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Sustainable Urban Regeneration of Public Realm in Historical Cities Centers

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Abstract

Sustainable development presents one of the most complex challenges in Egypt in particular of keeping up with the global march.

According to what Egypt possesses of original cultural spatial components, the need has necessitated taking care of the investments, but in a sustainable way in the historical cities centers where its possession of cultural spatial elements with high economic importance.

However, Egyptian historical centers have suffered from Degradation and dissipation of energies and capabilities resulting from the negligence of urban conservation projects, and its incompatibility with the ongoing social changes. The pathway taken by urban development have been considered as incomprehensive methods for all the levels of effect of the historical centers. These levels are the international, national and local levels with the Totalitarian goals for the city and the national economy which has been aimed at the methods of conservation of the urban in the domain of the historical area only. That narrow perspective hasn't achieved an increase in economical and job opportunities, without relying on the attracting the investments and tourism that can achieve a change of the value of the targeted area from the actual value towards the highest probable value.

The historic core is considered as an attraction for the tourism activities but in the centers of the Egyptian cities, the public realms are the outcomes of the undersigned remaining realms. Therefore, they cannot perform their function as public spaces expressing the local character, as they are the center of social relations and cultural product.

The research paper has dealt with the Urban Regeneration of the public realm and analytical applied survey study on the heritage core of the city Rashid.

The research ends with a number of recommendations related to dealing with the basis of urban regeneration of the public realm

Which have been applied on the historic core of Rasheed city.

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Keywords

Urban Regeneration – Public Realm – Sustainable development – Historic core

1. Sustainable Urban Regeneration In Historical Cities Centers

The reaserch paper deals with Sustainable Urban regeneration of historical city centers and focus on the the physical regeneration which is represented in Public Realm considered as a social interactions nodes and cultural vibrant,

as Public Realm is a group of spaces which reshaped by local community.

The main trend of world heritage organizations such as the English Heritage and the Aga Khan Foundation is to develop the urban regeneration strategies for the historic core. Urban regeneration of public realm of historical city centers greatly contributes to improving the quality of Urban environment, (Urban, public and private buildings, services, infrastructure, traffic systems, green areas and open spaces, all urban areas and skylines), as well as the commitment of stakeholders at various levels (local, national, and international), with the strategic objectives of the city and the regional economy, thereby increasing business, economic opportunities .¹

In accordance with the Aghakhan Development Historical Cities Report 2011 where *Urban regeneration of historical city centers* was defined as a comprehensive, integrated vision and action plan that addresses the urbanization, economic, social, and environmental development of target areas , Urban regeneration of historical centers is intended to change the nature of the place by involving the local community and stakeholders by creating an agenda of goals and activities. The main components of Urban Regeneration as illustrated in Figure 1, are (Physical regeneration – Environmental regeneration – Economic regeneration – Socail regeneration).

The dimensions of sustainable development as illustrated in Figure 2 that affect the process of urban regeneration are divided into a number of dimensions, namely economic dimensions, human / social dimensions, environmental dimensions and their reflection on urbanization technology. The dimensions of sustainable development are detailed as follows:

- Economic Dimensions:

The sustainability of developing countries is increasing the use of resources to improve living standards, because there are a direct relation between poverty, environmental degradation and rapid population growth. Sustainable development means for all countries: to reduce the growing disparity in income and access to health care, education, social services, natural resources and political rights equally of society

- Human / social dimensions:

”Social development” means the human / social dimensions, the population and the community of the target areas, where ”sustainable development” from the social perspective means making significant progress in stabilizing population growth, because the rapid growth of the population places severe pressure on natural resources and the ability of governments to provide services.

- Environmental Dimensions and their Reflection on Urbanization Technology:

Sustainable development in terms of the environmental dimension and the technology of urbanization also means the transition - especially industrial countries - to cleaner and more efficient technologies, to minimize energy.

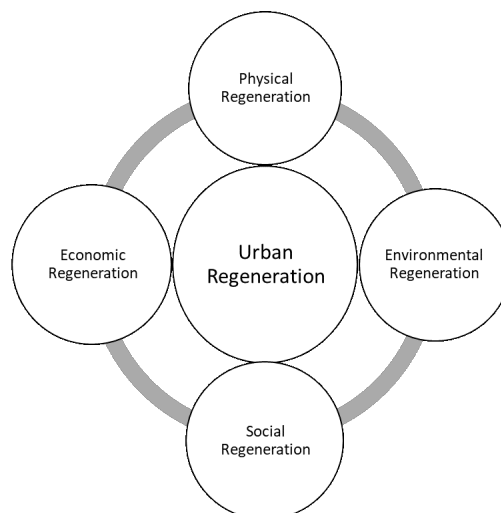


Figure 1. (Urban regeneration components)

¹ Philiip jodidio (2011) historic Cities Programme Strategies for Urban Regeneration Herat Area Programme, The Aga Khan ,Geneva.

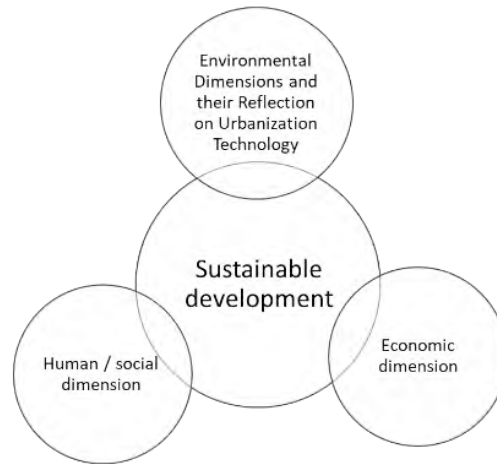


Figure 2. (Sustainable development Dimensions)

1.1. Public realm of historical cities centers

Public realm is a public-owned areas of streets, squares, green areas, public parks, pedestrian paths, buildings, public facilities, all urban spaces and public uses that meet the needs of all individuals in different segments of the society.

Attempts to define the attributes of the public realm and according to Abu Dhabi Urban Planning Council , Public realm includes all outdoor areas that are visually accessible regardless of ownership. These elements can include: streets, bicycle paths, pedestrian routes, public squares, nodes, transport axes, garden gates, waterfront, natural landmarks, And facades of buildings. Public areas are divided into four categories as illustrated in Figure 3.



Figure 3. (Public realm main elements)

1.2. Public Realm Network Study

The heritage heart is divided into a group of public spaces network: (motorways network, pedestrian paths, the squares and the green network). These networks range from the main level to the sub-level in a way that works on the historic interconnection.²

According to urban regeneration strategy of the historical heart of Birmingham City, the public spaces network was divided as illustrated in Figure 4.

²William Penn (2007) Sense of place: design guidelines for new construction in historic districts , A Publication of the Preservation Alliance , Philadelphia,USA

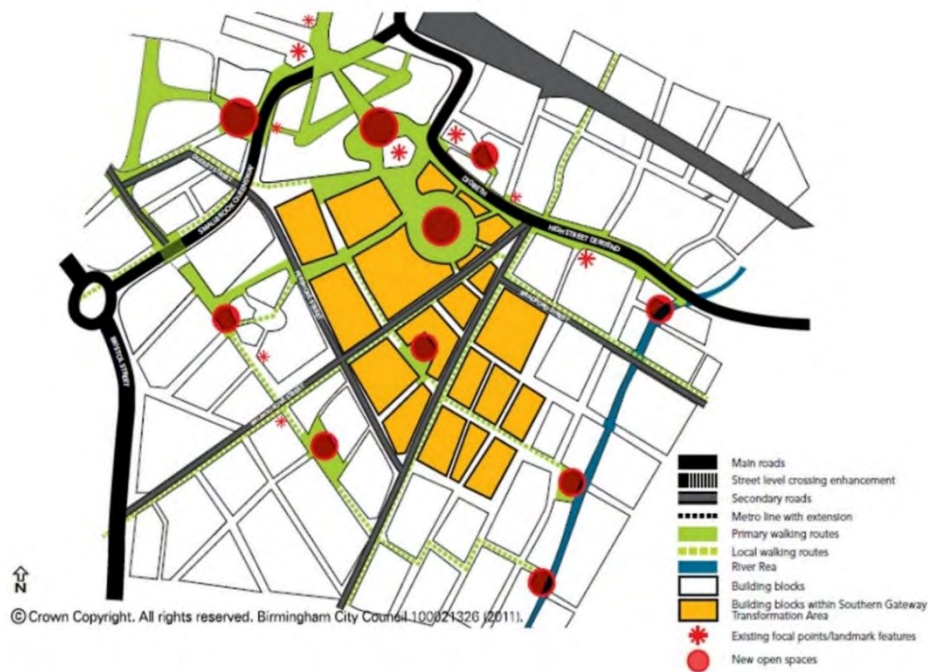


Figure 4. (Public Realm Network of the historical heart of Birmingham City)

1.3. Public realm network Components of historical city centers:

Public realm network of historic city centers consists of three networks: Vehicles network, Pedestrian Routes network, Public spaces network. Each of these networks is divided into several levels as follows³ :

A - Vehicles network:

The streets network of vehicles is divided into two main levels:

-First level: the main streets:

The streets of the movement of vehicles surround the historical heart, and is an entrance to the inner area of the heart of the center, the main public streets and a lane dedicated to public transport buses and super tram.

- Second level: the secondary streets:

The network of the streets of the vehicles from the main streets to the secondary streets, serving the heart of the center from the inside, and move the movement from the outside to the center, which does not affect the network of pedestrian traffic.

B- Pedestrian Routes network:

Pedestrian Routes is divided into three main levels:

- First level Major routes:

It is the main route network for pedestrians, connected to the main street network of cars, and is a major network of historical heritage sites.

- Level 2 Connecting Routes:

It provides an alternative shared routes network, and is a subnetwork of the historical core heritage sites.

- Level 3 Minor Connecting Routes:

It is a pedestrian network, a narrow local street that reflects the sense of place, Heritage, and a distinctive architectural experience for visitors and residents. As shown in the figure 5.

³ BDA Landscape Architects (2012) Heritage Squares, Conceptual Master Plans and Design Guidelines



Figure 5. (Minor Connecting Routes)

C - Public spaces network:

Public spaces network is divided into several types according to their purpose. There is a space that is intended to be a destination, a goal and another space that is an area for arrival or departure. The network of public spaces is as follows:

- Arrival / Departure Spaces:

Arrival / departure spaces have been for temporary presence and not destination or goal, usually called a drop off, pick up, and it must include parking spaces, signs and explanatory signs.

- Meeting Points:

Meeting Points are the main public areas and ranges of hiking with its various activities and distinctive tourist attractions as illustrated in Figure 5.



Figure 6. (Mayor Piazza in Madrid)

- Intimate spaces:

These spaces are characterized by smaller proportions and sizes than the public squares. They are known as those spaces that are formed between the buildings and are characterized by an intimate character. These spaces are characterized by local activities such as cafes (as shown in Figure 6), which shows one of the intimate spaces of the city Birmingham.



Figure 7. (intimate spaces of the city Birmingham)

2. Sustainable Urban Regeneration of public realm in Historic core of Rashid city

The importance of "Rashid" in its geographical location, and its history. Rashid extension of the city, "Paulitin", was called "Rashit" in the Coptic era. Moreover, Rashid is distinctive in the Ottoman era, where it is the second city - after Cairo - in terms of the number of Islamic monuments; the city contains 22 houses with a distinctive Ottoman architectural style (as shown in Figure 7), and 11 historical mosques such as (the northern gate, the castle, the historic bathroom, and the Abu Shahin mill). The historical core of Rashid is the traditional heart of the harmonious urban texture.⁴



Figure 8. (Arab Kelly House - National Museum of Rashid)

2.1. Analytical applied survey study on the physical dimension of the urban regeneration of the historical core of Rashid:

By analyzing the current situation of Rashid public realm features (Corniche, streets, squares, and public parks) in the heritage heart of the city of Rashid as follows (10)⁵

⁴ Dr. Galila Gamal Al-Qadi, d. Mohammed Taher Sadiq, d. Mohamed Hassan Ismail, (1999) Rashid emergence of the boom decline Arab Horizons House.

⁵ Yasmine Kamal Saied Aouf (2016) Urban Regeneration of Public Realm in Historical cities centers in sustainable way (Case study research in historic city core of Rashid City), M.Sc.Thesis. Faculty of Engineering, Cairo University, Egypt.

2.1.1. Analysis of the current status of Rasheed waterfront:

- The asphalt collapsing layer, which cause serious future damage to vehicles.
- The high density of street vendors along waterfront
- Shortfall of recreational activities that are suitable for waterfront.
- Shortfall of furniture streetscape elements.
- Waterfront area has low accessibility from the historic core.

2.1.2. Analysis of current roads network of Rashid:

The historic heart of Rashid has a deterioration of roads network, sewage networks, water, electricity, sanitation, pedestrian corridors, lighting and solid waste collection system.

- Rashid historical is divided as a result of the regional road (Alexandria - Rashid)
- The lack of clarity of the internal streets, and the intervention of pedestrian traffic with vehicles.
- Traffic interfered with daily market area which increase congestion in the local street.
- Changing the features and boundaries of existing historical streets.
- The lack of historical spaces of the Streetscape elements which compatible with the historical character.
- Collecting Garbage in narrow streets within the historic urban fabric.

2.1.3. Analysis of the current status of parks:

There is only one public park within the historical heart, and this park is untapped and uninhabited and cannot be recognized by users. As shown in Figures (9 & 10).



Figure 9. (Rashid public parks 1946)

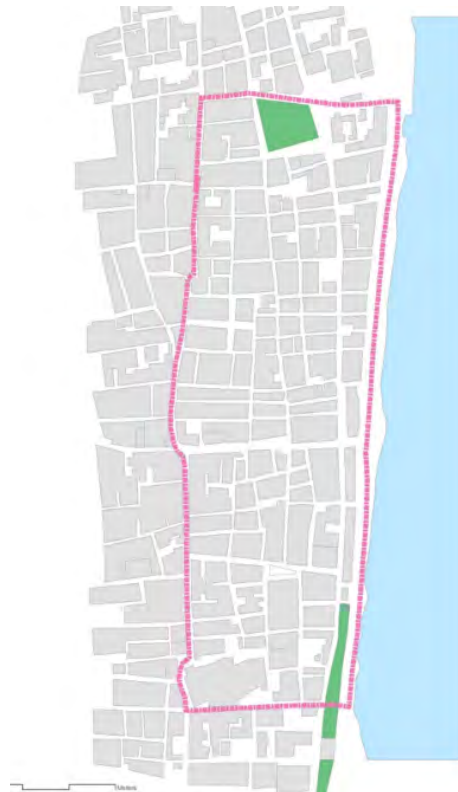


Figure 10. (Rashid public parks 2014)



Figure 11. (Analysis of current Public realm of Rashid)



Figure 12. (Rashid waterfront)



Figure 13. (Daily market & local street)

2.1.4. Objectives of Public realm Regeneration of Heritage Heart of Rachid City:

- The Urban regeneration of the historical heart of Rasheed is taking into account the two main dimensions of sustainable which are economic and social development⁶.
- Rehabilitation public and private historical buildings.
- Providing infrastructure upgrading.
- Providing public spaces and a framework of movement that helps to stimulate levels of social activity within roads network.
- Promoting tourism and cultural activities appropriate to the historical value of the ancient city of Rachid.
- Improvement & upgrading all elements public realm.
- Design and development pedestrian and cycling paths.
- Providing public transport routes that serve the historic core and pedestrian movement.

3. Conclusion

The results are divided into two main sectors: the physical dimension of urban reconstruction, and the non-physical dimensions of urban reconstruction,(Socio Economic and Social dimensions), as follows:

3.1. Division of Historical Center for Urban Sectors:

The historical center is divided into urban sectors to determine the basis for the appropriate treatment of each sector. These sectors are as follows:

A- The heart of the center:

It is a pedestrian zone. It is mostly a Car Free area. Streetscape elements must be given attention to the local urban character of the city of Rachid, attention to pedestrian signs, promotion of activities commensurate with the heritage value of Rachid, and transfer the inappropriate activities outside the historical heart. Resettlement of cultural activities, promotion historical craft activities and creating cultural and community activities that increase community ties and artistic activities. As shown in figure 14.

B-Urban spaces Network:

A network of urban spaces is gradually being constructed from public spaces to semi-public spaces to intimate spaces. Heritage activities are settled by these spaces, reinforced by Streetscape elements that encourage pedestrian traffic into the historical heart. Urban spaces network and pedestrian paths is the association of heritage landmarks such as the development of the local street which link the following heritage mosques (Zaghloul Mosque - Mosque of the soldier - the local mosque). As shown in the figure 15.

C- The river corridor of Rashid waterfront

Providing links for accessibility between the river and the heritage heart by pedestrian tunnels. The pedestrian pathway along the waterfront is optimized to accommodate pedestrian traffic , creating waterfront activities com-

⁶Yasmine Kamal Saied Aouf (2016) Urban Regeneration of Public Realm in Historical cities centers in sustainable way (Case study research in historic city core of Rashid City), M.Sc.Thesis. Faculty of Engineering, Cairo University, Egypt.

mensurate with the high economic value of the land overlooking the waterfront. As shown in the figure 16.



Figure 14. The heart of the center

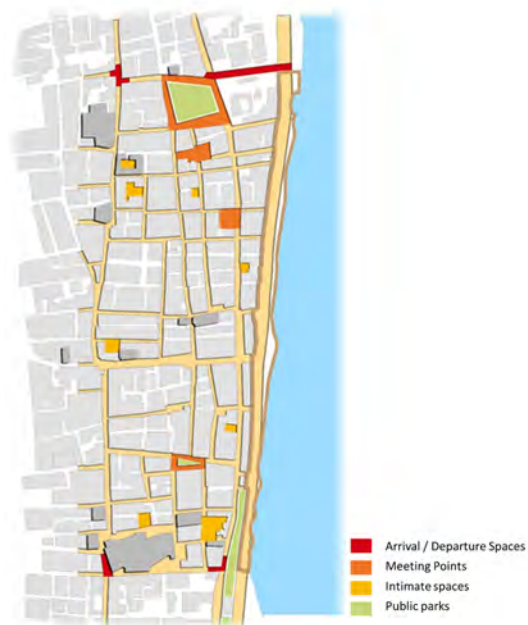


Figure 15. (Urban spaces Network)



Figure 16. (Urban spaces Network)

3.2. Urban regeneration of public realm of Rashid historic core as follows

A- Pedestrian paths network

Divided into three levels:

- First level / main pedestrian paths:

The main roads network, which are paths to the archaeological buildings of the heart.

- Second Level / Secondary:

These are collecting paths of activities that are commensurate with Rashid historical value.

-Third Level / Pedestrian paths: They are narrow local streets that reflect the sense of place and heritage of the heritage city, and represent a distinctive architectural experience for visitors and residents, interspersed with a network of intimate spaces

B- Proposed Urban Spaces:

A-Spaces of arrival / departure:

Spaces of temporary presence, not a destination or a target, called the drop of & pick up urban spaces, and must have available parking places and signs, as shown in Figure 17.



Figure 17. (Arrival/ Departure Spaces of Rashid historic core)

C- Meeting Points:

These are the main public areas in the formation. It is also a group of hiking activities, cafés, special Street Scape elements, children's play areas, as well as the availability of various services from fire extinguishing points, public baths, and Public transport. As shown in the figure 18.



Figure 18. (Meeting Points of Rashid historic core)

D- Intimate / secondary spaces:

Spaces that are characterized by smaller proportions and sizes of public realm, which are within the scope of the pedestrian network. As shown in the figure 19.



Figure 19. (Intimate/ secondary spaces of Rashid historic core)

E-Public parks:

Developing the current Rasheed Park and link it to the main pedestrian network as shown in the figure 20.



Figure 20. (Rashid public park)

F- Proposed vehicles movement:

According to the results of the 2010 Strategic Master Plan of Rashid city, the regional road that divide historic core will be reallocate beyond the old Rashid core as shown in the figure 21

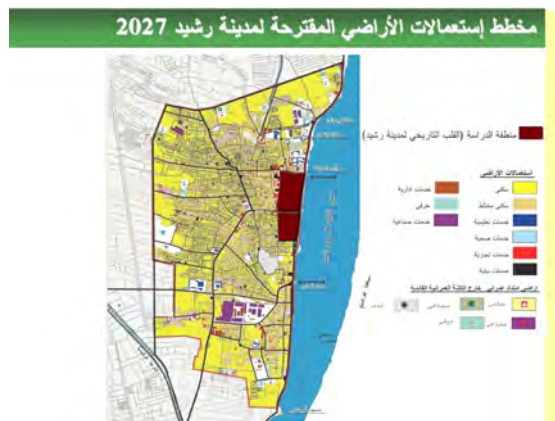


Figure 21. (Strategic Master Plan of Rashid city-2010)

G-Recommendations for dealing with Rasheed waterfront area:

- Division of waterfront for compatible sectors in terms of proposed activities that meets market needs
- Connecting the river corridor to the heart of the heritage through a series of tunnels for pedestrian crossing.
- Completion of the Rasheed river corridor development project and the reinforcement of the pedestrian corridor.
- Use the elements of Streetscape, which is compatible with the heritage character of Rashid as shown in the figure 22.



Figure 22. (Rasheed waterfront area)

3.3. The results of non-physical dimensions (economic / social) of the urban regeneration of Rashid historic core:

- Exploitation of historic houses and mosques as tourist sites and exploitation of the resulting resources in the historical heart development projects of Rashid.
- Localization of activities commensurate with the value of the lands overlooking the waterfront such as leisure and tourism activities.
- Develop strategies to reduce threats to heritage buildings that are degraded both for existing buildings and for the population in the long term.
- The historical center needs to be re-invested periodically in order to modernize the infrastructure, management of the province, and conservation work so that these places contribute as much as possible to the renewal of economic, cultural and social life of the city centers.
- The economic value of today should be given to heritage buildings.
- The empowerment of the population of Rashid in urban rehabilitation projects for the public places of the historical heart are not replaced by investors completely because they are part of the historical and cultural fabric of the historical heart.
- Developing the skills of the local administration to form partnerships with the private sector and NGOs.
- The city council should take into consideration the views of the private sector and citizens in general.
- Communication should be strengthened not only during the public-private partnership process, but also during the city's historic development.

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