

Deriving a scientific methodology for restoration and protection of the historical cities in Libya according to Vitruvius values and Maslow theory of incentives

Dr.Mariam M T Shibub

Associate Professor

Architecture Department and Urban Planning

Faculty of Engineering, Tripoli University

Abstract

Historic cities are considered urban areas, full of old buildings that contain heritage, meanings, and values. therefore, they must be taken care of and protected from deterioration and extinction through their restoration, and reuse. Many architectural restorers and researchers interested in preserving historical cities have strived to find policies for their renewal, searching for sustainable and comprehensive solutions that guarantee their survival over time. The importance of finding a clear and defined methodology in the restoration and protection operations of historical cities in Libya is extremely important. For this reason, the researcher studied and read the three principles adopted by Vitruvius in addition to Maslow's theory of incentives from another perspective, which is the restoration and protection of historical cities. Concepts with values that had and still have a great influence on the architecture science. Therefore, the researcher depended on inductive and deductive methodology to derive a methodology for the restoration and protection of historical cities in Libya. Given that inherited reflects the human and cultural needs of the residents of these cities, therefore, some of these needs could be applied as incentives to the users of these historical buildings. From this standpoint, it sheds light on the human categories that are related to restoration activity, studies the incentives and determines the impact on the local restoration work that took place in some historical cities in Libya, specifically the cities of Ghadames and Nalut. Finally deriving an organized scientific methodology for the restoration and protection of historical cities in Libya.

Keywords: restoration, preservation or protection, historical buildings, historic cities, incentives, needs, principles of Vitruvius.

Introduction

Historic cities are considered of architectural value and are a cultural inheritance of countries that must be taken care of and protected from extinction through restoration, maintenance, and reuse. Many architectural restorers and researchers interested in preserving historical cities have strived to find policies for their renewal, searching for sustainable and comprehensive solutions that guarantee their survival over time (Moazzeni, A. Khorasganil and Haghghatbin, M. 2023) [11]. The process of restoration of historic cities is considered one of the most complex operational processes. As a result of a number of determinants that depend on the dialectic of balancing between the objectives of restoration and maintenance on the one hand and the idea of change accompanying, the sustainability of the historic building, its marketing, and investment on the other hand. Operations must achieve a balance between a number of functional, social, tourism, economic, and educational interests of the community (Amin, H. 2004) [2]. Determining the methodology is also considered one of the primary tasks that those responsible for preservation and restoration operations must pay attention to.

Applying the three principles of Vitruvius, by simulating the existing conditions of historical cities to preserve heritage, depends on the composition of the local community and the social factors. The most important is lack of awareness which has a significant impact on processes of restoration and preservation (Al-Toukhi and Hassan Wehbe. 2004) [3]. All the influential groups in the local community are residents, owners, investors, and the local administration that should all agree on the importance of preserving the remaining architectural heritage of historical cities. Historically, the focus has been on physical restoration, which Vitruvius emphasized in his first principle of durability. But unfortunately, social and economic activities were neglected and these buildings were not operated and reused according to the needs of residents of these cities. This is considered the second principle identified by the scholar Vitruvius, which is (benefit), which urges not to neglect the most important factor among its factors, which is the social factor and the interaction of individual people and groups within it. The permanency of historical cities is based on mutual benefit between the building to achieve its survival and the users to benefit from it, whether in trade or living in it as a shelter. The opposite is true in the prevailing concept these days of restoration and maintenance operations that aim to meet these needs, which has led to the obliteration of historical and aesthetic landmarks, which is the third principle in the principles of

Vitruvius (beauty). All of these contradictions came as a result of not adopting a basic organized methodology and comprehensive of all the standards and values of the restoration and protection operations (Cernaro,A. Fiandaca,O. Lione, R and Minutol, F . 2023) [5].

Research problem

Many historical buildings in Libya are exposed to tampering and distortion of their architectural and aesthetic features through random treatments, either addition or removal. This happens without adopting a clearly defined scientific methodology in the restoration and protection processes for historical buildings, which makes them lose their historical architectural characteristics. From this standpoint, it was necessary to find a specific and clear methodology for the restoration and protection of historical cities in Libya to reduce the negative effects of this problem.

Objectives of the paper

- Highlighting the importance of using Vitruvius' principles in the restoration and protection of historical cities in Libya.
- Finding a close relationship between the relevant international principles and conventions in the field of restoration and protection and the principles of Vitruvius, and extracting the most important considerations that can be crystallized and included in an organized scientific methodology that helps the concerned departments deal with this topic, comprehensively and professionally.
- Determine the impact of incentives on individuals and groups related to the restoration and protection of historic cities.
- Deriving an organized scientific methodology for the restoration and protection of historical cities in Libya.

Questions of the research

1. How can Vitruvius' principles be applied in the restoration processes of buildings of historic cities?
2. How can the relationship be found between international charters and agreements related to restoration and protection operations in historic cities and Vitruvius's three principles?

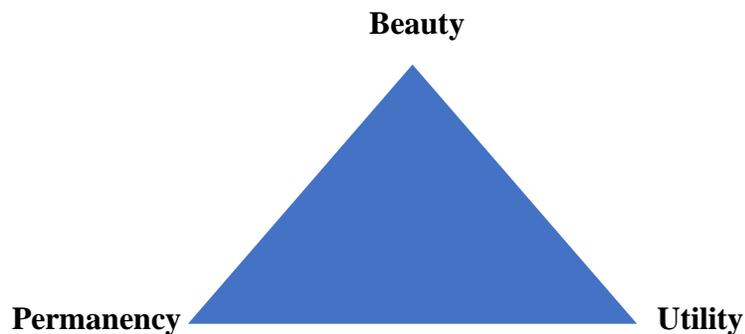
3. What is the impact of Incentives on individuals and groups and its reflection on the restoration and protection processes for historic cities in Libya?
4. What is the Methodology deriving for the restoration and protection of historical cities in Libya?

Used methodology

The research depended on inductive and deductive methodology for restoration and protection of historical cities in Libya based on the principles of Vitruvius for architecture and the Maslow theory of incentives while reviewing a number of international conventions that define various aspects of restoration work. In addition to studying the incentives, and determining the impact on the local restoration work that took place in Ghadames and Nalut historical cities in Libya by using interviews that concluded with Friends of the Environment and Heritage Society.

Principles of the Vitruvius Trilogy

Marcus Vitruvius Pollio published the book (Architecture), more than 2000 years ago, and it is the oldest book on architecture. In his book, Vitruvius presented a number of ideas about the development of architecture, and this book became popular in the late twentieth century. Vitruvius discussed the three principles of good architecture and the dynamic interaction between them (durability, utility, beauty) as shown in Figure (1) (Morgan, M.H. Vitruvius. 1960, p. 17) [10].



Principles of the Vitruvius Trilogy, Figure (1)

1. The concept of durability and permanency in restoration and protection operations for historical buildings

This principle revolves around the strength of the building and its permanency by paying attention to choosing the foundations and infrastructure according to the type of soil to ensure the stability

of the building on the ground without any cause for collapse so that it can remain to stand strong for many years. To achieve this advantage, emphasis must be placed on choosing building materials that have sustainable properties that are able to deal with different environmental climatic conditions (Radnic, J. Matesˇan, D and Abaza, A. 2020) [13].

Many buildings within historic cities around the world need restoration and maintenance as a result of their great lack of resistance to many different environmental conditions, such as human activity, and natural disasters resulting from floods, storms, fires, or explosions. Most of the historical buildings are built of stone and brick, this is why there was an urgent need to reinforce and strengthen its structures and load-bearing walls (Kareeva, D and Glazkova, V. 2017) [9]. Therefore, the historic buildings must be supported by strengthening materials, either by injecting them or inserting them into the original building material. In addition, care must be taken to use traditional materials and methods in the restoration process so that the original shape of the building can be preserved without any change in the method and shape of its construction (Almahari, S. 2017) [1]. Restoring historical buildings using appropriate scientific methods allows them to be reused, whether in their previous functions or in any new function that suits them to revive historical, cultural, and architectural values.

2. The utility and its impact from the restoration of historical buildings

It is represented by the building's ability to meet the needs of the users, to be able to carry out their activities, and to make them feel comfortable and safe inside, and provide a good experience for them, according to the original function of the historical building. Protecting and reusing historical buildings has a very important role in preserving spiritual and religious places. Buildings carry cultural heritage which represent the spiritual source of our connection to the rich past at all levels, socially, culturally, and economically (Shibub, M, 2018) [14], (Bing, L and Jian, H. 2021) [4].

One of the most important works that must take a great deal of attention from restorers, and architects is to make partial or complete internal or external changes to the historic building, so it can be used again, providing these changes should not lead to obliteration or destruction of the historical architectural identity. It is necessary to make sure that all existing interior options are evaluated and proven to be insufficient or sufficient and able to meet the new activities of the newly created function. "The new additions should have a different design that can be clearly

distinguished from the old part, and not significantly affect the distinctive features of the building.” (Almahari, S. 2017, p. 150) [1].

3. Beauty Concept

It is a relative term; the understanding of its content varies from one person to another. But we must agree that beauty here has a relationship with the architectural beauty of the blocks, values, and architectural vocabulary embodied in the relationship of spaces between each other and the facades, which is represented by the ratio and proportion between its architectural vocabulary. In addition to the play between light and shadow, and the contrasts between heaviness and lightness, structural systems, rhythm, and other aesthetic values reflect its simulation of the laws of nature and dealing with them, influence and are affected by them through architectural solutions that respond to natural and climatic external environmental influences (Danielsen, C. 2013) [7].

The three terms have been used in many topics related to the science of architecture, the most important of which is restoration and maintenance work in historical buildings and how to preserve them. Each corner of the triangle presents a principle under which many specifications and standards fall, serving as a guide that contributes to improving and raising the quality of restoration and maintenance operations, preserving the architectural and cultural heritage of our historic cities in Libya so, they live as a witness to the culture and urbanization of our people (Author, 2023).

Many of the principles that emerged from international charters and agreements touched on the Three Principles of Vitruvius indirectly and their importance in restoration and preservation operations in order to be the cornerstone for developing effective methodologies for the restoration, maintenance, and protection of historical cities. Therefore, it was necessary to shed light on a number of these charters and agreements related to restoration and protection operations in historical cities and link them to the three principles of Vitruvius (Author, 2023).

The 1976 “UNESCO Recommendation concerning the Safeguarding and Contemporary Role of Historic Areas”

The international organization UNESCO met in Nairobi in 1967 and came up with a number of recommendations regarding the protection of historical areas, stressing that:

- Historic areas are a global heritage. All responsible parties, including governments, ministries, and citizens, must preserve and protect them from factors that may lead to damage or intentional sabotage or unintentional as a result of human misuse of them (Utility).
- The organization recommended that all restoration operations should be based on scientific foundations and standards, not affect its authenticity, and highlight its cultural and social values (Durability).
- Giving sufficient attention to all historical areas, a sense of harmony, and preserving their beauty through the interconnection or contradiction of their various parts, so that each of its parts reflects its original characteristics without any distortion of its true features (Almahari, S. 2017) [1] (Beauty).

Charter for the Preservation of Historic Cities and Urban Areas “Washington Charter 1987” AD

In this Charter a number of principles were formulated that are related to the maintenance of historical buildings, the most important of which are:

- Emphasizing that the reuse and operation of historical buildings in terms of new functions and activities should be appropriate to the nature of historical buildings and should not negatively affect them. (Utility)
- When constructing a new building or reusing an old historical building, the general spatial planning of the site within the historic city must be respected in a way that is consistent with its general plan without any distortion. (Beauty)
- Historical cities must be protected from natural disasters such as earthquakes, floods, and pollution through their restoration and maintenance. All measures must be taken to limit the aggravation of these problems which may be structural or environmental and solutions must be developed to preserve the lives of their residents and the cultural heritage, which is represented by historical buildings (Almahari, S. 2017) [1] (permanency).

ICOMOS Charter – Principles of Architectural Analysis, Conservation and Restoration of Architectural Heritage 2003

ICOMOS Charter (2003) was ratified in Zimbabwe, which carried a number of recommendations that were formed in the form of principles related to restoration and maintenance. These recommendations were directed to specialists in restoration and maintenance work.

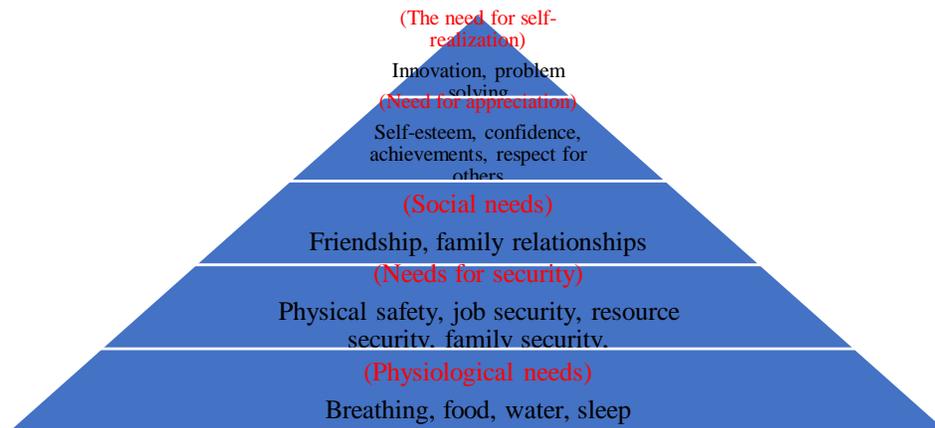
- All specializations related to restoration, consolidation, and maintenance of architectural heritage must come together to provide opinions and advice (permanence, benefit, beauty).
- The historical value of the architectural heritage of historical buildings includes all its various components, as a distinct product of an ancient era with a unique building style, that must be preserved and kept as an integrated architectural entity without compromising any one of its elements whether internal or external (Permanence, Utility, Beauty).
- When changing the function of a historic building, consideration must be given to preserving the historical features of the building, in addition to the conditions of security and safety (Utility).
- When dealing with historical buildings, many preliminary studies must be conducted in order to investigate and accurately diagnose the problems and determine the reasons that led to their emergence. Thus, successful solutions can be identified based on organized scientific research to achieve permanency through restoration and maintenance of the architectural heritage with the least intervention and lowest cost (Almahari, S. 2017) [1] (Durability).

People's culture is an essential feature of every society, it can be defined in three factors which is culture and itself environment, and heritage factors. The importance of preserving the architectural heritage and culture of historic cities makes successful solutions serve as guiding factors for the development of the historical architectural environment. Given that heritage reflects the human and cultural needs of the user which Maslow expressed in his human needs' theory can be applied as incentives for the users of historical buildings to restore, protect, maintain, and their prolong life.

Maslow's theory of human needs and its relationship to Vitruvius' architectural values

Abraham Maslow in his theory of human needs proposed the incentives that move a person to carry out this activity to satisfy certain needs. These incentives were arranged in the form of a

pyramid with different levels. Maslow identified five levels, its base is the basic needs, which are represented by (physiological and security needs), and at the top of the pyramid are represented by (social needs and self-esteem; self-realization) as shown in the Figure (2) (Hershberger, R.G. 1999) [8].



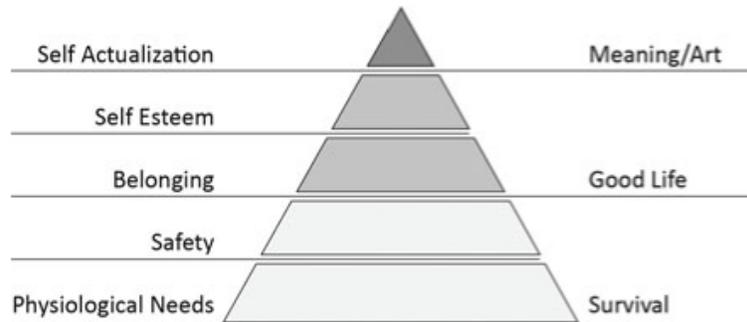
Maslow's Theory of Human Needs, Figure (2)

In several international conferences that took place after Maslow's death and dealt with deepening Maslow's theory of incentives, in the year 1990, these levels were modified to what is called the free Maslow diagram.

- 1- Physiological needs: such as air, eating, drinking, and shelter.
- 2- Safety needs: family security, employment, health, security of property, protection from risks, and stability.
- 3- Social needs: love and belonging - affection, family and social relationships, working with the group, and socializing.
- 4- Needs for self-esteem: confidence, respect for others, independence, control, and responsibility.
- 5- Needs for self-realization: knowledge, learning, and problem-solving, search for beauty, balance, and form, helping others to achieve self-realization and demonstrate superiority (Hershberger, R.G. 1999) [8].

Hershberger (1999) discussed the architectural values of Vitruvius in terms of their impact on users and motivating them to develop their architectural environment by meeting all their current and future needs. Therefore, remaining in the architectural values of Vitruvius represent the base of the pyramid for basic needs. At the top of the pyramid are moral needs, which cover the human

need for self-esteem and self-realization, and they correspond to the value of meaning and art in the architectural values of Vitruvius, as shown in Figure (3). From this standpoint, it can be discussed and linked to human needs and their impact on them.



Maslow’s Pyramid and Vitruvius Values (Hershberger, 1999, p. 43), Figure (3).

The original value of architecture is to enhance the continuity of human life, by protecting users inside historical buildings of all types. In addition, it creates a suitable and convenient environment for users to practice their activities and achieve their goals without much effort, in order to achieve its reuse and permanency and maintain its fabulous architectural aesthetic features. Many buildings were demolished because they did not provide these values that cannot be separated to provide an architectural environment that meets the needs of the users according to their different desires. all these values can motivate users to advance their architectural environment and move to advanced levels that help them see beyond their current requirements related to security, safety, care, and other needs. Therefore, it is the responsibility of the architectural restorer to involve residents in restoration processes to enhance the spirit of belonging and learn about all the historical values carried by all the elements and components of the various buildings within their historical cities (Hershberger, 1999) [8].

Incentives have a significant impact on the behaviors of individuals, groups or organizations to carry out a specific activity (CDG, BDP, UNDP, 2006) [6]. From this point, it was necessary to determine the people and their incentives that have a significant impact on the restoration and preservation of historical cities.

Incentives and their impact on individuals and groups related to the restoration and protection operations of historic cities.

Individuals are workers in Libyan state institutions that are entrusted with the task of managing, restoring, and protecting historical buildings and cities. These institutions are searching for a way and method to carry out this task with the simplest effort and lowest costs, and their incentives is to exercise their responsibility to achieve the goals for which they were established.

- Owners, residents, associations, clubs, and civil social institutions, have a high level of awareness of the importance of preserving historical buildings, and their incentives is the permanency of the building, its reuse, self-realization, and belonging to identity, authenticity, and love of beauty.
- Tourists come to see a new environment that is foreign to the surroundings of their normal daily lives, to renew their activity, and to live in a new environment. Their incentives are to acquire new knowledge, rest, recreation, renewal of activity, and love of beauty.
- Investors benefit from the presence of tourists through the returns they receive in exchange for providing services to them. Their incentive is the financial return, and their role is to provide services to tourists (Author, 2023).

From this standpoint, we can determine the incentives that restoration work can achieve for different categories and at what level they fall within Maslow’s pyramid for needs and Vitruvius values.

Responsible party	Incentives	Levels in Maslow's pyramid	Vitruvius values
Administration	Success in achieving the goals for which it was established, carrying out its responsibilities, controlling, and helping others	Level Five: Needs for self-realization	Meaning, Art and (Beauty)
Owners	To be used to cover a need (housing or work), improve the environment, move to a better standard of living, feel a sense of belonging and authenticity, and love beauty.	Level First, Second, and Third	Survival (permanency), Good life (utility)
Tourists	Achieve new knowledge, pleasure, entertainment, loving beauty and self-realization	Level Fourth, and Fifth.	Good life (utility) Meaning, art, (beauty)

Investors	Achieving financial returns and self-realization	Level First, Second, and Third	Survival, (permanency) and good life (utility)
-----------	--	--------------------------------	--

Table (1) shows the incentives and levels in Maslow's pyramid and Vitruvius values. From what was mentioned previously, it is possible to determine the impact of these incentives on the civil restoration work that took place in some historical cities in Libya, specifically the cities of Ghadames and Nalut (Author, 2023).

The civil sector in the city of Nalut and its role in restoring the Palace and the Old City

Nalut Palace was subjected to collapse and destruction several times, including what happened to it in the Ottoman era, the period of Turkish rule in Libya, the Italian invasion, and during World War I and World War II. The people were carrying out restoration and maintenance work in the form of collective work that did not follow an organized scientific methodology. The incentive in the past was the city's people's need to exploit places in the palace for the purpose of storing and protecting grains. However, in recent years, there was no incentive for the people to care about the palace. Over time, the awareness of the people grew as a result of increasing the level of education, so a civil association was established under the name Friends of the Environment and Heritage. It took it upon itself to save the palace and the city, so this association carried out several campaigns, starting with cleaning work and removing signs of pollution to carrying out restoration work for the rooms. The association also made a great effort to maintain and revive the old city, the oil press, and the mosque next to the palace. The association also invited the previous owners to contribute to the restoration and maintenance work, and a large number of them responded, Figure (4) (Friends of the Environment and Heritage Society, 2023) [12].



Figure (4): Residents are examining and restoring Nalut Palace (Source: Archives of the Friends of the Environment and Heritage Society)

From the above, the role played by the people in the restoration work of the palace in the city of Nalut, and their basic incentives is palace permanency and reuse it. In addition, the spirit of belonging to the local identity and love of the beauty of heritage and its preservation and permanency.

The role of the people in restoring the city of Ghadames

The city of Ghadames represented a meeting place for desert lovers and was distinguished by its traditional desert mud architecture that overcame the harshness of the desert, so much so that it was called the Jewel of the Desert. It became an important destination for architects and those interested in studying heritage, and this interest has contributed to raising awareness among the people who have waited a long time to see outside interest in their ancient city. They carried out individual and collective cleaning and self-maintenance campaigns. Civil associations were established, including the Heritage Protection Committee, and then the Friends of the City Association, which played an effective role in maintenance and restoration work and registered the city within the human cultural heritage. Recently, a special agency was established to develop the city of Ghadames, and a specialized French company took over the restoration and maintenance work in the old city (Friends of the Environment and Heritage Society, 2023) [12].

Conclusion

The process of restoration of historic cities is considered one of the most complex operational processes. As a result of a number of determinants that depend on the dialectic of balancing between the objectives of restoration and maintenance on the one hand and the idea of

accompanying change, and the permanency of the historic building its marketing and investment on the other hand. Applying the three principles of Vitruvius and incentives in Maslow's theory by simulating the existing conditions of historical cities to preserve architectural heritage relies on the composition of the local community and social factors, the most important is lack of awareness which has a significant impact on the processes of restoration and preservation. It has been noticed the role played by the individuals in the restoration and development of the ancient cities Ghadames and Nalut. The presence of a department for civil society organizations in the management of historical cities will undoubtedly contribute to activating the civil society role and motivating it to carry out greater activity.

From what was presented previously in this paper, it can constitute a solid scientific basis for deriving an organized scientific methodology, which the researcher called the Vitruvas Methodology for the restoration and protection of historical cities in Libya, in reference to the values of Vitruvius and Maslow's theory of human needs.

Vitru-mas Methodology for the restoration and protection of historical cities in Libya

This methodology was based on Vitruvius's three values for good architecture, as well as incentives in Maslow's theory for human needs while relying on a number of international conventions and principles that were adopted to restore and protect historic cities. This methodology contains a number of principles and foundations that could serve as a guide for the competent authorities and those responsible for the restoration, maintenance, and preservation of historical cities and architectural heritage in Libya.

1. The principle of motivation (Incentives)

The strong relationship with architectural heritage depends on the value of this heritage, which is determined based on the originality of the building and the extent of preservation of the environment in which it was created and its relationship to it. In addition, it achieves the possibilities for use and investment. Applying the principle of motivation gives individuals, architects, and restorers the meaning to deal precisely with the architectural heritage and legacy embodied in historical buildings and cities.

The most important foundations that must be followed are:

- Motivating all specializations related to restoration, and maintenance of architectural heritage to provide opinion and advice.
- Encouraging the people and users to preserve cultural and historical values by reusing them, loving the beauty of the city, belonging to the ancient local identity, and raising the level of awareness of belonging.
- Motivating individuals who work in Libyan state institutions by motivating them to exercise their responsibility to achieve their desired goals of restoration and preservation operations.
- Motivating civil institutions, owners, clubs, and civil associations interested in historical cities by raising the level of awareness of belonging to identity, authenticity, and self-realization, to preserve the historical building's permanency.
- Motivating tourists to acquire new knowledge through visiting the historical cities, and love of beauty this cultural heritage.
- Motivating investors to provide tourism services to increase financial returns by increasing the number of tourists, encouraging them, and providing loans to them.

2. The principle of survival (Permanency)

Permanency is considered the basic value in enhancing the continuity of human life and protection inside buildings of all types. The survival, durability, and long life of buildings are important specifications that allow users the opportunity to take care of basic human needs.

The most important foundations that must be followed are:

- Restoration operations must be based on scientific foundations and standards that do not affect the authenticity of historical buildings and highlight their cultural and social values.
- Conducting many preliminary studies in order to investigate and accurately diagnose the problems and determine the reasons that led to their emergence. Thus, successful solutions can be identified based on organized scientific research.
- Respecting the original materials with which this historical legacy was built and preserving as much as possible its original features that cannot be replicated with the same specifications with which they were built in those ancient times.

- Documenting all stages of restoration and distinguishing them so that the restored part is identified and revealed when studying it.
- Ensure the use of traditional materials and methods in the restoration process so that the original form of the building can be preserved without any change in the method of its construction. But these materials must prove their ability to confront the environmental conditions surrounding the historic building.
- When constructing new buildings near some historical buildings, take into consideration that these procedures may have a significant impact on the safety and survival of some historical buildings, which are dilapidated in some cases.
- Strengthening the historical building by strengthening it with reinforcing materials either by injecting them or inserting them into the original building material.
- Protecting historical cities from natural disasters such as earthquakes, floods, and pollution, through their maintenance and restoration taking all measures that limit the aggravation of these problems.

3. The principle of utility (a good life)

Historic buildings are a global heritage. All responsible parties (governments, ministries, and citizens) must preserve and protect them from factors that may lead to intentional or unintentional damage or sabotage as a result of human misuse of them. In addition, the protection and reuse of historical buildings have a very important role in preserving spiritual and religious places and buildings that carry cultural heritage and represent the spiritual source of our connection to the rich past at all levels.

The most important foundations that must be followed are:

- The historic building must be preserved and preserved as an integrated architectural entity without harming any of its elements, whether internal or external.
- The ability of historical buildings to meet the needs of users, carry out their activities, make them feel comfortable and safe inside, and provide good times for them, both according to the function of the historical building.
- The reuse and operation of historical buildings must be appropriate to their nature and not negatively affect them.

- When changing the function of any historical building, consideration must be given to preserving the building's historical features in addition to security and safety conditions.
- When making any changes, partially or completely, to the historic building so that it can be operated again, provided that these changes do not lead to the obliteration or destruction of the historical architectural identity or the architectural heritage of these buildings.
- When adding any new parts to the historic building, it must be taken into account that their design is different and unique from the old part and does not affect the original features of the historical building.

4. The principle of transformation (beauty and art)

The aesthetic values of historical buildings reflect their simulation of natural laws, dealing with them, influencing and affecting them through architectural solutions that respond to external climatic and natural environmental influences.

- Beauty is a very important value that must be taken into consideration in the restoration of buildings in historical cities by restoring and preserving their archaeological architectural elements as a witness to the progress of the peoples who inhabited these cities.
- Preserve the aesthetic architectural features of historical buildings in terms of shape, architectural style, materials, and construction systems.
- Involving residents in restoration processes to enhance the spirit of belonging and learn about all the historical aesthetic values carried by all the elements and components of the various buildings within their historic cities.
- Investing in historical buildings in tourism interaction as a source of the country's economy by paying attention to their architectural beauty and the surrounding environment without affecting their authentic nature.
- Improving the aesthetic and archaeological values of historical cities and enhancing their visual landscape, such as night lighting design processes that reflect their historical beauty.

Reference

- 1-Almahari, S. (2017). Conservation of Historic Buildings, Buildings from Muharraaq. Accrom.
- 2-Amin, H. (2004). Urban Conservation, Between Theory and Practice, Cairo University.

- 3-Al-Toukhi and Hassan Wehbe. (2004). The importance of historical regions and their impact on social interaction. Higher Institute of Architecture and Technology, Cairo.
- 4-Bing, L and Jian, H. (2021). Conservation and regeneration of historical buildings. CEAAE 2021, IOP Conf. Series: Earth and Environmental Science 787 (2021) 012179.
- 5-Cernaro, A. Fiandaca, O. Lione, R and Minutol, F . (2023). The Analysis of the Maintained/Disowned Relationship among Firmitas, Utilitas, and Venustas to Preserve the Cultural Heritage: An H-BIM Approach for the Management of Historic Buildings.
- 6-Capacity Development Group, Bureau for Development Policy, United Nations Development Programme. (2006). Incentive systems: incentives, motivation, and development performance. A UNDP capacity development resource.
- 7-Danielsen, C. (2013). Vitruvian Perspectives on Architectural Quality Developing a Vitruvian discussion on green architecture – a starting point for an upcoming research project., Danish Building Research Institute, Aalborg University.
- 8-Hershberger, R.G. (1999). Architectural Programming and Predesign Manager. New York (McGraw-Hill).
- 9-Kareeva, D and Glazkova, V. (2017). Reconstruction and restoration of historical buildings of transport infrastructure. IOP Conf. Series: Earth and Environmental Science 90 (2017) 012224.
- 10-Morgan, M.H. Vitruvius. (1960). The Ten Books on Architecture. New York, Dover Publications.
- 11-Moazzeni, A. Khorasganil and Haghghatbin, M. (2023). Regeneration of Historic Cities: Reflections of its Evolution Towards a Landscape Approach.
- 12-Publications of the Friends of the Environment and Heritage Society. (2006). Nalut-Libya.
- 13-Radnic, J. Matesˇan, D and Abaza, A. (2020). Restoration and Strengthening of Historical Buildings: The Example of Minceta Fortress in Dubrovnik Jure Radnic. Hindawi Advances in Civil Engineering Volume 2020, Article ID 8854397, 17 pages.
- 14-Shibub, M. (2018). The impact of re-use of historical and cultural building upon their sustainability standards study of historical buildings re-use in the city of Tripoli. International Journal of Architecture and Urban Studies, vol. 3, no. 3, pp. 33-46, Feb. 2018.