

# THE POTENTIALS OF INTEGRATION IN THE HISTORICAL KHAN OF AL-EXANDRIA-BABYLON

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## Abstract

Contemporary trends focus on exploiting the value of historical buildings and actively involving them in urban development projects. The integration policy is a middle ground between preserving the building as it is and demolition and removal, that is, integration aims to achieve a balance. Most of the historical buildings in Iraqi cities, including the Khans, suffer from the absence of a clear vision of the factors of urban integration in the levels and dimensions of the relationship between the historical building and its urban surroundings. The research assumes that the approach to the integration process depends on the determinants of the historical value of the building and its urban surroundings. The research aims to determine the approach for Khan of Alexandria according to the determinants of its historical value and the type of integration. The research relied on the analysis of previous studies to build a theoretical framework for the concept of urban integration according to the determinants of historical value, the visual and functional characteristics of the buildings and the surrounding spaces were analyzed, and the questionnaire was designed according to the extracted indicators. . The theoretical framework Showed that urban integration depends on valuable indicators such as the availability of architectural symbols and connotations, availability of aesthetic characteristics, availability of current function, integrity of origin, originality of materials, etc. These indicators were applied according to a questionnaire system for architectural and conservation experts and another model for indicators for users of the urban area in Al Khan. The applied results of the study area showed that the integration of the Khan requires integration into its urban environment in addition to the integration of the building itself, as the Khan needs functional integration due to the lack of economic value of the Khan, and the urban environment needs spatial integration (visual and functional) due to the loss of most historical values and functions that would reintegrate the Khan with its urban surroundings and not harm its historical value.

## Keywords:

Conservation;  
Historical value;  
Conservation Strategies;  
Development of valuable buildings;  
Urban integration;  
Visual integration;  
Functional integration;  
Urban fabric integration;  
Iraqi khans;  
Alexandria khans.

## 1 Theoretical study

For the purpose of identifying search terms and indicators of building values, it is necessary to study research concepts and previous studies as follows:

### 1.1 Introduction

Historical buildings of value are a witness to the memory of the city and its cultural heritage, and an active element in the formation of the city's identity and urban excellence, where contemporary trends focus on exploiting the value of historical buildings and actively involve them in urban development projects to achieve a balance between preservation that ensures the continuity of identity and vegetable distinction and development that secures the contemporary requirements of residents to turn them into a link that ensures continuity between the past, present and future [1]. The integration policy is also a middle direction between the two directions of preserving the building as it is and the direction of demolition and removal, i.e. Integration achieves a balance [2] .

A study by (Bastida, 2021) see that urban research sought to investigate the relationship between better urban design and the value it adds to the city, as good urban design as a basic concept in the urban development process has theoretical and applied potential to generate benefits for the various stakeholders involved. By producing and using the built environment, communities' opinions differ on what constitutes good design in the built environment, as it will depend on the public's perception of it rather than the nature of the design of the project to be implemented. Thus, the evaluation and indicators of good urban design (efficient space) have become one of the main characteristics of urban design and planning policy making in all areas around the world. [3].

Study on measuring complementation in urban environments (2023) Evaluating urban environments is of great necessity and importance to address and mitigate the undesirable effects of urban challenges at different levels, as the city responds to these challenges with complementation by creating changes at the deep structure level and urban transformations at the virtual structure level by A set of urban design strategies, mechanisms and tools. Good urban design has always had the potential to respond to contemporary and future urban challenges facing the city, which urban design practitioners aim to solve and complement the requirements of users and occupants in the city. The study shows that the main goal of urban integration is to integrate systems with Some of them are to reach a more efficient system that solves the urban problems in the city to meet the current and future requirements of the population. That is, the focus of urban integration is the integration of systems and sectors within the city [4].

Mustafa and Khansa ( 2018) showed that a region in the center of the city of Cincinnati in the United States suffers from social and economic separation and isolation as a result of cutting off the physical connection between the two regions, which prevented the flow of possible traffic along the area, and to solve this problem, the study proposes a systematic design through a system of intervention that enables the integration of the two regions (socially, economically and physically) and the restoration of life to a separate community, this intervention includes increasing the physical connection between the two regions by increasing pedestrian flows and creating Traffic corridors inside and outside the site and increasing the frequency opportunities of the site by increasing access to services and goods and enhancing participation between them [5].

Study on enhancing the sustainable cultural values of archaeological buildings 2024: This study believes that the world is witnessing an increasing interest in preserving archaeological buildings and effectively preserving their cultural identity. Reusing archaeological buildings provides opportunities for the continued existence of these buildings in modern society and to benefit from them for various purposes. The main challenge facing the preservation of the cultural identity in these buildings is to provide a suitable and sustainable environment for their new use without compromising the historical and cultural value of the original building. This research aims to explore the possibility of reusing archaeological buildings through integration between interior design and digital technology to preserve cultural identity [6].

Table 1. Previous Studies of Urban Integration

| The Study                                                                     | Findings                                                                                                                                                                                           |
|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (Bastida, 2021)                                                               | Integration policy is important in restoring and complementing the values of historic buildings                                                                                                    |
| measuring complementation in urban environments (2023)                        | Urban integration deals with the urban environment according to the visual and functional dimensions of the part and the whole                                                                     |
| Mustafa and Khansa (2018)                                                     | Areas or buildings that suffer from neglect or socio-economic isolation are the result of a physical (functional–visual) integration interruption                                                  |
| enhancing the sustainable cultural values of archaeological buildings, (2024) | The reuse of heritage buildings provides opportunities for the continued existence of these buildings in modern society, and it is possible to reuse historic buildings through urban integration. |

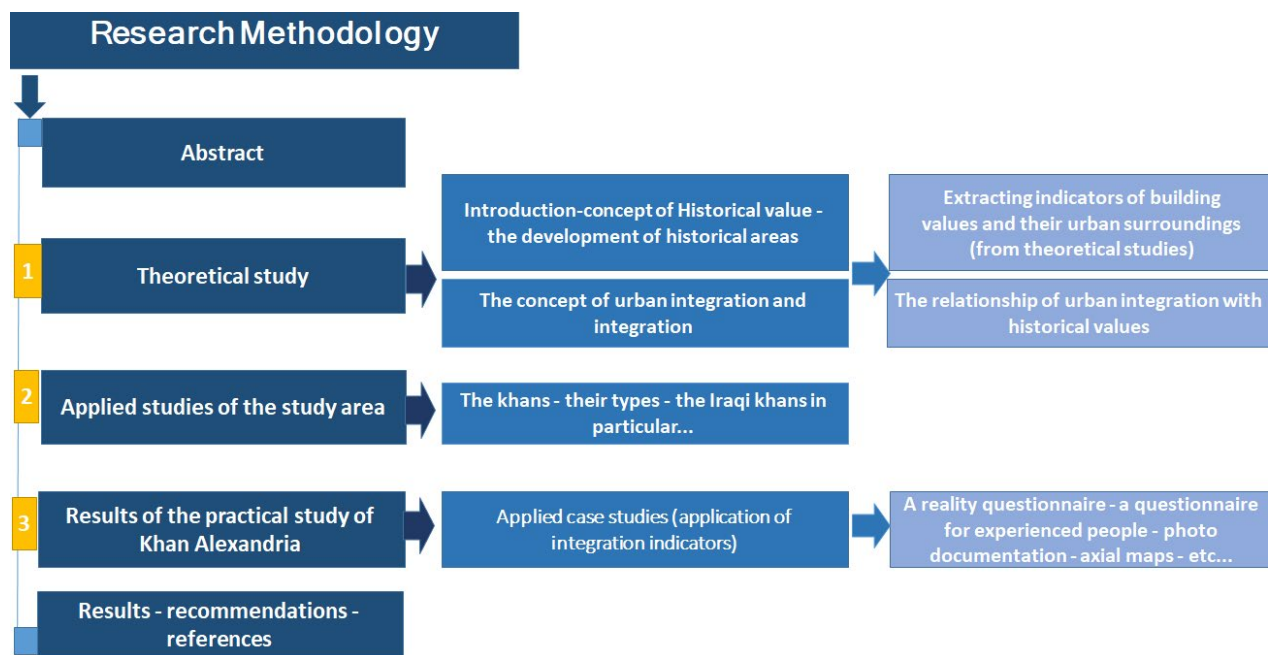


Figure 1. Research Methodology (Source: researcher)

## 1.2 The Concept of Historical Value

Farr's definition of value is that which is an object of appreciation by a person and has a role in guiding his life, value is a moral criterion and means what is both in human behavior. "Value is what is considered to be right, Beautiful, good, according to a personal judgment that is relatively compatible with the judgment of the Society of that time period [7]. The concept of value: it is the belief (conviction) of a person in sacred or legitimate goals that give him criteria for judging things and actions by good and ugly, or as philosophers see it (a tool for organizing existence or reality so that it is reconstituted to achieve human goals). When the concept of value is linked to heritage, it is the material or moral legacy left by the predecessor that deserves to be preserved, protected and preserved for successive generations. Heritage is formed by a person's awareness and awareness of the value of a building, monument or historical areas through generations, touching the goals and objectives he seeks. When dealing with areas or buildings of value, the concept of value must be addressed in its multiple dimensions. However, a valuable building it is a building or facility that has a historical, symbolic, architectural, artistic, urban, or social value [8]. However, values of historic buildings include the following classification:

1) Temporal (historical) value: The Association of the building with national historical values (Moral indicator of communication with the past), has an important influential national event (Moral indicator), and the extent to which the building expresses its era and history (Chronological indicator), also the age of the building (a chronological index) [9].

2) Symbolic value: established by an important figure locally or globally. The building is the product of an architectural design by one of the pioneers of architecture. Objects and sites save or are carry of the meaning (Ibid).

3) Aesthetic value: consistency and aesthetics (Ibid).

4) Social value: The Association of the heritage building with an important social function performed by it. The heritage building reflects the social traditions that existed in it. Contact with others, sense of identity, associative memory (Ibid).

5) The value of originality: keratinization, integrity of origin, that is, the preservation of original building materials, signs, writings or drawings including foot manifestations [10].

6) Functional(practical) value: it is the architectural heritage that is still used today, or at least it can be reused or employed to play a role in people's lives, the practical value is very high for the mosque and the church, for example, because they are still used today. The practical value of any building that no longer performs a function, or has turned into just a tourist shrine, diminishes [11] Fig.

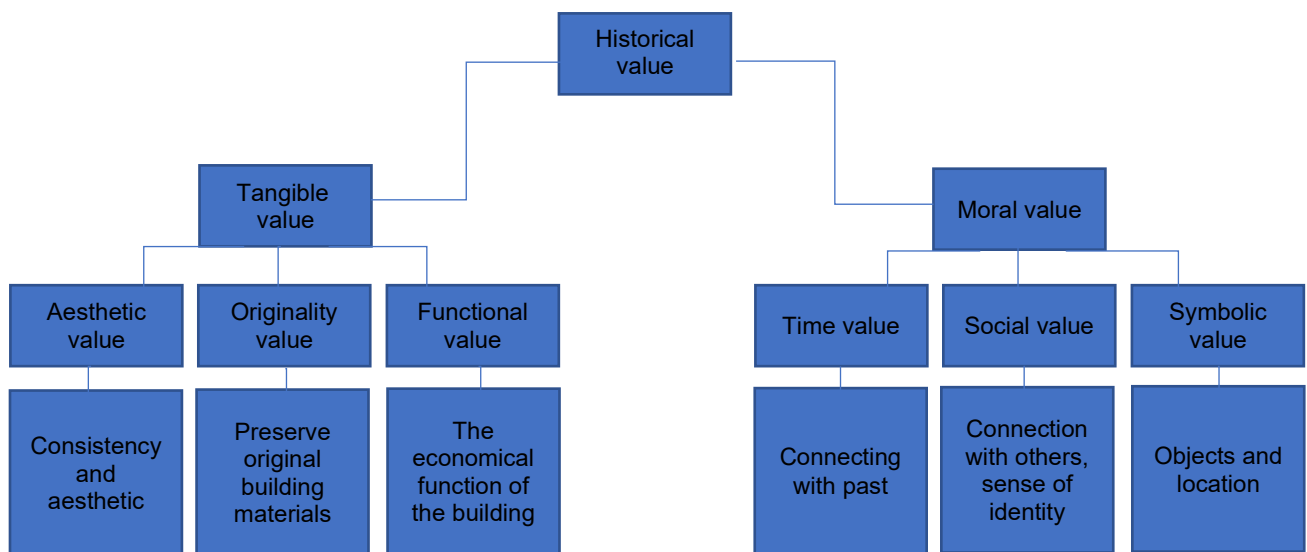


Figure 2. Classification of the Historical Building's Values (Source: researcher)

### 1.3 Development of valuable buildings

The policy of preserving buildings of architectural and historical value is one of the most important priorities that countries care about to protect the cultural heritage. However, restoring archaeological buildings alone will not achieve its goal except by comprehensively upgrading the area containing the antiquities, by linking buildings of historical value with the modern urban fabric, and designing the environment. Authentic urban construction, which expresses the cultural heritage of the city, is a complex process that requires studying the functional needs of the city and employing jobs that are appropriate to the nature of the buildings. However, the most important trends that deal with buildings of value are as follows [12]:

1) The policy of change and removal: It is the tendency to change all old formulas and replace them with modern formulations that are compatible with the development taking place in the region or the buildings of value, considering that old historical buildings are deteriorating and cannot be repaired or expensive. It is a trend that deals with buildings that are deteriorating architecturally, economically, or politically as well. Intervention levels for this trend can be at the level of an urban environment, an integrated fabric, an urban landscape (street), or an individual building Fig. 3



Figure 3. The Removal of an Old Building and Replacing It with A Modern Building  
([https://ar.wikipedia.org/wiki/%D8%AA%D8%AC%D8%AF%D9%8A%D8%AF\\_%D8%AD%D8%B6%D8%B1%D9%8A](https://ar.wikipedia.org/wiki/%D8%AA%D8%AC%D8%AF%D9%8A%D8%AF_%D8%AD%D8%B6%D8%B1%D9%8A))

2) Preservation policy: This trend is closely linked to the cultural heritage of society, as it always moves towards reviving historical buildings with the aim of confirming their importance and preserving their entity and symbolism in order to continue confirming their cultural character through preserving the architectural heritage and the visual and urban character of those buildings while protecting the social and cultural character of the community. The goal of preservation policies is primarily to preserve valuable architectural aspects in historical areas,

which is the negative dimension of the preservation process, and at the same time to systematically control what is changing. The levels of intervention in this direction can be at the level of an urban environment, an integrated fabric, an urban landscape (street), or an individual building [13] Fig. 4



Figure 4. Urban Integration in Al-Ghouri Agency [8]

#### 1.4 The concept of urban integration and integration

Integration it is the relationship between the system of the whole and the system of parts in the architectural work, emphasizing the formal, relational characteristics based on Gestalt psychology, which constitutes in a sense more than just the result of linking the parts to each other [14]. However, Urban integration: It is the integration of the components of the urban environment in terms of functional factors (social, economic and environmental) so that an integrated urban performance is achieved, which is the functional integration and integration between the urban environmental components on the physical side to reach all (visually and compositionally) unification. This integration is achieved through functional and material means and aims to achieve social integration rather than social segregation. The term urban integration was mentioned as a solution to the problem of urban gaps that afflict the urban fabric, which represents the lack of continuity of the urban fabric. The causes of these gaps are due to urban forces (social, economic, cultural, environmental, and political) that cause many urban problems, the most important of which is the introduction of highways into the urban structure. It is working to divide it into two different areas, or for the reason of the lack of simultaneous construction of development areas as a result of the high value of the land and real estate market variables, or for reasons of involving use and activities different from its urban surroundings, such as government use in commercial streets, or as a result of the extinction and neglect of areas of urban fabric. Irrigation, all of which lead to the creation of urban gaps It requires the re-integration of the urban fabric [15]. Furthermore, there are three levels of urban integration:

- 1) Micro level (integration of the building itself (partial integration)
- 2) Macro level (site integration) Urban surroundings with the building
- 3) Macro integration - City level

For the integration in buildings and urban integration, there are two levels, are as follows:

##### A. part level (integration in buildings):

- 1) Visual integration: between the elements and formal relationships of the building.
- 2) Functional integration: This is the building's function, including (economic and social functional)

##### B. urban level (urban integration):

Spatial integration: Kevin Lynch pointed to the integration between the conceptual structure, the spatial structure, and the actual use of the site in the urban structure, and the discontinuity lies in the lack of this integration. As for Amos Rapport, he believes that historical centres integrate personal culture and human behaviour with their urban structure. Moreover, the presence of great integration in the Islamic city in the nature of the formation, that is, the general formal composition of the city and the conceptual and value composition of its inhabitants. Moreover, the functional and visual dimensions and fabric integration are as follows [16]:

- 1) Functional integration of the urban structure: Alexander emphasized the idea of functional integration of the urban centre in which activities interact, as integration appears in historical city centres on a large scale, while modern cities are built according to the integration of a small scale, so

the whole is a sum of localized parts [17]. The gradual transformations in the identity of the urban environment, which are materially embodied in the formal transformations of the urban elements and the relationships between them, must be subject to the laws of their social, economic and cultural context in a way that achieves communication between the past and the present without introducing urban elements that are foreign to the urban environment. And the attempt to create communication Among the parts of the city with its diverse architectural identity, these parts need to be connected first with the spirit of the times and openness to the global context, and it is possible to reach the diversity of the city's identity between traditionalism and developments in the spirit of the times [18] .

2) Visual integration of the urban structure: between the elements and formal relationships of the urban surroundings (urban landscape). The visual integration of the urban landscape into the urban structure depends on the nature of the relationships between these characteristics and urban components.

3) Integration of the fabric: It means integration between the physical components of the urban structure to reach unified blocks, and these elements are realized through their structural elements on a large scale, which includes the system of space and movement, streets, and squares Fig. 5

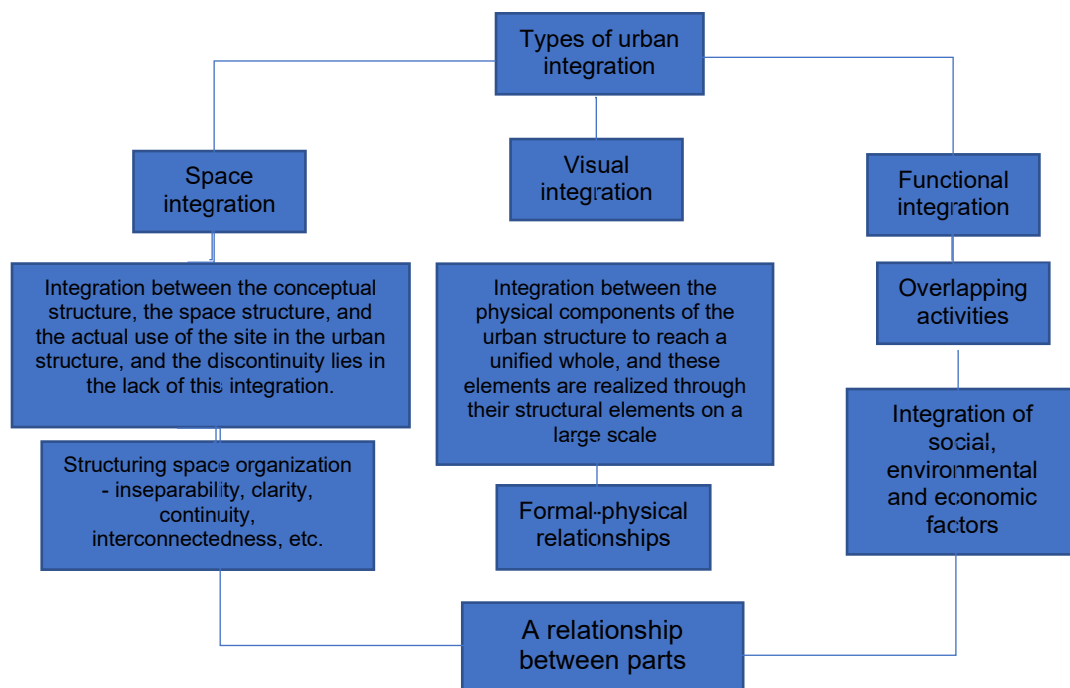


Figure 5. Classification of types of urban integration (Source: researcher)

### 1.5 Urban integration indicators according to levels of dealing and type of value

According to the definition of the basic research concepts and vocabulary (historical value, its types, and its relationship to urban integration and its types), the relationship of the types of urban integration with the types of historical values of buildings and the potential role they play in restoring the values of the historical building on the one hand and activating the role of the building within its urban surroundings on the other hand was tested. Fig. 6 shows the urban integration classification and its relationship with the classification of the potential value of the historic building within its urban surroundings from this concluded Fig. 7

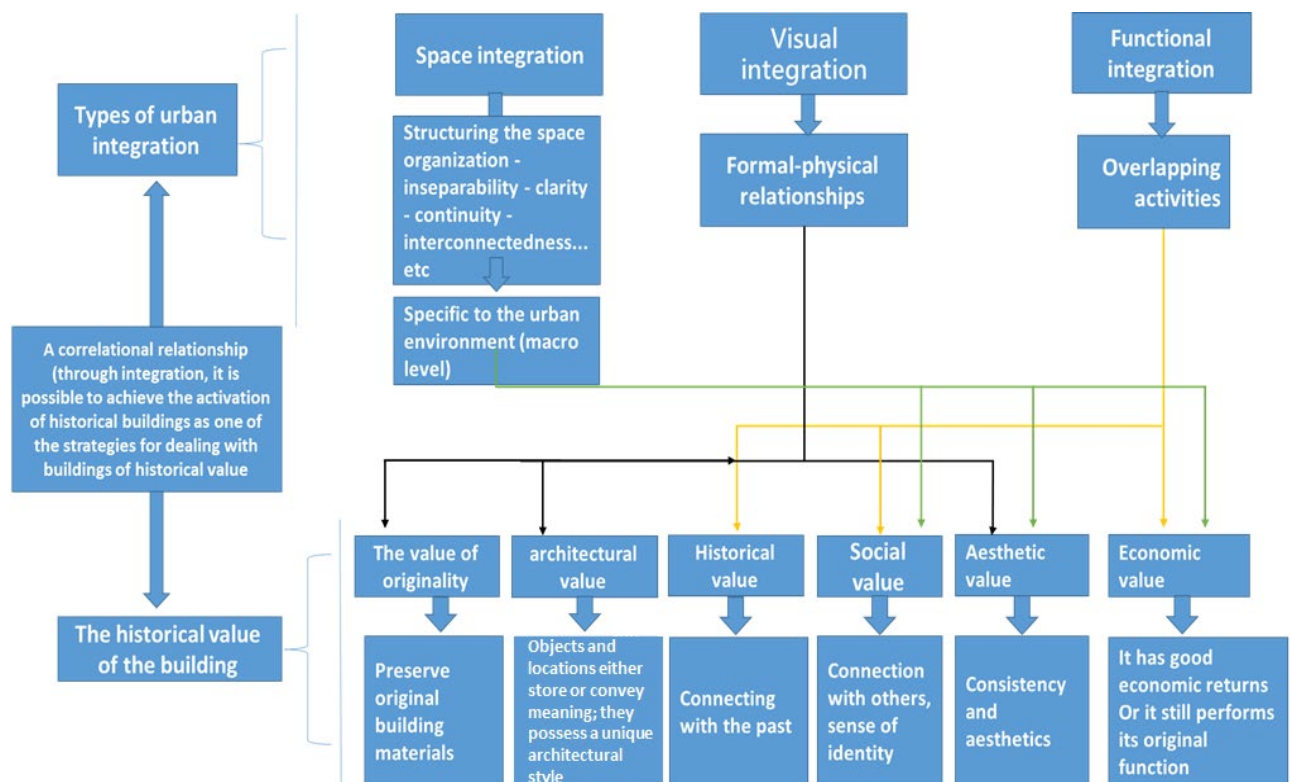


Figure 6. Classifying Urban Integration and Its Relationship with Classifying the Potential Value of a Historic Building Within Its Urban Surroundings (Source: researcher)

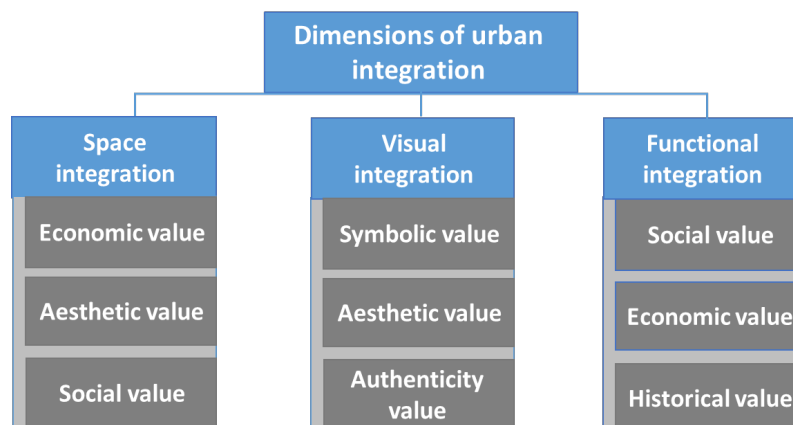


Figure 7. the values of historical buildings and the dimensions of integration that deal with them (at the part and whole levels) (Source: researcher)

From the above, a general framework for research can be made as in table 2, and Questionnaire for Experienced Users of the Khan in table 3.

Table 2. The general framework of urban integration indicators for buildings of historical value within its urban surroundings. (Source: researcher)

| Integration mechanisms         | Indicator                                                             | the level | The type of integration required | Secondary term                   | The basic term             |
|--------------------------------|-----------------------------------------------------------------------|-----------|----------------------------------|----------------------------------|----------------------------|
| Restore original functionality | -The availability of historical and national values in the building   | part      | Functional integration           | History of the valuable building | -Time value (historical)   |
|                                | -The building's expression of its era and history                     |           |                                  |                                  |                            |
|                                | -The age of the building                                              |           |                                  |                                  |                            |
| Restore the original           | -The building is the product of an architectural design by one of the | part      | Visual integration               | Architectural symbols and        | -Symbolic or architectural |

|                                                                                                                                                                                         |                                                                                           |                 |                        |                                              |                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-----------------|------------------------|----------------------------------------------|-----------------------------|
|                                                                                                                                                                                         | pioneers of architecture                                                                  |                 |                        | meanings                                     | value                       |
|                                                                                                                                                                                         | -Provides aesthetic elements for distinctive models or symbols                            |                 |                        |                                              |                             |
| <div>- Improve and repair</div> <div>- Restore the original</div> <div>-Delete an effective element</div> <div>- Add a new item</div>                                                   | -Unity between the building's elements or components                                      | part            | Visual integration     | Components and physical formal relationships | -Aesthetic value            |
|                                                                                                                                                                                         | -Diversity of components and relationships in the building facades                        |                 |                        |                                              |                             |
|                                                                                                                                                                                         | -Visual emphasis on an aesthetic feature or component of the building                     |                 |                        |                                              |                             |
|                                                                                                                                                                                         | -The building is distinguished by its human scale                                         |                 |                        |                                              |                             |
|                                                                                                                                                                                         | -Repetition of formal elements                                                            |                 |                        |                                              |                             |
|                                                                                                                                                                                         | - Compatibility in building elements                                                      |                 |                        |                                              |                             |
|                                                                                                                                                                                         | - Availability of unity in the components of the urban landscape                          | urban scene(All | Visual integration     |                                              |                             |
|                                                                                                                                                                                         | - Diversity in the components and relationships of the urban landscape                    |                 |                        |                                              |                             |
|                                                                                                                                                                                         | - Visual emphasis on an aesthetic feature, component, or building in the urban landscape  |                 |                        |                                              |                             |
|                                                                                                                                                                                         | -The urban landscape was characterized by a human scale                                   |                 |                        |                                              |                             |
|                                                                                                                                                                                         | - Repetition in the elements that make up the urban landscape                             |                 |                        |                                              |                             |
|                                                                                                                                                                                         | - The compatibility of the elements and structures of the urban landscape with each other |                 | Fabric integration     |                                              |                             |
|                                                                                                                                                                                         | - The building stands out for its value and visual clarity within the urban landscape     |                 |                        |                                              |                             |
|                                                                                                                                                                                         | -There is a gradient in the movement or spaces of the urban area                          | urban scene(All |                        |                                              |                             |
| Restore original-functionality                                                                                                                                                          | -The connection of a valuable building to social traditions that existed within it        | All             | Functional integration | Sense of identity                            | -Social value               |
|                                                                                                                                                                                         | -Community connection to a building of value                                              | All             | Functional integration |                                              |                             |
| Improve and repair                                                                                                                                                                      | - Time period of building materials and elements (antiquity)                              | part            | Visual integration     | Original building materials or elements      | -The value of originality   |
|                                                                                                                                                                                         | - Facility safety                                                                         |                 |                        |                                              |                             |
|                                                                                                                                                                                         | - Preserve original building materials, signs, writings or drawings                       |                 |                        |                                              |                             |
|                                                                                                                                                                                         | - Quality of maintenance and preservation operations                                      |                 |                        |                                              |                             |
| <div>- Restore original functionality</div> <div>- Change function</div> <div>-Delete an influential function</div> <div>-Adding an attribution function</div>                          | - The presence or absence of a current function of the building                           | part            | Functional integration | The economic function of a valuable building | -Economic (practical) value |
|                                                                                                                                                                                         | -The possibility of reusing buildings and employing them to play a role in people's lives |                 |                        |                                              |                             |
| <div>-Change function</div> <div>-Delete an influential function</div> <div>-Add assignment functions</div> <div>-Restore the original function or keep the functions as they are</div> | - Adapting the functions of the urban environment to the building's historical value      | All             | Functional integration |                                              |                             |

Table 3. Questionnaire for Experienced Users of the Khan and Residents of the Urban Area of the Khan  
(Source: researcher)

| result | Measurement mechanism             | coding | Question                                                                                       | level             | The type of integration required | Secondary item                               | Basic item                       |
|--------|-----------------------------------|--------|------------------------------------------------------------------------------------------------|-------------------|----------------------------------|----------------------------------------------|----------------------------------|
|        | Yes/No                            | x-1-1  | - Is the building linked to national historical values?                                        | part              | Functional integration           | History of the valuable building             | -Time value (historical)         |
|        | Strong/Medium/Weak                | x-1-2  | - The extent to which the building expresses its era and history                               |                   |                                  |                                              |                                  |
|        | Old/Medium/Modern                 | x-1-3  | -The age of the building                                                                       |                   |                                  |                                              |                                  |
|        | Yes/No                            | x-2-1  | -The building is the product of an architectural design by one of the pioneers of architecture | part              | Visual integration               | Architectural symbols and meanings           | -Symbolic or architectural value |
|        | Yes/No                            | x-2-2  | -Are there distinctive signs or symbols available?                                             |                   |                                  |                                              |                                  |
|        | Yes/No                            | x-3-1  | -Is there unity between the building's elements or components?                                 | part              | Visual integration               | Components and physical formal relationships | -Aesthetic value                 |
|        | Miscellaneous / Not Miscellaneous | x-3-2  | -Is the building diverse in components and relationships?                                      |                   |                                  |                                              |                                  |
|        | Yes/No                            | x-3-3  | -Is there confirmation of an element or component in the building?                             |                   |                                  |                                              |                                  |
|        | Yes/No                            | x-3-4  | -Is the building within the humanitarian standard?                                             |                   |                                  |                                              |                                  |
|        | Very refined/balanced             | x-3-5  | -Is there repetition in the formal elements?                                                   |                   |                                  |                                              |                                  |
|        | Contradictory/compatible          | x-3-6  | -Are the elements compatible (homogeneous) with each other?                                    |                   |                                  |                                              |                                  |
|        | Yes/No                            | x-3-7  | -Is there unity among the components of the urban landscape?                                   | All (urban scene) | Visual integration               |                                              |                                  |
|        | Miscellaneous / Not Miscellaneous | x-3-8  | -Is the urban landscape diverse in components and relationships?                               |                   |                                  |                                              |                                  |
|        | Yes/No                            | x-3-9  | -Is there an emphasis on an element, component, or building in the urban landscape?            |                   |                                  |                                              |                                  |
|        | Yes/No                            | x-3-10 | -Are the buildings in the urban landscape                                                      |                   |                                  |                                              |                                  |

|  |                                                   |        |                                                                                                      |                   |                        |                                              |                             |
|--|---------------------------------------------------|--------|------------------------------------------------------------------------------------------------------|-------------------|------------------------|----------------------------------------------|-----------------------------|
|  |                                                   |        | within the human scale?                                                                              |                   |                        |                                              |                             |
|  | Very refined/balanced                             | x-3-11 | -Is there repetition in the components or structures of the urban landscape?                         |                   |                        |                                              |                             |
|  | Contradictory/compatible                          | x-3-12 | -Are the components of the urban landscape (macro level) compatible (homogeneous) with each other?   |                   |                        |                                              |                             |
|  | Yes/No                                            | x-3-13 | -Is there a clear visual vision of the urban landscape or valuable building?                         |                   |                        |                                              |                             |
|  | Yes/No                                            | x-3-14 | -Is there a gradient in movement or spaces in the urban area?                                        | All (urban space) | Fabric integration     |                                              |                             |
|  | Yes/No                                            | x-4-1  | -Is the heritage building linked to an important social function that it performs?                   | part              | Functional integration | Sense of identity                            | -Social value               |
|  | Yes/No                                            | x-4-2  | -Does the heritage building reflect social traditions that existed within it?                        |                   |                        |                                              |                             |
|  | Yes/No                                            | x-4-3  | -Is there a community connection to the building of value (at the level of the entire urban setting) | all               | Functional integration |                                              |                             |
|  | Old/Medium/Modern                                 | x-5-1  | -The time period of the building's materials and elements (antiquity)                                | part              | Visual integration     | Original building materials or elements      | -The value of originality   |
|  | Good / Average / Poor                             | x-5-2  | -Safety of origin                                                                                    |                   |                        |                                              |                             |
|  | Conservative/partly conservative/non-conservative | x-5-3  | -Preserve original building materials, signs, writings or drawings                                   |                   |                        |                                              |                             |
|  | Good/not good                                     | x-5-4  | -Quality of maintenance and preservation operations                                                  |                   |                        |                                              |                             |
|  | Functionally lacking/functionally neglected       | x-6-1  | -The presence or absence of a current function of the building                                       | part              | Functional integration | The economic function of a valuable building | -Economic (practical) value |
|  | -Possible/not possible                            | x-6-2  | -Is it possible to reuse the building or employ it to play a role in people's lives?                 |                   |                        |                                              |                             |
|  | Appropriate/inappropriate                         | x-6-4  | -Do the functions of the urban environment do not harm the                                           | all               | Functional integration |                                              |                             |

|  |  |  |                                                                                           |  |  |  |  |
|--|--|--|-------------------------------------------------------------------------------------------|--|--|--|--|
|  |  |  | historical value of the valuable building (at the level of the entire urban environment)? |  |  |  |  |
|--|--|--|-------------------------------------------------------------------------------------------|--|--|--|--|

## 2 Applied studies of the study area

### 2.1 The khan and the Iraqi khans, including the Khan of Alexandria (case study)

#### 2.1.1 Definition of Khan

Al-Khan: A non-Arabic word that means a traveler's inn and residence. The khan was established due to the urgent need for its existence. The beginning of its establishment was simple, relying on the presence of a well or pool of water on land close to the caravan route, surrounded by a wall, to provide shelter and stability for its destination. Furthermore, Khans, is a word of Persian origin, given to the place where travelers stay, which are hotels in the current era. The wealthy people used to build caravansaries as a means of trade and earning money. The khans were a spacious building with spacious rooms that included a number of rooms and stores called khans. Moreover, most language sources agree that the word (khan) is Persian, Arabized, and it may have been derived from the word (khun), which means the title of sultan among the Turks, and the plural of the word (khan) is (khans), which is the place where travelers stay and is called (the hotel) [19].

#### 2.1.2 The importance of khans:

The idea of building khans in Iraq was linked to economic and social life because they were sometimes used for commercial exchange. Most of the khans in Baghdad performed commercial functions, regardless of their size or architectural plan, and were mainly used for rent in order to store goods and merchandise by wholesale merchants, and at the same time as inns for merchants. It was the stop of commercial caravans that went to buy or sell certain goods and commodities. During their movement between cities, these caravans needed places to rest after the hardship of travel. The old inns bore the character of current hotels in addition to the character of commercial centers in which commercial deals were concluded Fig. 8, Fig. 9.



Figure 8. Pictures of Iraqi khans (www.almadasupplements.com. Visit at 13/9/2023)

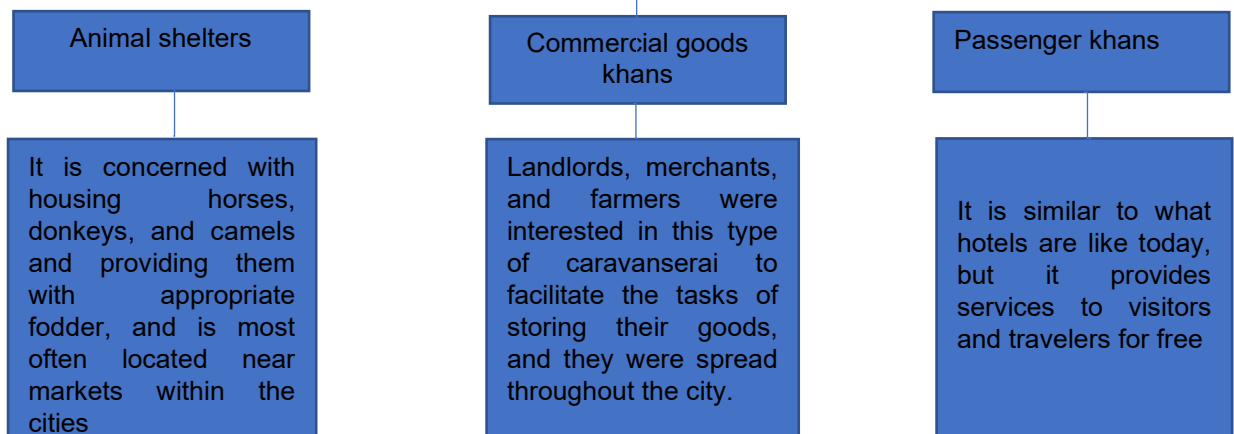


Figure 9. Types of khans (Source: researcher)

## 2.2 Khan of Alexandria (case study)

For the purpose of studying the values of the Khan of Alexandria, it is necessary to get to know it more precisely as follows:

### 2.2.1 Introduction and general description of the Khan of Alexandria

Khan Alexandria is located in the north of Babylon Governorate. Its history goes back more than 300 years. During the Ottoman era, its function was that merchants used it as a place to display their goods and a place to rest their horses as they headed south and north. It was a rest stop for pilgrims coming from faraway places. It consists of three large castles built on successive periods in the sixteenth century AD in the center of the city of Alexandria, which is now called the Old District. Each of these three castles contains many domes that are still standing to this day. Without any changes occurring to them, except for some minor changes as a result of climate factors [20] Fig. 10.



Figure 10. Khan Alexandria (satellite photos and survey photos in 2023 (researcher))

After the revolution of urban and industrial development, the spread of hotels, and the emergence of vehicles and means of transportation, there was no need for the Khan of Alexandria, like the rest of the khans, and it continued to be used locally for food, agriculture, and livestock trade until the sixties of the last century, after which it was completely neglected and closed, with only ruins remaining [21].

#### 2.2.1.1 General Description

Khan Al-Waqf, it is one of the khans that were extended along the land pilgrimage routes and the routes of visitors to the holy shrines in Najaf and Karbala. It consists of three large castles built over successive periods in the sixteenth century AD in the center of the city of Alexandria, which is now called the Old District. Each of these three castles contains many domes that are still standing to this day without any changes occurring to them except some. Minor changes due to climate factors. The three castles of this khan were built as a stop on the way for visitors to the holy shrines and were dedicated to this purpose, from which the name (Khan Al-Walf) came, as they were used at the time as rest stops for visitors and their animals (Ibid.)

#### 2.2.1.2 Preventive measures for the Khan:

Several measures have been taken to preserve the khan, including replacing the damaged bricks due to moisture with the same specifications as the original and strengthening the ceilings as in figures from 11 to 18.



Figure 11. preventive measures (removal of rubble) [21]



Figure 12. Pictures showing preventive measures (removing roof rubble) (survey photos in 2023 by researcher)



Figure 13. Pictures showing preventive measures (Supporting walls and ceilings) (survey photos in 2023 by researcher)

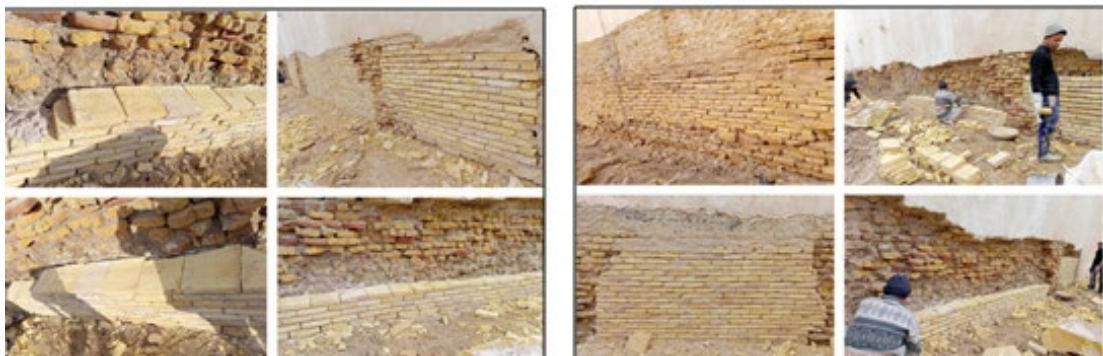


Figure 14. Pictures showing preventive measures (Removing bricks damaged by moisture and replacing them with bricks identical to the original) [21]



Figure 15. Pictures showing preventive measures (Treating ceilings and using materials identical to the original) [21]



Figure 16. Pictures showing preventive measures (Cleaning wells, removing dust, and repairing stairs) [21]



Figure 17. streets map leading to the Khan (Source: researcher)

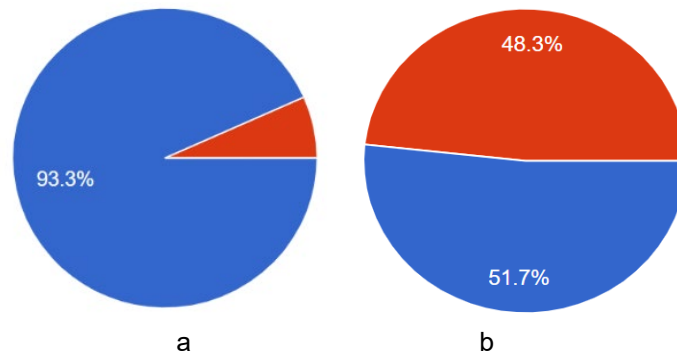


Figure 18. Urban landscape around Al Khan (Source: researcher)

### 3 Results of the practical study of Khan Alexandria

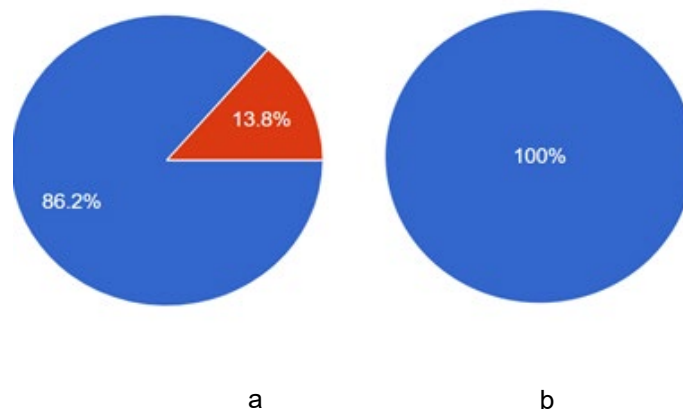
A questionnaire was applied that included (30) people with architectural experience, (60) people with experience in the khan or who worked in its preservation, and (60) people residing in the urban area of the khan. The shape is two colours, red for the answer in the negative – and blue for acceptance of that indicator

The results of the architectural or symbolic value questionnaire showed that there is a convergence in the answer that the building is the product of an architectural design by one of the pioneers of architecture, by approximately 50% for both categories (yes / no), which means that there is a lack of knowledge of the history of the khan for those with architectural experience. It also showed that the building has distinctive signs and symbols with 93% of the questionnaire sample, meaning that the building reflects distinctive styles and patterns. Taking the average of the two indicators, it is concluded that there is a good availability of symbolic value at 71.5% (there are architectural values), as shown in figure 19.

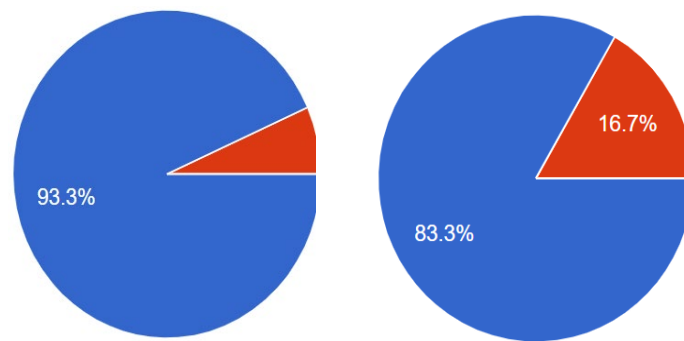


a- The availability of distinctive signs or symbols b- the building product.  
Figure 19. Presence of a Symbolic or Architectural Value (Source: researcher)

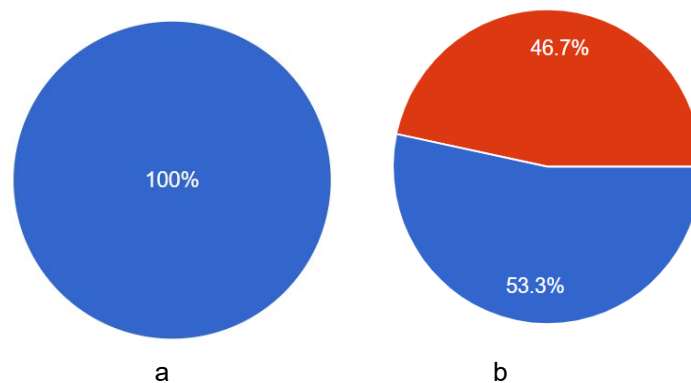
The results of the questionnaire of the aesthetic value of the building (part) showed that there is unity between the elements of the building or its components by 100%, and that the building is diverse components and relationships by 86%, and that there is confirmation of an element or component in the building by 83%, and that the building is within the human scale by 93% answers, and there is a balance in the formal elements by 46% answers, and that the elements are compatible (homogeneous) with each other by 100% answers, From the sample of the questionnaire and taking the average of the indicators, it is concluded that there is a good availability of aesthetic value by 84.4%, which means that the aesthetic value in Khan Alexandria is well available and it is important to preserve it without interference with its elements and components, as shown in figures 20-22.



a- building components and relationships. b- unity between the building's elements and components.  
Figure 20. The Availability of Aesthetic Value (Source: researcher)



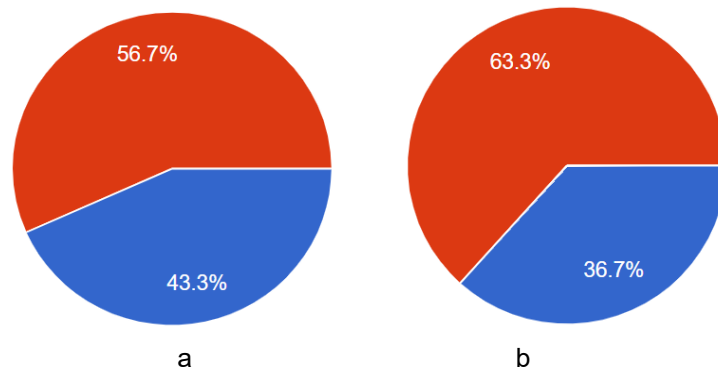
a- humanitarian standards b- confirmation of an element or component in the building  
Figure 21. The Availability of Aesthetic Value (Source: researcher)



a- the elements compatibility b- the repetition in the formal elements

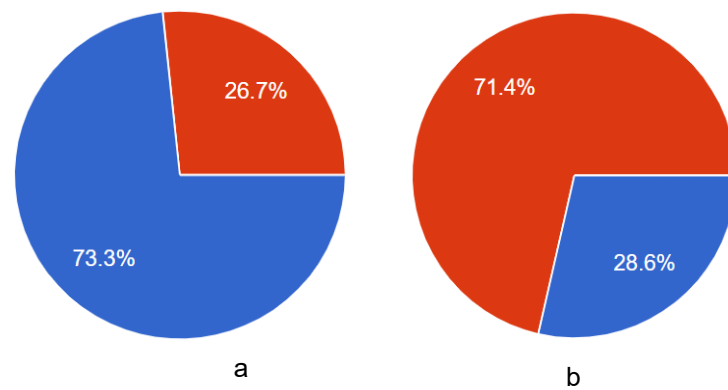
Figure 22. The Availability of Aesthetic Value (Source: researcher)

At the level of the urban environment, it showed that the existence of unity between the elements of the urban landscape or its components by 36%, and the diversity of components and relationships of the urban landscape by 43% answers, and the emphasis on an element or component in the urban landscape by 28% answers, and that the urban landscape within the human scale by 73% answers, and if there is a balance in the formal elements of the urban landscape is by 27%, The elements agree with each other in the urban landscape with 36% answers, and that there is a gradation in the movement or spaces of the urban area with 70% answers, and there was no clear visual vision of the urban landscape or building of value with 24% answers. From the sample of the questionnaire and taking the average of the indicators, it is concluded that (there are no good aesthetic values for the urban landscape, as the aesthetic value available in the urban environment achieved a percentage of the answer 75.38%. These results show that the urban area of the Khan suffers from major aesthetic problems and that there are possibilities for urban development and reconsideration of urban designs in urban landscape buildings as shown in figures from 23-25.



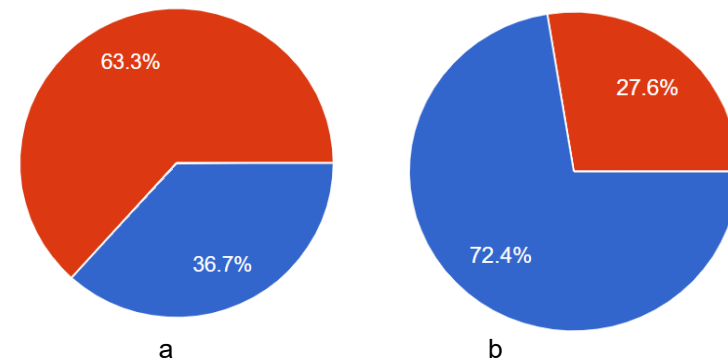
a- the urban landscape b- unity between the components of the urban landscape and the relationships.

Figure 23. The Availability of Aesthetic Value (Source: researcher)



a- The buildings in the urban landscape b- The emphasis on an element, component, or building in the urban landscape

Figure 24. The Availability of Aesthetic Value (Source: researcher)



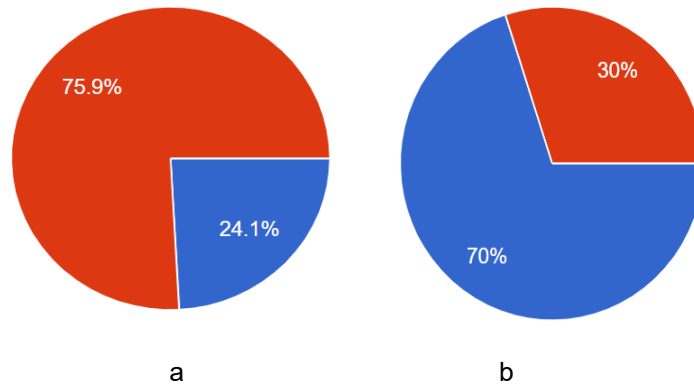
a- the components compatibility y b- the repetition in the formal elements

Figure 25. The Availability of Aesthetic Value (Source: researcher)

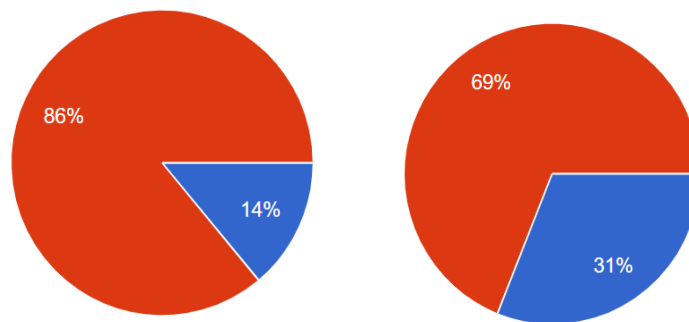
The results of the economic value survey showed that there is no current job available for the building, where the percentage of job availability reached 14%, and also showed that it is possible to reuse the building or use it to play a role in people's lives with an answer rate of 88%. From the sample of the questionnaire and taking the average of the two indicators, it is concluded that there is a good availability of economic value by 51%. This means that there are weak economic values for the building and a special economic function must be provided and it can be reused). It also shows

neglect and lack of knowledge of the importance of employing the Khan and integrating it into people's lives, which may cause it to be a passive building that does not support the revitalization of the area at the present time.

As for the urban environment, the results showed that the functions of the urban environment are not suitable by a large percentage, as the economic value of the urban environment reached only 31%. These findings illustrate the inadequacy of current jobs and the need to change them to suitable jobs that stimulate the region's economy, as show in figures from 26-28.



a- visual view of the urban landscape or building? b- gradient in movement or spaces  
Figure 26. The Availability of economic value (Source: researcher)



a- current function for the building b- the jobs surrounding the historic building  
Figure 27. The Availability of economic value (Source: researcher)

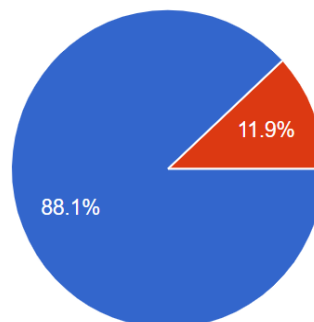
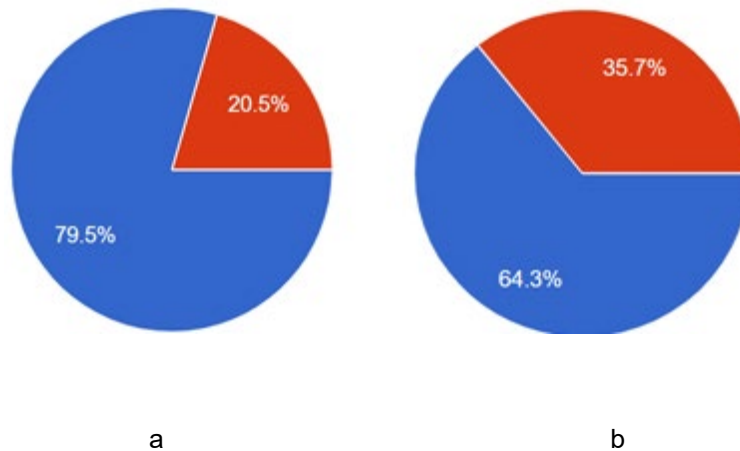


Figure 28. reusing the building or employ it. (Source: researcher)

The results of the time value questionnaire showed that the building has a relationship with important influential national events by 64%, and also showed that the building's expression of its era and history by 79%, and that the building is old by 84% of the questionnaire sample, and by taking the average of the indicators, it is found that there is a good availability of time value by 75%. This means that the building has historical significance in the memory of the community, which means that it must be preserved because it reflects important events and period in the region, figures from 29-30.



a- expressive the building is of its era and history b- important influential national events?  
Figure 29. The Availability of time Value (Source: researcher)

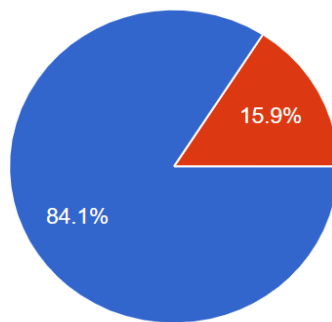


Figure 30. Building Age. (Source: researcher)

The results of the social value questionnaire showed that the building was associated with an important social function performed by 91%. This means that it can be employed with jobs close to the original. As for the urban environment, the results showed the availability of high social values, as the community's attachment to the building is very strong and reached 94%, which means that there is a possibility of preserving it with the help of the community around the khan because their association with it leads to protecting the khan from distortion and destruction caused by the human factor, figures from 31-32.

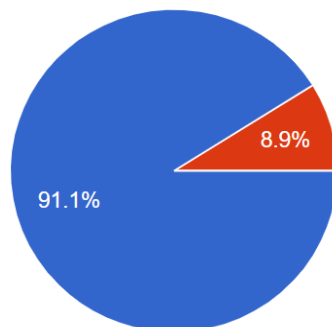


Figure 31. the linkage of the heritage building to an important social function. (Source: researcher)

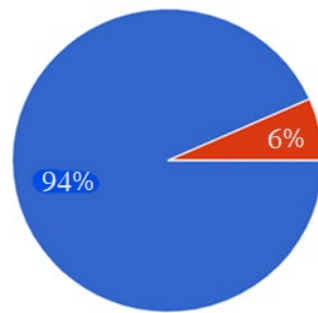
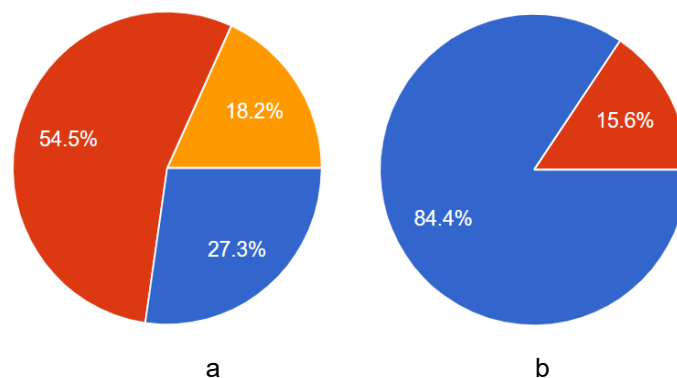
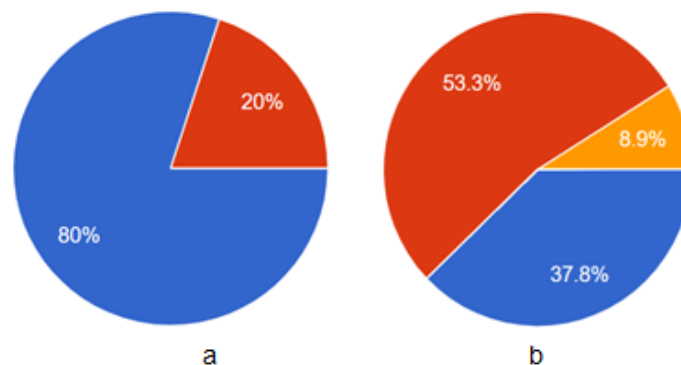


Figure 32. The community connection to the valuable building. (Source: researcher)

The results of the Authenticity Value Questionnaire showed that the period of time of the building's materials and elements is old with a response rate of 84% of the questionnaire sample, and that the safety of the structure is average with answers reaching 54%, and that the building partially preserves the authenticity of its materials with a rate of 53% of the answers, and it also showed that the quality of maintenance Good with a response rate of 80% of the questionnaire sample, and taking the average of the indicators, it is concluded that there is a good availability of the originality value at a rate of 67% (there are originality values for the building). It is possible to display the results as follows to know the integration required in Khan Alexandria and its urban surroundings, where less than 50% (not available), 50% -60% (weak), 60% and more (available) figures from 33-34.



the safety of the building b- the period of time for the building materials and elements  
Figure 33. The Availability of the value of originality (Source: researcher)



the quality of maintenance and preservation operations b- the preservation of the original building materials, signs, writings or drawings.

Figure 34. The Availability of the value of originality (Source: researcher)

Finally, the result of Questionnaire of the study area are as listed in appendix 1, and concluded the required type of integration in Khan Alexandria and its urban surroundings in Figure 35.

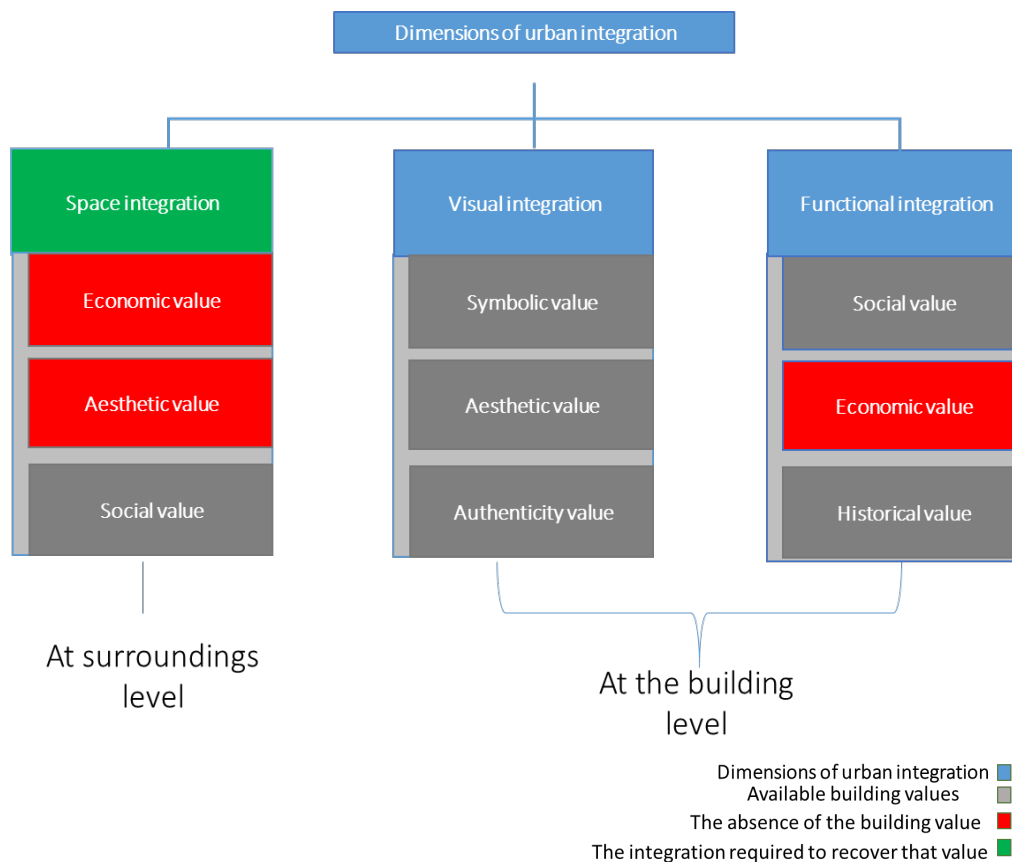


Figure 35 the type of integration required according to the type of missing value in Khan Alexandria and its urban surroundings. (Source: researcher)

### 3 Conclusion

The research concludes that the reuse of heritage buildings provides opportunities for the continued existence of these buildings in modern society, and it is possible to reuse historic buildings through urban integration, which is an important policy in restoring and complementing the values of historic buildings. He concluded a set of indicators on which each value of the historical buildings depended, on which he relied to determine the type of integration, such as (safety of origin - manifestations of age - preservation of original building materials - quality of maintenance and preservation operations) as indicators of the availability of authenticity values. (The age of the building - the building's association with national historical values - the extent to which the building expresses its era and history) as an indicator of the time value. (The building is the product of an architectural design by one of the pioneers of architecture - the availability of symbols) as an indicator of symbolic value. (The availability of aesthetic elements such as unity - diversity - repetition - emphasis on the element - human scale - compatibility) as an indicator of the availability of aesthetic values of the building and its surroundings

(The existence of an existing function - the possibility of reusing the building or employing it to play a role in people's lives - the appropriateness of the functions of the environment) as indicators of the economic value of the building and its surroundings. (The heritage building was associated with an important social function that it performs - the heritage building reflects the social traditions that existed in it - there is a connection of the community to the building of value) as indicators of the availability of social values of the building and its urban surroundings. As for the dimensions of urban integration, they are (visual - functional) at the level of the part or building, (and spatial integration, which includes visual - functional integration - textile integration) at the level of the whole or the urban environment. As for the practical aspect, it turns out that the khan needs functional integration and spatial integration of its urban surroundings. Residential buildings greatly affect the integration of the building with its urban surroundings. There is also a very strong social value for Khan Alexandria, as

there is a strong connection between the inhabitants of the area which facilitates its preservation and maintenance. The research concluded that the mechanisms of spatial integration of the urban environment require the mechanism of deletion of the influential functions and the mechanism of changing the function to a function close to the original, and the deletion of elements of buildings or buildings completely to enhance visual vision. It is possible to activate the valuable building (Khan of Alexandria) by dealing with the local government and the residents of the area by removing negative elements or buildings affecting the visual vision of the Khan, which provides good visibility from different directions. It is also possible to adopt a mechanism to replace the functions surrounding the Khan with commercial functions that stimulate the area, such as ancient handicrafts and the sale of pottery, which have to do with heritage and historical and symbolic values and do not negatively affect its historical value. The Khan of Alexandria can form a functional complex by occupying functions similar to the original, such as a tourist attraction or cultural center. The research provided an information and practical base that can be adopted from future research on urban integration, such as (the study of urban integration and its relationship to buildings of value within the new areas containing historical buildings, the study of the dimensions of urban integration (functional - visual - space) within the areas of development.

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Appendix 1. Questionnaire Results. (Source: researcher)

| result         | Measurement mechanism             | coding | Question                                                                                       | level | The type of integration required | Secondary item                               | Basic item                       |
|----------------|-----------------------------------|--------|------------------------------------------------------------------------------------------------|-------|----------------------------------|----------------------------------------------|----------------------------------|
| Provides value | Yes/No                            | x-1-1  | - Is the building linked to national historical values?                                        | part  | Functional integration           | History of the valuable building             | -Time value (historical)         |
|                | Strong/Medium/Weak                | x-1-2  | - The extent to which the building expresses its era and history                               |       |                                  |                                              |                                  |
|                | Old/Medium/Modern                 | x-1-3  | -The age of the building                                                                       |       |                                  |                                              |                                  |
| Provides value | Yes/No                            | x-2-1  | -The building is the product of an architectural design by one of the pioneers of architecture | part  | Visual integration               | Architectural symbols and meanings           | -Symbolic or architectural value |
|                | Yes/No                            | x-2-2  | -Are there distinctive signs or symbols available?                                             |       |                                  |                                              |                                  |
| Provides value | Yes/No                            | x-3-1  | -Is there unity between the building's elements or components?                                 | part  | Visual integration               | Components and physical formal relationships | -Aesthetic value                 |
|                | Miscellaneous / Not Miscellaneous | x-3-2  | -Is the building diverse in components and relationships?                                      |       |                                  |                                              |                                  |
|                | Yes/No                            | x-3-3  | -Is there confirmation of an element or component in the building?                             |       |                                  |                                              |                                  |
|                | Yes/No                            | x-3-4  | -Is the building within the humanitarian standard?                                             |       |                                  |                                              |                                  |
|                | Very refined/balanced             | x-3-5  | -Is there repetition in the formal elements?                                                   |       |                                  |                                              |                                  |

|                       |                                   |        |                                                                                                      |                   |                        |                                         |                           |
|-----------------------|-----------------------------------|--------|------------------------------------------------------------------------------------------------------|-------------------|------------------------|-----------------------------------------|---------------------------|
|                       | Contradictory/compatible          | x-3-6  | -Are the elements compatible (homogeneous) with each other?                                          |                   |                        |                                         |                           |
| Doesn't provide value | Yes/No                            | x-3-7  | -Is there unity among the components of the urban landscape?                                         | All (urban scene) | Visual integration     |                                         |                           |
|                       | Miscellaneous / Not Miscellaneous | x-3-8  | -Is the urban landscape diverse in components and relationships?                                     |                   |                        |                                         |                           |
|                       | Yes/No                            | x-3-9  | -Is there an emphasis on an element, component, or building in the urban landscape?                  |                   |                        |                                         |                           |
|                       | Yes/No                            | x-3-10 | -Are the buildings in the urban landscape within the human scale?                                    |                   |                        |                                         |                           |
|                       | Very refined/balanced             | x-3-11 | -Is there repetition in the components or structures of the urban landscape?                         |                   |                        |                                         |                           |
|                       | Contradictory/compatible          | x-3-12 | -Are the components of the urban landscape (macro level) compatible (homogeneous) with each other?   |                   |                        |                                         |                           |
|                       | Yes/No                            | x-3-13 | -Is there a clear visual vision of the urban landscape or valuable building?                         |                   |                        |                                         |                           |
| Doesn't provide value | Yes/No                            | x-3-14 | -Is there a gradient in movement or spaces in the urban area?                                        | All (urban space) | Fabric integration     |                                         |                           |
| Provides value        | Yes/No                            | x-4-1  | -Is the heritage building linked to an important social function that it performs?                   | part              | Functional integration | Sense of identity                       | -Social value             |
|                       | Yes/No                            | x-4-2  | -Does the heritage building reflect social traditions that existed within it?                        |                   |                        |                                         |                           |
| Provides value        | Yes/No                            | x-4-3  | -Is there a community connection to the building of value (at the level of the entire urban setting) | all               | Functional integration |                                         |                           |
|                       | Old/Medium/Modern                 | x-5-1  | -The time period of the building's materials and elements (antiquity)                                | part              | Visual integration     | Original building materials or elements | -The value of originality |

|                                  |                                                   |       |                                                                                                                                                      |      |                        |                                              |                             |
|----------------------------------|---------------------------------------------------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------|------|------------------------|----------------------------------------------|-----------------------------|
|                                  | Good / Average / Poor                             | x-5-2 | -Safety of origin                                                                                                                                    |      |                        |                                              |                             |
| Provides value                   | Conservative/partly conservative/non-conservative | x-5-3 | -Preserve original building materials, signs, writings or drawings                                                                                   |      |                        |                                              |                             |
|                                  | Good/not good                                     | x-5-4 | -Quality of maintenance and preservation operations                                                                                                  |      |                        |                                              |                             |
| Very poor availability for value | Functionally lacking/functionally neglected       | x-6-1 | -The presence or absence of a current function of the building                                                                                       | part | Functional integration | The economic function of a valuable building | -Economic (practical) value |
|                                  | -Possible/not possible                            | x-6-2 | -Is it possible to reuse the building or employ it to play a role in people's lives?                                                                 |      |                        |                                              |                             |
| Doesn't provide value            | Appropriate/inappropriate                         | x-6-4 | -Do the functions of the urban environment do not harm the historical value of the valuable building (at the level of the entire urban environment)? | all  | Functional integration |                                              |                             |