5-21-2022

Environmental Integration Criteria to Coordinate Egyptian Heritage Sites as an Open-Air Museum

walaa hussein
Assistant prof., Architectural Engineering Department, Pyramids Higher Institute for Engineering and Technology (PHI) – Egypt, walaahussien@yahoo.com

Follow this and additional works at: https://mej.researchcommons.org/home

Environmental Integration Criteria to Coordinate Egyptian Heritage Sites as an Open-Air Museum

Walaa Hussein Hussein Hanafi*

KEYWORDS:

open-air museums, environment, integration, heritage sites, criteria

Abstract— **Global trends and calls from the UN-Habitat discuss the value of public spaces. An individual's physical and psychological health and the high temperature of the planet owing to high pollution rates are negatively affected. This research formulates criteria that realize the concept of human life experience in open areas by maximizing the benefit of the existing and neglected heritage, valued areas, such as an open-air museum. Al-Zahir neighborhood in Cairo, Egypt, was selected for analysis after defining its components and formulating its current problems; the scientific–theoretical base of the study was established by collecting data using an application, Arc GIS. Then, using smart and digital technologies and sustainable elements to conserve the environment and energy, guidelines for creating open-air museums in this region was devised. Additionally, resources to highlight the aesthetics of the visual area's image, improve its functional performance, raise its cultural value, and enhance its human and environmental performance as a national project that the researcher termed as S-Z. OAM.**

I. INTRODUCTION

COVID-19 exposed the importance of public spaces and the need to rethink and thoroughly study neglected urban spaces to transform them into democratic, healthy, more sustainable, and inclusive urban spaces. There are many calls of the UN-Habitat and World Health Organization's new Sourcebook for urban leaders, health, and planning professionals. Public space is the living room of a city; just like in your house, the living room is the most important part of the house. —Pascal Smet, Secretary of State for the Brussels-Capital Region and Metropolis Regional Vice-President (Un-habitat 2015) (UNESCO 2021).

Therefore, urban heritage coordination projects in areas of value are positively reflected on the economic, social, and environmental aspects of the region and population. The most important objectives of these projects are good visual formation, environmental integration, and cultural preservation. The urban coordination process takes place for a natural site, be it living, natural elements, such as vegetation cover and wildlife, or nonliving natural elements, such as location, geology, topography, climate, water, and soil. However, the process can also be the coordination for a cultural site to consolidate the heritage values, moral (historical, aesthetic, and social) or utilitarian (economic, urban, and functional) values (UNESCO 2013) (Yin 2019).

The case study was used to define areas as a case study. Thus, the research identified the area's analytical data and properties for formulating criteria. Consequently, the study suggested and deduced a set of constants and variables from a theoretical study to reach the proposed design criteria. This

converted the neglected heritage, valued area into a compatible open-air museum to examine the research hypothesis that focuses on improving distinctive visual image of such areas by converting them into open-air museums. Therefore, increasing their importance, preserving, restoring, rehabilitating, achieving economic aspects, enhancing the residents' health, and preserving the environment are quintessential. Finally, the results are discussed and recommendations are proposed. Fig. 1
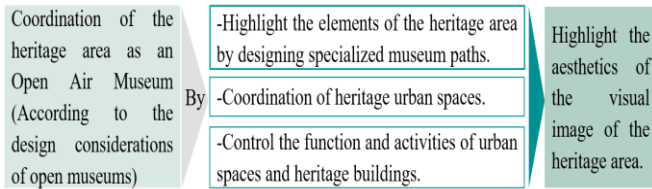

Fig.1: Research Problem Diagram

II. RESEARCH AIM AND OBJECTIVE

The study's objective is to highlight the neglected heritage, valued areas that have a distinctive visual image and an urban and architectural character for converting it into an open-air museum by proposing criteria, the study aims to determine the feasibility to maximize heritage, valued areas' benefit and enhance their efficiency in historical capitals by providing criteria that can help to achieve the comprehensive adaptive reuse of valued places to be an open-air museum: The study explores the following research questions.

- What benefits does integrating open-air museums into historical capitals provide?
- What are the implications of integrating elements and technology on environmental, economic, cultural, and social aspects?
- The possibility of benefiting from converting the study area into an open museum as an example that can be generalized in Egypt?

A. Research Methodology:

The methodology is divided into two sections: testing of the hypothesis and addressing the research questions:

- The theoretical study (qualitative research and data analysis) consists of three components:
- Study on the identification of open museums and their incorporation into the site as a preservation heritage strategy.
- Study on the benefits associated with the incorporation of these aspects into architecture.
- Analyzing the case study area by showcasing suggested area in historical Cairo and its various ingredients.
- Qualitative & Quantitative approach to a pilot study and case study:

The data of the case study (Al-Zaher district, Cairo – Egypt). Were collected through official sources, statistics, and reports of the Central Agency for Public Mobilization and Statistics (CAPMAS), field documentation, photographs.

Using geographic information system (GIS) database and survey maps, collects and analyzed data.

In addition, walk-through, photo editing and interviews for the residents of the area, professors, and academics in the coordination of heritage, valued areas were conducted to collect data on suggested site and open air museum strategies, and the data from the literature have analyzed as well as to ascertain the degree of acceptance of and satisfaction with this criteria.

By using a holistic and inductive methods, an analytical form is formulated to demonstrate how the open air museum conserves the valued building, natural resources, human health, while also Its social, environmental and economic impact.

Research limitation is Al-Zaher district, Cairo, Egypt, and the criteria for designing open-air museums as shown in figure 3.

III. LITERATURE REVIEW

Most countries are currently interested in taking care of heritage areas, preserving their urban heritage, and using them to stimulate tourism and trade. These heritage areas or types of museums are termed as open-air museums. Therefore, it is essential to search for neglected, valued areas in historical capitals to maximize their benefit through the presence of design elements, condition, efficiency, and clarity. Consequently, such museums can be developed to enhance the efficiency of the heritage area. They can also achieve the physical and psychological requirements of residents and users to improve the visual image of heritage areas through organizing exhibitions, walking tours, museums, historical trails, business activities, and festivals (Table 1) (Lashari 2019) (UNESCO 2013) (Jalali2020).

TABLE I
GLOBAL EXAMPLES OF OPEN-AIR MUSEUMS
(DAYLE2020) (TAYLOR 2014) (ARCH20-2022).

Notre-Dame du Haut	Den Gamle, Denmark.
The UNESCO selects these sites; the Roman Catholic chapel in Ronchamp, France, was built in 1955. It is an icon of modern religious architecture. Unfortunately, the chapel was vandalized in 2014.	In 1909 in Aarhus, a scenic Danish market town with a host of half-timbered buildings from the mid-1500s. The magical Apothecary, seen here, which dates to the 18th century.
Écomusée d'Alsacem, France.	Ethnographic Museum, Latvia.
The largest open-air museum in France. A medieval fortified tower in the 18th-century. It contains over 70 buildings that illustrate various aspects of traditional Alsatian village life.	One of the oldest open-air museums in Europe, it takes of pine forest by Jugla lake. Buildings were built from the 17th to 20th centuries.

Converting heritage sites into an open – air museum achieves a major goal, as it is highlight the distinctively visual

image, aesthetic and environmental value of the city, and enhance human productivity in addition to many sub goals as (Easterling 2016) (Degen 2017).

1. Urbanism: Improving the sublevel planning and infrastructure networks and showing the urban character;
2. Architectural: preserving, restoring, rehabilitating and lighting heritage buildings, and combating transformations and changes in the formative characteristics of heritage areas from the evolution of the life cycle;
3. Visual: highlighting its visual image and facilitating its perception;
4. Landscape: accessing standard rates for layout elements;
5. Functional: designing museum paths and coordinating the paths and types of movement within open-air museums to suit the densities, provide parking spaces, and achieve the flexibility of continuity of movement;
6. Cultural: raising awareness in the community regarding the value of the heritage, valued area and the diversity of programs and events;
7. Economics: achieving economic popularity and diversification, attracting investors to the heritage area, and activating internal and external tourism;
8. Technology: reducing the consumption of natural energy;
9. Environmental: reducing pollution and noise levels and protecting from climatic factors;
10. Social: achieving security and privacy, raising the living environment, and providing social activities.

The first step in designing an open-air museum is to define a walk that begins at a recognized place. Referred to as the entry, which is known as a chain, and concludes at a certain point known to visitors, or at the same beginning point, even if there are many heritage urban spaces and levels inside it. So the museum path consists of two main components:

1- Start point and end;
2 - Movement path: Several basic factors control the design of the movement paths in the open-urban museum. They include the types and characteristics of the movement, either free or limited and directions or directing the movement, with natural elements, such as the topography of the site or elements. This can be controlled by the designer, such as building uses.

Design criteria must be achieved to select used materials that are resistant to weather factors, easy to clean, durable, and easy to implement and maintain. Additionally, any part that has been damaged can be replaced, (Al-Majidi, & El-Eqapy 2019) (Paardekooper 2012) (Zeidler, J. A.2015) (Navickienè& Riaubienè. 2018).

Thus, the process of transforming the urban heritage, valued areas into open-air museums consists of several basic stages conducted according to the principles and criteria; the most important of which are as follows (Zeidler, J.2015) (Assem 2017):

- Determining traffic confrontations across the paths;
- Level of overlap to preserve heritage buildings and spaces;
- Museum paths design heritage site coordination;
- Lighting and lighting effects;

- Information and communication arts directories;
- Distribution of public services;
- Organizing activities inside the museum.

To apply this process, the identity of the space must be considered, where any open place has two main items of identity: social and environmental. Place components are imaged, form, and activity depending on the physical environment, built memory, social memory, and human activity. Fig.2
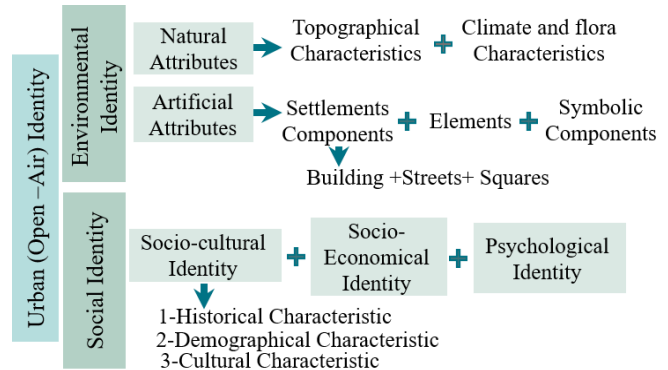

Fig.2. The formation of urban identity

IV. METHODS/EXPERIMENTAL

To start urban coordination projects for heritage areas, there are important basic studies carried out in two phases, as shown in Table 2. (Elshater 2018) (Iftikhar, Xie, Jamali, Khan & Shahid 2019) (Wells, J. C.-2010).

TABLE I
PHASES TO COORDINATE A VALUABLE HERITAGE AREA TO REALIZE IT AS AN OPEN-AIR MUSEUM.

The first phase includes the following steps:	Second phase consists of two steps:

-Choosing a valuable urban heritage area
-Formulating the problems of the current heritage area
-Determining the objectives of designing the heritage area as an open-urban museum
-Collecting and classifying data on the heritage area and its users
-Analyzing the data
-Determining the quality standards of heritage spaces.
	-Design criteria
	-Open-air museum design
	   a- Defining and coordinating specialized motion vectors
	   b- Developing a design plan for the museum paths
	   c- Coordination of the urban open-urban museum.

A. Approach About Region

The study area is located in the Al-Zahir neighborhood in the center of Cairo, the capital of Egypt.

Why choose a site of study area?

There are many distinctive landmarks in the neighborhood. The most important of landmarks are Al-Zahir Mosque, which was built in 1269 by the King of Egypt, Al-Zahir Baybars, with an area of 14,500 m2, and the Sakakini Palace, which was built in 1897 by businessman Gabriel Habib Sakakini, and it is distinguished by its unique architectural elements. Fig.3. (Saad, S. 2018) (Cairo Governorate page2020) (M.OC. 2021) (E. Antiquities 2021).
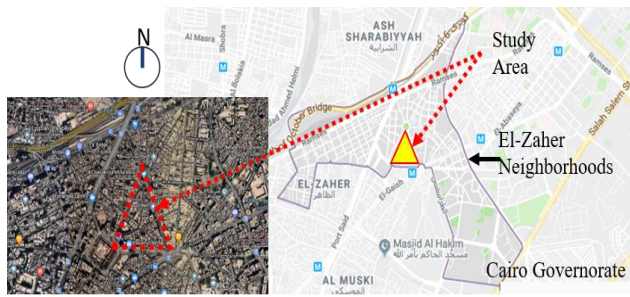
Fig.3. Case study area map, (Google map).

The area has many advantages from different aspects that were the reason for choosing it as follows: (CDF.2021) (COPMAS 2021) (CULTNT 2020) (EMA 2021) (Al-ataabi& Alhelli 2018) (EMC-NAUH- 2022).

1- Heritage and political: The region's containment of heritage buildings or ruins of local or international value (temporal, symbolic) that witnessed many historical events since the Islamic era and Mamluk state through the era of Muhammad Ali Pasha and his family, and the political changes after the 1952 revolution until now (Fig. 4).
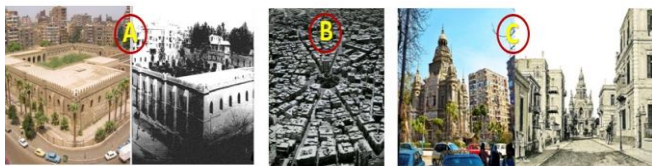

Fig. 4. A: Elzaher Baybars mousque2010-1270 AD, B: Sakakini square 1900 AD, C: Sakakini palace 2020-1897 AD.

2- Social: The area was a prestigious park for ancient Cairenes. The "Al-Zaher" community was affected by social factors that changed its layout, values, and form, especially after the July 1952 revolution and the migration of families of Western origin from it, especially English, Italian, French, Armenian, and Jewish. Historical figures, such as the late Palestinian President "Yasser Arafat," the international writer "Naguib Mahfouz," and the international director "Youssef Chahine" lived in this neighborhood.

3- Cultural: The Al-Zaher neighborhood was calling for culture and its Renaissance in the sixties of the last century. Faggala, one of the oldest areas in the neighborhood, was the first source for books and culture in Cairo. Libraries and cultural service societies spread. The most famous of which was the "Jezwet" or "Cultural Renaissance."

4- Functional: Different uses of buildings, such as residential, mosques, schools, churches, synagogues, palaces, and banks. The neighborhood turned from one of Cairo's high-end neighborhoods to a scattered between popular manifestations and ignorance. This is because of the demolition of houses that are more than 80 years old and replacing them with high buildings to increase the density of the area.

5- Economical: It has many traditional commercial activities that need to be reformulated and directed to support the heritage area. The uses of the buildings, except the heritage buildings, are mostly residential; there are workshops, shops, and cafes on the ground floor in most of the buildings. Building heights vary between 4 and 12 floors. There are schools, a post office, and a subway station near the entrance to the area. Fig.5.

Fig.5. Shots from the case study Area.

6- Architectural and urban: Buildings varied among Italian, Greek, and English styles. This urbanization and cultural diversity remain through some old houses, palaces, mosques, churches, and synagogues scattered throughout the region. The urban analysis shows the diversity of the urban pattern between radial, perpendicular, compact, and some focal points. The presence of the main square, the EI-Gish Square, and building ratio with the rate at about 87% are shown in the map in Fig. 6. (A colored pars is a sold parts (buildings) and uncolored is a void and streets.)

Fig. 6. Urban pattern and (solid &void) in the case study area.

7- Environmental: The nature of the temperature climate of the region; the summer temperature reaches 27°C–37°C, whereas winter temperature reaches 18°C–25°C, and rain is scarce.

8- Visual value: The site is characterized by the presence of a rhythmic composition and distinctive signs that can be used to form visual experiences for users and the formation of an urban visual sequence. Fig. 7
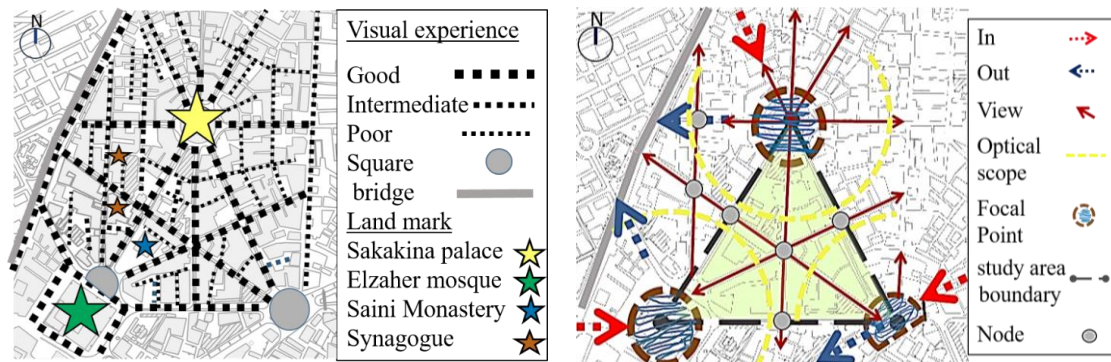
Fig.7. visual experience in the case study Area

It becomes clear the reasons for interest in the area. In addition to the presence of the location in the center of the capital, easy access to it, and the abundance of traffic networks and various transportations. Fig.8
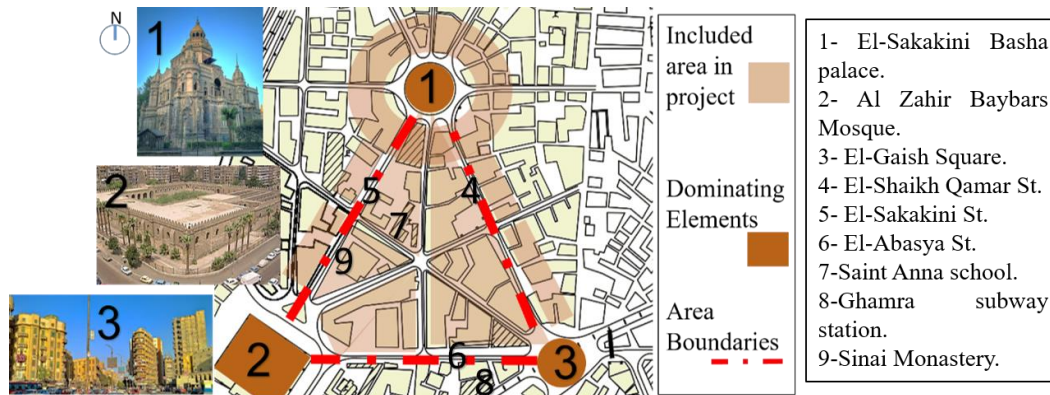

Fig.8. Suggested open-air museum boundaries and their dominating elements.

According the principals and standards of urban coordination for buildings, and heritage areas of outstanding value approved by the Supreme Council for Urban Planning, and Development in accordance with Law No. 119 of 2008, and the National Organ for Urban Harmony – Egypt, the selected site can be classified as heritage; linked to historical events bearing a symbolic value that is visually distinctive, characterized by uniqueness and rarity, and it has an architectural value.

Proposed Design Criteria to the Sakakini-Zaher Open-air Museum (S-Z. OAM.) (John W 2007) (Bandarin, and Oers, 2012) (Amer, 2015) (Ashraf and Nasreldin 2018) (Lynch 1960) (Merriman, P. (2016).

In this study researcher suggested a Criteria to Designing an open-air museum, its starts by identifying and coordinating specialized traffic vectors across roads and then developing a design plan for the specialized museum tracks. Finally, coordination of the open-urban museum, as follows:

1. The design of the museum path starts by defining the type of path in terms of the purpose of the visit and developing a vision for the specialized museum path to include all traffic vectors that share the same type of value according to the visual standards, waiting areas, and comfort of public and private visitors.
2. Designing sound effects and informational guides include defining the method of informing evidence, direct or indirect response, and designing the sound effects for various performances and activities, or as informational evidence and noise control.
3. Lighting design and light effects include lighting, pedestrian paths, automated movement, heritage building facades, heritage, and urban spaces, designing light effects for various shows and activities, and landscape lighting of the site. Lighting units with clean energy, varying between decorative and classic form.
4. The movement design inside the open museum includes all kinds of automatic movement and its direction in the heritage area, public transportation system to and from the open museum and inside it, parking spaces, pedestrian movement, and its path.
5. Designing the landscape elements to suit the new function as an open museum includes floors, benches, plants, water elements, fountains, stairs, ramps, sculptural and decorative items, and complementary elements, such as guide signs, lighting columns, trees, plants, gates, entrances, rubbish baskets, and fences.
6. The materials and elements used to redesign the site as an open museum are selected to be environmentally friendly, sustainable materials, use clean technology to conserve energy, and can use recycled or reused materials.
7. Organizing activities in the open museum include various educational programs on a theater stage or cinema screen. It can also organize sound and light programs and allocate

places to art exhibitions to discuss literary works or celebration events.

8. Distribution of public services in the open museum includes shading devices, rest areas, transportation stations, kiosks, sales outlets, information counters, public toilets, Internet, and Wi-Fi services. In some places energy generating floors from the movement of visitors can be used. In Figures 9, 10 some suggested items complementary to the chosen site to improve it.

Fig.10.Natural materials such as wood and stones can integrate with photovoltaic units.

Fig.9. Design complementary elements, photocells and light in site.

From previous studies, researcher suggested a plan, including path, zoning, and landscape, first the bubble diagram to redesign an area as an open-air museum of the heritage site through four basic elements. Culture zone is the main item, parking, plaza, or Vesta. Then, new findings are arranged according to the status and development of the site (Fig. 11).
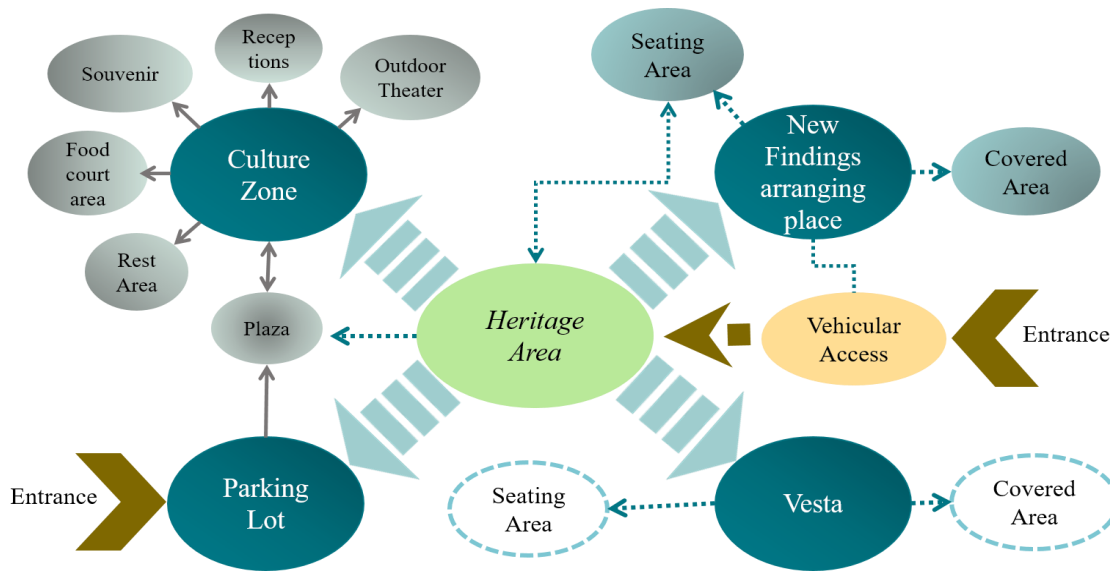

Fig. 11. Sakakini-Zaher open-air museum (S-Z. OAM) functional diagram

They suggested the museum paths in the region after studying existing paths and how to exploit them and take advantage of their planning to include them in the open museum and classify it as cultural, recreational, and economic. Fig.12.
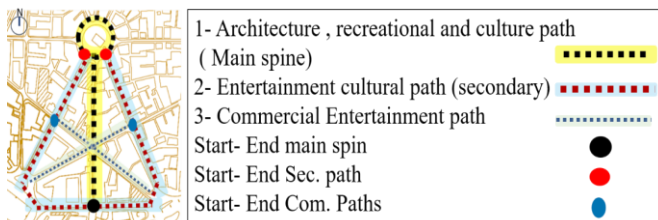

Fig.12. Suggested paths for S-Z. OAM.

V.   RESULT

The study sheds light on the open-air museum in the heritage area, especially in historical Cairo at (Al-Zaher neighborhood), Egypt as an example can be generalized in another site, to enhances the value of the area and creates an outlet for it, improving the urban and visual environment. This is evident in the urban and population overcrowding. It also enhances many positive aspects stated as follows:

1. Being a relatively specific open museum dedicated to pedestrians, and the possibility of entering the museum for pedestrians from gates and private cars that have entry permits and at specific times;
2. Coordinating and raising the efficiency of some heritage, urban spaces, and providing a safe and comfortable environment for pedestrians and disabled;
3. Preserving archaeological and historical facilities.;
4. Reducing the pollution rate in the heritage area by coordinating eco-islands, encouraging electric public transportation, car, and bicycle partnerships, cleaning roads, and improving their visual image;
5. Reducing congestion by limiting the entry of motor vehicles and providing parking spaces;
6. Economic returns, promotion of trade and tourism, and creation of job opportunities.

The proposed design can be deduced after placing zoning, paths, and defining the elements. As shown in the figure 13.
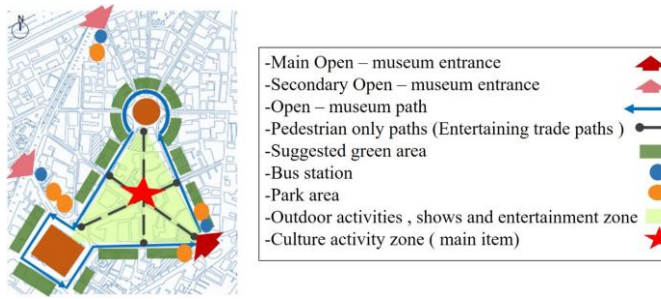
Fig.13. Design of Open- Air Museum.

The researcher designed a detailed proposal for the main axis of the open-air museum perpendicular to the Sakakini Palace with the required elements as a guide that can be applied to the rest of the area (Fig. 14).

Fig. 14. Suggested design of the Sakakini main axis

Through the previous figure, the researcher analyzed through four main axes that he deduced for the success of the suggested design of the open museum.

TABLE 3:
FOUR MAIN AXES TO SUCCESS OF THE SUGGESTED DESIGN OF
THE OPEN MUSEUM

Architectural	Environmental
Building value starts from its beginning, either from the side of the Sakakini Palace or Al-Zahir Mosque and decreases during the museum path between them. In contrast,	During the path, starting points, and ending points, is considered a high value in the proposed design after the landscaping within the criteria of heritage buildings or even the entertainment museum path.

Cultural	Economic
Cultural aspect is the top value at the start and end points due to the presence of existing heritage buildings. Additionally, its value increases by supporting it with cultural elements and activities included in the open-air museum design.	this aspect flourishes during the path and reaches its apex in the middle stage of the track, where the movement of buying and selling through kiosks, whether entertainment, cultural, or souvenirs

In brief, the Zoning and suggested design for the area were evaluated. The results can be formulated and presented through the mixer board between two factors: movement of the visitor and expected uses in the area. It was symbolized by the time in the X-axis and by the architectural, cultural, environmental, and economic returns in the Y-axis (Fig. 15).
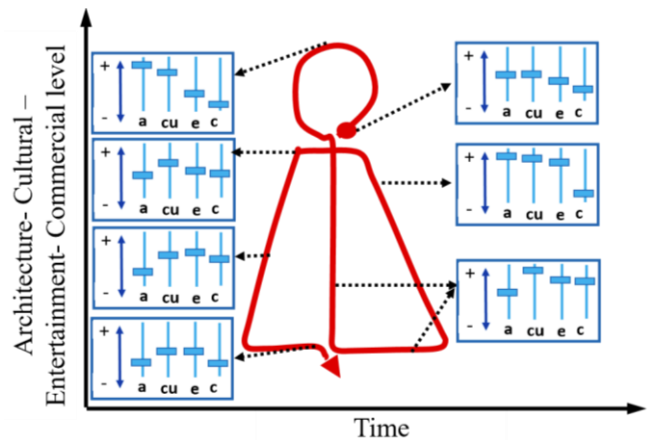

Fig. 15. ''mixer board'' evolution of architectural, cultural, entertainment, and commercial level over time

VI. DISCUSSION

The research indicates the importance of designing open-air museums in countries. Then, it presents the heritage value of the case study area, its challenges, and its ingredients. Finally, it suggests a design to reformulate the area as an open-air museum. The proposed design system addressed the problems in the area and achieved the following (Fig. 16).
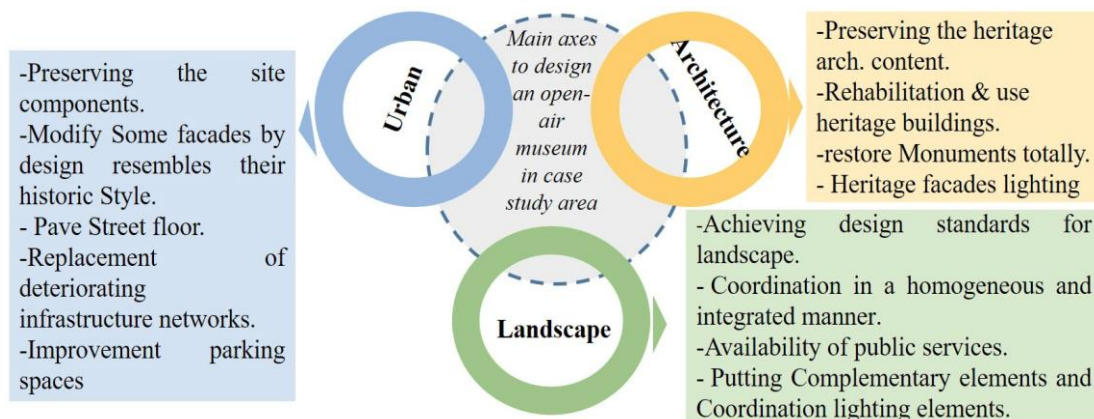

Fig. 16. The main axes achieved by integrating planning criteria

The proposed design system is supported by two main axes: promoting the heritage site and managing the visitor demand to be integrated into coordinate heritage sites as an open-air museum. Fig.17.
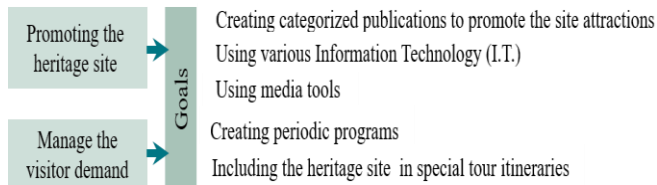

Fig.17. the main axes the Promoting the heritage site

VII.   CONCLUSION AND RECOMMENDATION

Interest in Heritage buildings and areas are parts of development strategies in the old city to reduce urban degradation by serving for activities, services, entertainment, internal and external tourism, and job opportunities.

- This study investigates the integration between urban, economic, social, and environmental aspects of basic development pillars of heritage areas.
- The research also discussed success potentials and deficiency features that can be remedied, such as providing parking areas, landscaping design, commercial path, public services, and regular maintenance to achieve higher efficiency levels and sustainability of the heritage site and the open-air museum for future generations.
- It becomes clear the necessity of distributing roles between the government, local administration, civil organizations, and private sectors, giving it the ability to make it an open-air museum.
- Environmentally, the research demonstrated the importance of finding an integrated design to create an environmental outlet in the urban pattern, where green and open spaces are scarce with the increase in population and traffic density in this site. It also demonstrates the importance of finding an integrated system for waste and raising population awareness.
- This research focused to Heritage areas represents an important turning point in the urban pattern with the diversity of land use and basic services. It works to relieve stress on the urban centers of the capital with the development of services and infrastructure.
- Additionally, putting highlighting economic activities are essential in developing work, creating workspaces, integrating the informal sector, and using the region's resources while diversifying investment areas to support living requirements.

Finally, recommended to apply this criteria study and proposed design to convert another valued site into open-air museums with the future possibility of developing. This model fits the nature of each open-air museum.

Through open-air museums, it is possible to achieve the strategies, and trends toward heritage buildings, environmental preservation, and improved quality of life, despite the fact that open museums in Egypt are still a relatively new field although there are several valued sites. With additional research, designers will gain a greater understanding of it, and the opportunity to apply what they have learned.

LIST OF ABBREVIATIONS

S-Z. OAM Sakakini -Zaher Open-Air Museum.

DECLARATION OF CONFLICTING INTERESTS STATEMENT:

The author declared that there are no potential conflicts of interest with respect to the research authorship or publication of this article

REFERENCES

[1] Un-habitat for a better urban future, "Public space for all", https://unhabitat.org/public-spaces-for-all, 2015, Accessed January 18, 2021.
[2] UNESCO World Heritage Centre, Convention Concerning the Protection of the World Cultural and Natural Heritage, http://whc.unesco.org/en/conventiontext/ .Accessed 2 June 2021.
[3] Taylor, K. (2016). The Historic Urban Landscape paradigm and cities as cultural landscapes. Challenging orthodoxy in urban conservation. Landscape Research, 41(4), 471-480.
[4] UNESCO. (2013). Operational Guideline for the Implementation of the World Heritage Convention. Retrieved from http://whc.unesco.org/archive/opguide13-en.pdf .Accessed 22 December 2020.
[5] Yin, M., Xu, J., & Yang, Z. (2019). Preliminary research on planning of decentralizing ancient towns in small-scale famous historic and cultural cities with a case study of Tingchow County, Fujian Province. Sustainability, 11(10), 2911.
[6] Lashari, D. K., Ahmed, N., Jamali, H., & Hussain, S. (2019). History and Preservation of Cultural Heritage of Gwadar. Conference panel discussion, University of Turbat. Pp 325-339.
[7] UNESCO (2013), Tangible Cultural Heritage, www.unesco.org/new/en/cairo/culture/tangible-cultural-heritage/ , Accessed 23 May 2021.
[8] Jalali, M. Tomb of Khaled Nabi - AmoQodrat Ecotourism residence. Retrieved from http://amoqodrat.ir/tomb-of-khaled-nabi/ , Accessed 10 March 2020.
[9] Dayle Wood, (2020) 10 Best Open-Air Museums around the World, Discover the most incredible museums that bring history-and design-to life. https://www.veranda.com/travel/g32969072/best-open-air-museums/ , Accessed 10 Feb 2020.
[10] Taylor, K. (2014). The historic urban landscape. Managing heritage in an urban century.
[11] Arch2o, magazine https://www.arch2o.com/unesco-world-heritage-sites-modernist/ , Accessed 10 Feb 2022.
[12] Van Oers, R., & Roders, A. P. (2012). Historic cities as model of sustainability. Journal of Cultural Heritage Management and Sustainable Development.
[13] Easterling, K. (2016). Extra statecraft: The power of infrastructure space. New York: Verso. Pp 9-10.
[14] Degen, M. (2017). Urban regeneration and resistance of place foregrounding time and experience. Space and Culture, 20, 141-151
[15] Zeidler, J. A. (2015). Presenting archaeological heritage: Identity and interpretation in heritage tourism planning. In Identity and heritage (pp. 145-158). Springer: Cham.
[16] Navickien? E., & Riaubien? E. (2018). Changes of approach to urban context in international guidelines and experiences in Lithuanian urban

environment. Sci. J. Latvia Univ. Life Sci. Technol. Landsc. Architect. Art, 13, 7-17.

[17] Jamali, H. (2014). A harbor in the tempest: Megaprojects, identity, and the politics of place in Gwadar, Pakistan. Ph.D. Thesis. Austin: The University of Texas. Pp 61-98.

[18] Allen, M. (2018). SAGE. Retrieved June 12, 2019, from ethnography in the SAGE encyclopedia of communication research method. https://dx.doi.org/10.4135/9781483381411.n169 . Accessed 20 March 2020.

[19] Assem, H., "A Structured Stakeholder Identification Tool for Urban Development Projects in Egypt: The Case of Ard Al-Liwa Crossing, Giza, Egypt", International Journal of Development and Sustainability, Vol. 6, No. 9, pp. 1106-1120, 2017.

[20] Zeidler, J. A. (2015). Presenting archaeological heritage: Identity and interpretation in heritage tourism planning. In Identity and heritage (pp. 145-158). Springer: Cham.

[21] Al-Majidi, B. H. H., & El-Eqapy, A. H. (2019). Identity and Exchangeable of Figure and Background Visually. Journal of University of Babylon for Engineering Sciences, 27(1), 290-311.

[22] Paardekooper, R. (2012). The value of an archaeological open-air museum is in its use: Understanding archaeological open-air museums and their visitors. Leiden: Sidestone Press. Pp 27-87.

[23] Shipley, R., & Marcie, S. (2013). The role of heritage conservation districts in achieving community economic development goals. International Journal of Heritage Studies 19,(3), 304-321.

[24] Bennett, T. (2013). The birth of the museum: History, theory, politics. New York, Routledge. Pp 10-53.

[25] Elshater, A. (2018). Towards a refined new concept of new urbanism in Egypt. Asian Journal of Environment-Behavior Studies, 3(8), 205-220.

[26] Iftikhar, M. N., Xie, L., Shakeel, K., Jamali, S., Khan, M., Cheema, K. H., & Shahid, M. (2019). The institutional and urban design of Gwadar City. International Growth Centre IGC, 138. pp9-90

[27] Wells, J. C. Valuing Historic Places: Traditional and Contemporary Approaches. Proceedings of the first international conference on the preservation and rehabilitation of Iraqi city centers, Baghdad, Iraq, 2010. https://docs.rwu.edu/cgi/viewcontent.cgi?article=1021&context=saahp_fp Accessed 3 January 2022.

[28] UNESCO World Heritage Centre, The Criteria for Selection, http://whc.unesco.org/en/criteria/ . Accessed 2 May 2020

[29] Saad, S. (2018). The Spatial Identity of Historic Cairo. Part 2: Must Prominent Buildings be informed. Identity through Architecture and Art. Part II, Cairo.

[30] Cairo Governorate page, Egypt, http://www.cairo.gov.eg/ar/pages/default.aspx . Accessed 16 Feb. 2021

[31] Egyptian Ministry of Culture, http://www.moc.gov.eg/ar/home/ . Accessed 2 Dec. 2020

[32] Egyptian Ministry of Tourism and Antiquities, http://www.antiquities.gov.eg /. Accessed 17 Feb. 2021

[33] Cultural development fund, ministry of culture, Egypt. http://www.cdf.gov.eg . Accessed 20 Feb 2021

[34] The Central Agency for Public Mobilization and Statistics of Egypt, CAPMAS. (2021). https://www.capmas.gov.eg . Accessed 14 Feb 2021

[35] CULTNAT: Centre for Documentation of Cultural and Natural Heritage, Bibliotheca Alexandrina, Egypt (http://cultnat.org/General/Cultnat.aspx) . Accessed Nov.2, 2020.

[36] Egyptian Meteorological Authority, http://ema.gov.eg/ . Accessed May 5, 2021.

[37] EMC-NAUH, The Egyptian Ministry of Culture, the National Authority for Urban Harmony, http://www.urbanharmony.org/guide/ealanat%20lafetat.pdf

[38] Assar Khaniki, Z., Darabi, H., & Irani- Behbahani, H. (2015). Integrated analysis of urban landscape fragmentation (case study: history-religious city of Ray). International Journal of Environmental Research, 9(2).

[39] Al-ataabi, M. S., & Alhelli, A. A. (2018). Renovated Spaces in Heritage Districts: The Reviving and Renovation of Culturally and Historic, Open Spaces in Islamic Regions. In Landscape Architecture-The Sense of Places, Models and Applications. IntechOpen. http://dx.doi.org/10.5772/intechopen.73099 . Accessed April 2, 2021.

[40] John Williams-Davies (2007) Open Air Museums: The History and Future of a Visionary Idea, Folk Life, 46:1, 159-161, DOI: 10.1179/flk. 2007. 46. 1. 159

[41] Bandarin, F. And van Oers, R. (2012), The Historic Urban Landscape - Managing Heritage in an Urban Century, Wiley-Blackwell, Oxford

[42] Amer, M. (2015). Developing Innovative Marketing Plan to Augment the Visitation of Egyptian World Heritage Sites: A Case Study on Saladin Citadel (Master of Arts in Heritage Conservation and Site Management - unpublished). Helwan University (Egypt) and Brandenburg University of Technology Cottbus-Senftenberg (Germany), Cairo. Retrieved from www.researchgate.net/publication/291832778 . Accessed 6 November 2020.

[43] Stobbelaar, D. J., & Pedroli, B. (2011). Perspectives on landscape identity: A conceptual challenge. Landscape Research, 36(3), 321-339.

[44] Ashraf, H., and Nasreldin, R., "Intermediate, Urban Regions Role in Improving Informal Areas in Egypt Case Study of Boulaq Ad-Dakrour", International Conference for Sustainable Design of the Built Environment, London, 2018.

[45] Lynch, K. (1960). The image of the city (Vol. 11). Cambridge, Mass: MIT Press, 11, 1-13.

[46] Nijhuis, S., & Jauslin, D. (2015). Urban landscape infrastructures: Designing operative landscape structures for the built environment. Research in Urbanism Series, 3, 13-34

[47] Merriman, P. (2016). Mobility infrastructures: Modern visions, affective environments and the problem of car parking. Mobilities, 11(1), 83-98

TITLE ARABIC:

التكامل البيئي لتنسيق مواقع التراث المصري لإدراكها كمتحف مفتوح

ARABIC ABSTRACT:

تناقش الاتجاهات العالمية حاليا قيمة الفضاء العام حيث يقضي الانسان معظم وقته في بيئة مبنية مما أثر سلبا على صحته الجسدية والنفسية اضافة الى ارتفاع درجة حرارة الارض نتيجة زيادة معدلات التلوث. يحاول هذا البحث صياغة معايير تهدف إلى تحقيق مفهوم تجربة الحياة البشرية في المناطق المفتوحة من خلال تعظيم الاستفادة من مناطق التراث القائمة والمهملة كمتحف مفتوح. تم اختيار حي الظاهر بالقاهرة -مصر بعد تحديد مكوناته وصياغة مشكلاته العمرانية والبيئية الحالية ثم وضع قاعده نظرية علميه من خلال تجمع البيانات باستخدام برنامج تحليلArc GIS ، ثم دراسة نظرية تحليلية، ودراسة معايير لتصميم متحف مفتوح في هذه المنطقة من خلال تطبيق التقنيات الذكية والرقمية والعناصر المستدامة للحفاظ على البيئة والطاقة والموارد لإبراز جماليات صورة المنطقة المرئية وتحسين أدائها الوظيفي ورفع قيمتها الثقافية وتعزيز المردود الانساني والبيئي بالمنطقة كمشروع وطني اقترحه الباحث باسمSZ.OAM

.