

## Egypt's Strategy to Develop Methods of Displaying Antiquities in National Museums. "Development of the Display Method in the Main Hall of the Egyptian Museum El Tahrir"

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### Abstract:

Egypt is blessed with a rich history and heritage of antiquities and museums, and the museum is the place that collects a collection of exhibits and valuable things and preserves the cultural heritage of peoples throughout the ages as a witness to the civilization and achievements of peoples. Egypt enjoys a large repertoire of antiquities and museums to display its antiquities and history, and given the role played by museums in displaying antiquities and human heritage, especially in the Egyptian Museum in Tahrir, which is distinguished by many artifacts, the method of displaying them needs development. Considering the technological development in this era, there is a need to develop a future strategic vision for the project to develop the museum display in the Egyptian Museum in Tahrir according to international standards.

### Keywords:

Development; Creative modern solutions; visual formation; Museum display systems.

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### Introduction:

The Egyptian government opted to construct the EMC in the center of Cairo to be the first structure ever constructed particularly to serve as a museum. Construction on the project began in 1897, and the museum was officially inaugurated on November 15, 1902. More than 160,000 artifacts from prehistoric to Roman times are kept there.

While it was founded in 1835 at the Azbek Park with a significant number of varied structures, the Egyptian Museum in Cairo is one of the biggest and most well-known international museums currently located in the field of liberation in the center of the Egyptian city, Cairo. When the French Egyptian scholar Auguste Marnet, who was employed at the Louvre, had the idea to build a museum where a collection of antiquities was shown on the Nile beach at Bulak, it was moved to the second exhibition hall of the Salah al-Din castle. The museum now houses the largest archaeological collection in the world, which spans all periods of ancient Egyptian history, and has more than 150,000 artifacts, the most significant of which are archaeological collections discovered in kings' tombs and the royal footnote of the central family in Jahmur in 1894. Its warehouses have thousands of monuments and more than 136,000 monuments from the Pharaoh.

### Statement of the Problem:

The Egyptian Museum is distinguished by its history and many antiquities, but the large number needs to be redistributed, and changed the museum display scenario and the introduction of new technology so that the visitor and tourist experience turns into an enjoyable, different, and unforgettable experience

### Research Delimitations:

**Time limits:** A proposal for display systems in the main hall of the Egyptian Museum in Tahrir

**Spatial boundaries:** In the main hall of the Egyptian Museum in Tahrir.

**Objective limits:** Present a proposal to develop the display method in the main hall of the Egyptian Museum in Tahrir and change the display scenario.

### Methodology

The researcher relied on the analytical descriptive approach and the link between modern and future technology and its application in national museums, such as the Egyptian Museum in Tahrir, and on the formulation of contemporary treatments as a working guide for those in charge of developing display methods in museums and choosing a display policy that is more appropriate for the future.

### 1-History of the Egyptian Museum in Cairo:

Mohamed Ali Pasha, Egypt's deputy from 1805 to 1848, is credited with having the concept for a museum of Egyptian antiquities. On August 15, 1835, he decided to try and restrict the export of antiquities, and as a result, the first Egyptian antiquities museum was established in Cairo.

The display is placed in a structure near the Azbek garden, constructed by an Avandi story, and the group was managed by Yusuf Zia Avandi. All the finds were moved to the Azbek Museum. In 1851, during Abbas I, the complete group was transported from Azbaki to one of the halls inside the fortress of Salah al-Din (Salah al-Din). In 1858, Wali Said Pasha chose the French Egyptian scientist August Mariette as the curator of the new museum in the Pulaq area of Cairo. Figure (1)

In the presence of Khadwei Ismail, the Polak Museum was formally inaugurated on October 18,

1863. But as it continued to acquire artifacts for its initial collection, the museum quickly outgrew its space, and by 1869 it had undergone yet another expansion. The museum sustained significant damage because of the devastating Nile floods in 1878, and it was closed to visitors while repairs were being made until it reopened in 1881. The



Royal Mummies' lair in the Marine Monastery was uncovered in 1881 .

The group's entire size had grown to a point by 1890 where the Bolak Museum could no longer accommodate the growing number of traces. The entire group was consequently relocated to Ismail Pasha Palace in Giza, located in the current Giza Zoo area. Figure (2)



Figure 1. The interior designs of the Bullock Museum. (Source: Mariette, Auguste, 1872)

Unfortunately, the palace of Ismail Pasha was unfit to serve as a museum, especially for the presentation of ancient artworks. When a hiding spot from the coffins of the 21st family, as well as mumaywat priests and amen priests at the cauldron's door, were found in the same year, the necessity for a new museum increased. The palace of Ismail Pasha was neither secure nor big enough to hold the hundreds of artifacts that were frequently brought in from excavations.

In addition, the palace lacked space for administrative offices, libraries, and labs, making it challenging to construct a successful institution.

After minor renovations to the structure, the Ministry of Public Works convened in March 1893 to decide whether to open a new museum of monuments or simply preserve the collections there. The Egyptian government was persuaded to construct a new museum by Jack de Morgan (1892–1877), the newly appointed Director of Antiquities. (Dr. Mohamed Saleh Aly & Dr. Houreg Sorozian, 1954)

An official commission of the Ministry of Public Works declared an international competition for the

design of a new Egyptian museum between 1893 and 1895, not long after the Ismail Pasha Palace Museum had opened. The winner received a prize of 1,000 Egyptian pounds, and the competition was held during this time.



Figure 2. Ishmael Pasha Palace in Giza (Source: Hélène Morlier, 2010)

It was planned to be built in the heart of the city, between the Nile and the British Nile Palace garrison, at Ishmaeliya Square (now Tahrir Square). There were 87 suggestions offered for the new building project, and the French architect Marcel Dorgéon ultimately decided on the design of the new classical building. Figure (2) (3)



Figure 3. The main interface designs. (Source: Nasser Rabbat, 2011)



Sidaway. (Source: Nasser Rabbat, 2011). Figure 4



Figure 5. Upper Egypt's statue of the sculptor Ferdinand Fever on the main door. (Source: Tarek Torky, 2022)

The two sizable statues surrounding the main door, which depict Upper Egypt and Lower Egypt, were created by the sculptors of Marseille Ferdinand Fever. Figure (5)

On April 1, 1897, Khadwei Abbas Halmi assisted in laying the cornerstone for the Egyptian Museum. After three years of preparation, the first artifacts were inserted into the interfaces on May 7, 1900. The collection's preparation and scientific

oversight were given to Gaston Masspiro. At the time, the new museum had a floor area of 15,000 square meters and cost roughly 240,000 pounds. The announcement of the Egyptian Museum's grand opening appeared in the Egyptian daily Al-Ahram on November 15, 1902. (Wafaa El-Saddik, 2005)Historic images from the museum archives follow. Figure (6)

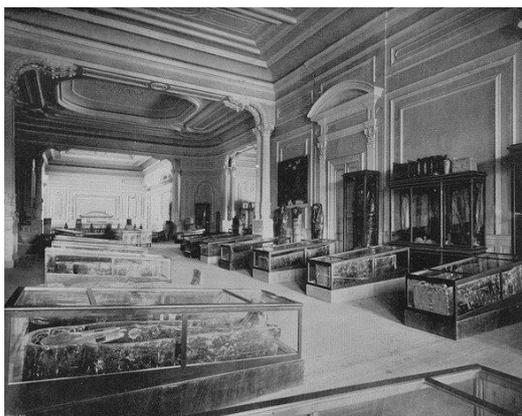


Figure 6. Historical photographs from the museum archives. (Source: Wendy Doyon, 2008)

## 2- The display problem at the Egyptian Museum in El Tahrir:

The Egyptian Museums can be characterized as a repository of antiquities because of the accumulation of thousands of artifacts into dated and unsightly wooden veneers, which have

restricted visitor movement and prevented them from appreciating the impact, Figure (7) as well as the absence of an environment that contributes to entertainment and entertainment, which has prompted the State to consider the creation of new museums and the implementation of new exhibits.

Like other global museums that use video techniques, holograms, and mobile phone applications to communicate their rare pieces to visitors, new modes of presentation rely on technology to employ attractions and stunning elements.

The Ministry of Antiquities is currently developing each of Egypt's numerous national and regional museums differently to preserve each institution's unique identity as part of a comprehensive plan for the advancement of artifact display techniques in Egyptian museums .

With time, the way of display of the artifact changed. While the antique chooses the appropriate artifacts for the museum, the designer places them within the desired context, and the museum presentation focuses on the idea or story that the museum should tell, to influence the visitor. In previous decades, the artifacts were arranged according to his vision. In chronological order, or according to subject and story. However, today the antique is collaborating with the museum designer to find the best way.

The Egyptian Museum of Emancipation will become a museum of distinctive art and religious artifacts that chronicles Egyptian culture because of its archaeology, which will pass the remains of Amon's vineyard to the Egyptian Grand Museum. As an alternative to Amon's cranberries' property effects, it will also incorporate Yuya and Thuya's antiquities. Additionally, there will be statues and significant items displayed in a glam setting so that guests can stroll around and take in the effect. In addition to changing the museum's presentation scenario, the development process entails maintaining the historic museum building, which is over 100 years old, and giving visitors headphones so they can conveniently listen to the explanation of the tour guides.

The Ministry's present philosophy is based less on the number of artifacts and more on the value the museum offers and the narrative it conveys. Each museum's key, or guiding principle, for developing display scenarios for its collections determines how the display scenario is structured and the artifacts are chosen.



Figure 7. The current situation is in the main hall of the Egyptian Museum. (Source: Samy Salah, 2018)  
Ground floor and first-floor planning for the Museum: (current status) Figure (8) (9)

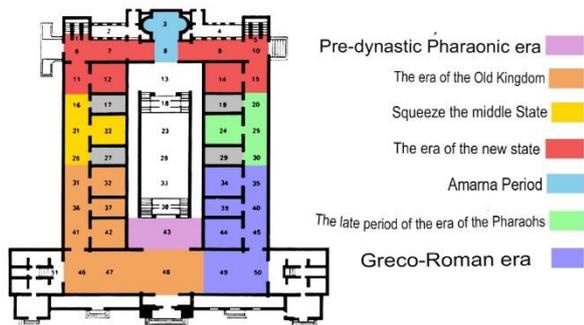


Figure 8. Ground Floor Plan.  
(Source: Horig Surozian, 2012)

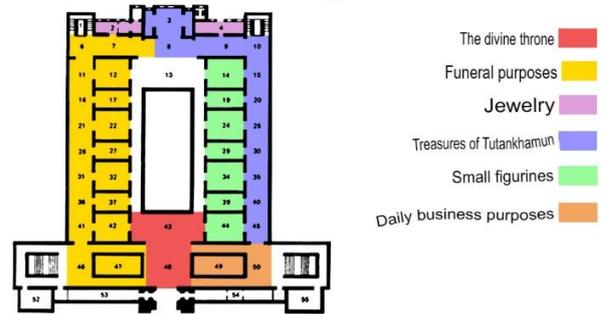


Figure 9. First Floor Plan.  
(Source: Horig Surozian, 2012)

### 3- Yuya and Thuya traces of the Egyptian Museum:

#### 3-1 Who are Yuya and Thuya

The parents of Queen T, the wife of the legendary king Amnhotob III, and the grandmother of King Akhnaton are Yuya and Thuya. Thuya was born in

the "Suhaj province" in the city of Akhim, where he was a senior army officer, a member of the nobility class, and a priest of the city's chief deity, "Min." His "Father of God" title may allude to his remarkable function as the king's guardian. He also held several significant posts in the palace, including Horse Supervisor.

Thuya also had several name titles, including "The King's Great Wife's Royal Mother," which she cherished and frequently used to record her penance and possessions. She also had a son named "Annan," who was the second priest of Amon.

The Yuya and Thuya Cemetery was discovered in 1905, almost 17 years before the discovery of the Tutchen Amon Cemetery, the 46th Cemetery, where the father of Queen T, the wife of the Great King Amishab III, and the grandmother of King Akhnaton, both of whom had high standing, had carved their graves in the Western Mainland's valley of the Kings in the shortest, a location that was only for the tombs of kings. The Yuya and Toya Cemetery is one of the most exquisite graveyards found for the great treasures of their everyday life, including the war wheel of Yuya and the family, seats, jewelry boxes made of gilded "cartonnage" inlaid with precious stones. Boxes and pots of viscera were also found.

Additionally, they had Yuya and Thuya's preserved mummies, interior and external coffins, and their masks made of stone and a restaurant decorated with gems.

### **3-2 Papyrus "Yuya" is the longest papyrus in Egypt:**

It also makes its public debut and is displayed for the first time for the "Yuya" papyrus, which measures 20 meters in length and is written in a hieroglyphic script that has been simplified. Since its 1905 discovery in their tomb in the Valley of the Kings, it has been kept intact inside the storage cabinets of the Egyptian Museum. It is in extremely good shape and has excellent color and quality in a stretched roll.

40 incantations from the Book of the Dead, also known as the Book of Going Out by Day, a collection of incantations, recitations, confessions, and instructions, are included in the Yuya Papyrus. (Quibell & James Edward, 2008)

### **4- Modern display methods in museums:**

Enhancing exhibitions and museum tours:

Over the past two decades, the flourishing websites and social media associated with museums have raised the question of whether these virtual spaces will one day replace the physical museum. However, likely, the virtual museum will not be a complete substitute for physical museums, where virtualism can be seen as a bridge to reality or inflate it.

### **4.1. Modern museum techniques to enhance tourist's cultural experience are the most important:**

**4.1.1. The graphic technique:** Using posters on walls and floors that list information and help visitors understand museum holdings, or by using optical digital displays that reflect light on various surfaces (glass surfaces, walls, floors, roofs), which are shown in motion pictures, still images, and slides, the graphic technique is an illustrative tool that communicates and interprets information to tourists easily and simply.

**4.1.2. Interactive screens:** It is a special kind of screen that combines text, fixed and moving images, sound recordings, and graphics to display the message of the museum by adding unique dimensions, influences, and programs that enable the user to preserve the visitor's experience and to stimulate and satisfy the visitor's interests. Additionally, they can be handled by touching, saving, or sending what has been shown on his mobile device.

**4.1.3. virtual reality technology:** For museum visitors, virtual reality technology offers a real-time, pleasant experience. It is a potent way to present one's collection of artifacts, offers fairly accurate representations of things that do not exist or do not exist at all but are widely known, and enables visitors to travel through time and space without leaving the museum's walls. As a result, there is a growing awareness of the museum's educational and educational role.

**4.1.4. Hologram technology:** a type of visual display that recreates the image and presents it in three dimensions, floating the image into the air as a three-dimensional object and displaying a color that reflects the shape to be presented.

**4.1.5. The technology of enhanced reality (AR):** In contrast to the hypothetical reality of dropping real objects in a virtual environment, the user can handle information and virtual objects through several devices, whether they are mobile, such as smartphones, or through devices dressed as glasses. The technology of enhanced reality is the technology of dropping virtual objects and information in the real user environment to provide additional information or to act as a guide to it. (Mohameed & Hamid, 2022)

### **5- Lighting system Basics in museums:**

It is well known that there are different types of light sources, both natural and artificial, and that all sources of light emit some invisible radiation (UV radiation, infrared radiation), purple light, which is of a short wavelength and is feared for its effects, and infrared radiation, which is of a long wavelength and causes an increase in temperature.

It is also well known that sunlight has harmful properties for both industrial lighters.

According to the intensity of exposure, the type of radiation, and the type of artifact lit, lighting may continue to affect these artifacts (organic) for several years. Because of this, we find ourselves in a very unsettling position when choosing lighting units.

Numerous studies have been done on this subject, and they have revealed that UV radiation and these spectroscopy packages are significant factors in causing damage. Exposure to periods under this light, whether from the sun or even fluorescent lymphocytes, causes a large pale (with two pulses) of colors and destruction of already-existing lilac fibers (papers, cotton) and the effect of light continues to be particularly severe, even if it is only for a brief period, causing destruction.

Both types of industrial lighting bulbs—fluorescent and incandescent—cause maintenance issues, especially when used with organic effects like fabrics and oil paints because they both create heat and UV radiation that undoubtedly destroys ancient artifacts.

Regarding the infrared heat effect of incandescent lamps, which produces heat on the surface of the impact, if there are various dyes on the effect, these colors can absorb heat that is different from each color and which is an uncomfortable surface temperature (paper, wood), as well as incisions and ruptures.

The significant risk of utilizing fluorescent lymphocytes- which are not advised for illuminating ancient exhibitions in museums or electric plants with white glow- has attracted the attention of ICOM and UNESCO.

### 5.1. Lighting methods:

The type of lighting used depends on the light's direction at the display level, which is typically horizontal and 80 cm above the floor. However, there may be exceptions, and vertical levels may also be used, which are typically 30 cm from the wall.

Experience has shown that this belief is false, and that daylight is the right light in museums, despite all the various challenges that obscure this light at different times of the year and its lack of access to certain areas within the museum. Previously, it was thought that industrial lighting was the most appropriate type of light because of its simplicity of operation and distribution as well as the highlighting of the features of exhibits.

### 5.2 Lighting in the Display of Organic Archaeology:

Drawing a starting frame for the proposed interior design elements is the first step in the process. Next, the necessary lighting values must be calculated. Finally, the surrounding materials and surfaces must be changed and adjusted so that eventually we have a consistent surface that does not result in any of those psychological, physiological, or other maintenance issues.

The following guidelines are followed while performing lighting calculations:

#### 5.3. The following information must be gathered to calculate the plants' overall flood count:

5.3.1. Intensity of the lights.

5.3.2. Lighting design.

5.3.3. Choosing a lighting model.

5.3.4. Calculating the overall lighting efficiency factor.

The photo-efficiency factors vary according to normal glow bulbs, mercury vapors, sodium vapors, and fluorescent lamps.

This value is also affected by the different colors of bishops, walls, and lighting styles.

The ideal solution for the lighting of museums is research, where lighting is used only during the necessary time to accommodate the visitor to the item on display. This is done by using electromagnetic cells that affect the light springs of each item on display.(Tarek Kamal Eldin Adly & Rafik Reda Zaree, 2021)

#### Proposal to Develop the Display Method in the Main Hall of the Egyptian Museum El Tahrir:

There are many problems with the way of display in the Egyptian Museum.

- The glass in the main hall on the roof needs to be maintained so that it can pass the sun and light the museum. Figure (10)
- The entrance area within the museum needs to be studied and confirmed in the design. Figure (11)
- Artificial lighting needs to be studied and redistributed. Figure (12)
- The large number of exhibits affecting the supply route.
- Use paints in some parts of the museum without studying them inappropriately. Figure (13)
- The use of the photograph machine for its negative impact on archaeological exhibits should be reduced.
- There is an urgent need to develop modes of supply and use methods of speech and technology to give visitors a unique and interesting experience.



Figure 10. The glass in the main hall on the roof needs to be maintained so that it can pass the sun and light the museum. (Source: photo taken by the researcher)



Figure 11. The entrance area within the museum needs to be studied and confirmed in the design. (Source: photo taken by the researcher)



Figure 12. Artificial lighting needs to be studied and redistributed. (Source: photo taken by the researcher)



Figure 13. Use paints in some parts of the museum without studying them inappropriately. (Source: photo taken by the researcher)

Consideration should be given to the height of the display units and the size of the font for reading and after the lighting units and the angle of their slope on the display units. Figure (14)

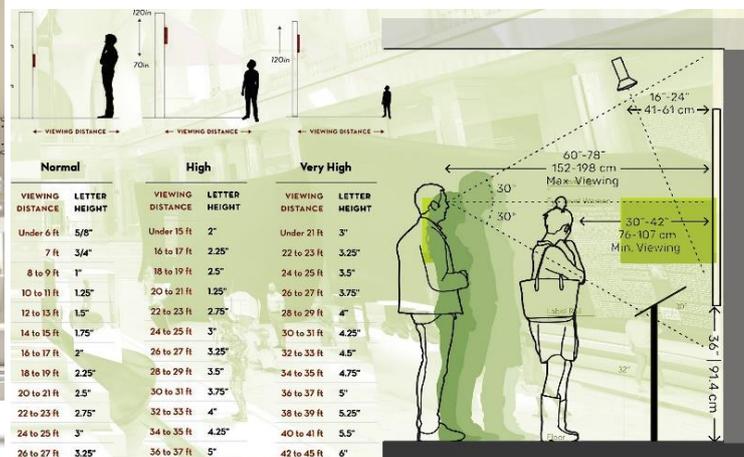


Figure 14. Study of Artificial lighting. (Source: From the work of the researcher)

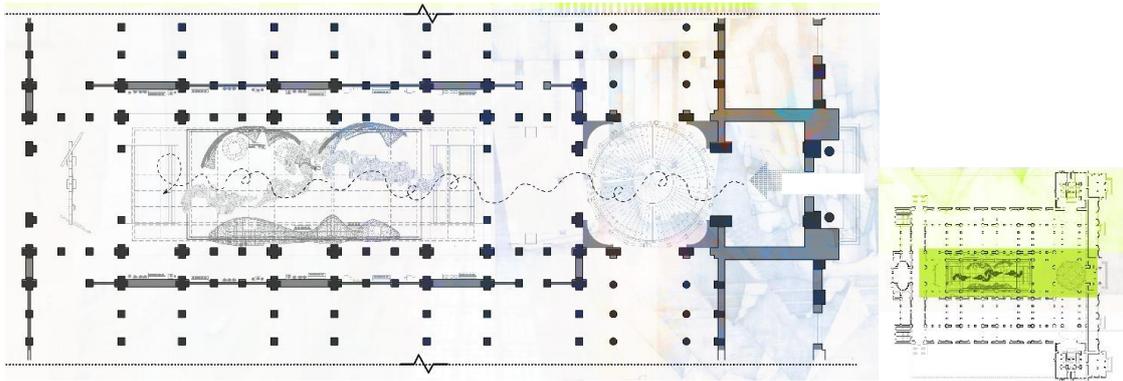


Figure 15. Plan of the main hall in the museum. (Source: From the work of the researcher)

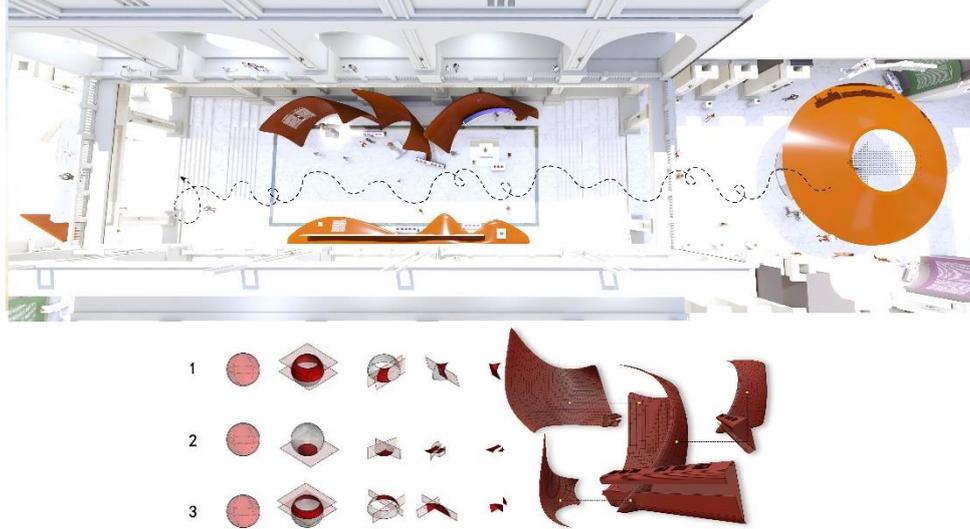


Figure 16. Perspective plan demonstrating the circulation and the main idea of the display concept comes from the analysis of the shape of the circle, which reflects the continuity of how pharaoh civilization has been and remains throughout the ages the center of the fascinating and secretive human being despite the technology of the times, the pharaoh civilization remains the beacon of science and secrets. (Source: From the work of the researcher)



Figure 17. Section A-A in the entrance and the main hall (Source: From the work of the researcher)

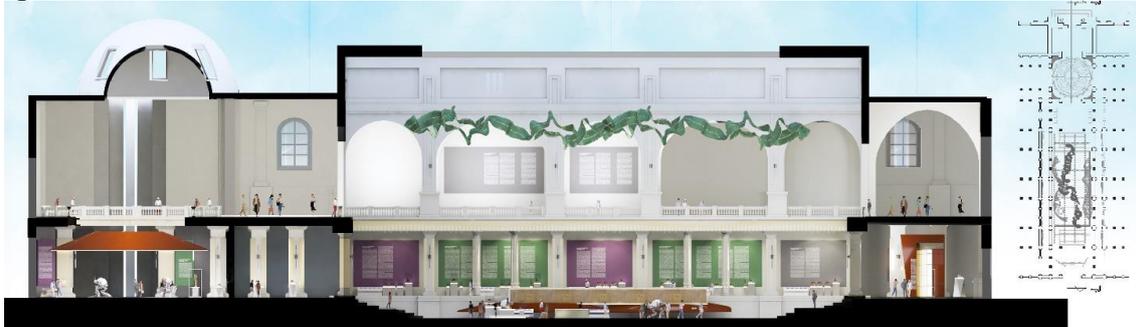


Figure 18. Section B-B in the entrance and the main hall (Source: From the work of the researcher)



Figure 19. Perspective of the entrance gate  
(Source: From the work of the researcher)



Figure 20. The perspective of the panoramic view of the artifacts in the museum.  
(Source: From the work of the researcher)



Figure 21. The perspective of the main hall in the museum. (Source: From the work of the researcher)

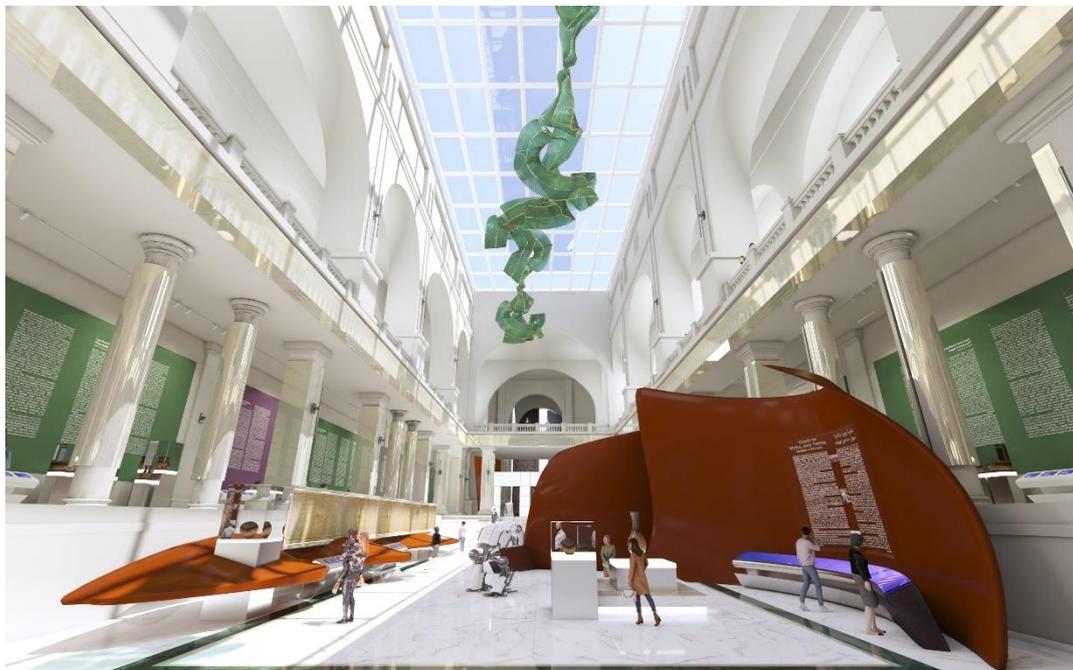


Figure 22. The perspective of the main hall in the museum uses solar fiber optics light It stores sunlight and converts it into lighting. (Source: From the work of the researcher)



Figure 23. The perspective of the main hall in the museum. (Source: From the work of the researcher)

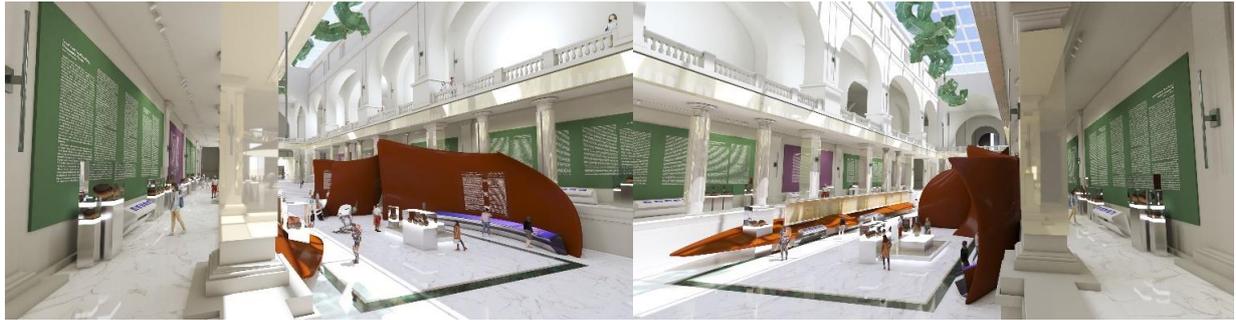


Figure 24. The perspective of the main hall in the museum. (Source: From the work of the researcher)

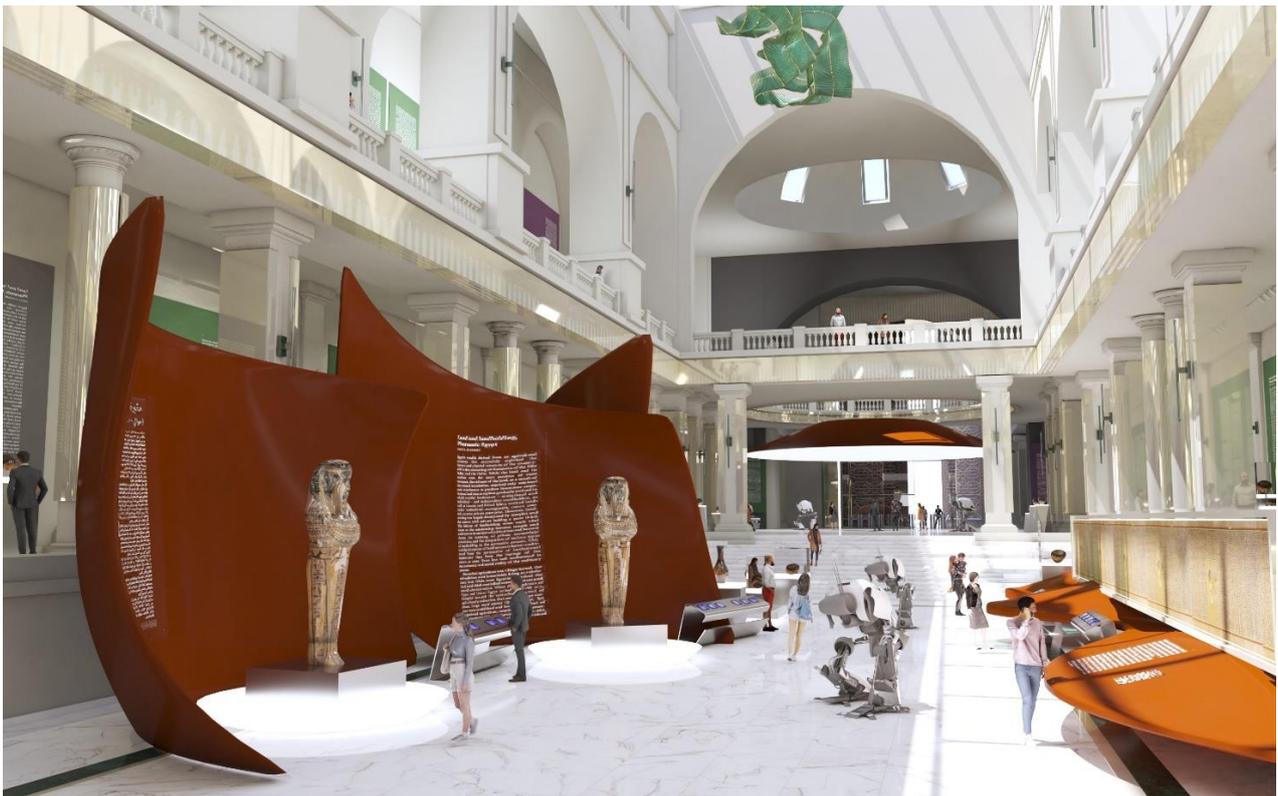


Figure 25. The perspective of the main hall in the museum. (Source: From the work of the researcher)



Figure 26. The perspective of the main hall in the museum. (Source: From the work of the researcher)



Figure 27. The perspective of the main hall in the museum. (Source: From the work of the researcher)



Figure 28. The perspective of the main hall in the museum. (Source: From the work of the researcher)

### Recommendations:

Egypt has a great history of fascinating all Pharaoh's civilizations, full of secrets and baptisms. Modern technology has been unable to explore the ambiguity surrounding Pharaoh's civilization. Egypt also enjoys many of the traces that have been discovered and continue to be discovered every day

by the organization of monuments, thus the researcher's recommendations are as follows:

- Studying and developing methods of presentation in museums.
- Museums containing many monuments must be distributed to other museums.

- Each museum must have a theme served by its presentation method, which depends on how it is presented, and not how many exhibits of the visitor's tits have a special experience.
- Colleges of Fine Arts are researching students through research projects to re-elaborate museum presentation methods and submit their proposals through competitions between beautiful arts colleges in Egypt.
- The importance of integrating technology into supply modes.
- Making agreements between museums outside Egypt and our museums to offer a hypothetical experience of visiting Egyptian museums to those who are unable to visit Egypt.

### Conclusion

- History was the imagination of time before it became its reality and its past, and so the ingenuity of the genius of past centuries, today, has sacrificed our heritage and our culture of pride.
- We must therefore take care to preserve our history and heritage and study all the solutions that will enable us to continue throughout the ages, bearing in mind the cultural values and norms of the civilizations to which they

belong. Art is the mirror of the age and the witness of history. A museum is a place where our past has all the secrets that the pharaohs have hidden, so we must develop the ways of our museums, creating a unique experience for visitors that suits our history.

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