Applied to the Path
Source: Authors

- **Path (Spine of Movement):** The connecting alleys and the souq streets are the main circulation routes. This is a dense, informal, and sensuous movement between small corridors and open squares.
- **Nodes (Points of Pause):** Major stop points like Bab Al Bahrain, Sacred Heart Church, Mo'min Mosque, and the Hindu Temple serve as decision-making points where movement is slowed, and social interaction is heightened.
- **Landmarks (Visual Anchors):** Landmarks such as Khalaf House and Bab Al Bahrain can be used as an orientation and memory aid, organizing the way users form a mental map of the city.
- **Edges (Transitions):** Perceptual boundaries that change comfort and awareness are marked by shifts between shaded arcades to sunlit streets or enclosed alleys to open squares.

- **Districts (Zones of Identity):** The route crosses the cultural groupings of religious, commercial, and heritage that possess their own emotional atmosphere and sense of their own identity.

Annotated Maps

The annotated map in visual terms transfers the findings interpreted on the basis of the theoretical model (Lynch,1960) to the reality of the lived experiences of the Manama route. The map, by identifying tracks, nodes, features, connections, and areas, is not merely a geographical image, but a diagram of the experience of the movement and being.

The red line of the path is the spine of the circulation between souq streets and connecting alleys, and the nodes Bab Al Bahrain, Sacred Heart Church, Mo'min Mosque, and the Hindu Temple are emphasized as the points of rest and choices. Visual landmarks such as Khalaf House and Bab Al Bahrain are used to organize the orientation and recollection. Perceptual thresholds are also annotated on the edges, indicating where changes in light, enclosure, and activities take place and changing the feeling of comfort and clarity.

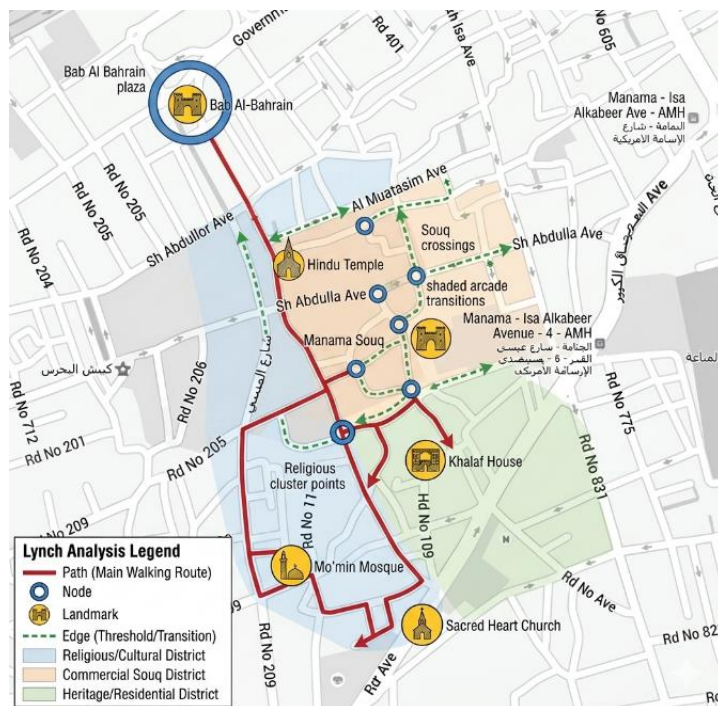


Fig. 2: Determined Route in Urban Manama for the analysis

Source: Authors

Finally, the districts, religious, commercial, and heritage, are stipulated to demonstrate areas of identity and ambience. There is uneven perceptual legibility along the route: They are high in areas where landmarks and nodes can be seen, and low in broken alleys. Navigation is constructed by the users in a stratified interpretation of sensory information, cultural points of reference, and spatial boundaries, not a visual map.

Documentation and Interviews in the Field

To gather experiential knowledge, direct observations, sensory mapping, and semi-structured interviews with residents, shopkeepers, and worshippers were conducted. Focus on documentation around emotional atmospheres (belonging, safety, ritual, alienation), sensory conditions (sound, light, texture, social behavior),

and cultural intelligence layers (identity, diversity, memory). Qualitative input from interviews provided a deeper understanding of how the community perceived safety, how the community navigates, and opportunities for pause and reflection.

Methods of Analysis

Analytical Interpretation

The recorded results were analyzed using the concepts of spatial psychology and phenomenology. Emotional mapping was used to see where the calm and the stress, belonging and alienation lie. Acoustic, tactile, and visual contrasts, using sensory overlays. The cultural intelligence reflections explored the negotiation of identity and diversity in the intersections of religious and business interests. These analyses were combined into layers of diagrams to show experiential strengths and weaknesses along the way.

Visualization and Regenerative Design with the the Aid of AI

Artificial intelligence tools were used to create graphic overlays to represent gradients of emotions, contrasts in sensations, and possible improvements. These visualizations were used to create regenerative proposals such as pedestrian-only corridors, culturally inspired self-navigation systems, and shaded “jalsa” gathering nodes. The proposals were brought in line with community feedback to ensure cultural sensitivity and experiential authenticity.

This methodology combines the four elements of spatial mapping, qualitative interviews, sensory documentation, and the simulation with AI to create a comprehensive approach for the re-imagining of the heritage route in Manama. It ensures that regeneration design proposals are based on lived experience, cultural identity, and psychological well-being, and situates the study within a wider debate about human-centered urban regeneration.

Findings and Analysis

Field investigations took place in the Manama heritage route, which includes various anchors, including Bab Al Bahrain, Souq, Khalaf House, Hindu Temple, Sacred Heart Church, and Mo'min Mosque. All the emotional atmospheres, sensory conditions, and cultural identity layers were documented through a structured framework of documentation. To capture both visual and experiential qualities, data collection included annotated maps, observational notes, photographs, and transcriptions of interviews. Systematically, a sensory overlay (aural, visual, tactile, and social), as well as layers of cultural reflections (identity, diversity, and memory), were mapped. This multimodal approach resulted in a detailed, holistic document of the ways in which the route is used, experienced, by the people and serves as the ground for analytical interpretation and a regenerative proposal.

Findings from Spatial Documentation: Analytical Interpretations.

Bab Al Bahrain

i. Route Analysis

Spatial Behaviour

Bab Al Bahrain is a civic entry point and a marker on the periphery of the Manama Souq. Its curved walkway and open front make a powerful visual point of reference, and the parting between the contemporary civic streets and the ancient market space. The size and symmetry of the building underline the fact that it is a threshold space, which unites commercial, governmental, and cultural areas.



Fig. 3: Annotated Map of Bab Al Bahrain
Source: Authors

Movement & User Patterns

Circulation around Bab Al Bahrain is stratified; the traffic moves in a circle around the roundabout, and people walk in a path towards the arch and into the souq. These green direction lines and signs help enhance the purpose of a navigational landmark. There is a linear and symbolic movement across the arch, which takes visitors across civic plazas and into the crowded retail streets. There is an overlap of the patterns of use: commuters and tourists pass by on their way to the souq, and locals use the frontage as a meeting place. The threshold itself is made into a pause zone where the daily flows are slowed down, which further supports making Bab Al Bahrain a connector and a civic gathering place.

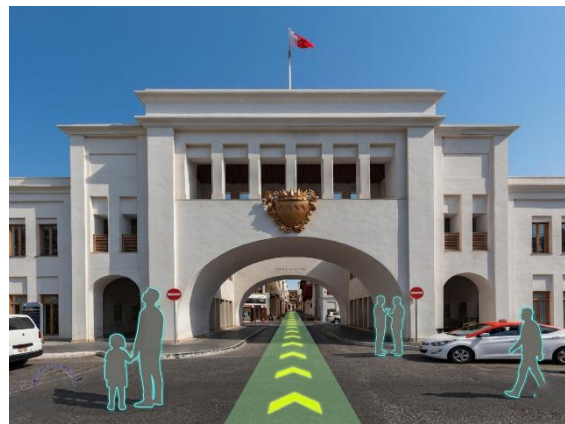


Fig. 4: Bab Al Bahrain Pedestrian Movements & Pattern
Source: Authors

Emotional Analysis

Bab Al Bahrain has an emotional complexity in that it is an important civic marker and a point of civic reference. These roles create both positive and negative emotional experiences through feelings of community, stress, and alienation.

- **Belonging:** As a symbol of community, Bab Al Bahrain serves as an orientation point in the civic identity of the local community. Its monumental form can enhance community cultural memory and give people a sense of belonging to the place they live and are visiting. Its location acts as a meeting point for the diverse communities that share a heritage.

- **Stress:** Bab Al Bahrain acts both as a hub for transitional and commercial activity and thus creates a high degree of congestion and overwhelming sensory experience for many people. Regular high volumes of vehicles, pedestrian, and market activity create high levels of emotional stress for many people who visit or live in this area and limit the opportunity to stop and experience a moment of reflection.
- **Alienation:** The monumental façade of Bab Al Bahrain creates a highly significant visual marker but can sometimes feel more like a corridor or passage than a gathering place. The size and nature of the architectural form may cause some visitors to feel a lack of cultural connection to the place, and most likely perceive an opportunity for social inclusion or belonging.

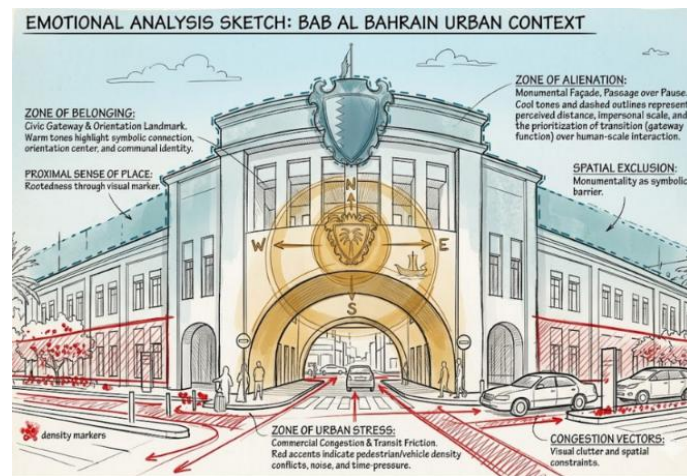


Fig. 5: Bab Al Bahrain's Emotional Analysis Sketch Overlay
Authors, AI Tool Assisted)

Through the interplay of identity and urban pressures, Bab Al Bahrain portrays a complex duality of being both a landmark of identity and a place where the community can experience the pressures of urbanization. Emotional experience at this site has many dimensions, as Bab Al Bahrain represents both the pride of the community and the pressure of accessing the community.

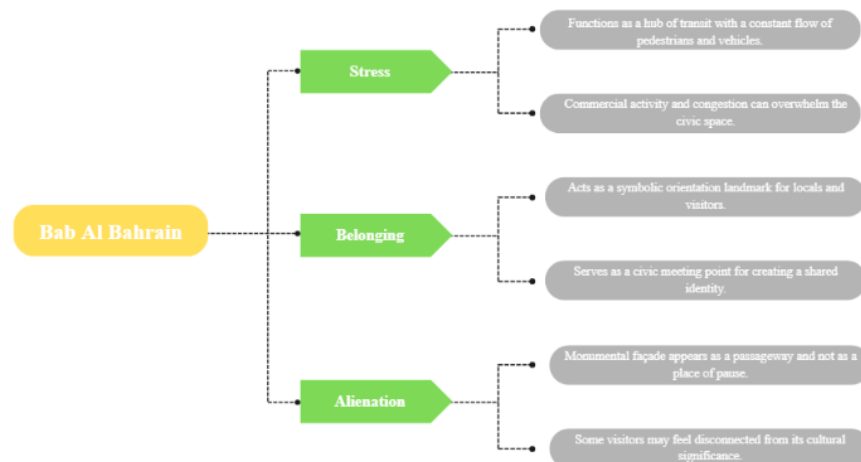


Fig. 6: Bab Al Bahrain Emotional atmosphere Analysis Chart
Source: Authors

Sensory Documentation and Interpretation

Emotional Atmosphere

- The primary feeling is symbolic, transitional, and a civic identity.
- It acts like a gateway between the past and present.
- Its atmosphere is legible, open, and engages the public.

Sound Mapping

- Sounds of the urban noise are dominant, but less dense than the Souq.
- Open space allows the sound to disperse and not focus on one area.
- Public activity and gathering sounds are occasional.

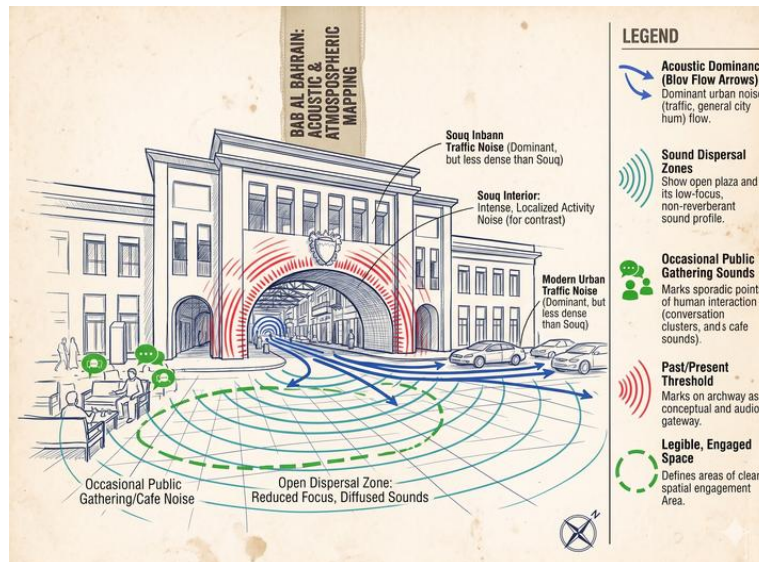


Fig. 7: Bab Al Bahrain's Sound Mapping Sketch Overlay
Source: Authors, AI Tool Assisted

Light Mapping

- The place is highly exposed to daylight due to the open environment
- Clear visual orientation and visibility
- Enhances legibility and spatial clarity

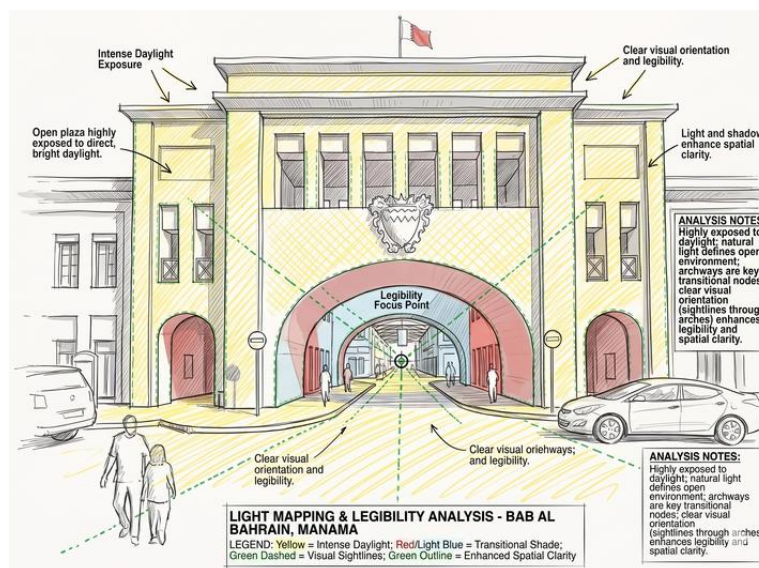


Fig. 8: Bab Al Bahrain's Light Mapping Sketch Overlay
Authors, AI Tool Assisted

Texture Mapping

- Surfaces are clean and restored, and some are restructured
- Reflects heritage and institutional character
- Surfaces are less dense than the souq; materials are more in order here

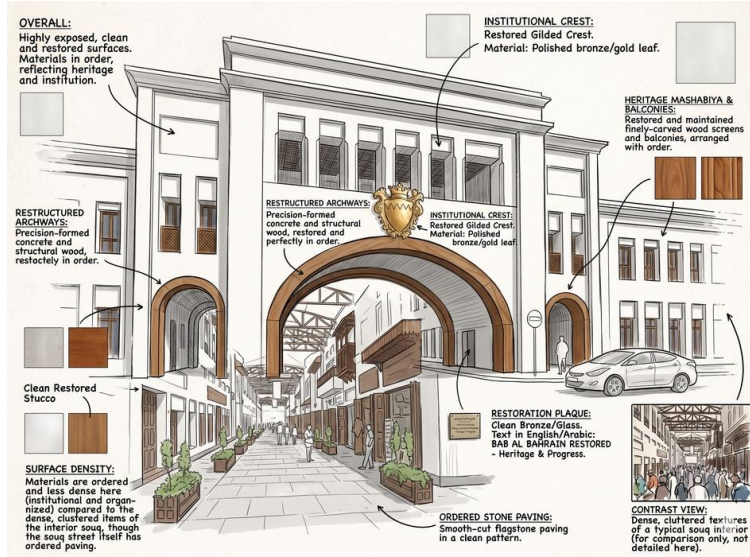


Fig. 9: Bab Al Bahrain's Textures Mapping Sketch Overlay
Source: Authors, AI Tool Assisted)

Social Behavior Mapping

- Movement is linear, transitional, and directional
- Space is used for meeting, passing through, and waiting for a pick-up (taxis)
- Social behavior is open, less intense, and lighter

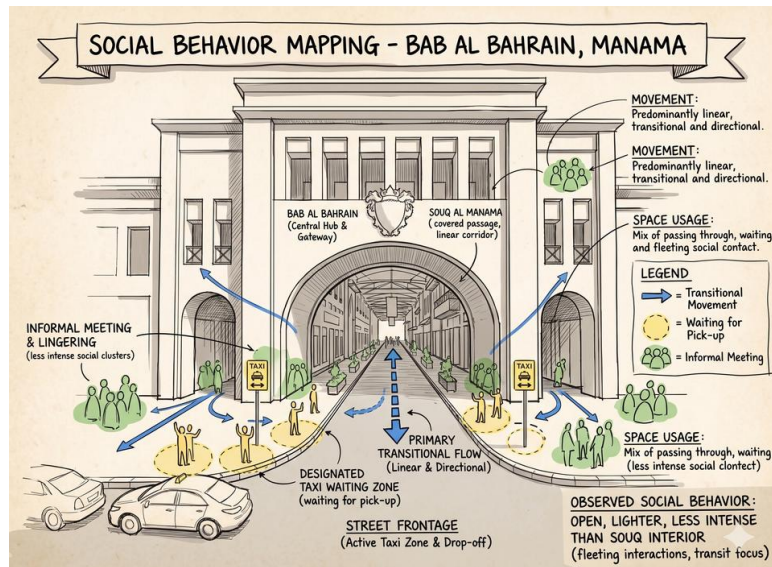


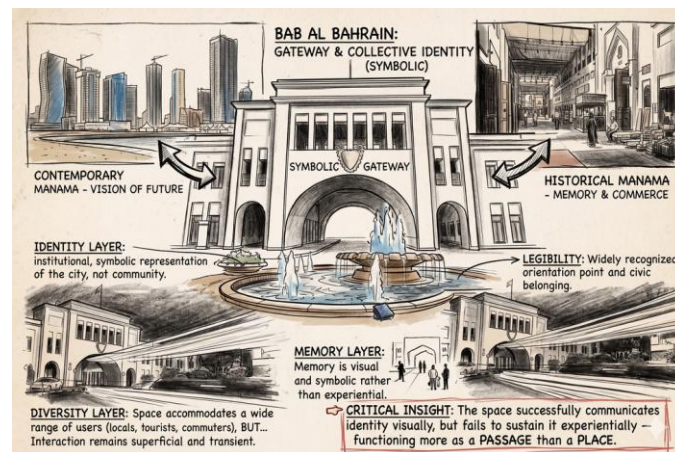
Fig. 10: Bab Al Bahrain's Social Behavior Mapping Sketch Overlay
Source: Authors, AI Tool Assisted

ii. Cultural Intelligence Reflection

Cultural Reflection is divided into three layers: Identity, Diversity, and Memory. Bab al Bahrain functions as a symbolic representation of the collective identity; it acts as a gateway between contemporary and historical Manama. It is very legible and recognized nationwide as a point of orientation and civic belonging.

- Identity Layer
- Identity in this context is symbolic and institutional; it represents the city rather than individuals or communities.
- Diversity Layer
- This space accommodates many users from various backgrounds, like tourists, locals, and shopowners, but the interaction is transient and superficial.
- Memory Layer
- Memory in this layer is visual and symbolic rather than experiential; people recognize it but do not engage with it on a deeper level.

However, the place communicates visual identity successfully but does not sustain it experientially.



F

Fig. 11: Cultural Intelligence Reflection Sketch Overlay of Bab Al Bahrain's

Source: By Authors, AI Tool Assisted

a. Manama Souq Route Analysis

Spatial Behaviour

The souq is a tight trading fabric constituted of winding pedestrian lanes flanked by shopping establishments. Its spatial structure focuses on boundary-making and continuity with the shopfronts and signage forming a repetitive pattern of thresholds. The souq serves as a civic anchor, connecting Bab Al Bahrain with the past and sacred places, and as a buffer between civic plazas and occult ritual spaces.

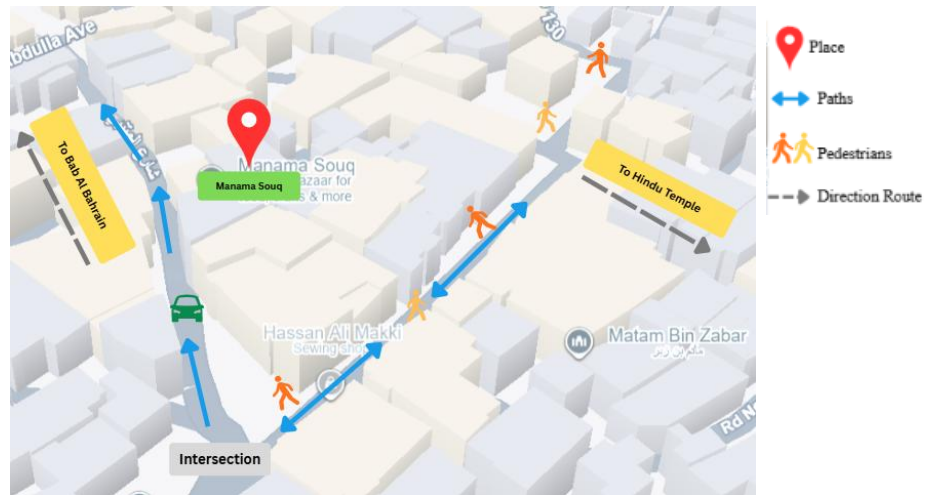


Fig. 12: Annotated map of Manama Souq
Source: Authors

Movement & User Patterns

The pedestrian flow is very dynamic, starting at Bab Al Bahrain and spreading into various alleys to the Hindu Temple and the other locations. The flow is linear along the major lines, but discontinuous on a sideways lane, in accordance with the type of retail and social life. User behavior overlaps: customers can window-shop, traders meet shoppers at the front, and tourists find their way to cultural attractions. The tight corridors multiply the encounters and result in unceasing negotiations of spaces in standing, walking, and pausing behaviours. Signage and directed paths are used to reinforce the directional flows, but informal circulation is prevalent, and this is an organic development of the souq.



Fig. 13: Pedestrian Movements & Pattern of the Manama Souq
Source: Authors

i. Emotional Analysis

Manama Souq has a continuously changing, emotionally rich environment that balances stress, belongingness, and alienation.

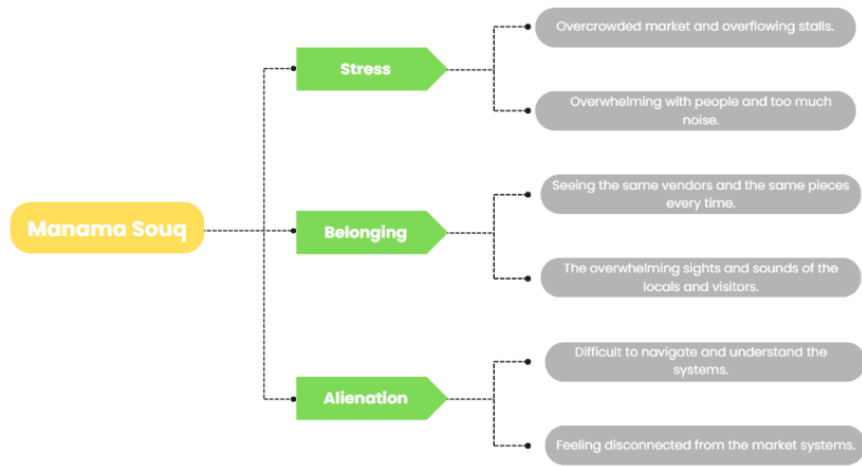


Fig. 15: Analysis Chart of Emotional Atmosphere - Manama Souq
Source: Authors

ii. Sensory Documentation and Interpretation

Emotional Atmosphere:

- Primary feeling is intense, vibrant, and overstimulating.
- Strong sense of cultural diversity and activity.
- Atmosphere shifts between excitement and sensory overload.

Sound Mapping:

- Sound outside is of traffic, voices of people chattering, footsteps, and car honks.
- A high-intensity sound environment is persistent.
- A dynamic but chaotic acoustic condition is created.

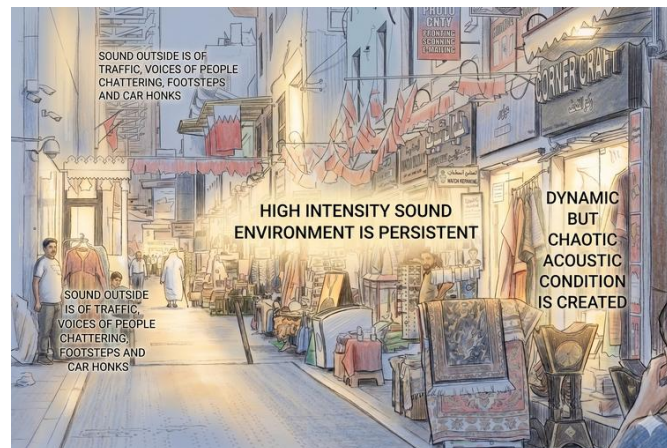


Fig. 16. Manama Souq Sound Mapping Sketch Overlay
Source: Authors, AI Tool Assisted

Light Mapping:

- Light is fragmented due to shaded pathways and bright openings.
- Mix of artificial shop lighting and natural lighting.
- Produces a layered perception and visual contrast.



Fig. 17: Light Mapping Sketch Overlay- Manama Souq

Source: By Authors, AI Tool Assisted

Texture Mapping

- Combination of textiles, aged surfaces, concrete, pavements, and goods sold.
- High visual and tactile dense environment.
- Reflects the cultural layering and informality of the souq.

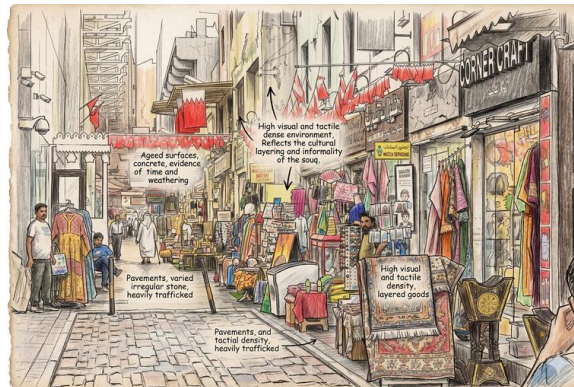


Fig. 18:Textures Mapping Sketch Overlay - Manama Souq

Source: Authors, AI Tool Assisted

Social Behavior Mapping

- Movement is slow, non-linear, and congested.
- Users engage in social engagement, interaction, and informal exchange.



Fig. 19: Social Behavior Mapping Sketch Overlay - Manama Souq

Source: Authors, AI Tool Assisted)

iii. Cultural Intelligence Reflection

Cultural Reflection is divided into three layers: Identity, Diversity, and Memory. Manama Souq is one of the most culturally layered and interactive spaces along the route, as social interactions, movements, rituals, and daily commerce take place all at once. The busy market fabric creates an atmosphere of cultural intimacy, family vendors and interactions, sensory richness, and encounters that contribute to a strong sense of urban identity.

- **Identity Layer:**

Identity in the souq is built by the everyday social practices that occur rather than a monumental display of architecture. Negotiation, commerce, and interaction amongst individuals create a sense of cultural evolution and belonging that is tied to the collective life of the Souq.

- **Diversity Layer:**

The souq is clearly the strongest condition of cultural collectivity within the route. Tourists, locals, worshippers, and traders all occupy the same place simultaneously, creating a multi-layered social experience.

- **Memory Layer:**

Memory in the souq is both experiential and sensorial. Sounds of trading, the smell of food and spaces, over-crowded routes, and the repetitive rituals of the market create that strong memory tie to the atmosphere of the place rather than the physical form of that place.

Finally, the souq creates a powerful expression of cultural diversity and urban life within its spatial layout and sensory intensity that transforms the richness into confusion for some of the unfamiliar users.



Fig. 20: Cultural Intelligence Reflection Sketch Overlay - Manama Souq
By Authors, AI Tool Assisted)

b. Hindu Temple Route Analysis

Spatial Behaviour

The temple is situated deep into the thick commercial weave of the Manama Souq, and is encircled by jewelry stores, restaurants, and civil soft landings. Its exterior and ornamental surfaces serve as a visual indication, separating the sacred space from the retail space around it. The small size of the land forms a stratified interchange between the open street life and the closed ritual spaces.



Fig. 21: Annotated map of the Hindu Temple
Source: Authors

Movement & User Patterns

The flow of pedestrians is formed by various informal approaches in the souq, which meet at the temple. The Bab Al Bahrain Avenue is the main axis that establishes the line between the civic and sacred space. Circulation inside is cyclic and ritualistic; the worshippers proceed through the mandapa halls and finally arrive at the Garbhagriha. The movement of the exiting is re-united with the dynamic rhythm of the pedestrian flow in the souq, the ritual movement of the procession, and the daily movement of the urbanity.



Fig. 22::Pedestrian Movements & Pattern - Hindu Temple
Source: Authors

i. Emotional Analysis

A strong emotional setting is created by the Hindu Temple through belonging, security, and ritual.

- **Belonging:** The temple is located within the Manama Souq, where worshippers, vendors and visitors share spaces in common. The physical placement of these groups together reinforces cultural pluralism and reinforces a communal sense of identity.
- **Security:** Within the sanctum and the assembly halls, the thresholds and rhythmic patterns of architectural elements create a protective enclosure. These spatial attributes create an atmosphere of respectfulness and shared security between the worshippers, who feel protected from the urban density around them.
- **Ritual:** The overall movement within the temple space is a cyclical journey from the mandapa halls to the Garbhagriha. Throughout this journey, participants experience an array of sensory stimuli such as incense, chanting, and flickering lamps as part of their spiritual practice.

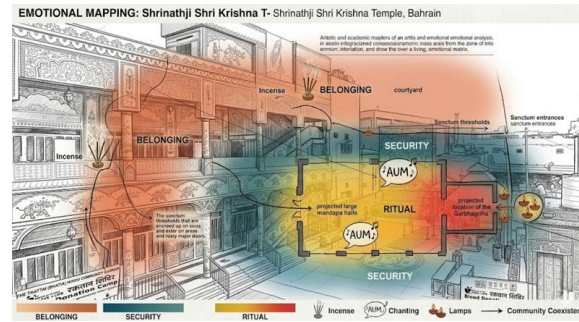


Fig. 23: Emotional Analysis Sketch Overlay -Hindu Temple

Source: Authors, AI Tool Assisted

Together, these elements create the temple as an open yet sacred anchor; IN other words, that is, a location in which the routine of city life intersects with the profundity of ritual. The emotional environment of the temple is constantly changing as it is influenced by commerce, devotion, and cultural coexistence, thus acting as a central point of experiential intelligence along the route.

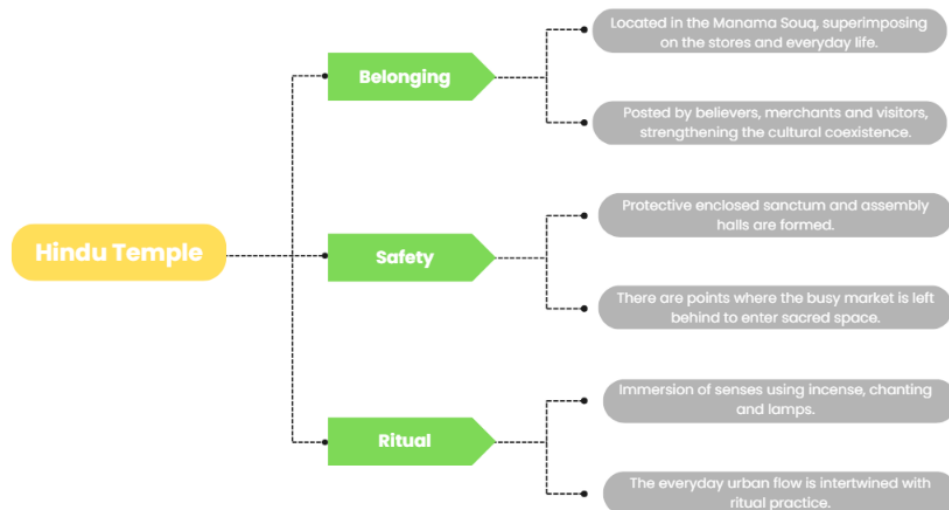


Fig. 24: Emotional Atmosphere Analysis Chart - Hindu Temple

Source: Authors

ii. Sensory Documentation and Interpretation

The area of the Temple acts like a sensory threshold existing in the dense commercial urban fabric of Manama. It creates a transition from the chaotic retail movement to a culturally layered environment.

Emotional Atmosphere:

- Primary feeling around the Temple: Calm within the chaos of the commercial streets.
- Secondary feeling around the Temple: Cultural belonging and spirituality

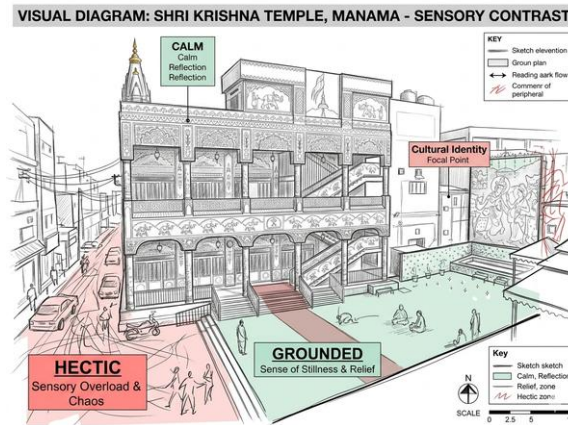


Fig. 25: Emotional Atmosphere Sketch Overlay - Hindu Temple
Source: Authors, AI Tool Assisted

Sound Mapping:

- Background sounds: people talking and traffic from cars
- Foreground sounds: bells from the temple and low murmuring sounds of prayer
- Effect on perceiver: layered acoustic sounds

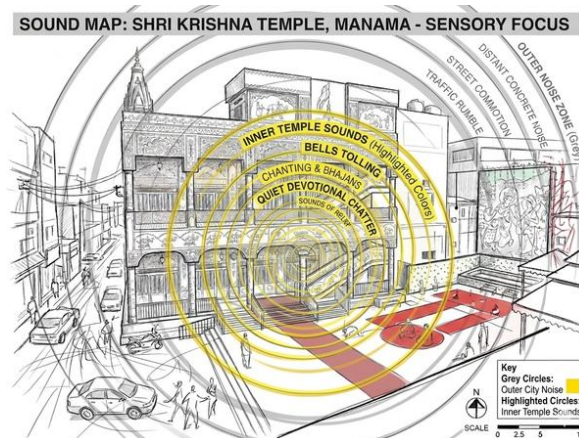


Fig. 26: Hindu Temple Sound Mapping Sketch Overlay
Source: Authors, AI Tool Assisted

Light Mapping:

- Outside the temple, there is harsh daylight with high contrast shadows.
- Near the temple, the light is filtered and slight shading from nearby buildings
- Light becomes more controlled, making it calmer for temple visitors

Texture Mapping:

- Surrounding materials are mainly rough concrete, worn-out pavements, and old shopfronts
- The Temple facade is more ornamented and has a tactile feeling to it
- This creates a material contrast which gives the Temple its identity



Fig. 27: Textures Mapping Sketch Overlay - Hindu Temple
Source: Authors, AI Tool Assisted

Social Behavior Mapping

- Movement shifts from fast to slower and linear to irregular, and is mostly responsive near the temple.
- users begin to pause and gather near the entry of the temple, whilst others adjust their paths.
- Mixed groups coexist by creating socially negotiated movements.

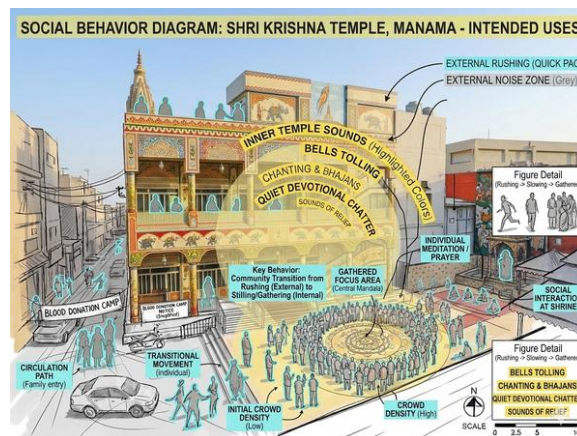


Fig. 28: Social Behavior Mapping Sketch Overlay - Hindu Temple
Source: Authors, AI Tool Assisted

Reflection of Cultural Intelligence

Cultural Reflection is divided into three layers: Identity, Diversity, and Memory. The Hindu Temple is embedded within a dense commercial fabric, in the heart of the Manama Souq. It reveals a layered condition of unique cultural co-existence, where the sacred identity of the temple is not isolated, but is negotiated within everyday urban life. As documented, the temple exists in overlapping flows of shop owners, tourists, and worshippers dissolving the clear boundary between commerce and rituals.

- **Identity Layer**

Identity in this context is fluid and hybrid, not singular. Religious identity is usually maintained internally, and externally, it conforms to the informal, dynamic nature of the marketplace.

- **Diversity Layer**

In this context, multiple cultures operate and co-exist simultaneously without strict spatial segregation. However, co-existence is passive rather than intentionally designed.

- **Memory Layer**

Memory in this context is structured by means of sensory continuity, movement, and chanting rituals may be noticed - this allows users to create a cultural anchor of identity, even in the midst of this busy, inform urban environment.

Finally, cultural diversity in this area is present but not spatially articulated; diversity survives through social practices rather than formal urban design.

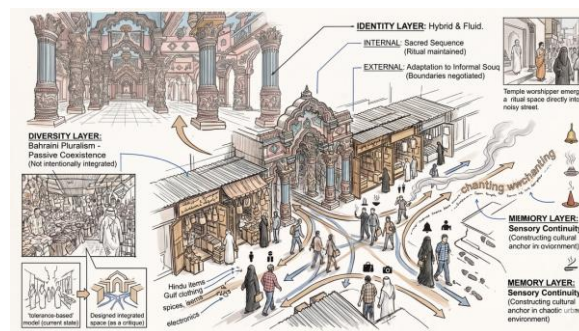


Fig. 29: Cultural Intelligence Reflection Sketch Overlay - Hindu Temple

Source: Authors, AI Tool Assisted

c. Khalaf House

i. Route Analysis

Spatial Behaviour

Khalaf House is integrated into a small residential block, surrounded by small alleyways and traditional facades. Its low face covers the interior-oriented courtyard structure, which is common in Bahraini household buildings. Near roads are surrounded by a dense, closed structure, contributing to privacy and intimacy.



Fig. 30: Khalaf House Annotated map

Source: Authors

Movement & User Patterns

The source of pedestrian movement is the souq and civic anchors around it that lead to the house through the narrow lanes. Access is indirect, and one has to manoeuvre through alleys, reducing the speed and increasing the transition between the public and the private spaces. Upon entry, circulation moves inwards to the central courtyard, which serves as the spatial anchor and allocates access to the other rooms.



Fig. 31: Pedestrian Movements & the Pattern - Khalaf House
Source: Authors

ii. Emotional Analysis

Khalaf House is characterized by a layered emotional environment consisting of belonging, security, and rituals in relation to a domestic tradition.

- **Belonging:** Both the small courtyard and the narrow alleys provide areas for family members to gather and interact with the neighbors. These spaces also promote a sense of collective identity, thus putting the house in relation to a larger community and making it a part of the social memory of the collective.
- **Security:** The covered thresholds and the protected walkways of the house create spatial enclosures, which shield the residents from the noise and chaos of the surrounding street. This shielding of space promotes privacy and trust while facilitating the feelings of safety and maintaining a connection to the neighborhood.
- **Ritual:** Routine practices of domestic life, such as entering the courtyard, festivals of the season, and shared traditions provide for the establishment of rituals in everyday life. These repeated actions have resulted in the transformation of the house into the living record of the community's past.

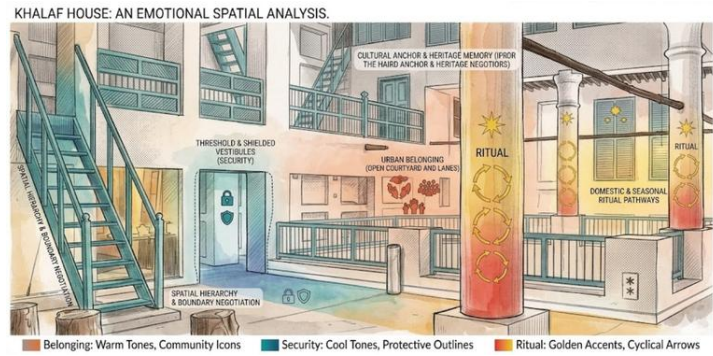


Fig. 32: Emotional Analysis Sketch Overlay - Khalaf House

Source: Authors, AI Tool Assisted

Collectively, these attributes have established Khalaf House as a place of heritage because the emotional character of the house and the experience of it are inextricably linked. The house is both a place to live in and a reference point for culture, representing both the rhythm of domestic life and the continuity of the identity of the community.

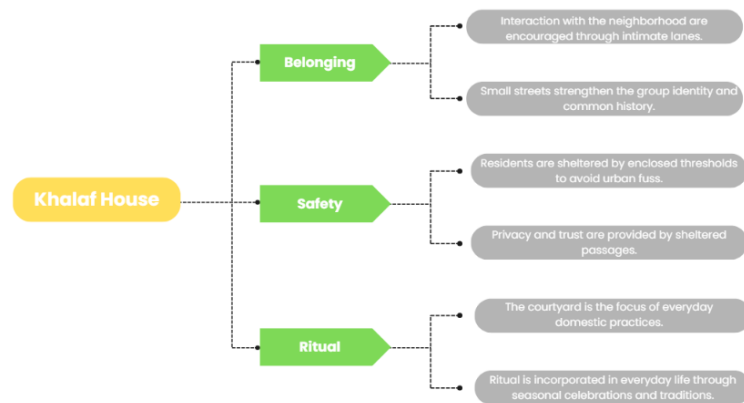


Fig. 33: Khalaf House - Emotional Atmosphere Analysis Chart

Source: Authors

iii. Sensory Documentation and Interpretation

Emotional Atmosphere:

- Primary feelings are nostalgia, introspection, and calm.
- The house gives a sense of historical identity and memory related to past of pearling of Bahrain.
- Inside of the house gives a clear escape from the urban chaos outside.

Sound Mapping:

- Sound penetration to the inside is minimal as it gets buffered from the street.
- The interior atmosphere is quiet and sometimes there is echoing
- Sound perception shifts from the urban noises to controlled silence

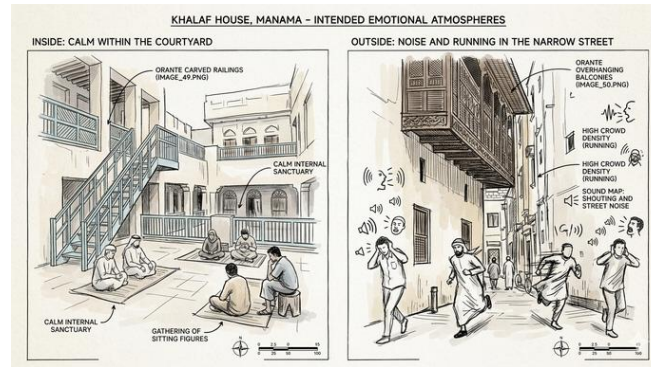


Fig. 34: Sound Mapping Sketch Overlay - Khalaf House
Source: Authors, AI Tool Assisted

Light Mapping:

- Light is filtered through the courtyard and the openings.
- A strong contrast exists between the bright courtyard and the shaded interior rooms.
- Creates a soft, intimate, and diffused lighting environment.

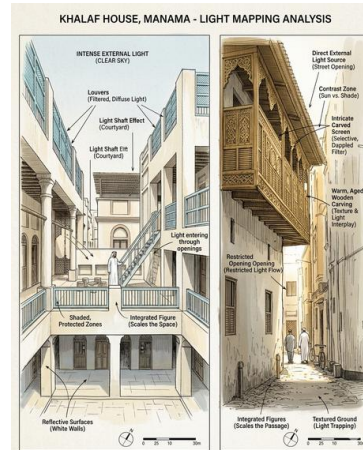


Fig. 35: Light Mapping Sketch Overlay - Khalaf House
Source: Authors, AI Tool Assisted

Textures Mapping:

- Materials are mostly traditional materials (wood, plaster, and stone).
- Intricate elements, mashrabiya screens, and carved wooden doors.
- Tactile quality is strong, detailed, and rich with human-scale designs.

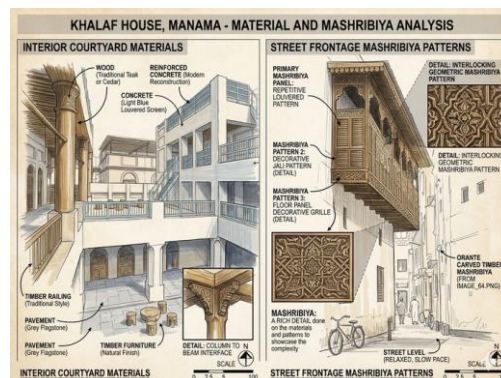


Fig. 36: Textures Mapping Sketch Overlay - Khalaf House
Source: Authors, AI Tool Assisted

Social Behavior Mapping:

- Movement is slow, non-linear, and exploratory.
- Users engage in reflection, quiet interaction, and observation.
- Social behavior is respectful and culturally attentive, and generally low intensity.

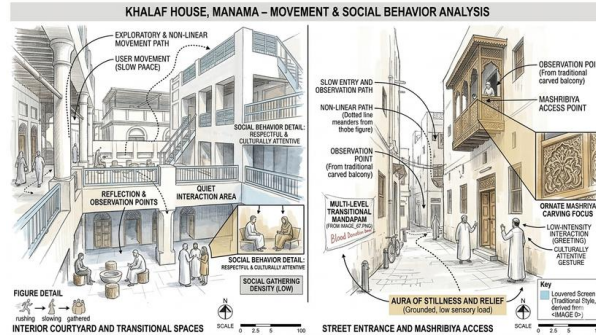


Fig. 37: Social Behavior Mapping Sketch Overlay - Khalaf House
Source: Authors, AI Tool Assisted

iv. Reflection of Cultural Intelligence

Khalaf House shows a deeply rooted layer of cultural memory in this journey, where the core identity is built through domestic rituals within the household. Spatial intimacy is created, and the inherited social structures are maintained. Courtyard houses are oriented inwards and are accessed through the narrow routes, which together reinforce the sense of privacy, collective identity, and belonging.

- Identity Layer:
Identity in this context is stable and inherited; it is tied to tradition, family, and the local architectural language adopted.
- Diversity Layer:
Diversity in this context is limited and focuses on the internalized aspects. Space prioritizes community bonding and continuity, strengthening the sense of belonging and reducing openness to outside factors and people.
- Memory Layer:
These layers carry intergenerational memory; they are embedded in spatial practices like gathering in a courtyard and seasonal rituals. The memory is not symbolic here; it is lived and repeated daily.

Finally, cultural identity is preserved with high authenticity, but it additionally risks becoming disconnected from the broader multicultural urban context.

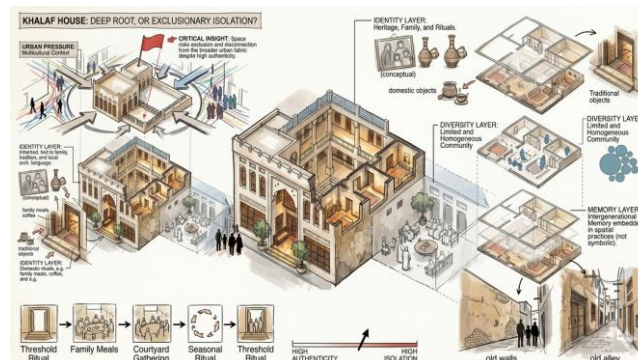


Fig. 38: Cultural Intelligence Reflection Sketch Overlay - Khalaf House
Source: Authors, AI Tool Assisted

d. Sacred Heart Church

i. Route Analysis

Spatial Behaviour

The church is located as a visual focal point of the urban landscape in Manama, and the facade and bell tower serve as powerful visual references. The location on the streets and the proximity to civic institutions (schools, cemetery, and the shops) make it very easy to identify it as an area of community. The wide frontage and the many points of entry of the building are in contrast to the concealed thresholds of the domestic heritage sites and accentuate openness and visibility.

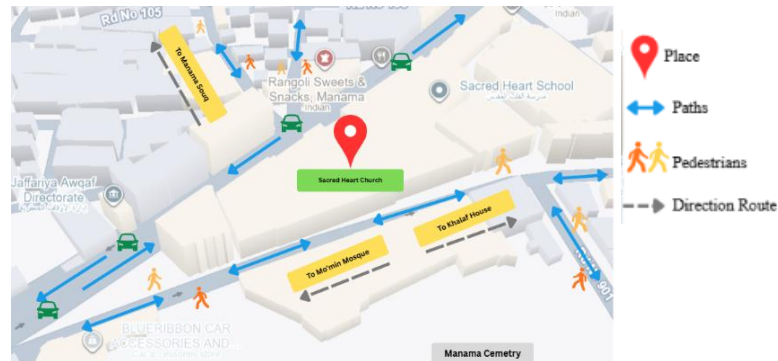


Fig. 39: Annotated map - Sacred Heart Church
Source: By Authors

Movement & User Patterns

Walking and traffic flows merge at the church, with the surrounding corridors, the routes to Manama Souq, Mo'min Mosque, and Khalaf House all leading to this point. The entrance chain is straight with the broad walkways leading the worshippers and visitors to the main doors. The circulation within is linear and congregational with an orientation towards the nave and the altar, which enhances collective gathering behaviour. The threshold serves as a rest area where people change their behavior of being on the street to collective worship. Patterns of the users also overlap; parishioners come to attend services, families attend community activities, and passers use the frontage as a meeting or a resting place. The closeness of the schools and the stores keeps the foot traffic flowing, making the church an inherent part of daily life, which strengthening its presence as a civic anchor.



Fig. 40: Pedestrian Movements & Pattern _ Sacred Heart Church
Source: Authors

ii. Emotional Analysis

The emotional character of the Sacred Heart Church can be described through the three concepts of belonging, safety, and ritual.

- **Belonging:** The church's welcoming signs, visible members of the parish, and bell tower help demonstrate the church's openness. Together, these qualities create a sense of inclusivity, continuity, and, thus, reinforce the generational ties between the families and establish collective identity.
- **Safety:** Sightlines from the outside of the building to the interior create feelings of safety, while the altar and ritual practices provide a greater sense of sanctuary. The boundaries between the outside and the inside of the church act as psychological buffers to build trust and reverence.
- **Ritual:** The bells, hymns, and liturgical practices animate the church as a center for community rhythm. Rituals serve as a means of providing both spiritual immersion and a safe space for the surrounding neighborhoods; they are where the tradition will be woven into the urban life around them.

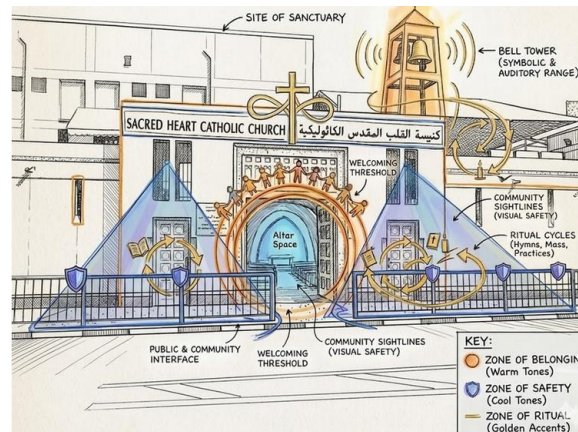


Fig. 41: Emotional Analysis Sketch Overlay - Sacred Heart Church
Source: Authors, AI Tool Assisted

It is observed that these qualities create Sacred Heart Church to be both a spiritual sanctuary and a civic anchor. As the emotional atmosphere experienced cannot be separated from the spatial experience gained when there, this is a place of continuity, gathering, and ritual adherence that creates a sense of belonging and safety in the fabric of the urban identity in Manama.

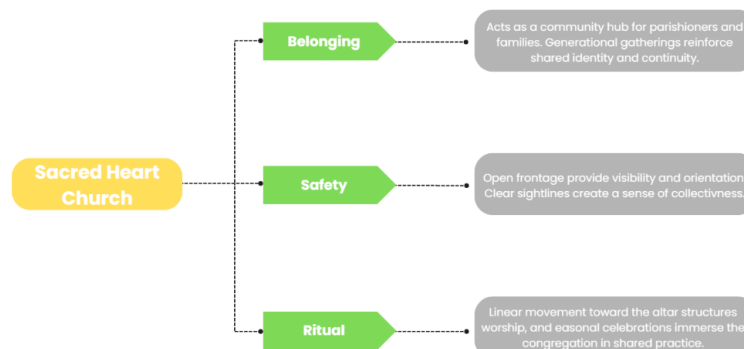


Fig. 42: Sacred Heart Church Emotional Atmosphere Analysis Chart
Source: Authors

iii. Sensory Documentation and Interpretation

Emotional Atmosphere:

- Primary feeling is reflective, serene, and a collective calm.
- Strong sense of belonging and community gathering.
- Atmosphere shifts from urban noise to spiritual stillness.

Sound Mapping:

- Sound outside is of urban activity and traffic.
- Sound inside is muted silence, soft voices, and echoes.
- Acoustic quality creates depth and reverberation.

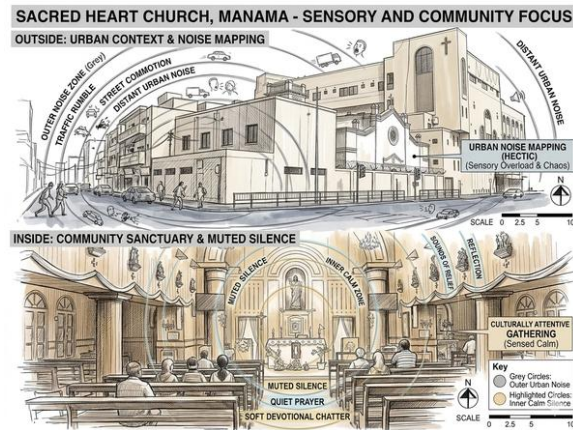


Fig. 43: Sacred Heart Church Sound Mapping Sketch Overlay

Source: Authors, AI Tool Assisted

Light Mapping

- Light enters through controlled openings and filtered glazing.
- Creates soft and diffused illumination with focal highlights.
- Enhances the spiritual emphasis and spatial hierarchy.

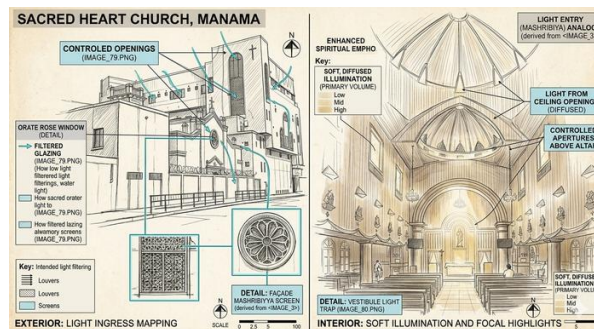


Fig. 44: Light Mapping Sketch Overlay - Sacred Heart Church

Source: Authors, AI Tool Assisted

Texture Mapping

- Materials are smooth, plaster and stone with polished surfaces.
- Less intricate than traditional houses, but clean and ordered.
- Materials reinforce sacred clarity and simplicity.

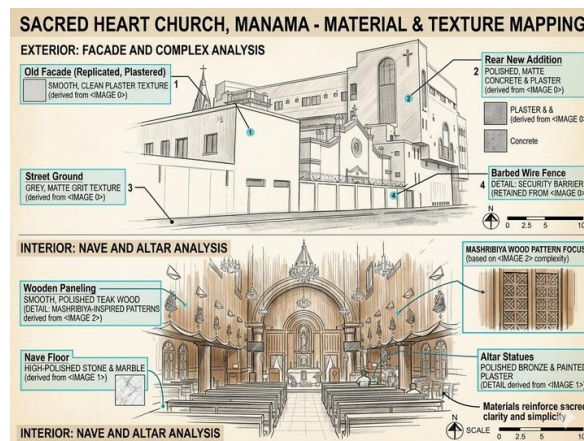


Fig. 45: Sacred Heart Church Textures Mapping Sketch Overlay
Source: Authors, AI Tool Assisted

Social Behavior Mapping

- Movement is slow, non-linear, and exploratory
- Users engage in reflection, quiet interaction, and observation
- Social behavior is respectful and culturally attentive and generally low intensity

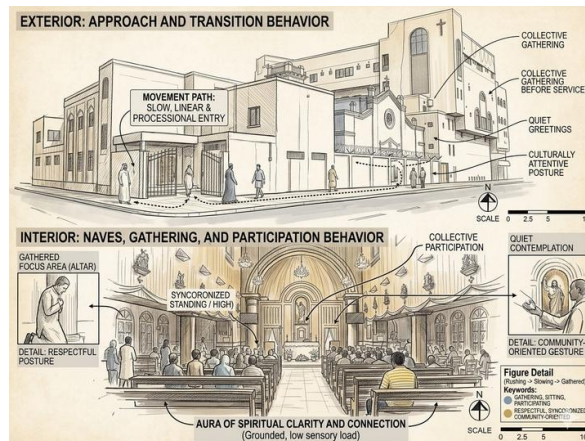


Fig. 46: Social & Behavior Mapping Sketch Overlay Sacred Heart Church
Source: Authors, AI Tool Assisted

iv. Reflection of Cultural Intelligence

This Church represents a sacred spatial condition built around religious identity, a sense of openness, and a continuity within the culture that intersects within the urban fabric of Manama. The Church is not inward and concealed, but rather visible from the streets approaching it with an open frontage, a clear bell tower, and welcoming to its worshippers, making it both a place for community gatherings and a spiritual sanctuary.

• Identity Layer

Identity is established through accessibility and visibility. The church blends with the city and communicates its clear threshold, visible architectural features, and the vast gathering spaces it holds.

- **Diversity Layer**

Social inclusion is a vital aspect of the church, as the nearby community and worshippers usually exist and interact in the same place. Its location in the heart of Manama allows it to blend into everyday urban life between shops, schools, and homes.

- **Memory Layer**

These layers carry a collective memory of rituals passed down from generations and religious origins, such as the sound of bells, hymns, seasonal celebrations, and gatherings. These rituals repeatedly transform the church into a living hub of social and spiritual continuity.

Finally, the church balances visibility, ritual continuity, and accessibility, revealing how religious identity remains only distinct while actively taking a role in the public realm.



Fig. 47: Cultural Intelligence Reflection Sketch Overlay [= Sacred Heart Church
Source: Authors, AI Tool Assisted

e. Mo'min Mosque

i. Route Analysis

Spatial Behaviour

The mosque is located centrally on the street grid, and its dome and minaret become visible in the urban environment. It also has its frontage facing the other roads as opposed to a concealed heritage entrance, thus making it reachable and readable as a community anchor. Its positioning along open lots and civic corridors strengthens its position as a meeting place.

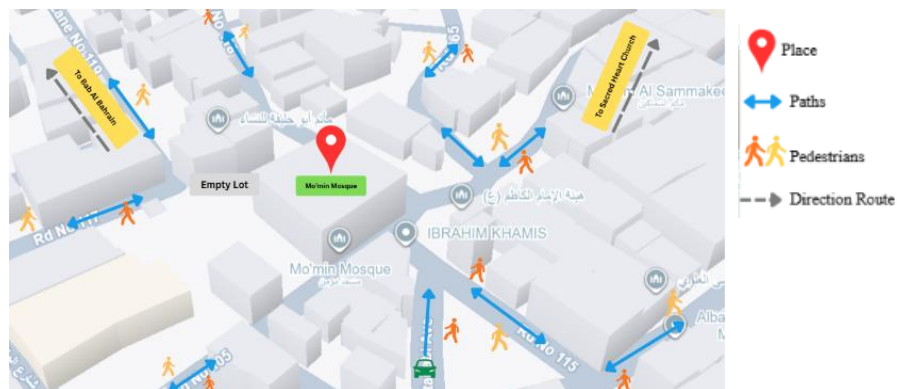


Fig. 48: Annotated Map of Mo'min Mosque
Source: Authors

Movements & Patterns of Use

Pedestrian flows merge at the intersection of 3 roads and are directed to the main entrance of the mosque. There is linear and congregational circulation, which leads to the prayer hall and mihrab, which is characteristic of collective worship behaviour. Moving during the prayer periods, the movement is enhanced when the worshippers come in waves and leave, creating a rhythmic movement in and out. The threshold serves as a transitional area in which people change their daily activities on the streets to that of rituals.



Fig. 49: Pedestrian Movements & Pattern - Mo'min Mosque
Source: Authors

At this place, patterns of use are overlapping, families are present during Ramadan, children with elders, and the people who pass by the frontage. The visibility and openness of the mosque create a continuous interaction, making it an integral part of everyday life and enhancing the identity of the mosque as a religious and social center.

ii. Emotional Analysis

Mo'min Mosque generates an extremely complex emotional atmosphere. It runs the gamut from belonging, through stress, and onto feelings of alienation.

- **Belonging:** The Mosque acts as a community anchor. The purpose of the mosque is continually reinforced through daily prayers and Ramadan prayers. These shared rituals strengthen a common bond and common identity as well as a common sense of continuity associated with their faith and create a deep feeling of connection to one another through their worship.
- **Stress:** The location of the Mosque within a congested urban environment creates a lot of pressure on those worshipping. Overcrowded prayer times and the intensity of the activities surrounding the mosque add stress to those worshipping and may detract from the devotion and calmness many try to achieve through their worship.
- **Alienation:** The concentrated sacred practice creates boundaries that isolate or alienate non-believers or outsiders. The thresholds of the mosque mark the difference between inclusion of the faithful and the exclusion of the others, thus creating the image of the worshipping community acting like an extended family living outside the greater urban flow.

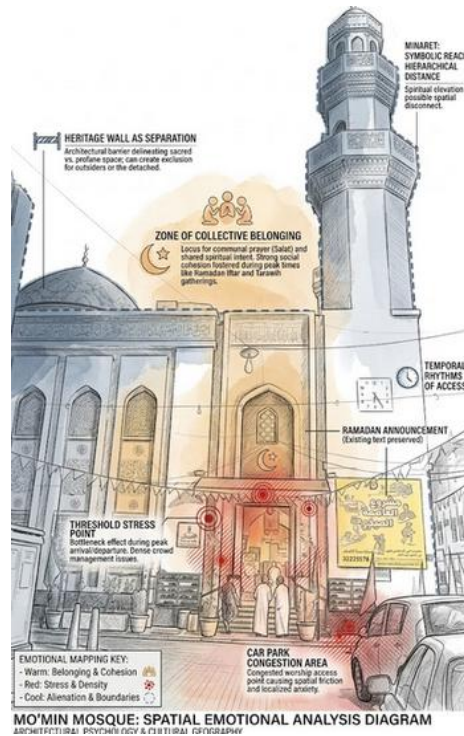


Fig. 50: Emotional Analysis Sketch Overlay Mo'min Mosque
Source: Authors, AI Tool Assisted

Through both inclusion and exclusion, the Mo'min Mosque serves as a site where calmness from devotion to God can be contrasted against the stress created by urban congestion. With this layered emotional atmosphere, the Mosque is at the same time both a sanctuary of belonging and a place where alienation exists due to the difference between spiritual continuity and the pressures of retreating urban development.

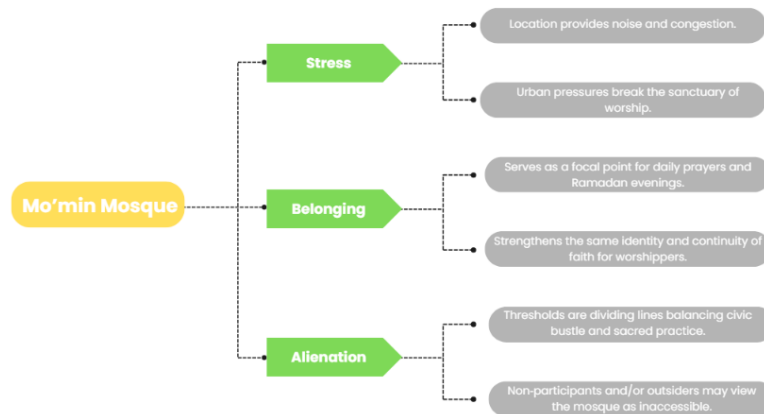


Fig. 51: Mo'min Mosque Emotional Atmosphere Analysis Chart
Source: By Authors

iii. Sensory Documentation and Interpretation Emotional Atmosphere

- Primary feeling is peaceful, grounded, and spiritually focused
- Strong sense of familiarity, belonging, and routine of mosque visits
- Atmosphere is tied to daily rituals and temporal rhythm (prayer times are respected)

Sound Mapping

- Sound of the Call to Prayer (Adhan) acts as a strong anchor of audio
- Interior sounds are controlled, and whispers of soft recitation of the Quran and prayers
- Exterior sounds allow the urban noises to fade when the entrance threshold of the mosque is approached

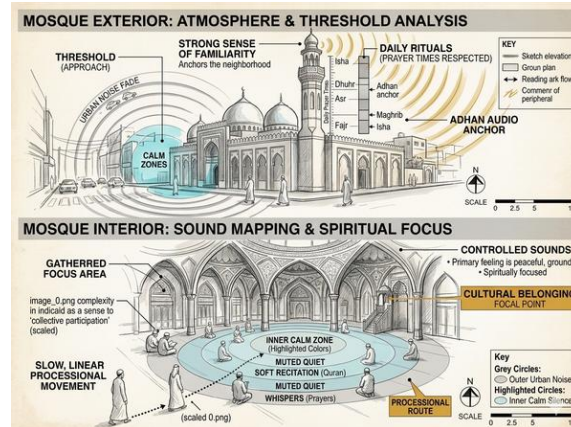


Fig. 52: Mo'min Mosque Sound Mapping Sketch Overlay
Source: Authors, AI Tool Assisted

Light Mapping

- Light is filtered and indirect, entering through small openings
- Soft gradients of light are created
- Focus, calmness, and inward orientation are reinforced

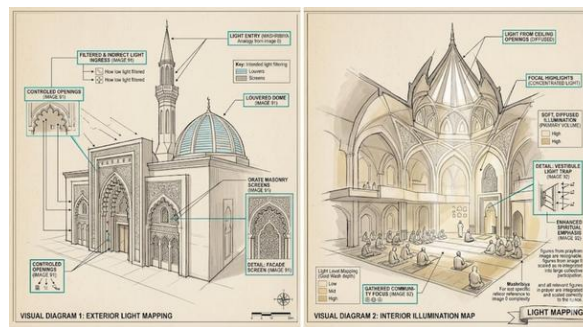


Fig. 53: Mo'min Mosque Light Mapping Sketch Overlay
Source: Authors, AI Tool Assisted)

Texture Mapping

- Materials are carpet, plaster, and stone
- Surfaces are soft and clean, enhancing comfort inside
- Ornamentation is minimal on the mosque

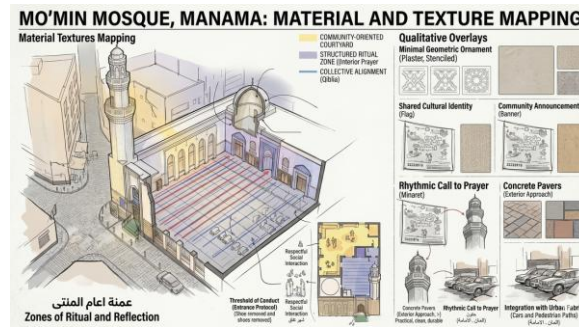


Fig. 54: Mo'min Mosque Textures Mapping Sketch Overlay
Source: Authors, AI Tool Assisted

Social Behavior Mapping

- Movement is rhythmic, organized, and ritualistic
- Users engage in collective alignment and behave in synchronized prayers
- Behavior is respectful, structured, and community-oriented

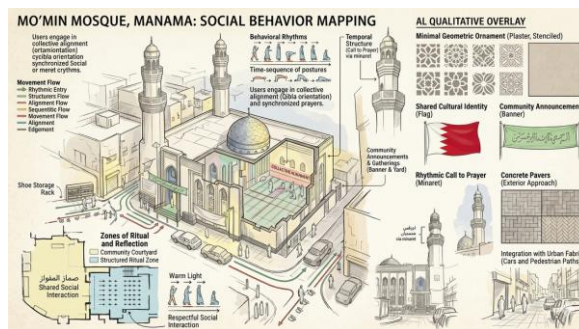


Fig. 55: Mo'min Mosque Social Behavior Mapping Sketch Overlay
Source: Authors, AI Tool Assisted

iv. Cultural Intelligence Reflection

The Mo'min Mosque demonstrates a layer of spiritual belonging, social exclusion, and urban stress due to its location, which all coexist together. The Mosque is located within a visible street network with more than 3 roads intersecting; thus, the mosque acts as both a social and religious anchor and reinforces the community identity through daily prayers and religious rituals.

• Identity Layer

Identity is strong and ritual-based. Daily prayers and seasonal gatherings, like in the Holy month of Ramadan, create a temporal rhythm that reinforces the identity, religious continuity, and communal attachment amongst the Muslim community.

• Diversity Layer

The mosque establishes a sacred threshold of invisible boundaries between the people outside and inside, all the while creating a strong social cohesion. Some of the ritual practices that become concentrated inside may create unintentional exclusion for non-Muslims who do not participate in these rituals, but the community of Muslims in Manama feels right at home.

• Memory Layer

Memory is experienced through ritual continuity and repetition. Sounds of the Athan, visions of the synchronized prayers and religious gatherings embed the temporal

memory into the urban fabric of the area, marking the mosque as essential for the everyday life and rhythm of Manama.

Finally, the mosque reinforces spiritual and communal identity through its strong rituals and boundaries; it also reveals how sacred places can create belonging for some while alienation for others.

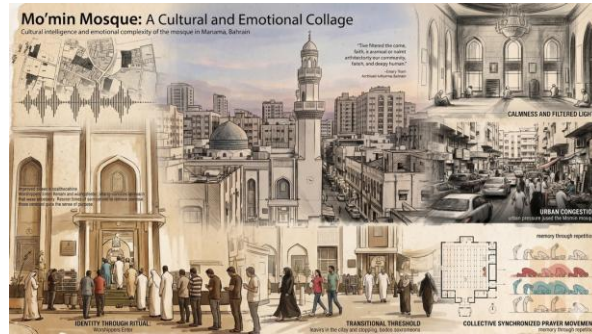


Fig. 56: Mo'min Mosque Cultural Intelligence Reflection Sketch Overlay
Source: Authors, AI Tool Assisted

1. Comparative Insight

• Cultural Identity

Throughout the way, cultural identity is expressed differently. Bab Al Bahrain is mostly a symbol of national pride, but it lacks a lived cultural richness. By contrast, trade, diversity, and everyday rituals are the hallmarks of cultural dynamism in the Souq, which can sometimes be marred by commercialization. Khalaf House is a vital link between heritage and memory, embodying traditional architecture and customs that continue to resonate with Bahrain's identity. Anchored in religion, the three mosques, temples, and churches offer the greatest cultural bases, reinforcing ritual continuity and pluralism. Together, the spaces show how the strength of cultural identity is strongest in places of heritage and religion, and less so in civic and commercial locations.

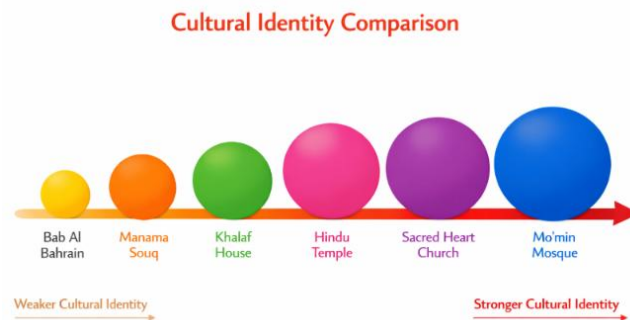


Fig. 57: Comparative scale of cultural identity across Manama's heritage and civic anchors.
Circle size indicates relative strength of cultural presence.

Source: Author

• Movement and Legibility

There is a clear difference in spatial legibility, evident in the movement patterns. Bab Al Bahrain provides clarity and orientation for both residents and visitors. In contrast, the Souq is disjointed and confusing, with narrow alleys that make it hard to navigate and can be hard to follow for outsiders. Khalaf House values slow circulation inward, which facilitates thinking over passing. Ritual flows within the religious context of mosque and church, offering structured flows during rituals,

which enhances legibility and rhythm, and the pattern of ritual flow created in the temple provides for movement patterning of people. The overall quality of movement is highest at Bab Al Bahrain and the mosque, and is lowest in the Souq, emphasizing the difficulties encountered in a highly built commercial area.

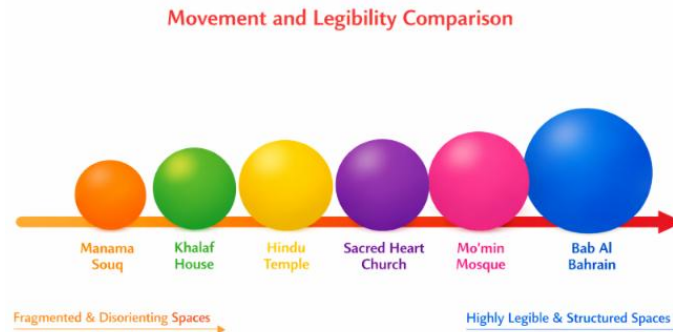


Fig. 58: Comparative scale of movement and legibility across Manama's heritage and civic anchors. Circle size indicates relative spatial clarity and navigational strength.
Source: Author

• Sensory Experience

The sensory experience ranges from a richness that can be overwhelming to intimacy that's subtle. The Souq is the most multisensory, with the fragrance of spices, the noise of the traders, and the feel of the textures, but it can also be overstimulating. Coral stone, wood, and shifting light create a contemplative atmosphere in Khalaf House, which is quieter and more intimate than the environments of other resort hotels at the site. Sites of worship give a sensory richness: the scent of incense and the sound of chants in the Temple, the sound of bells and the diffused light in the church, and the beat of the call to prayer in the Mosque. Bab Al Bahrain, on the other hand, is more visually clear with less shading and tactile engagement. The sensory richness is therefore highest in Souq and religious spaces, the subtlest in heritage houses, and the highest in civic spaces, but not as many sensory elements.

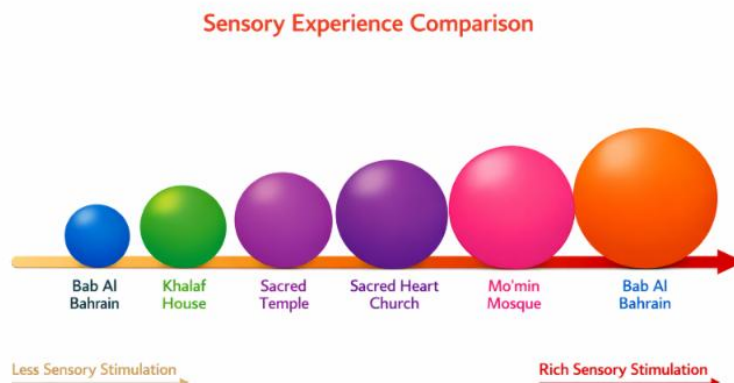


Fig. 59: Comparative scale of sensory experience across Manama's heritage and civic anchors. Circle size indicates relative sensory richness and environmental stimulation.
Source: Author

• Emotional Atmosphere

Emotional contexts along the way are symbolic pride—intimate comfort. Bab Al Bahrain promotes sense of belonging and sense of national pride; it is not as intimate as smaller heritage sites. The Souq is lively and dynamic, but sometimes dense, generating stress and isolation, especially for outsiders. Khalaf House is a home of memory, of comfort, of warmth and security, of a sense of family. Collective

rhythm and spiritual continuity in the mosque, sacred protection and curiosity at the temple, and inclusivity and belonging in the church are the most emotionally comforting religious anchors. Overall, it is heritage and religious settings where emotional comfort is the strongest, and civic and commercial anchors fluctuate between pride and stress.

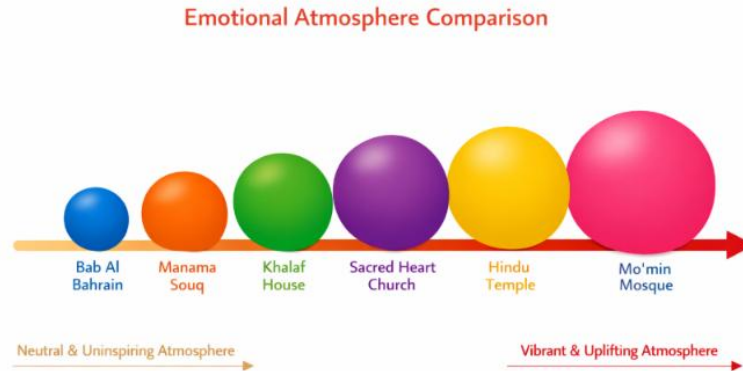


Fig. 60: Comparative scale of emotional atmosphere across Manama's heritage and civic anchors. Circle size indicates relative emotional intensity and sense of belonging.

Overall Comparative Insight

The analysis of the route through these aspects shows that cultural identity and emotional satisfaction of identity are strongest on the heritage and religious anchors, movement clarity is strongest on Bab Al Bahrain and the mosque, and sensory richness is strongest on Souq and the temple. The different spaces have different influences on Manama's experiential fabric. This comparison highlights the importance of interventions that are regenerative, which can include a more complex/symbolic approach that maintains sensory richness and emotional comfort while increasing movement clarity and accessibility, and maintaining cultural depth.

Regenerative Proposal

The experiences of the key stakeholders in the Manama heritage route were documented and analysed, and recurring concerns that are affecting the safety and cultural experience. Pedestrian (as well as vehicle) traffic in narrow streets creates unsafe conditions, reducing comfort and sense of belonging. The alleys are broken up, and the souq corridors are clogged, resulting in a lack of perceptual legibility and a disorienting feeling for the visitor to lose touch with the cultural anchors of the city. Furthermore, the lack of designated pause places along the route will not afford opportunities to reflect, interact, and connect with culture.

These are three related interventions: pedestrian-only corridors will increase safety and intimacy of movement; a self-navigation system based on cultural motifs and assisted by AI-responsive devices will improve orientation and disalienation; and "jalsa" gathering nodes will create shaded pause points to offer an immersive environment to rest, reflect, and engage in community interaction. These strategies will work together to create a human-centred, culturally resilient route along Manama that will improve emotional well-being, perceptual clarity, and collective identity while being sensitive to seasonal and urban change.

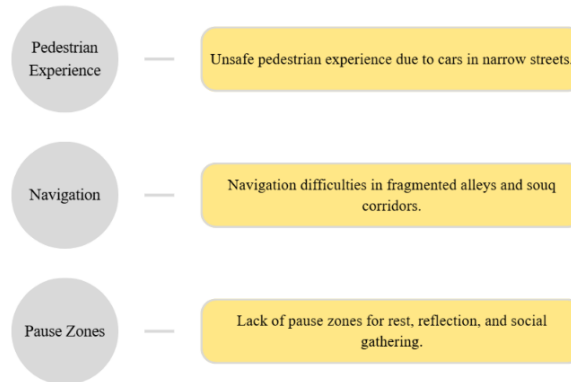


Fig. 61 Graph Showcasing the Identified Problems' Interventions
Source: Authors

Concept Narrative

The concept of the Manama heritage route regeneration is a safe, legible, and culturally rooted pedestrianisation of the area. It addresses three significant experiential issues – unsafe streets, disorientating navigation, and a lack of pause zones – through interventions that are both practical and culturally intelligent.

- **Pedestrian-Only Routes**

The narrow streets of the souq and heritage corridors will be transformed into pedestrian-only streets. The removal of cars from these spaces brings back safety, decreases stress, and enables residents and visitors to enjoy the close-up views of these culturally rich spaces. This intervention enhances the feeling of belonging and comfort with the emphasis on human movement rather than vehicular flow.

- **Self-Navigation System**

A culturally inspired wayfinding system will be implemented to overcome disorientation and fragmented legibility. Landmarks will be linked via signage and digital means, including the Hindu Temple, Khalaf House, Sacred Heart Church, and Bab Al Bahrain. A series of QR-coded plaques, Kiosks responding to AI, as well as motifs from local heritage (mashrabiya screens, temple bells, church crosses, mosque domes) will help users navigate intuitively along the way. This system facilitates the perception of clear images, minimizes alienation, and strengthens cultural identity symbolically.

- **“Jalsa” Gathering Nodes**

Shaded seating areas will be provided as pause points at critical junctures – temple entry, courtyard in Khalaf House, frontage of church, and the plaza of the Bab Al Bahrain. The “jalsa” nodes offer resting points, moments for reflection, and a chance for people to come together. They are tactile, they are softly lit, and they are acoustically buffered; they are places of culture where everyday motion is reduced to moments of belonging or community storytelling.

All of these interventions converge in an overall experiential story: movement is now safe and human-scale, navigation is intuitive and culturally legible, and pauses are used for identity and connection. The concept includes the possibility of using AI to simulate seasonal lighting, add emotional overlays, and create immersive stories, ensuring that the heritage route in Manama becomes a living, adaptive, and sustainable cultural resource.

Experiential Journey

The interventions reimagine the Manama heritage route frame as an experiential sequence, starting at Bab Al Bahrain and moving through the heritage, religious, and commercial anchors.

• Entry - Bab Al Bahrain Civic Gateway

The journey begins at Bab Al Bahrain, re-imagined as a pedestrian-friendly plaza. Road traffic is rerouted so that it is pedestrian-only. Self-navigating kiosks and cultural wayfinding motifs welcome visitors and guide them towards the souq and heritage anchors. The plaza features a “jalsa” gathering node with an oasis of shaded seats that provide opportunities for pause and reflection before entering the dense urban fabric.

• Souq Corridors - Commerce & Transition

New pedestrian-only lanes and adaptive shading now enhance the movement that comes into the Manama Souq. The alleys are so labyrinthine that there are wayfinding cues to help users navigate through them, minimizing disorientation. The use of acoustic buffers and sensory overlays mitigates congestion while maintaining vibrancy and comfort. There are small jalsa nodes in the souq that provide pause points for social interaction and rest.

• Heritage Anchors - Temple, Khalaf House, Church, Mosque

Navigation markers and pause nodes frame each anchor. The Hindu Temple allows for ritual immersion with safe pedestrian access and the provision of shade for gathering. Khalaf House's courtyard is a place of reflection inspired by the heritage. The frontage of Sacred Heart Church transforms into a civic pause space, strengthening feelings of belonging. The thresholds of the Mo'min Mosque are remodeled to reduce the congestion stresses, and seating areas are provided, along with clear circulation paths.

• Exit - Cultural Continuity & Reflection.

The route ends with a loop back to Bab Al Bahrain, which serves as a hub for both transportation and culture. The plaza is animated with seasonal decorations (light overlays, event projections), which will render it adaptive, immersive, and engaging. The visitors depart with a clear narrative of the plural identity of Manama, safe movement, intuitive navigation, and shared gathering.



Fig. 62: Experiential Journey and Concept Narrative of the Interventions' Proposals

Source: Author

This Diagram shows:

- Orange (Entry) = Plaza seating and wayfinding at the civic gateway into Bab Al Bahrain.
- Purple (Souq Passage) = Shaded lanes, navigation cues, rest spots.

- Green (Heritage Anchors) = Hindu Temple, Khalaf House, Sacred Heart Church, Mo'min Mosque with shading and cultural nodes.
- Blue (Exit) = Bab Al Bahrain Plaza re-imagined by light displays, event space, and reflection areas.
- Center: multicolored circle in the shape of JALSA, which represents pause, connection, and community.

Experiential Interpretation

a. Bab Al Bahrain

The reimagined Bab Al Bahrain is a reasserted civic threshold that brings together movement, culture, and emotion. The plaza is now closed to vehicles, making it a pedestrian-only area and emphasizing safety and human connection. A network of shaded walkways directs visitors towards the souq and patterned paving that encourages people to intuitively follow the route towards the souq, and there are seating “jalsa” nodes encouraging pause and social interaction under filtered light and palm canopy. The archway turns into a symbolic anchor of belonging, enclosed by the motifs of Bahrain that allude to its plural identity. It is through this metamorphosis that Bab Al Bahrain becomes a space for living and learning, a place that embraces reflections, stories, and the rhythm of everyday life in Manama's experiential cityscape.

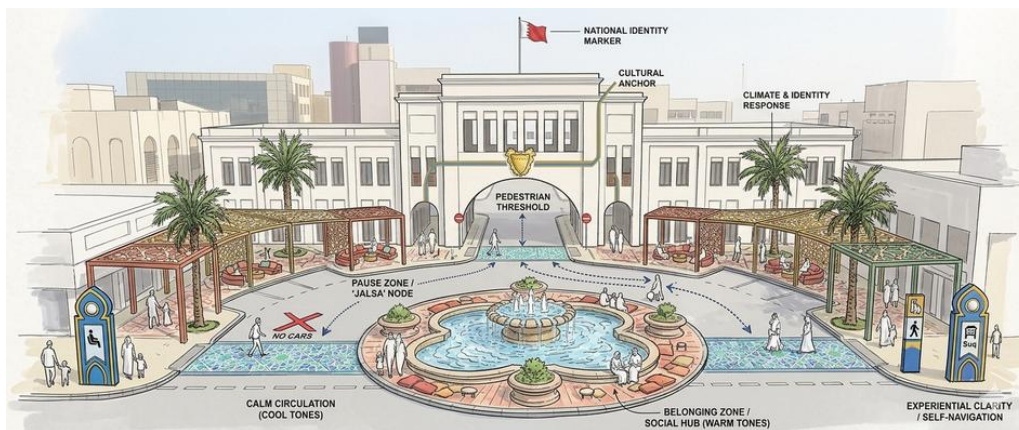


Fig. 63: Overlay Sketch of Suggested Intervention Proposal to Bab Al Bahrain
Source: Authors, AI Tool Assisted.

Souq Al Manama

The corridor of Souq Al Manama is re-imagined, creating a pedestrian-only cultural spine with safe, intuitive, and immersive movement. Narrow lanes are close to cars, and visitors can wander freely through the shade of the facades and shops of the old cities. Self-navigation cues, inspired by the motifs of Bahrain, help to orient the visitor, turning the maze-like alleys into readable paths, linking commerce with culture. Small “jalsa” nodes are installed along the walkway to offer shaded seating areas under string lights and palm canopies to give spaces for rest, reflection, and social interaction.

These quieter moments set against the backdrop of the souq's festive ambiance of flags, crafts, and voices create a rhythm of movement and pause that underscores the sense of connection and cultural identity. In this liveable intervention, the souq transforms from a crowded marketplace into a safe, accessible, and people-centered experiential corridor.

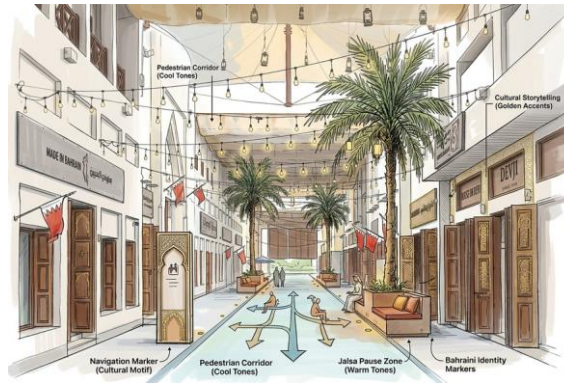


Fig. 64: Overlay Sketch of Suggested Intervention Proposal to Souq Al Manama
Source: Authors, AI Tool Assisted

Hindu Temple

Shrinathji Shri Krishna Temple is a cultural landmark that enriches the vibrant tapestry of the Manama Souq, where rituals meet every day urban life. The redesign proposal puts pedestrian access paths around the temple, thus protecting the safety and intimacy of movement, while highlighting the ornate front facade of the temple and its courtyard. They are oriented by self-navigation cues inspired by ritual symbols and traditional motifs that turn the temple into a legible orientation point inside the souq. In the courtyard, the shaded “jalsa” gathering nodes offer pauses, reflection, and social interaction, at the same time as the temple's spiritual immersion, a sense of communal belonging.

Warm colours accentuate areas of cultural coexistence, cool colours accentuate safety and calm circulation, and golden colours reinforce the continuity of ritual practice. This project transforms the temple from an invisible sacred space into a place that is experiential, human-centred, and serves as an anchor in Manama's cityscape, reflecting its spiritual depth and cultural diversity.



Fig. 65: Overlay Sketch of Suggested Intervention Proposal to Hindu Temple
Source: Authors, AI Tool Assisted

Khalaf House

The Khalaf House becomes a space of a heritage enclave, a space where domestic memory and community identity converge. The stretch of the alley, which leads to its ornate wooden doors, turns into a pedestrian-only zone, where safety and intimacy of movement are guaranteed, and the rhythm of traditional architecture is preserved. Self-navigation cues, using the technique of mashrabiya latticework and carved thresholds, help visitors to find their way to the courtyard and make the house a readable cultural landmark. Shaded “jalsa” gathering nodes are also

strategically placed at certain indicators to offer pause points for reflection, storytelling, and peaceful social interaction, further strengthening a sense of belonging and safety.

Warm tones suggest communal lanes, cool tones imply protective enclosures, and golden tones indicate ritual continuity in daily domestic activities. In this way, Khalaf House becomes a hidden residential landmark, a safe, transparent, and culturally sustainable icon in Manama's experiential landscape.

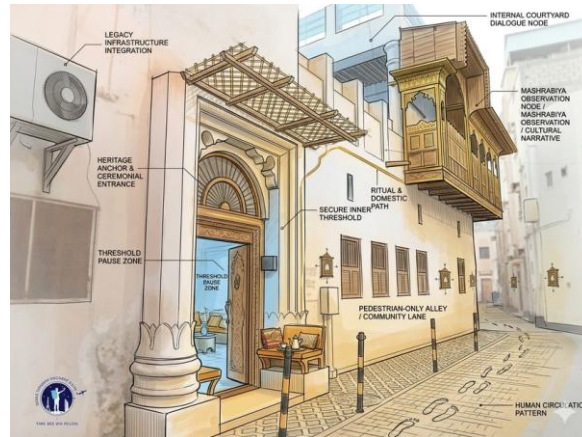


Fig. 66: Overlay Sketch of Suggested Intervention Proposal to Khalaf House

Source: Authors, AI Tool Assisted

Sacred Heart Catholic Church

The Sacred Heart Catholic Church is a civic and spiritual focal point for Manama's varied urban landscape, a testament to cultural diversity and a sense of shared identity. The pedestrian-only access routes frame the church frontage in order to facilitate safe and welcoming pedestrian access across the street, in this re-imagined proposal. The church is a legible orientation marker in the city, with the help of self-navigation cues, which combine Christian symbols with Bahraini motifs. Shaded gathering nodes or "jalsas" are located at the entrance, offering pause areas to reflect, discuss, and engage with the community and deepening the sense of belonging and inclusion.

Warm colors are used to draw attention to the welcoming threshold; cool colors to bring focus to safety and protective boundaries; golden accents are given to emphasize continuity of ritual and liturgical practice. The Sacred Heart Church becomes a traffic-jammed landmark and transforms into a civic anchor that promotes safety, clarity, and cultural sustainability in the experiential landscape of Manama through this intervention.

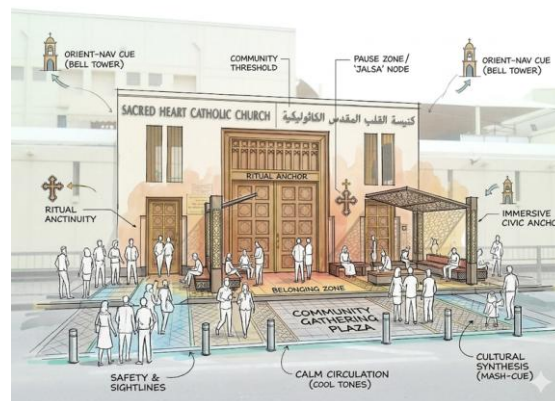


Fig. 67: Overlay Sketch of Suggested Intervention Proposal to Sacred Heart Catholic Church

Source: Authors, AI Tool Assisted.

Mo'min Mosque

The Mo'min Mosque is envisioned to be a spiritual and communal anchor with a sense of safety, clarity, and belonging. In the revamped scenario, the thresholds and circulation around the mosque are reconfigured as pedestrian-only access pathways to decongest and de-escalate the paths for worshipers and visitors alike. The use of self-navigation cues based on Islamic motifs such as crescents, domes, and geometric arabesques enhances the legibility of the text and strengthens cultural identity through orientation. Pausing spaces are created by shaded “jalsa” gathering nodes, located near the entrance and along pathways, which offer places to pause and reflect, to discuss and engage in community dialogue, while maintaining the intense immersion of the ritual.

Warm hues denote communal prayer areas, cool hues draw attention to soft circulation, and golden accents denote ritual continuity. The Mo'min Mosque becomes a haven that represents belonging, provides a sense of security for visitors, and becomes a part of Manama's experiential fabric through this intervention.

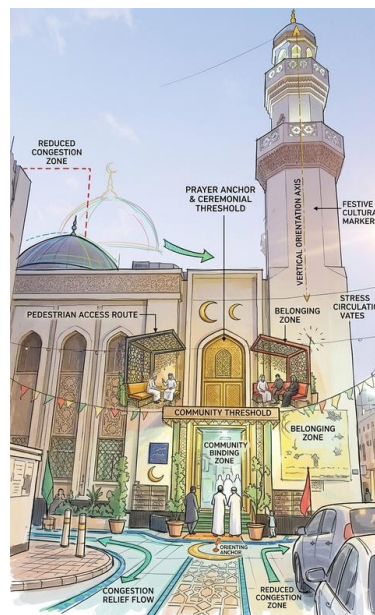


Fig. 68: Overlay Sketch of Suggested Intervention Proposal to Mo'min Mosque
Source: Authors, AI Tool Assisted

Community Feedback

1. Interview Integration Questions Design

The interview questions were designed to capture the emotional atmosphere of heritage, civic, and religious sites in Manama by focusing on how individuals experience identity, belonging, safety, ritual, diversity, and navigation. Each thematic cluster is intended to elicit both personal narratives and collective perceptions, ensuring that responses reflect lived experience rather than abstract evaluation.

Thematic Clusters

Identity & Belonging

- Questions posed focused on the interviewee's connection to the site.
- Aim: Analyze how space fosters emotional and cultural attachment.

Safety & Comfort

- Questions addressed feelings of safety and vulnerability, and the elements of the environment.
- Aim: Analyze the elements of space and their effect on feelings of comfort.

Rituals & Atmosphere

- Questions focused on the environment, the overall site, and the elements of the rituals
- practiced.
- Analyze how the site molded the atmosphere and how the elements of the site played a
- role in crafting the elements of the site.

Pluralism & Cultural Diversity

- Questions posed focused on the relationships between communities.
- Analyze how space fosters pluralism and diversity of the collective in Manama.

Navigation & Perceptual Clarity

- Questions focused on space in relation to contextual confusion.
- Analyze the effect of the overall site on the experience of the visitor.

Methodological Approach

The open-ended questions were to provide qualitative feedback. Site-specific, yet comparable questions, personal and collective spheres. Responses were framed as belonging, safety, and emotional atmosphere.

2. Interview Summaries

The interviews provide insights into the ways the heritage of Manama, its civic and religious roots, creates emotional moods of belonging, safety, ritual, stress, and alienation.

• Belonging & Identity

The places such as Bab Al Bahrain, Khalaf House, and Mo'min Mosque were always associated with childhood memories, family reunions, and the continuation of heritage by the respondents. New visitors emphasized the finding of pluralism and how the city center accommodates the coexistence of mosque, temple, and church as a reminder of the identity of peace and respect in Bahrain.

• Safety & Stress

The Souq was said to be colorful but daunting, and at times, with people to the extent of inconvenience and claustrophobia.

Bab Al Bahrain, on the other hand, was perceived to be a breathable open civic space that compensates for the overcrowding of the Souq. Religious places (the mosque and the church) were seen as a secure base, providing reassurance and refuge.

• Rituals & Atmosphere

Ritual activities in the Mo'min Mosque during Ramadan and meetings in the temple and church were defined as very spiritual and shaping the lives of the family and community. Sensory details such as the smell of spices, the noises of traders, bells, hymns, and lights of the festivals were underlined as elements of the memory and atmosphere.

- **Pluralism & Cultural Diversity**

The coexistence of various religious centers was identified as the characteristic feature of the urban identity of Manama by all the respondents. This pluralism was regarded as astonishing yet encouraging, educating about respect among generations.

- **Navigation & Perceptual Clarity**

The Bab Al Bahrain was always used as a landmark to orient. It was easy to find the way around the Souq using the knowledge that locals had, but visitors found it difficult to manoeuvre through its twists and turns, needing to use maps or features to find their way back.

3. Reflection

- **Belonging and Identity**

The interviews indicate that the heritage and civic anchors like Khalaf House, Bab Al Bahrain, and Mo'min Mosque are closely related to the individual and community identity. The locals identify these areas with their childhood memories, family gatherings, and cultural continuity, whereas visitors identify them as the face of the pluralism of Bahrain. This shows that belonging is both acquired and learned via experience.

- **Safety and Stress**

It was always mentioned that religious spaces were safe and comforting and that the Souq was perceived to be lively, but overwhelming. The congested alleys and the noise became stressful, especially to the newcomers, and open civic spaces such as Bab Al Bahrain were a respite. This evidence the direct impact of the spatial characteristics on emotional comfort.

- **Rituals and Atmosphere**

The remembrance of ritual practices was especially during Ramadan at Mo'min Mosque, which was described as formative and spiritually fulfilling. Sensory aspects, such as the smell of spices, the sounds of merchants, bells, and hymns, were highlighted as part of the atmosphere and memory. These are rituals and layers of sensations that root the emotional experience between generations.

- **Pluralism and Diversity**

The presence of mosque, temple, and church in the center of Manama was a common phenomenon observed by all the participants as a strong representation of cultural diversity. It was this pluralism that locals were proud of, and visitors who were surprised and inspired by the inclusiveness. This is an indicator of Bahrain being a city of respect and coexistence.

- **Navigation and Orientation**

Bab Al Bahrain became a standard reference point to guide oneself in the city, as a civic reference point. The Souq was easy to navigate for locals but confusing to visitors due to its mazelike design, and they may need to use maps. This demonstrates the familiarity as a factor that decreases alienation and the newcomers as relying on landmarks to navigate the complexity.

4. Feedback from Interventions Interview

The respondents were asked to think about the proposed interventions – pedestrian-only corridors, self-navigating systems, and shaded jalsa gathering nodes. Their views emphasize the relevance of the proposals to their experience.

One of the respondents pointed out that pedestrianisation would alleviate congestion and make the Souq more pleasant. The shaded jalsa nodes were received

as places to pause and connect socially, and cultural navigation cues were found to be supportive of orientation and affirm identity.

“As someone new to Bahrain, I wish to emphasize that I believe the navigation system will make the Souq less disorienting as people will no longer need to rely on digital maps there,” said another respondent. The gathering nodes with shade were found to be welcome as a space to make people feel less uncomfortable; the pedestrian-only corridors were seen to add to safety.

A third respondent raised the issue of family safety, stating that pedestrian walkways would make it easier to get out with kids. The families appreciated the Jalsa nodes as resting points and places to connect, and cultural navigation cues were thought of as educational resources for children to learn about the identity of Manama. The feedback focuses on three aspects: pedestrian corridors increase safety and comfort.

Conclusion

This study examined the heritage route in Manama in terms of experiential intelligence and cultural regeneration, on the premise that the city is not only a functional environment but a cultural and psychological landscape for the people. The research, through a combination of theory from spatial psychology, phenomenology, and experiential urbanism, and field documentation, interviews, and AI-assisted visualization, has pointed to the intricate relationship between emotional atmospheres, sensory conditions, and cultural identity that govern the perception of urban experience.

The results make it clear that the heritage anchors of Manama, namely, Bab Al Bahrain, Souq, Khalaf House, Hindu Temple, Sacred Heart Church, and Mo'min Mosque, bear layers of memory, ritual, and diversity that are central to the identity of Manama. However, these places are under threat from modernization, congestion, and homogenization, which could threaten their experiential richness. Emotional mapping brought both comfort and alienation, sensory documentation brought contrasts between the traditional and the modern, and cultural reflections added plurality and inclusiveness to the sustainability of identity.

The proposals in this study for regeneration – pedestrian-only spaces, self-navigation systems inspired by culture, and the shaded jalsa gathering nodes – are directly addressed to these challenges. They intend to re-establish safety, improve perceptual clarity, encourage social interaction, and strengthen cultural legibility and memory. These interventions were identified as relevant by the community, and residents, visitors, and families alike noted their potential to make a difference with respect to comfort, orientation, and belonging. This validation reinforces the necessity to make design proposals from lived experiences; that regeneration is not imposed but co-created with those who live in the city.

The research also bears broader implications for human-centered urbanism in times of technological change, beyond Manama. It illustrates the importance of experiential intelligence (the ability to design from an emotional, sensory, and cultural perspective) for sustainable urban futures. Additionally, the study underscores the merit of mixed research strategies, which rely on fieldwork alongside digital visualizations, enabling a qualitative depth and innovative representation.

To sum up, the heritage route in Manama serves as a blueprint for how Gulf cities can be re-imagined as cultural places to modernise and retain identity. The interventions proposed here aim to re-create urban space by foregrounding memories, diversity, and sensory richness to improve well-being, perceptual clarity, and sense of belonging. Going forward, this work can be expanded and expanded further through participatory design processes, policy integration, and performance

evaluation, making experiential intelligence a key principle for urban regeneration in Bahrain and elsewhere.

This is a rather a unique study of the experiential intelligence of a city particularly a city in the Middle East: specifically, Bahrain. Its strength is in employing numerous and a vast variety of research techniques to ascertain the complexities of nuances of spatial experience of a number of significant places in Manama, Bahrain. However, its scope is limited in that the experience is time specific and place specific and therefore cannot be generalized. Nevertheless, it contributes significantly to the understanding of the daily experiences of the people in their everyday environments: cities in which they live.

Acknowledgements: This research paper is an outcome of the final research achievement of our studio work. We would like to express my sincere gratitude to residents of Manama whose generous support enabled the research to be carried out.

Contributions of the Authors: Dr. Hawraa Alshaik conceptualized and supervised the research as a part of a course of studies in Interior Architecture program at the University of Bahrain, Bahrain. Lana Mohamad Youssef Ashkar & Amena Nayal Rashed Mukred collected information and wrote the draft of the paper. Dr. Hawraa Alshaik conceptualized edited and finalized the paper

Conflict of Interest: The author declares that there are no conflicts of interest regarding the research and publication of this paper.

Ethical Research Practice: This study strictly follows standard ethical research guidelines.

Availability of Data:

This paper presents only some of the data produced through this research. However, most of the data generated through this research is available for scrutiny and can be provided upon request.

References

- Alalawi, A. (2026). Vernacular identity in Bahrain's urban transformation. Manama: University of Bahrain Press.
- Alfadhel, M. & Elghonaimy, H (2025). High-rise façades and identity in Manama. *Journal of Gulf Architecture*, 12(3), 45-62.
- Al-Ghatam, R. (2024). Villages and urban absorption in Bahrain: Spatial memory and identity. *Bahrain Journal of Urban Studies*, 8(1), 77-95.
- Al-Madani, S. (2022). Migrant experiences in Bahrain's public spaces: Superdiversity and belonging. *International Journal of Middle Eastern Urbanism*, 5(2), 101-118.
- Bachelard, G. (1994) *The Poetics of Space*. Boston: Beacon Press.
- Cobbina, J., Mensah, K. & Boateng, R. (2025) Cultural identity and sustainable urban development: Belonging and ownership in community spaces. *International Journal of Sustainable Cities*, 12(1), 33-49.
- Gehl, J. (2010). *Cities for People*. London: Island Press.
- Higuera-Trujillo, J.L., Llinares, C. & Macagno, E. (2021) Neuroarchitecture: Effects of spatial design and sensory conditions on emotional well-being and cognitive responses. *Frontiers in Psychology*, 12, 611378.
- Lynch, K. (1960). *The Image of the City*. Cambridge, MA: MIT Press.
- Madanipour, A. (2003). *Public and Private Spaces of the City*. London: Routledge.

- Mansour, M., Al-Khalifa, H. & Al-Ansari, F. (2023) Perception and identity in urban environments: Emotional atmospheres and safety in Middle Eastern cities. *Journal of Urban Studies*, 45(2), 215-232.
- Mohamed, A. & Allani, M. (2024). Movement patterns and social sustainability in Bahrain's retail districts. *Journal of Urban Behaviour Studies*, 9(4),120-138.
- Montgomery, J. (1998) Making a city: Urbanity, vitality and urban design. *Journal of Urban Design*, 3(1), 93-116.
- Norberg-Schulz, C. (1980) *Genius Loci: Towards a Phenomenology of Architecture*. New York: Rizzoli.
- Pallasmaa, J. (2005) *The Eyes of the Skin: Architecture and the Senses*. Chichester: Wiley.
- Relph, E. (1976) *Place and Placelessness*. London: Pion.
- Suvarna, A. & Allani, M. (2023) Iconic skylines and experiential disruption in Bahrain. *Gulf Architecture Review*, 14(2), 33-50.