

## Egypt's Plan for the Development of Historic Cairo and the Old Popular Neighborhoods "Development and Rehabilitation of Al-Saleh Najm Al-Din Ayoub School as a Handicraft Development Center"

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### Abstract:

The nature of the era, and the imposition of modern developments in society, played a role in stopping the original function of many of the old historical buildings, and that stopping became a reason for neglecting such facilities, and then destroying them, which threatens their demise and greatly reduces the general character of the old city and loses its general texture. It enjoys a civilization of seven thousand years and a fertile legacy of history and historical places that attract tourists from all parts of the earth. The re-employment of old buildings is an important way to deal with and preserve them as a starting point for sustainable development of ancient cities. To what extent can the re-employment of old buildings contribute to preserving the national and local cultural and urban specificity of Historic Cairo and advancing the process of sustainable urban development for it? Ayoub as a center for the development of handicrafts to preserve our heritage from extinction and re-employ it while preserving its identity.

### Keywords:

Development; Creative modern solutions; Revival; Integration reuse.

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### Introduction:

The job loss of most types of archaeological buildings, which became a reason for neglecting such facilities, and subsequently their destruction, threatens their demise because of the nature of development and what modern developments forced on society. Many of the features that make up the historical city's basic flavor and texture are lost. International studies have also shown that one of the best ways to preserve a historical structure is to restore it by creating a new job that ensures its survival and continuity rather than embalming it or turning it into a museum, keeping in mind that doing so might compromise the building's historical value and privacy. Therefore, the process of re-employment is crucial for a variety of reasons, including the preservation of Islamic traditional patterns and the urban environment as well as the building's archaeological significance. One of the most crucial requirements for the re-employment of structures and archaeological sites is that the new function be consistent with the civilized character of the old city and be compatible with its area and location, provided that the added modifications do not negatively impact the building's structural integrity or cause damage, and the new function of the building must be for the purpose of maintaining it in the first place. Al Moez Li Din Allah Al Fatimi Street development is crucial because, in addition to historic buildings, the preservation of antiquities also includes the preservation of the built environment. Therefore, the Ministry involved in the Historic Cairo project decided to develop Al Moez Li Din Allah Al Fatimi Street, especially since it is the largest street in Historic Cairo. Moreover, The Venice Charter, issued by the

Second International Conference of Architects, Technicians, and Archaeologists from May 25–30, 1964, the Lahore Charter for Islamic Antiquities from 1980, and finally the International Symposium on Conservation, Restoration, and Preservation on Islamic Cairo from February 16–20, 2002, were all international conventions that supported the need for re-employment.

### Materials and Methods:

- 1- The research is based on a descriptive and analytical approach to the evolution of Egypt's heritage sites and how closely they are tied to technology and technical advancement, as well as how much successful design and design concepts contribute to boosting the cultural level of visitors.
- 2- It also depends on how the case study approach and conclusion are developed by analyzing the current circumstance of Sabeel Muhammad Ali Pasha and drawing conclusions about various and creative ways to design to preserve heritage and integrate technology to create an ecological void without compromising the location's history.

### Statement of the problem:

Asserting that the celebration of the ancient past and a future that we shape with creative and renewable concepts, in response to the legitimate expectations of citizens of historical cities, and making their dreams and aspirations a reality, the preservation of architectural heritage is a crucial step in the process of preserving human identity. Due to the nature of development and what modern developments imposed on society, most types of archaeological buildings had their functions suspended. This led to a reason for neglecting these

facilities, which led to their damage and eventual demise, necessitating the need to intervene by performing the necessary restoration work without compromising the structure and its specifics and re-employ it in proportion to the functions of the nowadays.

### Research Delimitations:

After extensive architectural, structural, artistic, and historical research, interior design projects, renovations, and ancillary work, the structure must be restored. Moreover, it must be done in proportion to the building's structural needs to avoid burdening the structure, causing architectural deformation, or lowering its archaeological or artistic worth.

#### 1- Al-Saleh Najm Al-Din Ayoub School history:

The school is located on a distinctive site on the Fatimid Street called al-Muizz li Din Allah Street

known for being on the procession path of the Shi'a Fatimids (Bayn al-Qasrayn), Cairo. Patron(s): Sultan al-Salih Najm al-Din Ayyub (r. AH 637–47 / AD 1240–9) the last of the Ayyubid sultans.

The site of the former Fatimid Eastern Palace is now home to the Madrasa of al-Salih Najm al-Din Ayyub. It is regarded as the first school to be created in Egypt specifically for the instruction of the four sunni schools of fiqh (jurisprudence). Al-Salih Najm al-widow Din's Shajarat al-Durr added a mausoleum, where the sultan was laid to rest in AH 648/AD 1250. As a result, an Ayyubid architectural complex was constructed in the center of Fatimid Cairo, giving the city a fresh look. The Mamluks much appreciated the new style, and they adopted it in their complexes as they grew along al-Muizz Street, which became the main thoroughfare, or kasba, of the City of Cairo.

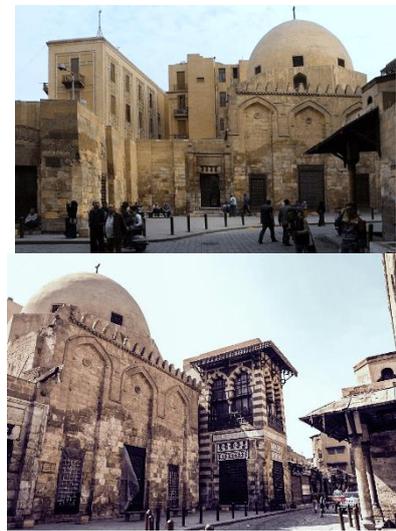


Figure (1) Al-Saleh Najm Al-Din Ayoub School exterior (Source: Amal Samy ,2019)

The Islamic state actively contributed to the construction of schools that served as high-level educational foundations for religious instruction in accordance with the four Sunni Schools of Law (Maliki, Shafi'i, Hanbali, and Hanafi) commencing in the beginning of AH 5th/AD 11th century. These educational institutions encouraged students to learn more about and spread Islamic principles. According to historical documents like the *Khitat* of al-Maqrizi, there were 24 Sunni schools in Cairo during the Ayyubid era. (Doris Behrens-Abouseif, 1993)

The only remaining structures from these schools are the ruins of two: the Madrasa Kamiliyya (built in AH 622/AD 1225) and this one, the Madrasa Salihyya, where a portion of the western iwan, which was situated next to the builder's mausoleum, the building's façade and entrance, and its minaret still stand.

The main façade of the madrasa was constructed from dressed stone that was carefully aligned and

divided into three sections: the center section, which houses the entrance and its sides, is 18 meters long; the right-hand section is 31 meters; and the left-hand section is 26 meters. Figure (1)

The left- and right-hand parts are roughly 11.50 m high, while the center section rises to a height of 12 m. A horizontal strip of inscription bearing the name of the builder and making supplications for him is carved in the center portion (the entrance) of the structure. It is written in the Naskhi script. There is an arched niche with five rows of muqarnas in the middle of this part, which is topped by a lintel made of interlocking voussoirs. (K.A.C. Creswell, 1960)

The Salihyya Alley entrance, which is now marked by the madrasa's minaret, was once the principal tunnel separating the two similar wings of the institution. It now leads to this alley. The brick-built minaret is the only one of the Ayyubid dynasty's structures still in existence. It is covered in white plaster. It was restored in 1995 and

consists of three sections: The square shaft at the bottom of the main body has a length of 5 meters and a height of 10.40 meters. Three arched recessed areas embellish it. It has an octagonal structure that rises to a height of 5 meters above it. It has eight doorways with lobed arches that lead to a wooden balcony where the call to prayer is broadcast. Two rows of muqarnas and a lobed dome are used to crown the minaret above the octagonal form. Due to its characteristic octagonal portion and the dome that closely resembles Ayyubid metal incense burners, this form of minaret is known as *al-mabkhara* (the incense burner). The minaret of the Khanqah of Baybars al-Gashanqir, which dates to AH 709/AD 1310, demonstrates that this kind of minaret remained common up until the start of the Mamluk dynasty. Later, during the Mamluk period,

the minaret developed to the point where the octagonal story rose in height and turned into a key feature of the structure. (Ahmed Fikri, 2008)

Two similar buildings (the schools) that share a single entrance and a common façade make up the madrasa's floor design. The entry leads to a hallway with two doors on either side. The two iwans of the Maliki and Shafi'i Schools are accessible through the eastern door, and the two iwans of the Hanbali and Hanafi Schools are accessible through the western door. With an open courtyard in the centre, each side is made up of two independent schools made up of two iwans that are facing one another. The traditional madrasa layout of four axial iwans (cruciform) that emerged later in the Mamluk period may be seen as a development of this design arrangement. (M. Max Herz bey, 1902)

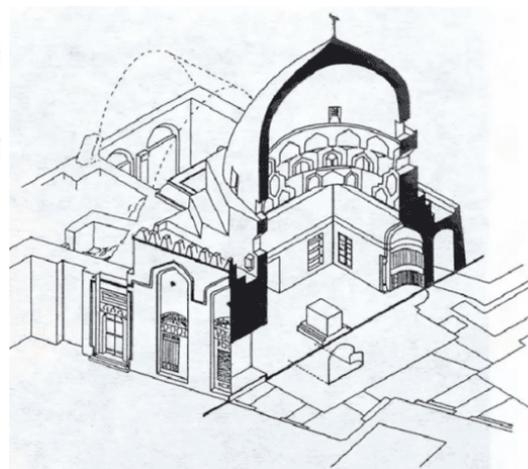
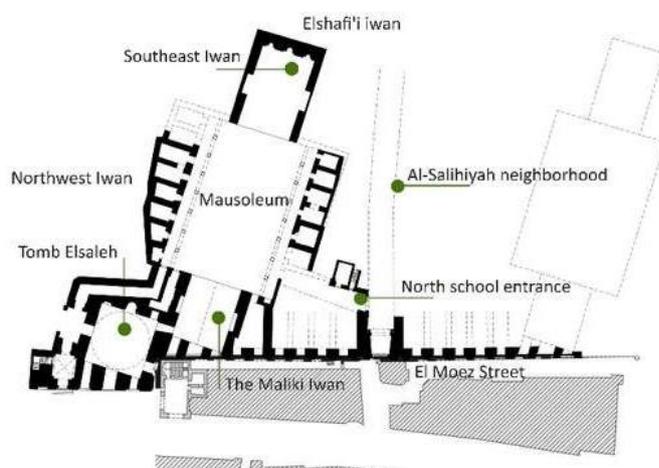


Figure (2) Plan of Al-Saleh Najm Al-Din Ayoub School The schools and sectional of mausoleum the plan demonstrates the design which had two identical buildings that shared a front and a single entrance. An independent school was present on either side, consisting of two iwans that faced one another and had an open courtyard in the middle. This architecture can be seen as a precursor to the four axial iwan-adorned school that would be built later, during the Mamluk era. (Source: Tarek Torky, 2022)

## 2- The effect of architectural perception on the formation construction:

The memorial building was the first architectural idea during the Mamluk era. The primary goal of creating the urban complex was to establish the memorial structure, which is meant to honor the shrine's owner. The assertion of the designer to emphasize the shrine more than other components and make it dominant over the plastic construction and the urban relations that arise around it is evidence that, despite the significance of the school in the formation of complexes, the mausoleum is the key element and the focal point in urban complexes. The mausoleum's forward thrust into the public realm, above the level of the front, underlines its precedence over the other elements in the urban complex.

The architect recognized the political significance of the shrine and that it had a further, equally significant dimension—the plastic one—that could support the political significance and convey the

architect's aesthetic. The architect turned to boosting the shrine's capacity for architectural expression and optimizing the message it transmits to convey a visual statement with political meaning. The shrine is a symbol of authority and influence. The architect used a variety of techniques for this, including emphasizing the mausoleum's dome by positioning it in a prominent location on the street; raising them by employing graduated corner bends to increase their height for the best visibility in all directions; and in a densely packed urban environment.

A new vision in formation construction was realized for the first time in the mausoleum of the good king Najm al-Din attached to the Salhiya School, which is the first shrine in the city's center, by the idea of highlighting the mausoleum from the outside to achieve the greatest visibility and impact on the public space. The first school established in Cairo for the four Sunni schools was created by Al-Malik Al-Salih Ayoub, the final Ayyubid sultan.

Al-Salihiya Madrasa was constructed between the years of 1242 and 1244 on a portion of the site of the palace of the Fatimid monarchs in Cairo's Bain al-Qasrain neighborhood, which is where the greatest examples of Circassian Mamluk architecture can be found. The main entrance is situated in the middle of the northwest facade, facing the street, and it connects to the school's two wings on the right and left of the corridor. The minaret was positioned above the main gate by the architect to denote the entrance, provide a figurative relationship between the horizontal facade extensions to the right and left of the entrance, and give a sense of balance with the dome of the tomb.

The mausoleum is the Salhia School's highest expression of artistic plasticity. The school's northernmost corner is where the mausoleum is situated. It is a square structure that projects from the northwest facade, and a domed structure rises above it. To create a perspective dimension compatible with the significance of the political statement it conveys abroad, the tomb protrudes forward in the street space. Despite the tomb not having been a part of the structure at first, its later addition did not throw off the balance of the facade but instead gave it a formal and aesthetic dimension. The architect was determined to enhance the plastic building's capacity to convey this message in a variety of ways. Thus, he highlighted the most significant elements of his architectural vocabulary in a unified formation that brought together the minaret, the main gate, and the mausoleum's dome in a harmonious formation with the facade that dominates the urban landscape and sets the pace in the public space around it.

("Architectural Perception and Its Impact on Plastic Construction in Mamluk Architecture Cairo 1250-1517," 2011)

### **3- The Handicrafts and heritage in Egypt:**

It is one of the main traditional sectors of craftsmanship, and Egypt has been involved in handicrafts since the time of the Pharaohs. The Egyptian people distinguished themselves from other peoples in the manufacture of handicrafts by using natural products from cotton, wool, and wood as well as silk, so the Egyptian handicrafts are renowned for their diversity, richness, and simplicity. The kilim industry in Fowa and Al-Joura in Al-Arish, Marsa Alam, Abu Simbel, and Siwa, the embroidery industry in Damietta, Siwa, Bir Al-Abed in Arish, and Saint Catherine, and the textile industry in the Akhmim districts are the three most significant of these sectors. In the Luxor neighbourhoods of Sohag and Naqada, Saqia Abu Shara, which specialises in the production of

handmade carpets, and the leather industry, which is concentrated in the Old Egypt, Alexandria, Halayeb, and Shalateen regions, as well as the production of jewellery in the Nasr Al-Nuba, Halayeb, Shalateen, and Marsa Alam neighbourhoods, and Al-Gamalia Gathering, which specialises in silverware and the marble industry.

### **4- History of traditional crafts in Egypt:**

Traditional crafts have been at the forefront of Egypt's diverse industries since antiquity because they are distinguished by their high quality in implementation and finishing, and their decorative lexicon is drawn from ancient arts (Pharaonic, Coptic, Islamic, folk). Due to the diversity of its embellishments, hues, level of craftsmanship, and employment, it has created (heritage arts) that are used in all facets of daily life. Traditional crafts served as Egypt's national industry up until the late Ottoman era, providing the nation's population with the textile, architectural, stone, timber, ceramic, and glass adornment, and inlaying works they required. With bones, copper and silver works, silk and woolen textiles, embroidery, tents, and numerous other handicrafts in addition to the goods that are exported to other nations of all inherited crafts, that industrial base had entire neighborhoods in which the craftsmen lived under a precise system that is the system of craft sects, which has its rules, origins, and lords and his elders. (Ezzedine Naguib, 2010)

Most of the handicraft sects that made up Cairo society during the Ottoman rule had a sheikh or captain who was chosen by the sect's members. Due to the professional sects' geographic bases, which occasionally get their names from the names of those sects, most of the crafts were concentrated in a small area of Cairo. All the coppersmiths gathered in the same-named market and its surrounding suburbs. The "tent makers in Cairo" experienced the same thing, frequent and occasionally unique.

When the Mamluk state came to an end in 1517 AD at the hands of the Ottoman Sultan Selim I, crafts in Egypt underwent a trial. To build facilities and craft industries in Istanbul that are comparable to those in Egypt, the Sultan dispatched thither hundreds of expert craftsmen and sheikhs of workmanship for many of the inherited creative crafts. It has consistently produced new generations of artisans in various sectors, and its civilizational route has persisted. Egyptian innovators' imprints can still be seen on the architectural structures and facilities that are rich in beautiful designs. (Ilham Zidane, 2017)

The Egyptian people were distinguished from other peoples in the manufacture of handicrafts by using natural products such as cotton, wool, wood, as

well as silk, so Egyptian handicrafts were famous for their diversity, richness, and simplicity. The kilim industry in Fuwa and Al-Joura in Arish, Marsa Alam, Abu Simbel and Siwa, the embroidery industry in Damietta, Siwa and Bir al-Abd in Arish and St. Catherine, and the textile industry in the Akhmim neighborhoods. are the three most important of these sectors. In the neighborhoods of Luxor in Sohag and Naqada, Saqiyat Abu Shaara, specialized in the production of handmade carpets, and the leather industry, which is concentrated in the regions of Old Cairo, Alexandria, Halayeb, and Shalateen, as well as the production of jewellery.

### 5- Examples of handicrafts in Egypt:

Traditional crafts have been at the forefront of various Egyptian industries since ancient times because they are distinguished by their high quality in execution and finishing, and their decorative dictionary derives from ancient arts (Pharaonic, Coptic, Islamic, folk). Due to the variety of motifs, colors, level of craftsmanship and employment, it created (heritage arts) that are used in all aspects of daily life. Traditional crafts served as the national industry in Egypt until the late Ottoman era, providing the country's population with the required textiles, stone, wood, ceramics, glass, and inlay work. With bones, copper, silver, silk and woolen textiles, embroidery, tents, and many other handicrafts in addition to goods that are exported to other countries of all inherited crafts, that industrial base had entire neighborhoods in which artisans lived under a delicate system that is the system of craft sects, with its rules and origins and princes and elders

There are many handicrafts that the Egyptian people practiced, and distinguished in a way that made them masterful and creative, and one of the most famous types of handicrafts in Egypt:

- Pottery
- Carpet industry
- Free industry



Figure 3. Al-Saleh Najm Al-Din Ayoub School current situation (Source: Photo taken by the researcher.)

- Textile industry
- Crochet industry
- Wicker work
- In the middle of the barn
- Products made with occupier raw materials
- Fashion with technology development
- Robes and vest
- Rural picks
- Compassion wool and aunt
- Assiouti water pipe
- Al-Anon Fine Copper
- Forming buffalo horns
- Pedal damper action
- Sensory Asyuty ramming
- Macramé embroidery
- Aleem Asyouti Al-Adawi
- Aleem Asyouti Al-Adawi

Considering the state's interest in traditional crafts, the Cairo Governorate announced the provision of 100 free scholarships for training in traditional crafts for youth from 18 to 35 years of age, both sexes. Heritage »investment. And she announced her intention to expand the scope of the presidential initiative, "Egypt's Industrialists", to include training more citizens in the production of traditional crafts, in conjunction with preparing marketing plans for products locally and globally.

### 6- Proposal of the development and rehabilitation of Al-Saleh Najm Al-Din Ayoub school to a handicraft development center:

Nothing remains of the school of Al-Saleh Najm Al-Din Ayoub except for the Maliki iwan, which became the mosque and shrine of Al-Saleh Najm Al-Din Ayoub. As for the Shafi'i iwan, the courtyard and the chapters, nothing remains but debris in a way that is inappropriate with the history of the school and Cairo. Therefore, the researcher found that the recruitment of Al-Saleh Najm Al-Din School for a centre for the development of handicrafts is a must.

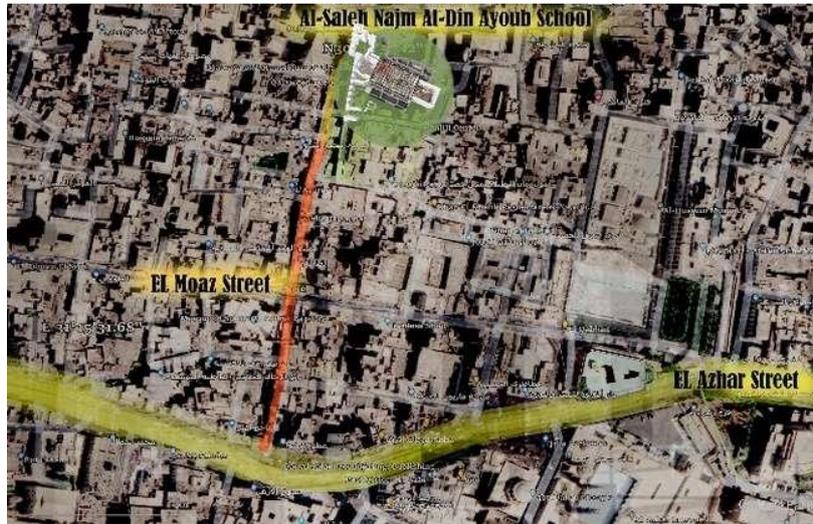


Figure 4. Al-Saleh Al-Saleh Najm Al-Din location in El moez street near elAzhar street, (Source: Google earth.)



Figure 5. The monuments around Al-Saleh Al-Saleh Najm Al-Din school showing the historical character of the place. Left Elmansour Kalaoon School ,in the middle the Mosque of elsultan elzaher barquouq and on the right elmoez street (Source: Photo taken by the researcher.)

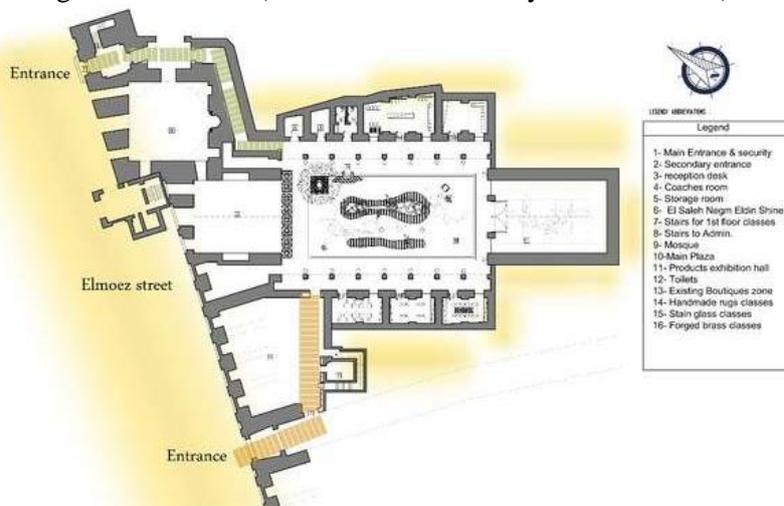


Figure 6. Plan of the Ground floor demonstrating functional relationship (Source: From the work of the researcher)

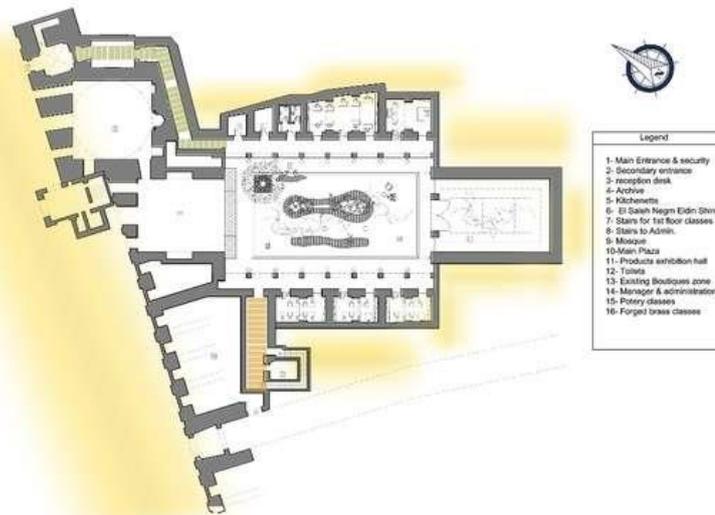


Figure 7. Plan of the First floor demonstrating functional relationship (Source: From the work of the researcher)



Figure 8. Atrium perspective (option 1) (Source: From the work of the researcher)



Figure 9. Atrium perspective (option 1) (Source: From the work of the researcher)



Figure 10. Section demonstrating the atrium and the gallery showing the use of hollow brick tiles and the use of glass covering the inner courtyard area as a principle of sustainability. The solar glass is characterized by three distinct mechanisms: reflection, absorption, and permeability. (Option 1)  
(Source: From the work of the researcher)

Arches are considered one of the most important elements in Islamic architecture, and the Muslim architect took care of them and mastered them in making them, and they are the main load element, as they depend on it to connect the columns to support the ceilings and domes, and Muslims used

different types of arches in every era, according to capabilities and public taste The types of arches in Islamic architecture are 42 arches. In this proposal, the researcher tried to deal with the arch in a contemporary way.



Figure 11. Atrium perspective (option 2) (Source: From the work of the researcher)



Figure 12. Atrium perspective (option 2) (Source: From the work of the researcher)

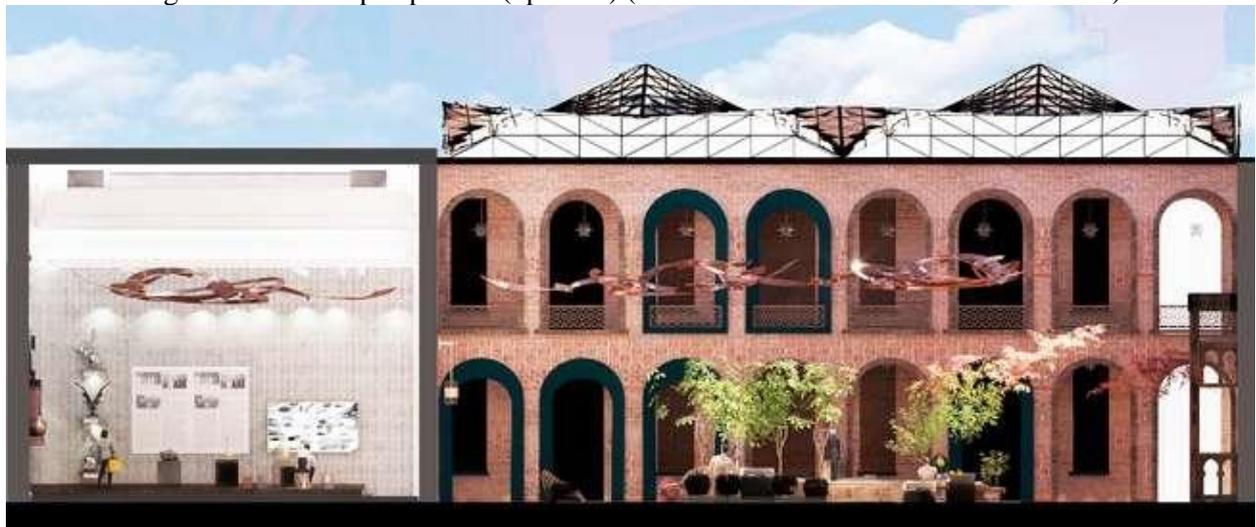


Figure 13. Section (option 2) (Source: From the work of the researcher)



Figure 14. The handcraft Gallery (Source: From the work of the researcher)



Figure 15. The handcraft Gallery (Source: From the work of the researcher)

As new construction becomes more energy efficient, energy consumption is no longer the only criterion considered when evaluating the sustainable performance of buildings. Based on a full life cycle approach, the impact of building

materials manufacturing, in addition to the construction, transportation, demolition and end of life phases, becomes critical to improving the overall sustainable performance of a building.

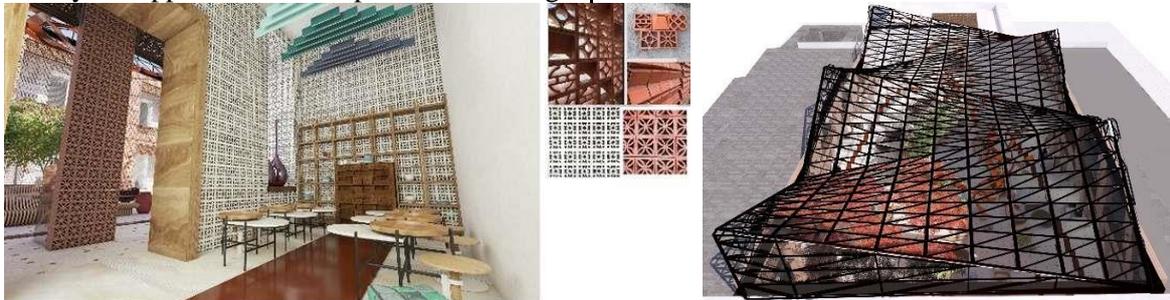


Figure 16. on the left the class of pottery and on the right the atrium ceiling design Solar glass works by three distinct mechanisms: reflection, absorption, and transmittance. As a result, this glass can reflect, absorb, and transmit solar energy and prevent it from entering

Glass is an inert and irreplaceable building material that brings natural light into buildings. Its production from energy-efficient furnaces makes it a preferred product for sustainable buildings.

Nowadays, the preservation of historical buildings through rehabilitation using sustainable approaches is growing rapidly in many countries in the world, so the researcher tried in a modern way to revive the dilapidated places of his madrasa as-Salih Najm al-Din Ayyub without obliterating the identity of the place.

### Conclusion:

Handicrafts are part of the history of our dear country, and preserving them from extinction and disappearance from the civilized scene is the responsibility of every citizen along with the relevant official authorities, just as the art of architecture has existed since the earliest human ages, so the development of architecture was and still is linked to the development of man and his era, and the Islamic heritage is a wealth It is a civilization that must be taken care of and protected, and work to complete the process of its development to become more appropriate with the conditions of the era and the changes of

civilization. Therefore, the researcher tried to combine Islamic art with contemporary solutions for architecture and interior architecture.

Contemporary technological development has had the greatest impact on changing architecture and building patterns, but this does not mean that the spirit and classic design of architecture has disappeared from our lives. Many architects are still working to integrate the classic spirit of architecture with modern digital technologies in creating the ideal building, and this is what the researcher tried to achieve.

### Research Results:

- One of the components of their resurrection is using heritage buildings for proper purposes, which supports their preservation and upkeep.
- The architectural and symbolic values of the group were preserved by Al-Saleh Najm Al-Din Ayoub School's re-employment plan, which is reflected in architectural details, decorations, interior design, the arrangement of spaces, and the overall ambiance of the past.
- By choosing new purposes that blend in with the interior design of the building, a sound approach and design criteria for the interior

spaces must be used in conjunction with the suitable re-employment of heritage structures.

- To maintain the heritage building's original aesthetic, interior design alterations must be kept to a minimum as it prepares for a new use.
- The new job must satisfy modern demands while maintaining the aesthetic and historical significance of the heritage building for the re-employment process to be effective, and this is accomplished by choosing the best among the available employment options.

### Research Recommendations:

The following suggestions are produced by looking at ideas related to architectural heritage and talking about international conventions regarding the reconstruction and restoration of historic buildings and methods of protecting such places:

- Maintaining architectural legacy should be a sustainable development process that involves various societal groups such as financiers, experts, teachers, and regular citizens who are also the owners and occupants of historic structures. This is achieved by raising awareness of such cultural heritage.
- Encourage maintenance staff at buildings to use all current techniques, including computer applications.
- Repurposing historic structures in ways that directly benefit the local community, as this increases local support for conservation and job-creating initiatives.
- Analyzing effective practices to make sure that a culture of heritage building preservation and employment is developed, as well as the transmission of knowledge in science and

education to succeeding generations.

- Advancing the idea of preserving historic structures from the traditional approach, which is limited to restoration and upkeep, to the contemporary approach known as integrative preservation, which adds a suggestion for a modern function that fits with the historical significance and interior design of the building and benefits on the social, cultural, and economic levels and achieves integration into modern life.

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