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Developing historical waterfront that located in Central Business District Case study: El Manchya, Eastern Harbor, Alexandria

Haitham El Sayed Ahmed El Sharnouby*

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Abstract — Developing waterfront historic districts especially that lying in Central Business District (CBD), helps in integrating communities with their water elements and reflects the ability of CBD to adapt economic and social environments. The aim of the research is to set a new approach to be applied to achieve sustainable waterfront development. By emphasize the quality of life means in El-Manchya Square to increase economic return in terms of tourism, and public and private investments. These through guidance of similar case; which is Aristotelous plaza; one of Greece's best known locations. After studying Aristotelous plaza we can conclude certain approaches to be applied in El Manchya Square. Applying these approaches to El Manchay Square could be an attempt to enhance this focal node on metropolitan Alexandrians waterfront through the place making criteria, analyzing that waterfront in Alexandria, Egypt. Finally the research will conclude certain recommendations to develop this type of waterfront historic district based on examples' analysis of Aristotelous plaza Thessaloniki – Greece development.

I. INTRODUCTION

RECENTLY, through all over the world citizens in harbor and coastal cities were reclaiming their waterfronts. They need to interact with the water edge and release all boundaries, to create more festival and public spaces, to do their everyday activities on a proper promenade, enjoying the old downtown in a new way. Also, it had to be with financial and economic benefits returning to all parties and stakeholders involved and to keep it side by side as a priority with the conservation and revitalization process.

The research considered as an attempt to focus on El-Manchya Square with its potentials as waterfront historic

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district and the proposed methods to vivid the old **CBD** as it had been done in many cities around the world. Taking Thessaloniki in Greece as a studying case to evaluate the main process, and what does it take to do the same in our city. Choosing Thessaloniki particularly for its similarity to Alexandria in history, urban fabric, metropolitanism and much more the historic waterfront in each. What have been done through the latest development strategy in Greece isn't that far from us to do, the development takes a long-term strategy (25 years), the improvement of the main infrastructure was the main theme all over the country which facilitate investment projects through the public or private sectors to proceed, and that will have its influence on the national income as well.

*Corresponding Author: Haitham El Sayed El Sharnouby, Lecturer at Dept. of Architectural Engineering – High Institute of Engineering and Technology, Beheira., (E-Mail: haythamarch@yahoo.com)

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A. Problem statement

The eastern historic harbor of Alexandria suffers infringement and negligence, where this harbor needs to be conserved and revitalized as a waterfront connected to **CBD**. This problem may be solved through observing and analyzing previous experiments in that concern in order to conclude appropriate approaches suitable for the eastern harbor to reimage the old district and its waterfront and increase the investments opportunities and finally achieve the research aim.

B. Research justifications

While the eastern harbor has three main nodes (Saad Zaghloul Square, El-Manchya Square, and Abul Abbas Square) which they are almost suffer the same problems, El-Manchya square have the lion's share of visitors, traffic, and commercial movement. Thus this square may take an ultimate priority to be developed and conserved

C. Research aim

Rehabilitate the major node of "El-Manchya" square on the waterfront to provide mixed use public spaces, provide more open spaces and walkways for pedestrians which rebuild the image of the district and motivate the tourism and investment movement.

D. Research Methodology

The research follows descriptive and analytical approaches, where descriptive approach used to review data about El-Manchya square and observe its main features and problems, while the analytic approach used to analyze similar example for that square, to conclude guidelines and approaches to be applied on the research case study. The research also will goes as the structure illustrated in (Error! Reference source not found.)

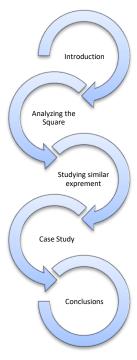


Fig. 1: Research Structure

II. ANALYZING THE SQUARE

Eastern harbor in Alexandria is containing two of the three squares that represent the central business districts in Alexandria. These three squares are, Saad Zaghloul square, El-Manchya square, and El Shohadaa square. The first two are located in the shore line of the eastern harbor. Fig. 2 illustrates the location of El-Manchya square in eastern harbor.

A. Historical Background

In the heart of Alexandria's old European center, is what is known as 'Midan el-Manchya' - Arabic words which means "The Square". Over its history this space had other names: French gardens Square, Grand-Place, Place des Consuls, Place Mohamed Ali, and now Midan El Tahrir, or "Liberation Square." These names reflect the changes in socioeconomic and political conditions in Egyptian society, in general, and the Alexandrian, in particular.



Fig. 2: Location of east harbor in Alexandria (captured by Google maps)

This square is the oldest urban space in the cosmopolitan city. Here cosmopolitanism began and flourished in the early 19th Century, encouraged and favored by Egypt's progressive ruler Mohamed Ali (1805-1848) and his successors. Ironically, it was also here that the nationalist leader Gamal Abd el-Nasser on the 26th of July 1956 declared the nationalization of the Suez Canal, thus ending a century and a half of cosmopolitanism [1].



Fig. 3: The French gardens of El-Manchya square [2]

B. Visual Analysis

Mainly traffic problems is dominant due to random and uncontrolled intersection joints between high capacity pedestrians and mechanical traffic especially in rush hours. Negligence in general to what is supposed to be national asset by demolition or unconscious treatment for the historical buildings; for example, (Wkalat Monferrato, Majestic hotel, the preliminary court, The Unknown Soldier Memorial, and French consulate). Also another major problem is existing, which is high buildings out of the heritage legislations such as (Singor University and The Egyptian insurance company) (Fig. 4).



Fig. 4: Left, CIB Builidng and Right, Singor University [3]

The following map (Fig. 5) illustrates the location of the Major buildings and landmarks forming the square.



Fig. 5: Major buildings and landmarks forming the square

- 1. French consulate
- 3. Alexandria primary court
- 5. The Unknown Soldier memorial
- 7. The Egyptian insurance company
- 2. Wkalat Monferrato
 - 4. Majestic hotel
 - 6. Singor university
 - 8. The French gardens

1) French consulate

The primary aspects of Alexandria's cosmopolitanism architecture are still preserved by the French consulate (Fig. 6). However, various aspects added over time, such as the green area and landscaping, the brick encircling walls, and Singor University building, these added elements influenced negatively on the consulate facades.



Fig. 6: The French consulate, comparison over time (Left side [2])

2) Wkalat Monferrato

It has a great heritage importance, as it was established between 1882 and 1890 and was called "Wkalat Monferrato" (Error! Reference source not found.), and it was used as administrative offices with shops in ground floor, or "Wkala" for buying and selling, which is widespread in the distinctive buildings in the square. The building has been prolonged by tampering and infringement [4].



Fig. 7: Wkalat Monferrato [4].

3) Alexandria primary court

The Alexandria primary court (Fig. 8) was built at the beginning of the nineteenth century. It was neglected in maintenance work, which made it in dire need of conservation, reuse and development in line with the urban context of Alexandria, especially in this important spot overlooking the eastern harbor. The court must be moved and the building should remain, as the court activities confuse the traffic in the square and the Corniche Road.



Fig. 8: Alexandria primary court [3]

4) Majestic hotel

The building was built in the beginning of the second decade of the twentieth century as a luxury hotel (Fig. 9). And over time the hotel turned into a modest office building that houses law firms, marketing and a large military mission firm.



Fig. 9: Majestic Hotel over time (Left side [2])

The hotel lobby has been divided into shops, and the entrance is turned into a narrow door that leads to a rusty and broken elevator [5].

5) The Unknown Soldier memorial

The Monument was built by the Italian community in Alexandria in 1933, to honor Khedive Ismail. Then it was turned into the monument of the Unknown Soldier in 1965. The monument is based on a similar design to the monument to Victor Emmanuel II, located in Piazza Venezia, in the Italian capital, Rome [6].



Fig. 10: The Unknown Soldier memorial [3]

III. THE SIMILAR EXPERIMENT

Aristotelous plaza (Fig. 11) is one of Greece's best known locations and it is nearly synonym with Thessaloniki itself. Not only does the square play an essential part in the city's sociocultural life but also it plays a significant role in the sociocultural life of Greece as a whole. Aristotelous plaza has hosted several big rallies and public speeches, also it has hosted the yearly Christmas. It is a famous tourist destination in the city while several cafes and restaurants that border the area have helped to revitalize it. The squares two quarter-circle sides are dominated by significant buildings (Fig. 12), on the left the

Electra palace hotel which is one of Thessaloniki's greatest five stars hotels, and on the right the Olympian theatre cinema which is one of the city's most famous movie theatres.



Fig. 11: Location of Aristotelous plaza (captured by Google maps)

A. Historical Background

Aristotelous plaza is Thessaloniki's principal city square, located on the city's coastline in the city center. The history of Aristotelous plaza began with the Great Fire of 1917, which damaged two-thirds of Thessaloniki. The square was conceived by French architect "Ernest Hébrard" in 1918.



Fig. 12: Aristotelous plaza (captured by Google earth)

To emphasize the city's connection with the Byzantine Empire, Hébrard implemented grand façades for the huge axis, using characteristics from Byzantine and Western architecture rather than Ottoman architecture. The City Hall would be on the left side, the courthouses on the right side, and a magnificent arch heading uphill from Civic Square. Although the most of the square was constructed in the 1950s. Many of the buildings that surround the center plaza have been refurbished since then, and the northern areas of the city were extensively restored in the 2000s. Since 1950, the twelve buildings that make up Aristotelous Square have been designated as Hellenic Republic structures.

B. Rising of the problem

When Thessaloniki was named European Capital of Culture in 1997, the city council formed an organizational committee to

oversee the renovation of the city's waterfront, including Aristotelous Square. It primarily focuses on conservation and adaptive reuse, particularly in Aristotelous square and the ancient shoreline, as well as easing mobility and releasing traffic congestion in the old districts as part of the big development taking place in various Greek locations. When it came to traffic difficulties, the major goal was to construct a massive historical node - on the ancient waterfront in relation to the city's main urban axis — that would rejuvenate the place's sociocultural identity and function as a pedestrian, recreational, cultural, and historical zone.

1) Transportation

The tram railway network of Thessaloniki began serving the area in 1950, but the service was cancelled in 1957. Since then, the buses of the Thessaloniki Urban Transport Organization have been the only method of public transit to and from Aristotelous Square. Metro, which is now under construction, is intended to alleviate traffic congestion, improve mobility and accessibility, and create a safe historical pedestrian zone. Different types of transportation, such as ferry services, are available to other places around the coast of Thessaloniki.

2) Greece's Development Goals

Greece had initiated a massive development strategic plan to initiate sustainable economic growth by the turn of twenty first century, as 193 UN's Member States approved the Sustainable Development Goals (SDGs) in Greece in 2015, with the goal of achieving them by 2030, these by concentrating on six investment sectors that target poverty and universal development. Thessaloniki's share was mainly concentrated in transport infrastructure schemes of these investment sectors as illustrated in (Fig. 13)

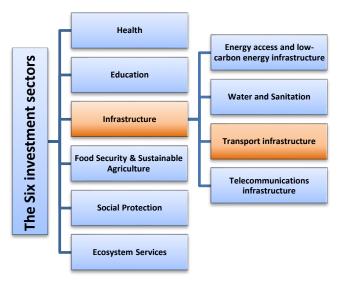


Fig. 13: The six investment sectors

C. Source of Funds

Greece benefited the European Union (EU) funding of infrastructure projects in (2014 -2020) under Interrelation Policy funds to be invested in transport and environmental

projects in Greece. Also it benefited the European Investment Bank (EIB) fund. It directed a considerable budget of these funds in transportation infrastructure especially urban rail type. The urban rail projects represented as tramways and metro accounted as 79% of the whole budget of rail projects in Greece. The core development for that type of squares is evacuating the square from the crowded traffic, this can be achieved by making metro is the dominant transit type in the square (Fig. 14).

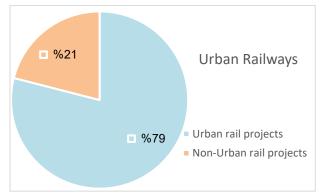


Fig. 14: Urban railways has 79% share of whole budget railways projects

D. The Economic Return

Aristotelous plaza in Thessaloniki now is a constantly growing tourist destination and it is considered to be ready for real investments. So that the Greece government concentrated the development of the square in infrastructure especially in transportation, as this type of investments considered as economic multiplier which can boost demand of other sectors. By directing the investment in transportation infrastructure especially urban railways, this influencing Greece to become a significant global tourist destination, which attracting 24.8mln arrivals in 2016, ranking 15th in global rankings and 9th in Europe.

IV. APPLYING TO EL-MANCHYA SQUARE

Alexandria considered like Thessaloniki as they are Mediterranean and historical locations. As an experimented concept in developing the historical and waterfront in Aristotelous plaza, the development plan was based on dealing with the traffic jam in the surrounding paths of "El Manchya" square through developing the transportation infrastructure in terms of urban rail, evacuating the location from vehicle traffic, and provide a very high priority to the pedestrian experiment. El-Manchya square almost has the same characteristics like Aristotelous plaza, which the same paradigm can be applied in accordance with the domestic inputs of the Egyptian facts and strategies. This strategy can be progressively executed as follow:

A. Developing Urban Rail Way (Tram)

The city's public transportation systems, especially urban railways (Tram), suffer deterioration [7], lack of modernization and efficiency. Also the intersection of various traffic types resulting traffic jams in rush hours [7], (Fig. 15).



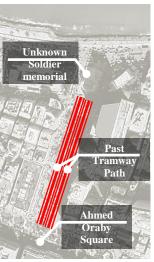
Fig. 15: deterioration of Tram, conflict of various traffic types [7, p. 16]

In the strategic plan of Alexandria for transportation, the development plan is financed by "European Union's Neighborhood Investment Facility", Managed by the French Development Agency, and Awarded in 2013 to French Engineering Company Egis [7, p. 32].



Fig. 16: Transportation Strategic Plan of Alexandria city [7, p. 34]

The development plan was planned to be supervised by a directing committee involving; Ministry of Transport, Ministry of International Cooperation, Governorate of Alexandria, Egyptian National Railways, National Authority for Tunnels, Alexandria Public Transport Authority.





Old tramway path [7]



Traffic types intersection [7]

Fig. 17: The Tramway path in past

The finance amount for the development plan was (300 Million Euros) for "El Raml Tram" [7, p. 33], where strategic plan considered that the tram which passes through El-Manchya square is part of "El Raml Tram" (Fig. 16). In the past; the urban railway was cross the square from the "Unknown Soldier memorial" to "Ahmed Oraby Square". Alexandria governorate removed that railway in order to evacuate the traffic jam from the square, also did this in order to prevent the intersection of various traffic types (Fig. 17).

The strategic plan of transportation did not determine a certain type of light rail train for "El Raml Tram", while the crowded roads in the city is highly need to monorail or suspended railways to solve the traffic jam problems, with saving cost and time rather than the underground railways, especially in part from "El Raml Station" to "Ras Eltin" -which called City Tram- passing through El-Manchya square [8]. The proposed solution is replacing the City Tram from "El Raml Station" to "Ras El Tin" by monorail passing this part through "El Gaish/El Cornich Road" as in (Fig. 18), by establish a terminal in "El Raml Station" to transfer passengers of "El Raml Tram"; Presented by red line; to the new Monorail; Presented by cyan color.



Fig. 18: The proposed traffic passes

B. Developing the Axis of Eastern Harbor

One of most reasonable ideas for preventing traffic jams is converting the two way roads into one-way road. This idea may solve the traffic jam in "El Gaish/El Cornich Road" in the study area, through define the direction to be from "El Anfouchy" to "El Chatby" as (Fig. 18); presented by orange color;. While the other direction from "El Chatby" to "El Anfoushy" as (Fig. 18); presented by light green color; to be carried by bridges over the breakwaters of the Eastern Harbor then beyond "Qaitbay Castle" then merges with the existing road after "El Anfouchy Fish Ring". Fig. 19 illustrates this idea which proposed by the winning project of Bibliotheca of Alexandria competition in 2006 for developing the eastern harbor [9], [10].



Fig. 19: Axis of Eastern Harbor [9]

C. Evacuating the Study Area from Vehicle Traffic

Movement in historic districts especially if this in **CBD** preferred to be for pedestrians without any intersections with vehicle movement [11, p. 18]. This idea may performed by moving the vehicle traffic in "El Gaish/El Cornich Road" to be underground as in (Fig. 20), these in order to extend the pedestrian areas in front of "Unknown Soldier memorial"

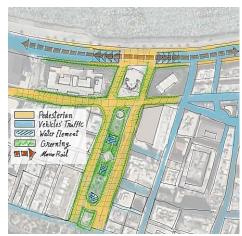


Fig. 20: Defining the elements and traffic types in El Manchya square

Fig. 21 illustrates the movement and traffic in El Manchya square as the City Tram moved to "El Gaish/El Cornich Road"

as monorail, also the vehicle traffic evacuated from the square in "Mohamed Korayem Street" while all vehicle traffic transferred to "El Gaish/El Cornich Road" with moving the traffic to be underground. These actions make the pedestrians movement extended to the harbor bank and magnifying the opportunities of investment in the waterfront of the square.



Fig. 21: El Manchya square Areal Perspective

V. CONCLUSION

This research is driven by the goal of contributing to the better understanding of how historic revitalized waterfronts can role as creative locations to attract tourism and support the urban economy through the following conclusions

- Historic revitalized waterfronts as creative locations, can act as catalysts for urban economic regeneration and tourism development.
- Enabling citizens and visitors to reconnect with historic harbor areas not only for business, social exchange or leisure, but also to participate to creative and cultural activities
- Greater burdens are being placed on planners, developers, and community leaders to find several sources of funds.
- Coastal and port cities continue to seek opportunities to revitalize and redevelop their waterfronts to accommodate local and community desire to inhabit these spaces.
- Developments along the waterfront support a wide range of urban land uses from residential to industrial, commercial and public open space, in order to support economic benefits.

VI. RESULTS AND DISCUSSION

Studying the research case study and analyzing similar case; resulting various points in terms of funds, infrastructure, and facilities, led to the following results.

- Development long term plan to invest in flourishing the historic districts instead of neglecting and demolishing, is not only in responsibility of the country but also the responsibility of the international community especially in terms of financial funds.
- Funds that provided by international organizations remain the main source to develop cosmopolitan historic cities.

- Attracting investments in infrastructure rehabilitation projects resulting ease mobility and release traffic jams through the old downtown, as reflects on the tourism and the national income.
- The experiments proof that replacing city railways with monorail or subway solves part of the intersection of various traffic types.
- The proposed eastern harbor axis project; transferring and decreasing the traffic capacity away from (el Gesh Road).
- Develop projects that are not only economically beneficial and ecologically sustainable, but also equitable, inclusive, and reflective of community needs

VII. RECOMMENDATIONS

The schematic proposal of "El Manchya square" which I prepare in light of analyzing and studying a similar plaza "Aristotelous Plaza" provide the following key points which describe a roadmap to develop "El Manchya square".

- Transfer vehicle traffic under the pedestrian zone by underground tunnels and keep parking areas outside and close to nearest monorail terminal.
- The court activities must be moved and the building should remain, as the court activities confuse the traffic in the square and the Corniche Road
- Provide opportunity to develop "El Manchya square", emphasize and conserve the historical waterfront, which is a major approach for tourism development.

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

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ARABIC ABSTRACT:

تطوير الواجهة المانية التاريخية التي تقع في منطقة مركز الأعمال دراسة حالة: المنشية ، الميناء الشرقي ، الإسكندرية

ARABIC ABSTRACT:

يعد تطوير المناطق التاريخية التي تقع على الواجهة البحرية للمدينة، خاصة الموجودة في منطقة الأعمال المركزية (CBD) ، من أهم العوامل التي تساعد على دمج المجتمع من رواد تلك المناطق مع العناصر المائية المحيطة به، كما ينعكس ذلك على قدرة مركز الأعمال بالمدينة على التكيفُ مع كل من البيئة الاقتصادية والاجتماعية مما يخلق تناغم يصب في المنفعة العامَّة على الصُّعيد الإقتصادي والإجتماعي والثقافي. من هذا المُنطلق فإن البح يهدف إلى التعرف على الأساليب والطرق التي يمكن تطبيقُها لتحقيق التنميَّة المستدامة إقتصاديا وإجتماعيا وثقافيا لمناطق للواجهات البحرية للمناطق التاريخية بمركز الأعمال بالمدينة. ذلك من خلال التأكيد على توافر وسائل جودة الحياة بميدان المنشية كحالة دراسية لزيادة العائد الاقتصادي على الصعيد السياحي والإقتصادي مما يدعم الاستثمارات العامة والخاصة. ولتحقيق ذلك تم الأسترشاد بنموذج مماثل؛ وهو ساحة أرسطو -أحد أشهر المناطق في اليونان. حيث أنه بعد دراسة ساحة أرسطو أمكن إستنباط أساليب للتطوير ليتم تطبيقها في ميدان المنشية. هذا ويعد تطبيق هذه الأساليب على ميدان المنشية محاولة لدعمُ هذا الميدانَ المطل على الواجهة البحرية للَّميناء الشرقي بمدينَّة الإسكندرية من خلال وضعُ معايير تتناسب مع الواقع المصرى، وذلك من خلال تحليل تلك الواجهة البحرية فيّ الإسكندرية. وينتهى البحث إلى مجموعة من التوصيات التي تدعم تطوير هذا النوع منّ المناطق التاريخية على الواجهات البحرية من واقع المثال الذي تم تحليله (ساحة أرسطو، ثيسالونيكى - اليونان).