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**Urban regeneration of "SoorMagra AL Oyoon" district****Darin Refaat<sup>1</sup>, Mohamed Zaki<sup>1</sup>, Aya ElMeligy<sup>2</sup>, Rasha Gaber<sup>3</sup>, Gehan ElSayed<sup>4</sup>, Ayman Abdel Hamid<sup>5</sup>**

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**Abstract**

Egypt is considered one of the most historically rich countries around the world, not only for its famous ancient Egyptian monuments but also for its rich Coptic and Islamic heritage sites. Among which is the medieval Mamluk aqueduct of Sultan AL-Nasser Mohammad ibn Qalawoon known as " SoorMagra AL Oyoon". However, despite its ionic location and great historic value, SoorMagra AL Oyoon district has been severely neglected and affected by the great population growth and urban sprawl leaving it urbanely deteriorated, poorly designed, and aching with slums, pollution, and destructive land uses.

The research aims to propose a revitalization and urban development strategy for Soor Magra AL Oyoon district through a number of urban interventions including the removal of slums and inappropriate land uses, reallocating suitable land uses, redesigning streets, pedestrian and bike lanes, green areas, and public spaces that respect the context and urban fabric of such a valuable heritage site.

The proposed project is mainly a commercial promenade combining urban, social, economic, and touristic activities. The research follows an analytical methodology through which the basic urban design theories and standards of infill projects in heritage sites would be reviewed, as well as undergoing a comparative analysis of successful commercial promenades infill projects in different heritage sites around the world. Moreover, the research would offer an urban assessment of the current urban state of SoorMagra AL Oyoon through cooperating with various governmental entities for acquiring statistical data, maps, and information, as well as a series of field studies to cover all design criteria. The proposed project aims to integrate a number of different functions including commercial, touristic, and community services through a comprehensive urban design project that acts as a catalyst regenerating project not only in the urban aspect but also socially and economically.

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**Keywords**

Magra Al Oyoon; urban regeneration; infill projects; commercial heritage sites.

**1. Introduction**

Population growth, rapid urbanization, decaying infrastructure, changing socio-economic needs are among many pressures that are encountered by urban heritage districts in many developing countries around the world. These changes represent major threats to valuable heritage sites, tearing down their urban fabrics, damaging built heritage, and consequently leading to loss of uniqueness and urban character of such significant heritage sites. These effects are greatly exacerbated when associated with lack of governance and strategic intervention plans (Licciardi & Amirtahmasebi, 2012). Since change is a natural inevitable law, the main challenge of urban heritage districts is to cope with socio-economic changes while maintaining their significant physical and cultural values. In other words, conservation policies must retain a certain level of balance between conserving urban heritage while meeting socio-economic development goals (Hassan, Trafford, & Mohsen, 2008; Elnokaly & Elseragy, 2013).

**2. Different approaches to heritage conservation**

Urban planning strategies generally aim to maintain a balance between meeting public needs, encouraging investment, and enhancing the local community. When dealing with heritage sites, conservation of built and cultural heritage assets must be accounted for so as to ensure the preservation of resources and promote sustainable development. Different approaches have been adopted internationally to guide conservation projects and act as a legislative framework for such projects. The selection of a certain approach depends on the specific case and circumstances of the built heritage. More importantly, different approaches can be practiced simultaneously. These approaches are namely; the sustainable approach, the living heritage approach, and the historic urban landscape approach (Zeayter, Mansour ,2018).

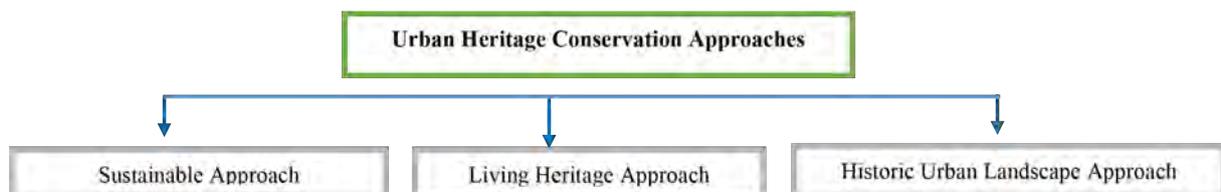


Figure 1. Heritage conservation approaches.

**2.1. Sustainable approach:**

Urban planning strategies generally aim to maintain balance between meeting public needs, encouraging investment, and enhancing the local community. When dealing with heritage sites, conservation of built and cultural heritage assets must be accounted for so as to ensure the preservation of resources and promote sustainable development. Different approaches have been adopted internationally to guide conservation projects and act as a legislative framework for such projects. The selection of a certain approach depends on the specific case and circumstances of the built heritage. More importantly, different approaches can be practiced simultaneously. These approaches are namely; the sustainable approach, the living heritage approach, and the historic urban landscape approach (Zeayter, Mansour,2018).

## **2.2. The Living Heritage Approach**

The living heritage approach was initiated by the “International Centre for the Study of the Preservation and Restoration of Cultural property”(ICCROM), in 2005. Its main concept is that the importance of heritage must not be limited to its physical value, but should also consider the appreciation of the local community of its significance and how to make use of the inherent potentials. The main objectives of the living heritage approach are:

- Create the methods and tools to involve the community in the conservation and management process.
- Support the utilization of traditional knowledge in the conservation process.
- Enhance community awareness to living heritage approaches through training programs (Wijesuriya, 2013).

## **2.3. The Historic Urban Landscape Approach**

In 2005 the WHC declared the historic urban landscape approach which was supported by the UNESCO’s definition of urban heritage as a catalyst for social as well as economic development through promoting tourism, commercial functions, increased land value. The revenues of such development would then be used to fund conservation and rehabilitation. The HUL approach is considered the base indicator for urban heritage management since it promotes sustainable development, integrates tangible and intangible elements, and deals with the historic area as a comprehensive process rather than an object (Rodwell, 2010).

## **3. Heritage urban regeneration as a catalyst for urban development**

Catalyzation is a process in which adding a component into an environment, where this new component adds a positive impact to the surroundings and promotes positive changes. Hence, Urban Catalyzation has a major role in the urban design process, as it emphasizes the role of a newly added project to the urban context which enhances the development and positive transformation of the district and promotes new projects and behaviors to the area.

As in the case of Historical buildings and heritage areas; there may be a new urban component or a tactical intrusion in the important precious heritage components that strengthen their worth and employ attaining urban improvement on a larger scale, that’s why Catalyst involvements differ. (Attoe, 1989)

Key points and aspects for Heritage urban regeneration as a catalyst for urban development to achieve sustainable improvement goals can be summarized as follows:

1. Solving problems of City Centers; regionalization and disconnection, concentrating on initiating the flood in the spaces and discovering connections inside the urban context
2. Improvement of deteriorated urban spaces by encouraging active participation and utilization of the provincial environment (historical, physical, cultural or social) as a basis of motivation within rehabilitation plans.
3. Achieve a comprehensive and gradual transformation leading to urban integration and the creation of viable, original and diverse cities, and a good start to future economic growth (Ellin, 2007).

**Catalyst Projects key aspects:**

- The capability of Creating a positive outcome; which differs from adding new element and investments, discovering new designing relations and positioning the cityscape
- The Catalyst project ensures positive renovation and the promotion of valuable urban components, by reviving or addition of principles to the current context (Sideroff, 2003).
- Most Importantly are routing the catalyst outcome and comprising it in a way that preserve s its context, consideration of the urban context and the local heritage of the district and preserving the catalyst identity as a distinguishing part cohesive with the whole.

Therefore, the urban catalyzation can be defined as the planned interference controlling or leading to attaining positive fluctuations within urban morphology; which Subsequently leads to a series of responses leading to the attainment of sustainable development goals (Mahmoud W., Mohammed T. 2015).

**4. Catalyst Heritage Buildings:**

Criteria of Catalyst role activities in relation to its different values, contextual, and heritage level (Bohannon, 2004)

1. Capability of promoting a pedestrian passage by offering an appealing view engendering a necessity for secondary and periodic uses.
2. Related perfectly to its surroundings visually and physically.
3. Commencement of opportunities for community collaboration, through the promotion of social and cultural activities.
4. Ability to adjust to place and time changes and to multiple functions.

**5. Analysis of successful examples:**

In the following section, a number of successful case studies are analyzed to show their basic urban interventions, key elements of success, and level of community satisfaction.

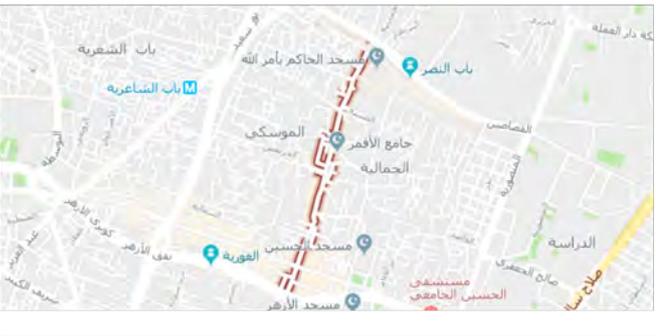
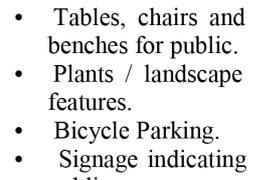
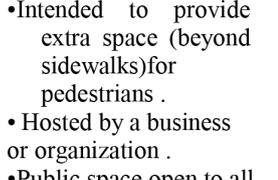
<p><b>El-Moez St. (UNDP,1997)</b></p>			
<p><b>Location:</b></p>	<p>Cairo ,Egypt</p>		
<p><b>Population:</b></p>	<p>0.8 million</p>		
<p><b>Land uses:</b></p>	<p>18 m mixed use</p>		
<p><b>Context</b></p>	<p>Commercial, Historical</p>		
<p><b>Cost:</b></p>	<p>40millionEGPound(2.30m)</p>		
<p><b>Funding:</b></p>	<p>Government</p>		
<p><b>Key Elements</b></p>	<ul style="list-style-type: none"> <li>-Positives:</li> <li>-The cars have a certain track at a given speed</li> <li>-Historic walkway for people</li> <li>-Places to do activities</li> <li>-Exploitation of historical buildings</li> <li>-Better business</li> <li>-More safety for people</li> </ul>		
<p><b>Keys to Success</b></p>	<ul style="list-style-type: none"> <li>-Pedestrians can walk on the entire right-of-way.</li> <li>-Quality paving materials and textures.</li> <li>-Progressive removal of obstacles, curbs, and bollards.</li> </ul>		
<p><b>Goals</b></p>	<ul style="list-style-type: none"> <li>• Drastically reduce air pollution in the historic center.</li> <li>• Provide more pedestrian-friendly spaces for residents, visitors, and business owners.</li> <li>• Provide a high-quality and attractive environment.</li> <li>• Create a space that supports local businesses.</li> </ul>		
<p><b>Evaluation</b></p>	<p>😊 <b>80%</b> Overall satisfaction</p>		
	<p>🚶 <b>+68%</b> Increased street safety for pedestrians according to residents</p>		
	<p>🚶 <b>+83%</b> Increased walkability according to business owners</p>		
	<p>🚗 <b>-80%</b> Decrease in SO<sub>2</sub> levels</p>	<ul style="list-style-type: none"> <li>• Tables, chairs and benches for public.</li> <li>• Plants / landscape features.</li> <li>• Bicycle Parking.</li> <li>• Signage indicating public space.</li> </ul>	
	<p>🚗 <b>-42%</b> Decrease in NO<sub>2</sub> levels</p>	<ul style="list-style-type: none"> <li>• Intended to provide extra space (beyond sidewalks)for pedestrians .</li> <li>• Hosted by a business or organization .</li> <li>• Public space open to all.</li> </ul>	

Figure 2. Analysis of El-Moez St. Market

<h3>Khan Al-Khalili Market (UNDP,1997)</h3>		
Location: Egypt Population: 1.2 million Metro: 1.5 million Context: mixed use Funding: Public		
<b>Key Elements</b>	<ol style="list-style-type: none"> <li>1. High-quality, durable materials that are locally sourced</li> <li>2. Tree planting and porous surfaces.</li> <li>3. High-quality lighting.</li> <li>4. Wide, continuous sidewalks.</li> <li>5. The commercial areas that help in rising the economy</li> </ol>	
<b>Keys to Success</b>	The successful pedestrianization of streets in Khan el kalili can be attributed, in part, to the incremental nature of change, giving people the time to change their patterns of driving and parking into patterns of cycling and using collective transport to access key destinations in the city—in addition to providing time to develop ways of using this newly available public space.	
<b>Goals</b>	Improve connectivity in the city center. Provide a high-quality and attractive environment. Create a space that supports businesses. Encourage a diverse range of people to live and spend time in the city center. Revitalize the city’s forgotten alleyways by turning them into vibrant laneways.	
<b>Evaluation</b>	<div style="display: flex; flex-direction: column; gap: 10px;"> <div>  <b>+4%</b>                      Increase in pedestrian activity                 </div> <div>  <b>+11%</b>                      Increase in cycle volume                 </div> <div>  <b>160</b>                      Converted parking spaces (2009–2015)                 </div> <div>  <b>5,600</b>                      Square meters of roadway converted to parklets and street plazas                 </div> <div>  <b>61%</b>                      Pedestrians feeling “very safe” from vehicles when in parklets                 </div> </div> <div style="display: grid; grid-template-columns: repeat(2, 1fr); gap: 5px;">        </div>	

Figure 3. Analysis of Khan Khalili Market



Figure 4. Analysis of Central Copenhagen

## 6. Case Study: Soor Magra Al Oyoon:

### 6.1. Current Situation of Soor Magra Al Oyoon (GOPP)

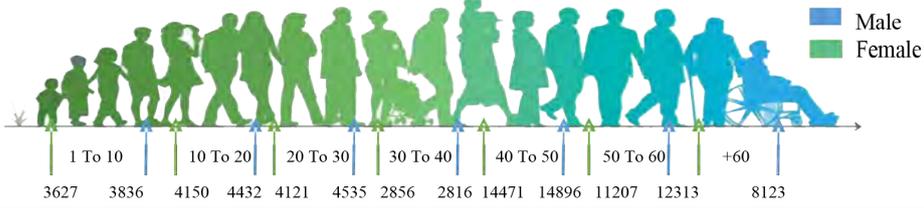
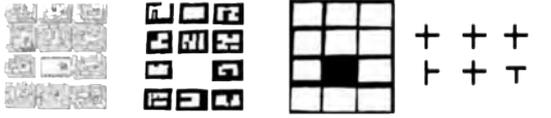
Current Situation of Soor Magra Al- Oyoon (GOPP)		
Location:	Egypt, Cairo	
Context:	Historical/ Mixed use	
Population:		
Key Elements	<ul style="list-style-type: none"> <li>-Pedestrians can walk on the entire right-of-way.</li> <li>-Quality paving materials and textures.</li> <li>-Progressive removal of obstacles, curbs, and bollards</li> </ul>	
Keys to Success	<ul style="list-style-type: none"> <li>-Creation of a pedestrian</li> <li>-New street furniture installments.</li> <li>-New trees planted.</li> <li>-Widened sidewalks.</li> <li>-Pedestrian-priority spaces with no vehicular traffic.</li> <li>-Quality paving materials and custom designed lighting.</li> <li>-Removal of obstacles, bollards, curbs, and redundant street elements.</li> </ul>	
Goals	<ul style="list-style-type: none"> <li>• Drastically reduce air pollution in the historic center.</li> <li>• Provide more pedestrian-friendly spaces for residents, visitors, and business owners.</li> <li>• Provide a high-quality and attractive environment.</li> <li>• Create a space that supports local businesses.</li> </ul>	<p><b>Urban Fabric: divided into 3 sections :</b></p> <p><b>Inner City Block:</b></p>  <p><b>Informal Settlement:</b></p>  <p><b>Formal Settlement</b></p> 
Positives	<ul style="list-style-type: none"> <li>-The cars have a certain track at a given speed</li> <li>-Historic walkway for people</li> <li>-Places to do activities</li> <li>-Exploitation of historical buildings</li> <li>-Better business</li> <li>-More safety for people</li> </ul>	
Needs	<ol style="list-style-type: none"> <li>1. Improvement of historical places.</li> <li>2. Reallocation of land uses.</li> <li>3 - Removal of informal settlements.</li> <li>4 - Provide a good work .</li> <li>5. Provide better services areas.</li> <li>6- Making realistic solutions to increase the efficiency of the place.</li> <li>7. Provide modern markets and attract te tourist to the place.</li> </ol>	

Figure 5. Analysis of Soor Magra Al Oyoon

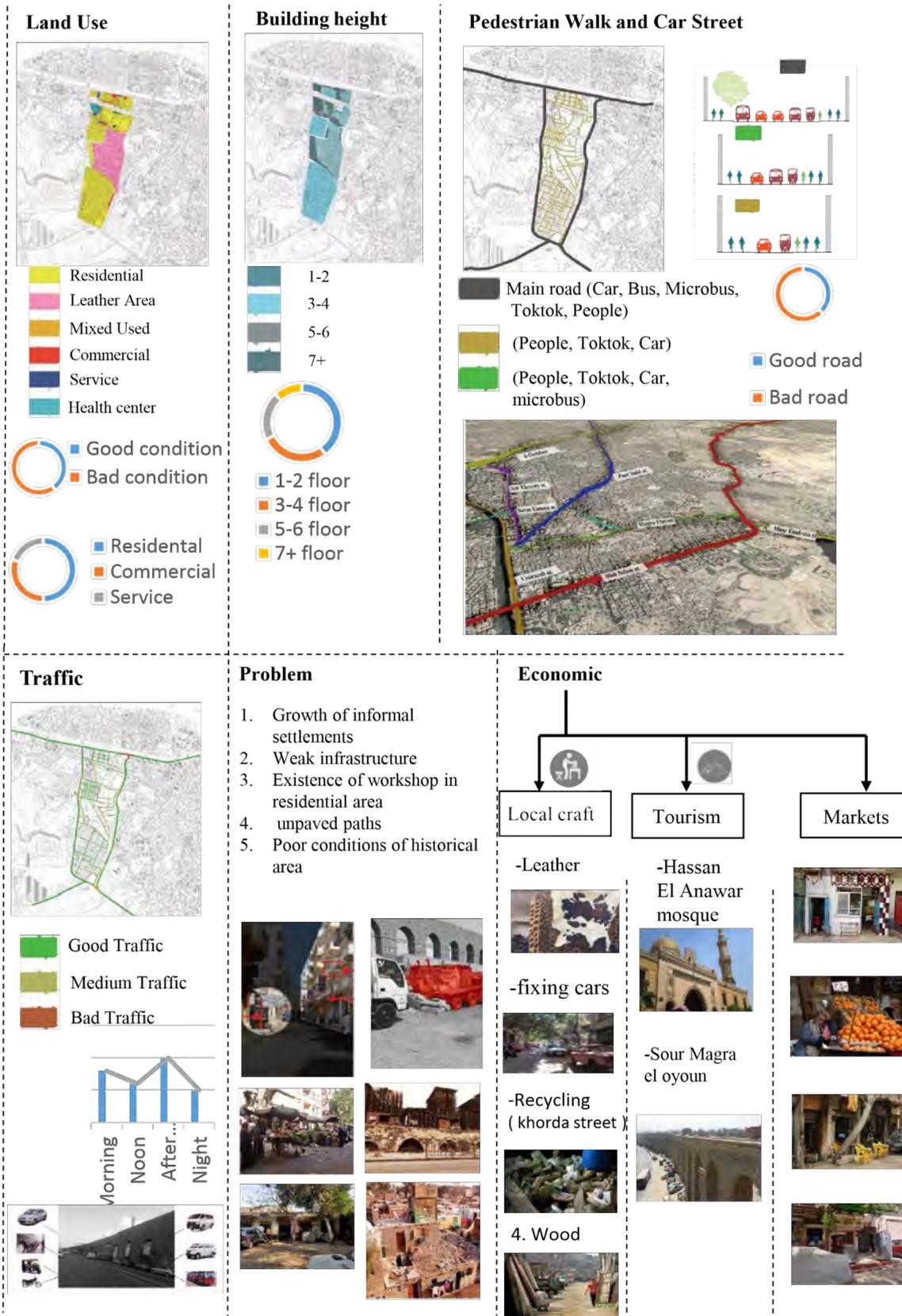


Figure 6. Analysis of circulation of Soor Magra Al Oyon

## 6.2. Proposed Urban Regeneration Interventions of Soor Magra Al Oyoon:

- The urban analysis of Soor Magra Al Oyoon has displayed the poor urban conditions of the historical area, the increase of slums and informal settlements, the inappropriate land uses, the lack of public and green spaces, the intersection between vehicle and pedestrian paths. The main focus points of the proposed urban regeneration plan are listed below:
- Removal of slums and informal settlements.
- Reallocation of land uses so as to integrate between historic touristic areas, commercial activities, residential areas, public spaces.
- The commercial promenade is designed to bear a resemblance to old Islamic markets "Souk" in order to enhance aesthetic values and increase the sense of place and identity, creating a remarkable shopping experience for the local community as well as visiting tourists.
- Pedestrian and bike routes are added while avoiding intersection with vehicle routes as much as possible to increase safety and promote walkability.
- The design of elevations, landscape furniture, and lighting fixtures respects the aesthetic, heritage, and cultural values of the place.
- Public spaces and green areas are also added to reduce pollution, enhance the quality of life, and create community cohesion through social and cultural events.
- The proposed project aims to promote the social and economic regeneration of Soor Magra Al Oyoon through providing basic community services and ensuring economic sustainability.
- The local community was engaged in setting design concepts through a number of field visits and personal interviews with local community members.
- An illustration of the main concepts of the proposed urban intervention is shown in (Figure 7).

## 7. Conclusion

Through the study of different conservation approaches and the basic concepts of urban catalysts and regeneration projects, as well as the analysis and evaluation of different examples, the following conclusions and recommendations have been reached:

- The main focus of recent conservation approaches is to ensure the sustainable development of heritage areas while maintaining its cultural and heritage identity. Moreover, increasing community involvement in strategic planning creates a sense of shared ownership of the heritage site.
- Urban regeneration and catalyst projects should provide mutual benefits to both the heritage conservation process as well as the local community.
- Increasing public spaces and green areas provide social, environmental, and cultural functions and enhance the quality of life of the local community.
- Promoting walkability and biking through providing safe routes as one of the main concepts of new urbanism initiated by the UN-Habitat.
- Aesthetic and cultural values should be considered in the design of heritage regeneration process to promote tourism, hence providing economic revenue for the project.
- Urban regeneration interventions increase both tangible and intangible land value.

– The removal of inappropriate land uses, slums, and upgrading of infrastructure services is an inevitable stage of urban regeneration processes.

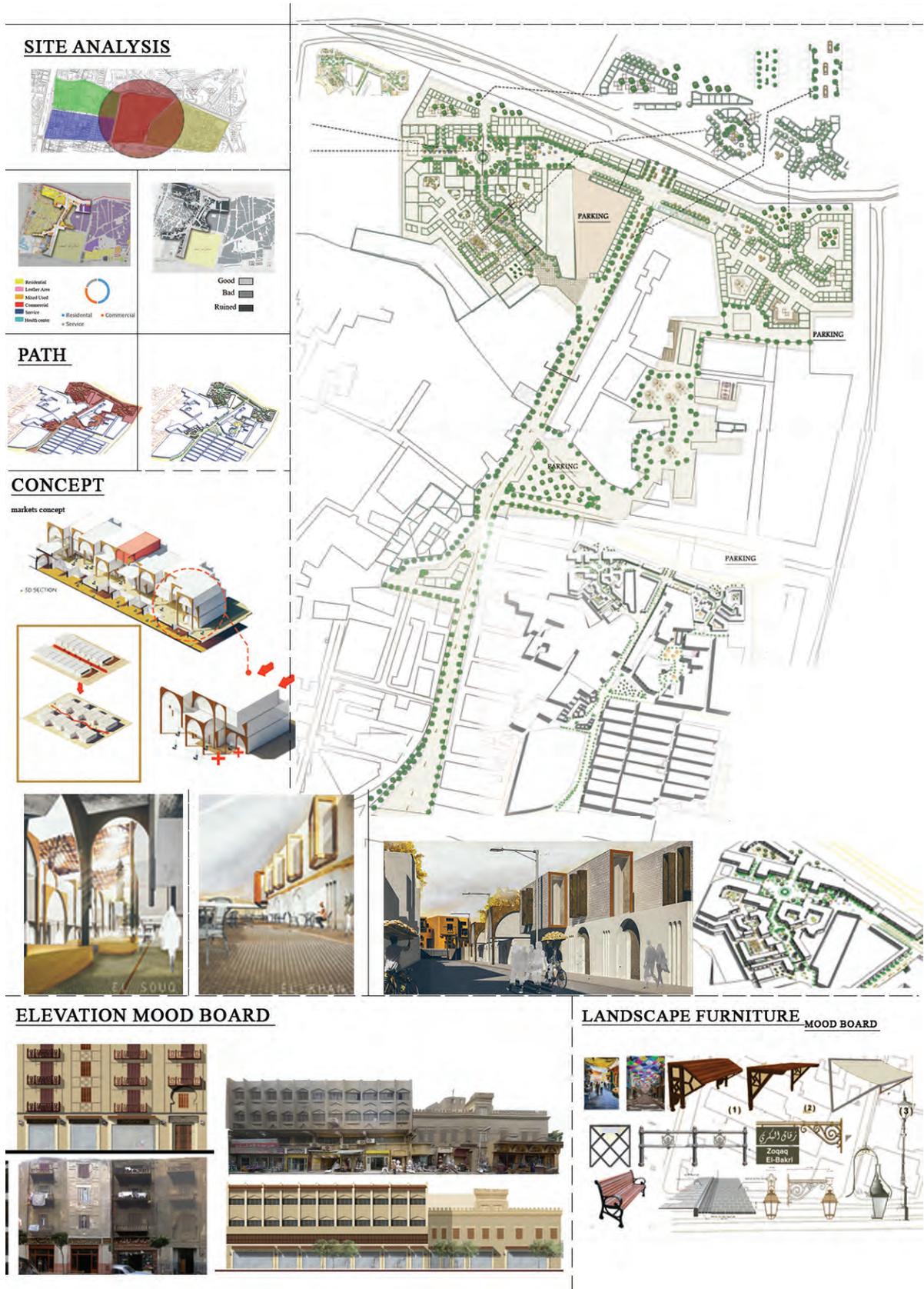


Figure 7. Proposed Urban Interventions

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