# AN INTEGRATED DESIGN MODEL FOR SUSTAINABLE DEVELOPMENT IN WATERFRONT AREAS PORT SAID CITY AS A CASE STUDY.URBAN REGENERATION IN COASTAL CITIES

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## ABSTRACT

Every city has pockets of underused and underutilized land or distressed and decaying urban areas. These pockets of underused land weaken the city's image, livability. They are usually the result of changes in the urban growth and productivity patterns. Coastal cities have a lot of development potentials & resources in addition to problems and urban challenges, considering the various Environmental & Socioeconomic complexities that they already face.

Urban regeneration (UR) is defined as a comprehensive and integrated vision and action to address urban problems through lasting improvements in the economic, physical, social, and environmental condition of an area. The paper has taken this definition as its point of departure in the subsequent formulation of research objectives and approach to the study. It focuses on using urban regeneration strategy as an approach to intervene in coastal cities with Cultural Historical Contexts, and develop them, seeking to conserve the past values, and integrate socio-economic, environmental, and urban approaches to face the current and future challenges with all their complexities.in this concern Port Said City is taken as a case Study, where the paper aims to explore its historical and strategic importance. A multi-level proposal from the international, regional, city planning, urban design, landscape architecture is suggested. The paper focuses on Palestine Street in the city of Port Said, as one of the main heritages, historical, commercial,

entertainment waterfronts in the city. The study is a Partnership Based Model between all development partners: local academics, civil community, and the users.

Finally, the paper proposes an Integrated Design Model for the development of Historical Waterfronts in Value Cities and ends up with a detailed proposal to develop Palestine Street in Port Said city.

**KEYWORDS:** Urban Regeneration, Culture Heritage, Port Said, Palestine Street, partnership-based model, integrated design model.

### URBAN REGENERATION

### Defining Regeneration.

Urban regeneration is defined as a comprehensive and integrated vision and action to address urban problems through lasting improvements in the economic, physical, social and environmental condition of an area (1). Another more inclusive definition of urban regeneration, Robert and Sykes state that urban regeneration is a comprehensive and integrated vision and action to address urban problems through a lasting improvement in the economic, physical, social, and environmental condition of an area.

They feel that given its emphasis on partnership and strategic approach; it can perform an enabling role in achieving sustainability (1). Finally, it is about wealth; the generation of profit, of income, of resources, and how these are distributed between rich and poor areas, and groups. It is a highly political discipline; it is about people and power (2). This definition will be a milestone in the subsequent formulation of the paper objectives and the approach to the study.

### Analytical Framework for Urban Regeneration.



Figure 1: The analytical framework of the process of urban regeneration, Source: Tsenkova, S., 2002 (3)

**OUTPUTS**

**Mega Trends**

**Strategies for change**

| **Economic** | **Social** | **Physical** | **Environmental** |
|---|---|---|---|
| - New economic opportunities | -Employment retraining | - Rebuilding city centre | - Environmental action |
| - Economic diversification | - Improvement in education and healthcare services | -Improvement of housing | - Green policies |
| - Support for new and existing firms | | - New social facilities | |
| | | - Transportation | |

**- CITIES / PLACES**
**- COMPETITIVE**

**- LIVABLE FISCALLY SOUND**
**- SOCIALLY INCLUSIVE**

Urban regeneration needs to be understood in the context of significant shifts in the economy that are beyond the control of particular localities. These sectoral changes are driven by a rapid decline of manufacturing activity and employment of semi- skilled workers, contrasted by growth in the financial services. The result is a "two-speed economy" coupled with deterioration of the urban fabric in poor communities, which accelerates the spiral of urban decline (4).

**Response to challenges.**

The challenges that confront urban regeneration vary from place to place and over time; different areas have a set of unique opportunities that translate into different priorities and strategies for change (5). The immediate effects of urban regeneration strategies can be grouped in four categories: economic, social, physical and environmental. In looking for ways to define long- term success, the following statement appears to be the key: cities/ places become economically competitive, liveable, fiscally sound and socially inclusive (6).

**Cultural heritage in Coastal Cities.**

The definition of the term "Cultural Heritage" has been evolving throughout the 20th century from an approach referring exclusively to "monuments", mainly single buildings, a concept which has been successively broadened, considering groups of buildings (ensembles), natural and man-made sites, arriving at a definition which includes both tangible and intangible heritage and the close interrelations between the two. Most coastal communities have developed strategies, knowledge, traditions, beliefs and professional skills connected to trade, exchange and exploitation of marine resources, which are particularly rich as they correspond of the specific challenges connected to the management of the coastal and marine environment and because of the particular intensity of exchanges between cultures passing across the sea (7).

Coastal and marine activities have created buildings and artefacts highly adapted to their specific technical needs, like port structures, shipyards, structures for navigation, fisheries and aquaculture as well as representative buildings which once defined the physical interface between land and sea, defining the identity of a place.

**Megatrends.**

Cultural heritage has a potential of contributing to economic development, enhancing, if properly managed, the local potentials for attracting quality tourism in an area. The protection of this heritage represents a special challenge in the context of coastal zones, where pressures on land use are high, as economic interests connected to the conservation are frequently not developed, and the ethic imperative in favour of future generation's rights only rarely has a political voice in coastal management processes. (8)

## PORT SAID, THE CITY

**International impact.**

Port Said is considered as the World Corner. It is acted as a global city since its establishment and flourished particularly during the nineteenth and the first half of the twentieth century when it was inhabited by various nationalities and religions. Most of them were from Mediterranean countries, and they coexisted intolerance, forming a cosmopolitan community. (9)

Figure 2: Port Said city and its international impact

Referring to this fact "If you truly wish to find someone you have known and who travels, there are two points on the globe you have but to sit and wait, sooner or later your man will come there: the docks of London and Port Said", Rudyard Kipling once said. (9)

## Regional Role.

Port Said is located in the region of Suez Canal with other 5cities: Ismailia, Suez, North Sinai, South Sinai, and Sharkia. The region is enrolled on the top of the national development plans of Egypt's National Vision 2052. Port Said city has a big share of development projects in the east and west extensions of the city. (10)


Figure 3: Cities of Suez Canal Region [10]; Figure 4: Development Projects in Suez Canal Zone [11]. Source 3: http://gopp.gov.eg/eg-map/; Source 4: https://www.sczone.eg/English/Pages/default.aspx

## City planning "Port Said City".
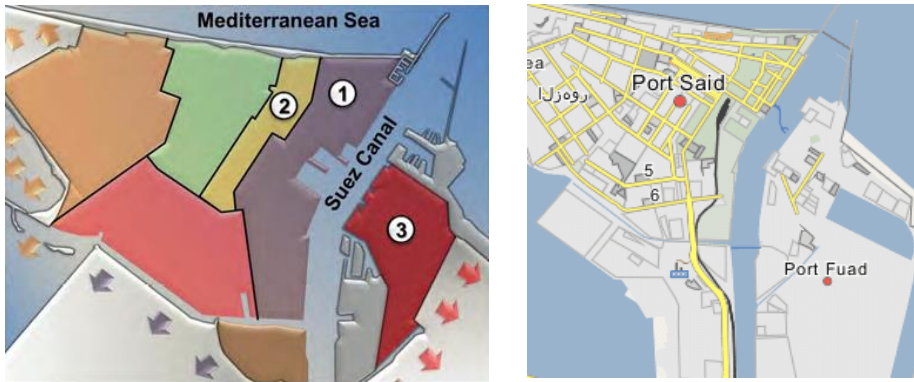


Figure 5: City Planninforor Port Said City

Port Said city is comprised of 7 districts. The historic urban fabric can be distributed mainly into 3 main districts according to the typology of buildings and usage, which are the European quarter, the Arab quarter and the garden city of Port Fouad. (12)

## PALESTINE STREET IN PORT SAID CITY

### Introduction.

On 15th of January 2019, the Egyptian Engineering Association in Port Said city call architects and engineers to participate in the national competition to develop Palestine Street in Port Said city. The call was very interesting to all the architecture community, especially the city has two architecture and urban schools, one in Port Said University, and the other is in the Arab Academy for Science and Technology and Maritime. The competition passionate the architecture community to participate, 16 participants join the competition varying between groups and individuals. The paper is based on the delivered proposal by one of the participant teams, who gain the second position after obscured the first one.

The team consists of different members varying in age, backgrounds, and specializations from architecture, urban design, urban planning & development, environmental, and architecture design & visualization.

**History of the street.**



Figure 6: Palestine Street in the past



Figure 7: Simon Arzet Building

Palestine Street is considered one of the most important streets in Port Said city since its inception because it is directly overlooking the Suez Canal. The street was called Francois Joseph according to The Emperor of Austria and King of Hungary Then the Street Was Called Sultan Hussein according to The second son of Khedive Ismail after that the street was called Shokry Al Quwatli according to the President of the Republic, which achieved unity with Egypt. The street finally called the Palestine street till now.

The street has many of attraction points and historical buildings, which was found around the stages of development for the street. Simon Arzt mall, it was the second branch in 1923 and the first branch in the trade street (Al Nahda street currently). The owners were Moshly

and Bandarly (two of the richest Jews in Egypt) and was considered the largest commercial complex in Port Said at that time and the tourist finds all that is needed not only for goods, ornaments and antiques, but there were in it sections provide all services to the tourist was a barber shop and a department of repair of watches and a section of the tools for photography and the strengthening of films.

Old Port Said lighthouse (1868 - 1870), Intersection of Palestine Street with Al-Jabarty Street There was old Port Said Light House the first reinforced concrete lighthouse in the world. Its height was about 56 meters and has eight faces. It was Electrically operated and then replaced by gas 1915. It was with Black and white for daytime guidance. (13)
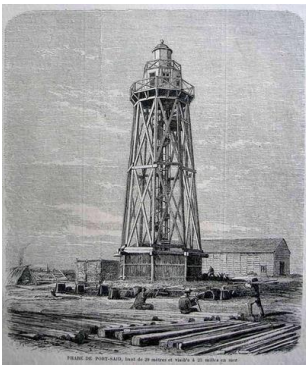


Figure 8: Old Light House

## EXISTING SITUATION & URBAN SURVEY

### Land Use Study & Analysis.



Entertainment
Residential Commercial
Commercial
Residential
Administration
Eductional
Garage
Historical Building
Green Area
Factory and Sotrage
Empty Land

Figure 9: Land use study of Palestine Street. Source: developed by the researchers from the site surveying

## Building Conditions Study & Analysis.



Figure 10: Building Condition study of Palestine Street. Source: developed by the researchers from the site surveying

## Building Heights Study & Analysis.



Figure 11: Building Heights study of Palestine Street. Source: developed by the researchers from the site surveying

## URBAN ANALYSIS & DESIGN DECISIONS

## Visibility Study.
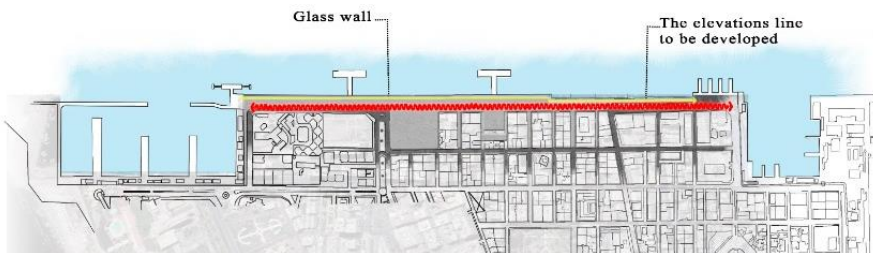


Figure 12: The Visibility Axis. Source: developed by the researchers from the site surveying

**The first wall: The architectural façade of the buildings**



The proposal will develop the facade within the same architectural pattern to achieve a conserving contemporary harmony along the street. A Colour Code for the street will be developed to achieve a certain sense of harmony in the historic area of the city.

**The second wall: The Suez Canal Edge**

The proposal promotes to use the view of the Canal to have 100% visibility of the view with putting in consideration security concerns, that's why the proposal recommends a Double Tempered Bullets Proof Glass Wall with height 4 m, and 2-4 cm thickness, to have a clear enjoyable and secure view of the Canal, with limited accessibility for the customs employees.

## Accessibility & Mobility.
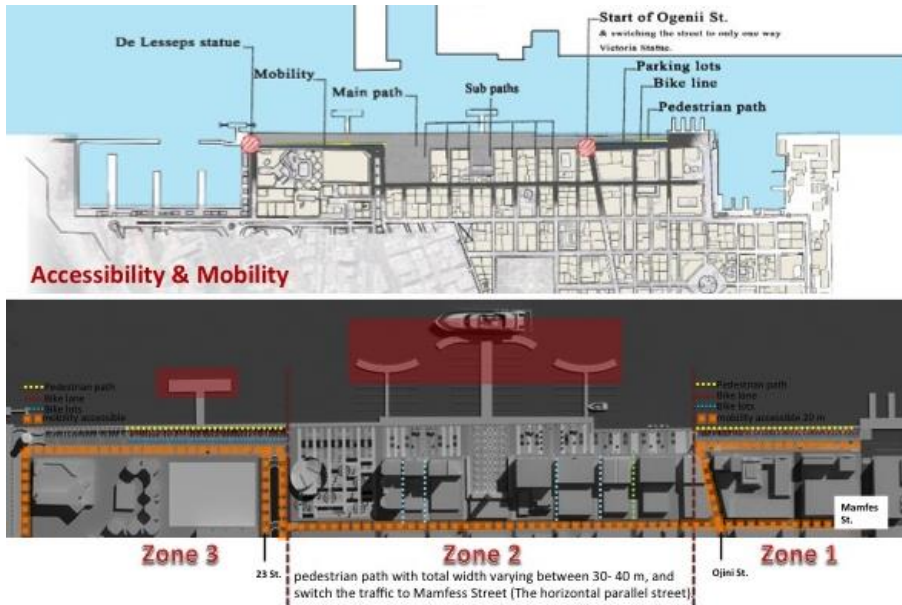


Figure 13: Main zones in Palestine Street. Source: developed by the researchers from the site surveying

## Distribution of Palestine Street (1.3 km) to 3 zones:

1 - From ferry squares to Eugenia street (central building): mobility accessible 20 m+ pedestrian path with 15 m width

2 - From central to the historical Garden: pedestrian path with total width varying between 30- 40 m and switch the traffic to Mamfess Street (The horizontal parallel street).

3 - From Historical Garden to De-lecpes statue mobility accessible + pedestrian path with 12 m width.

4 - Providing bicycle lanes to encourage citizens to ride bicycles.

5 - Providing spaces for on-street parking parallel with the pedestrian area.

### Palestine Street's Visual Image
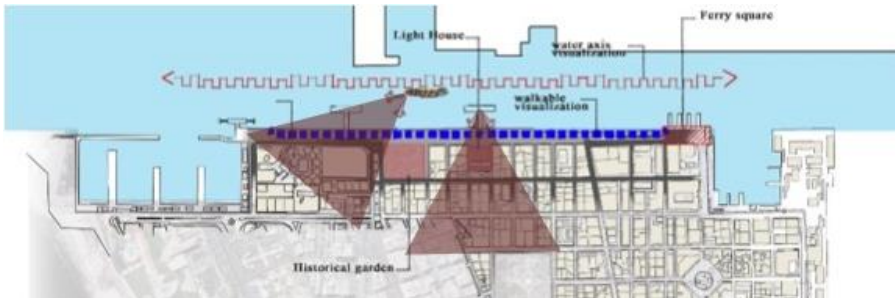


Figure 14: Visual Image Study. Source: developed by the researchers from the site surveying

Kevin Lynch defined image-ability as "the quality in a physical object which gives it a high probability of arousing a clear and strong visual image in any given observer". An image-able city is one whose landmarks, centers, districts, and routes are differentiated yet well-connected, forming a larger unit we can picture mentally, where we are well-oriented and can move about confidently without fear of becoming lost. (14)

The street has 3 main attractive points of visual image:

The main Axis from the ferry squares, parallel with the street walls, and direct to De-Lecipes statue "The Vista".

The perpendicular visual images from the Ship's marina to the lighthouse "the main attraction point".

The East South "Parallel" visual image from the ships in the Canal to the port and its waterfront

Design Decision: The proposal promotes the 3 main visual images to ensure the economic, historical, and emotional engagement between Port Said citizens and the Suez Canal.

## INTEGRATED MULTIDISCIPLINARY DESIGN MODEL

"Port Said Storytelling "PSST" - Port Said Egypt's Forgotten Treasure"

With a shared faithful platform of sustainability and people-centered needs, The Team started to develop their vision. A comprehensive development vision is proposed for the development of Palestine Street based on a multi-scale approach from regional planning, urban development & planning, urban design then touches the ground to the scale of architecture. The proposal will use the Urban

Regeneration Strategy as the main policy to intervene in the city, especially in a very sensitive area of Port Said city. The comprehensive proposed vision would lead the proposal to sustainability, proving that sustainability is more integrated and people-centred than any definition.

**Vision.**

The main concept of this proposal is to discuss the obstacles that come up when trying to propose sustainable development based on built heritage. What we really mean with the Cultural heritage is the traditions and the achievements of people in any place. The heritage is considered a priceless and unique asset that belong to all humanity not only one nation. Knowing the historical and cultural value of Port Said will help in proposing a sustainable tourism development plan based on heritage conservation.

In this small city, you can see buildings of different architectural styles and several nationalities have lived in and each added its own style and taste. This made what we may call an open-air architectural museum; several architects left symbols, on old buildings, that clearly points to their origins from around the Mediterranean.

In this context, heritage conservation does not mean turning this city into museums; instead, it calls for finding new socio-economic models for its built heritage. We may say that the conservation of the built heritage, in Port Said, is an essential decision in cultural societies as it just needs a little effort to become a major tourist attraction. (12)

Port Said, like many Egyptian cities, made an effort to conserve the built heritage while adapting to rapid development. According to Egyptian Antiquities Information System (EAIS), Port Said has a wealth of Mediterranean architectural styles that span decades and need correct approaches to conserve (EAIS, 2007). (15)



Figure 15: Proposes the 3 main pillars in the Sustainable Development plan. Source: the researchers
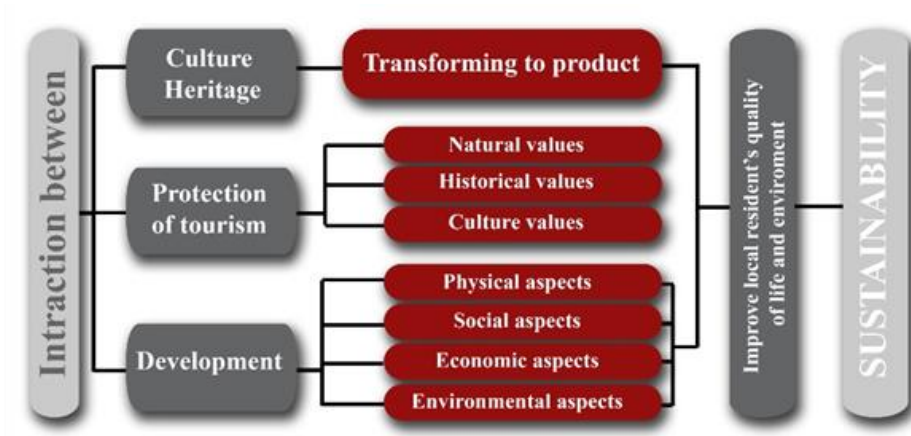
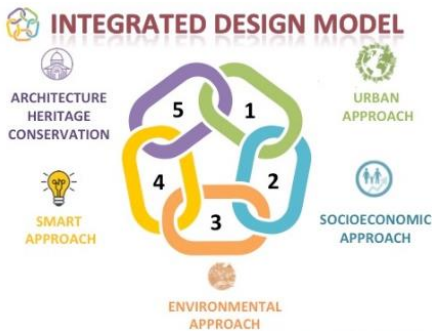Figure 16: Proposes the Sustainable Development Plan



Figure 17: Proposes the Integrated Design Model for intervene in the existing urban area.

## Development Partners

A deep believing in development is for people and by people participation, guides the team to communicate through focus group and questionnaire with the development partners:

Civil Community: Port Said Historical Association

Experts: Architectural & Urban Heritage Experts from the National Organization of Urban Harmony.

Users of the shops in the street.

## Results and Outcomes:

Expertise & Civil Community.

A focus group, hosted by Port Said Historical Association, was held with civil community and experts in Architectural & Urban Heritage Conservation, and Urban Harmony and the main recommendations were:

A model of an integrated project to achieve sustainable development in Port Said;

Ensuring the identity of the city;

Promoting the waterfront;

Tourism development;

Small projects to increase employment;

Management of the future project and maintenance;

Promoting Port said City as a Multi civilization;

Investment in the city;

Economic & social impact of the development on the users.

Users of the shops.

A questionnaire was developed for the shop's renters and owners, and a pilot study on 20% of them was made. The results are:

- All of them knew about the governor decisions;
- The majority agrees on the development concept;
- The majority agrees on facades development;
- All of them refused to move from their shops.



Figure 18: Workshop with the Civil Community, the team and experts in Architectural Heritage.



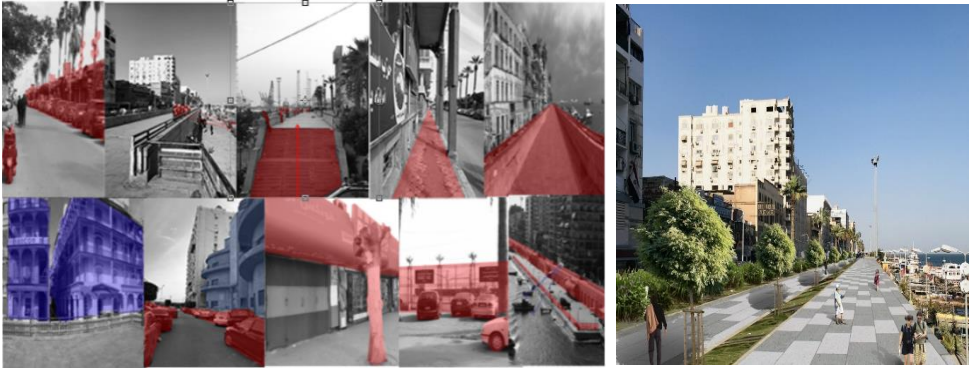Figure 19: Site Visit by the team of the project, with the expert in Architectural Heritage.

Figure 20: Street Analysis Source: Developed by the researchers from the site visit

## DESIGN PROPOSAL & CONCEPTS

### Historic Urban Fabric & Design Pattern.

Architecture is the best presenter about what is happening and what is taking place inside, as if it is speaking. Port Said architecture is rich, eclectic and contemporary. The influences of the Arab world and Europe still found in Port Said architecture, both on their own or blended with other architectural styles. Port Said is witnessing a construction boom, which is rapidly changing the urban fabric, initiating to growing threats to the historical built heritage. Palestine Street is located in The European quarter (Al-Sharq), which has a regular layout in the form of a right-angled triangle, combining European city planning and architectural styles. (12)

Design Decision: The proposal chooses to eager/promote the historic urban form by extending the grid urban form to shape the street urban pattern.
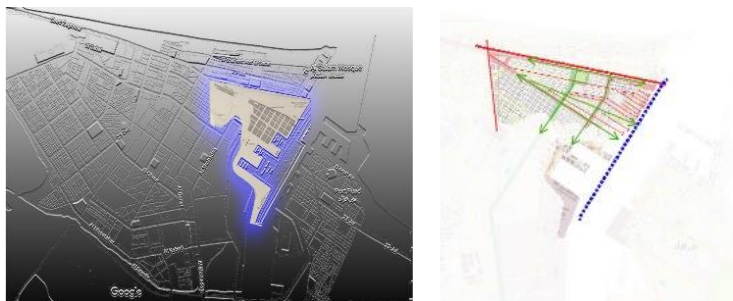


Figure 21: adapting the current status with the design concept. Source: Developed by the researchers
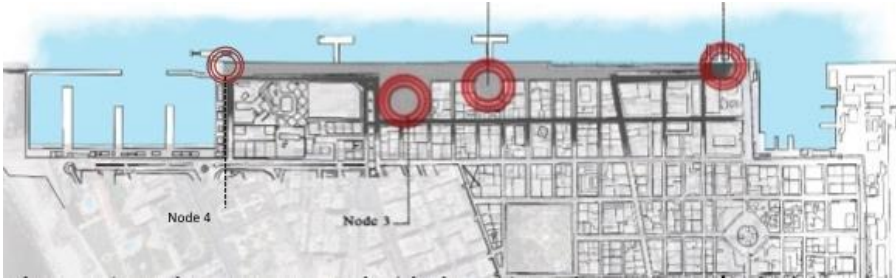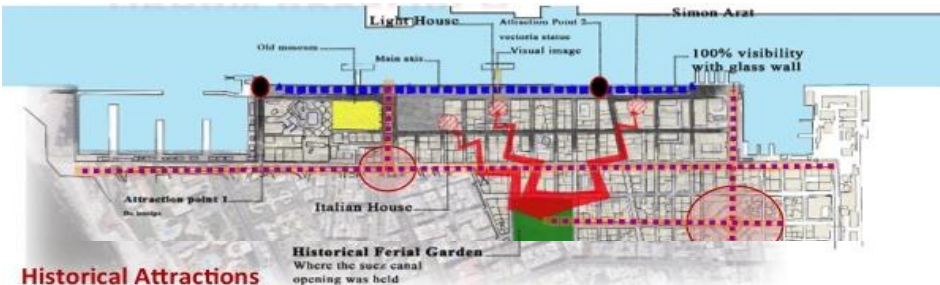
Figure 22: Urban Fabric fforPort Said City and its effect on the proposed landscape pattern of Palestine Street. Source: the researchers



Figure 23: The main concept, and the Proposed Design Nodes. Source: the researchers



Figure 24: historical Attractions

## Main Nodes & Design Concept.

The proposal promotes conserve, and rehabilitation of the attractions. The 3 main nodes are connected with the main path carrying us/, which is extended till the Suez Canal Authority Building (The New Museum).

- Node 1: The ferry squares is an existing node.
- Node 2:(Fanara) The Enlightenment Plaza is containing entertainment and commercial services (cafes & restaurants &

souvenir shops for canal zone) with Night Hologram and laser Shows.
▪ Node 3: the Italian House and the Historical Garden, which will be integrated together to make A Cultural Hub.
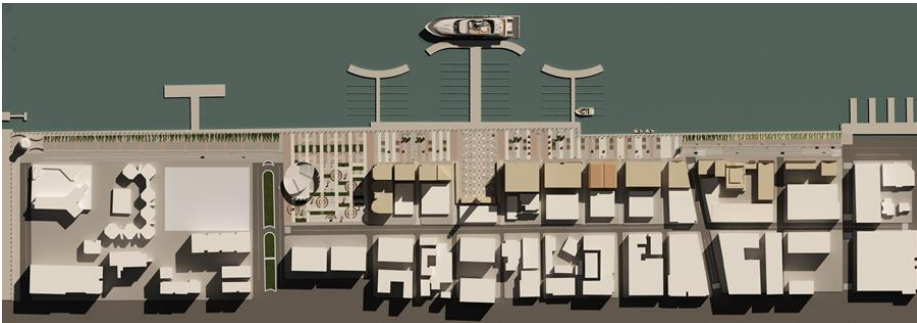▪ Node 4: de lecepse.



Figure 25: Proposed Master Layout. Source: the researchers

## CONCLUSION & RECOMMENDATIONS

Urban regeneration (UR) could be generically defined as a comprehensive & integrated vision & action that can address urban problems through lasting improvements not only in the economic, physical conditions of an area but also social, and environmental conditions.

Most coastal communities have developed strategies, knowledge, traditions, beliefs and professional skills connected to trade, exchange and exploitation of marine resources, which are particularly rich as they correspond to the specific challenges connected to the management of the coastal and marine environment and because of the particular intensity of exchanges between cultures passing across the sea.

Coastal & marine activities have created buildings & artefacts highly adapted to their specific technical needs, like port structures, shipyards, structures for navigation, fisheries and aquaculture as well as representative buildings which once defined the physical interface between land and sea, defining the identity of a place.

Cultural heritage has a potential of contributing to economic development, enhancing, if properly managed, the local potentials for attracting quality tourism in an area. The protection of this heritage represents a special challenge in the context of coastal zones, where pressures on land use are high, as economic interests connected to the conservation are frequently not developed, and the ethic imperative in favour of future generation's rights only rarely has a political voice in

coastal management processes. Heritage conservation does not mean just turning this city into museums; instead, it calls for finding new socio-economic uses for its built-heritage and promotes for maintaining what needs to be conserved in the form of sustainable active cycles in the frame of what called urban regeneration.

Moving to Port Said city as the case study in this paper, the city is witnessing a construction boom, which is rapidly changing the urban fabric, initiating to growing threats to the historical built-heritage. Based on the fact that Port Said architecture is rich, eclectic and contemporary & the influences of the Arab world and Europe still exist in Port Said architecture & urban contexts, both on their own or blended with other architectural styles. We may say that the conservation of the built heritage in Port Said is a milestone in similar cultural societies as it just needs a little effort to be put on the track of touristic development.

The paper ended by some recommendations among them suggesting A model of an integrated project to achieve sustainable development in general, applied in Port Said, by Promoting the City as a Multi civilization global spot; through working on Touristic Development by emphasizing on the identity of the city, and promoting its waterfront represented in Palestine street, creating Small projects to increase employment, Management of the future projects and maintenance within and integrated frame work of urban regeneration; besides Investment in the city considering the Economic & social impact of the development on the users

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