

A Catalyst of Urban Regeneration of Kuala Lumpur: The River of Life Project

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Abstract: The River of Life (RoL) is one of Malaysia's Economic Transformation Programmes, an initiative that combines high-impact projects and programmes to elevate the country to developed nation status. The objective of the study intends to discover the impacts of RoL that implies the planning and river beautification, which has been outline in the literature. The second objective is to determine the challenges and factors that contribute to the success of RoL project. The mixed approach was used in this study involving the interviews, document reviews and questionnaires survey. The study has discovered the impacts of RoL project from the perspectives of local authorities, private sector as well as stakeholders involved in the project. They have played an important role in ensuring all the challenges arise during the development of the project have been resolved accordingly. The outcomes of this study will guide multiple parties in ensuring better urban lifestyle for future Malaysian.

Keywords: River Of Life, Urban Regeneration, Waterfront Redevelopment, River Cleaning, River Beautification

1. Introduction

In the 20th century, the idea that waterfront could be redevelop was a science fiction that was reflected in popular media. But now, it has become a new reality with the growth of devices and modern technology. The focus on information and communication technology has created a very different urban environment than we have ever seen before. Waterfront is redevelop not only in terms of river cleaning and river beautification but also in terms of commercialization and tourism to maximize the social and economic potential of area involved.

During this period the formal imagery of cities has become more central to urban development; the 'spectacle' of the city with its seductive surfaces and urban iconography has been seen as a key to prosperity (Dovey, 2004). This transformation of urban imagery has often focused on waterfront sites

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with wonderful opportunities to reclaim disused waterfront land and create new forms of public amenity. Rivers have always been important to people. In prehistoric times, people settled along the banks of rivers, where they found fish to eat and water for drinking, cooking, and bathing. In fact, in Malaysia, settlements have historically sprung up along riverbanks, hence, many urban cities in Malaysia such as Kuala Lumpur, Terengganu, Malacca, Kuantan, Kota Bharu, and Kuching were established after waterfront settlements had developed - developed on river edges or in river valleys.

1.1 Research Background

The River of Life (RoL) project is an Entry Point Project identified as a seven-year project under the Government of Malaysia National Transformation Programme, an initiative which combines high-impact projects and programme to elevate the country to developed nation status. Situated at the convergence point of the Klang and Gombak rivers, the Blue Pool is designed to visually transform the rivers into a stunning, sensory experience (Jay, 2017). It aims to transform the eight river streams with total length of 110 km, total area of 781 hectares and 63 hectares of water bodies that are located within the Greater Kuala Lumpur or Klang Valley region into a vibrant and live able waterfront with high economic value and commercial value, rejuvenating the city's river and reconnecting it to the surrounding urban fabric.

1.2 Problem Statements

- (i) The awareness level in maintaining the qualities of water from the surrounding population are low and need to be nurtured.
- (ii) To determine the challenges and factors that contributes to the success of River of Life (RoL) project.

1.3 Research Questions

- (i) What are the impacts of River of Life (RoL) project that implies the planning development and river beautification?
- (ii) What are the challenges and factors that contribute to the success of River of Life (RoL) project?

1.4 Research Objectives

The objectives identified for this study were as follows:

- (i) To discover the impacts of River of Life (RoL) project that implies the planning and river beautification.
- (ii) To determine the challenges and factors that contributes to the success of River of Life (RoL) project.

1.5 Significance of the Study

Results of this study were important for some parties which are:

- (i) Local Governments

Local Governments such as City Councils are the responsible authorities in the development of their area after obtaining approval for the construction of any project from the federal and state governments.

- (ii) Real Estate Professionals

The information provided in this study on factors and challenges in river cleaning, river beautification and river development will provide useful information to property experts such as Valuers and Real Estate Agents in terms of economic context.

(iii) Academics Experts

Academic experts related to the field of study may refer or make it as guidance on the topics and the issues of the activity provided in this study.

1.6 Scope of the Study

The scope of research for this study focused on the urban areas known as The River of Life at the capital city of Kuala Lumpur. Respondents who have been targeted in this study were the Planning Officers of Kuala Lumpur and those involved in the development process. The data were collected by conducting interviews with target respondents as well as document review and questionnaires.

2. Literature Review

Adapting to changing economic realities and competing for a more significant role in the world economy, they have reinvented themselves to attract new flows of capital investment. During this period the formal imagery of cities has become more central to urban development; the 'spectacle' of the city with its seductive surfaces and urban iconography has been seen as a key to prosperity (Dovey, 2004). This transformation of urban imagery has often focused on waterfront sites with wonderful opportunities to reclaim disused waterfront land and create new forms of public amenity. Rivers have always been important to people.

2.1 Concept of Waterfront Development and Urban Regeneration

Breen and Rigby (1994) considered that waterfront development may not necessarily need to directly front water but may need only to look as if it is attached to the water. They believed that a property with a commanding view of water can be considered as a waterfront property. While urban regeneration is a process focusing on all elements of an area that help contributed to the creation of a more sustainable city and environment. Regeneration is concerned with the re-growth of economic activity where it has been lost; the restoration of social function where there has been dysfunction or social inclusion where there has been exclusion; and the restoration of environmental quality or ecological balance where it has been lost (Couch, Fraser, & Percy, 2003).

Similarly, Ryckbost (2005) sees waterfronts as any property that has a strong visual or physical connection to water with the water itself being any type of water body such as a lake, the ocean, a river or a stream of all sizes (Breen & Rigby, 1996). For example, in China, developers classified two types of waterfront development. The first is called a "borrowed" water view that integrates buildings into an existing water system and, the second is called a "created" water view, which includes man-made lakes and any other water body (Murray, 2003). In this context, by being an interface between land and water, a waterfront is considered an important resource that offers great opportunities to a city.

Therefore, waterfront development is best represented as a development directly fronting water for any purpose and the water components can include river deltas, coastal plains, wetlands, beach and dunes, lagoons and other water features (Figure 1). Also, the boundary of where the water and land meet is difficult to determine and depends on jurisdictional limits and the administration of the country. Waterfront development is used to represent such terms as waterfront revitalization, waterfront rehabilitation and other terminologies. The exclusion of the waterfront development types, for example

coastal development, is because in Malaysia, the coastal areas are generally managed in a sectoral in nature (Hussein, 2008; Zarin *et al.*, 2001 and Molden *et al.*, 2003).

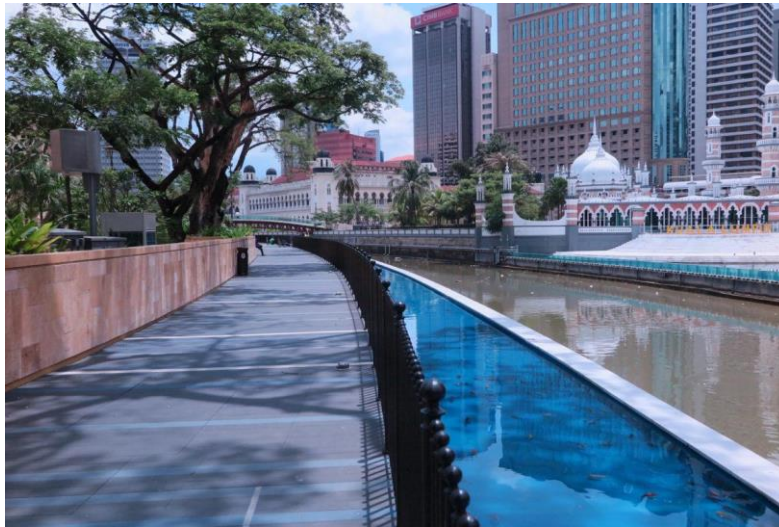


Figure 1: River of Life project gives new life to inner city of Kuala Lumpur (Schneider, 2018)

2.2 The Importance of Urban Regeneration

Urban regeneration can encompass many facets, from renovating the urban landscape and restructuring its layout, to regenerating culture, creating jobs and creating an overall sense of national identity. This kind of regeneration can be exactly what a society needs to turn it around, make new centers of comers, create new homes, and really garner a feeling of togetherness. Urban regeneration has been in practice for years, with cities revamping themselves in order to become better. This can mean creating more roads, motorways and transport systems, as well as creating new residential areas, industrial sites and commercial areas.

All of these factors come together to contribute to a better society both politically and economically. Regenerated cities can also take place on the earth, rather than just through building work. Urban renewals are currently taking place all over the world to create jobs for people in order to give them and their families a better quality of life. With all the benefits that urban renewal brings, these countries will grow up culturally, economically and politically so that they can have a rank in the world (Urban Regeneration in the World, 2018). Every place is different. They all have their own problems that are constantly changing and they all have their own opportunities that can act as the base for their renovation.

2.3 Categories of Urban Regeneration

Urban regeneration can be divided into four groups which are urban development, urban rehabilitation, urban preservation and urban revitalization (Miller, 1959). The first group in urban generation is urban development. The aim of the group is to redevelop existing site holistically by doing physical changes such as site cleaning and building demolition work. Next category is urban rehabilitation. The aim of the group is to rehab old, neglected and dilapidated site by focusing work on changing the activity, landscape and infrastructure of the site that will enhance the economic activity based on Transit Oriented Development concept. The third group in urban regeneration is urban preservation. The aim of the group is to preserve heritage site or building. Preservation and conservation work done towards the site or building to enhance the attractiveness of the building site without losing

their aesthetic value. The final group is urban revitalization. The aim of the group is to revive a building integrated and comprehensively by carry out upgrading and maintaining work towards the building that will result an increase in economic worth and attractiveness.

2.4 River of Life (RoL) Approach

The approach applied in the River of Life (RoL) Project is to educate the community about caring for their own environment have four main components which are creating awareness, expand knowledge, upgrade skills and take action. The first component is creating awareness by carry out campaigns, talks, exhibition and poster related to environment. Next component is expanding knowledge through platform such as books, CDs, websites and newsletter. The third component is upgrading skills in environmental programme that includes demonstration, training and workshops. The final component is taking action by conducting pollution prevention, pollution monitoring and river audits.

In achieving RoL Project, there are several processes that need to accomplish. Those processes includes active consultation process, multi-stakeholder partnership, participatory and practical approach, pollution prevention at source, smart partnership, working with ongoing activities, stimulating stakeholder contributions and co-financing, involving the mainstream and social media, integrated river basin approach and sustainability through empowerment.

2.5 Components of River of Life (RoL)

The RoL project is divided into three major components, which are River Cleaning, River Beautification and Commercialization and Tourism. The first component of this project is River Cleaning led by DID. Today, DID duties encompass River Basin Management and Coastal Zone, Water Resources Management and Hydrology, Special Projects, Flood Management and Eco-friendly Drainage. The objective of this component is to clean and improve the water quality of 110 km along the Klang and Gombak River from its current Class III - V water quality (not suitable for body contact) to Class Iib (suitable for body contact, recreational usage) by year 2020. DID heads this taskforce (comprises of 26 government agencies across four (4) ministries). Next, the second component is River Beautification led by Kuala Lumpur City Hall (DBKL).

The objective of this component is to beautify 10.7 km stretch along the Klang and Gombak river corridors. The final component in RoL project is commercialization and tourism led by KWP. The component objective is to maximize the social and economic potential of the Klang and Gombak riverfronts.

2.6 Public Outreach Programme (POP)

Under the River Cleaning component, a Public Outreach Programs (POP) is part of the key initiatives (12B). It was initiated in 2012 at on-the-ground education and behavioral change towards caring for rivers of target groups such as general public, educational institutions, local community, food establishments, hawkers, wet markets, workshops, industries, corporations and developers to reduce pollution (Department of Irrigation & Drainage Malaysia, 2018).

3. Research Methodology

This section describes all the necessary information that is required to obtain the results of the study. Mixed method approach were used for data gathering with structured and semi-structured interviews coupled with the review of documents related as well as questionnaires survey are used within the project area. This study is based on the seven (7) steps shown in the research design below.

3.1 Research Design

Firstly, the research problem has been identified and becomes the driving forces for the researcher to conduct the study. The formation and objectives of the study were identified from the issues and problems in the site focuses on the RoL project located at the inner city of Kuala Lumpur. The structured and semi-structured interviews were conducted to various stakeholders to further strengthen the data gathering of the study. Second, based on document analysis from other sources such as media statements, reports, master and land use plans as well as marketing plans have been analysed. Some important references were also available through internet searches on the organization's official website as a secondary data source. Third approach is through the questionnaires where the survey is conducted within the project area.

3.2 Data Collection

In order to obtain information needed in this research, the researcher had interviewed 4 officers, including two personnel from Kuala Lumpur City Hall (DBKL) and one from the Department of Irrigation & Drainage Malaysia (DID) and from AECOM Malaysia Berhad respectively. All of the interviewee had an important role in the planning and development of RoL project. In addition, the researcher has also conducted a survey with 45 respondents to examine the factors contributed to the success of RoL project from the eyes of the communities.

3.3 Data Analysis

The thematic analysis method was used to analyze the data obtained from the interviews with stakeholders involved in urban regeneration and waterfront redevelopment of RoL project. This analysis focused on a particular theme that aims to know more in detail and to prove something related to a particular study. Hence, the Statistical Package for the Social Sciences (SPSS) was used as a tool to analyse the simple statistical analysis including the average and percentage.

4. Data Analysis and Results

This section presents the research output and data analysis derived from the interviews and survey that has been conducted in this study. Following are the results of the findings.

4.1 Impact of the River of Life (RoL) Project

The project has shown some significant impacts where there are increases in economic activities at the surrounding areas especially the retail outlet and businesses. By regenerating the area, it has created a desirable place with quality streetscape elements that are both durable and aesthetically pleasing. It has also increased pedestrian movement through shaded streets that open up for pedestrian use. In addition, a focus on water sensitive urban design in the streetscape and landscape helps to restore the environment and mitigates flooding through improved localised drainage. The project further demonstrates conservation efforts while activating a previously underutilised area. A place of worships near the river such as the Masjid Jamek of Kuala Lumpur and the St. Mary Anglican Cathedral has been nearly utilised for the worshippers and tourists to experience the uniqueness of the heritage quarter. Urban infill throughout the district activates the pocket of dead space around the highly attractive tourist areas, creating more contemporary nodes such as art installation, informative storytelling signage, and

a renewed streetscape, creating a place which connects landmarks, reveals heritage and provides a place for the local community to interact to each other.



Figure 2: The River of Life project offers visitors a spectacular view and display of neon lighting with fountain at night (Water LossAsia, 2020)

4.2 Challenges in the Project Implementation

There are five major challenges were identified during the planning and development of the River of Life (ROL) project. These challenges were identified to determine the effectiveness of the urban regeneration programme in the particular heritage quarter of Kuala Lumpur city.

(a) Vandalism

According to DBKL's officer, one of the challenges they faced in the post-development of the project is vandalism by the public. This is proven with the evidence of vandalism activities that occurred during inspection. These vandalism activities were detected just after beautification works have been done at the mosque area. The vandalism activities have damaged the properties and the authority needed an additional recovery work to do the repair. He pointed out, *"Further observation need to be done to identify the perpetrator of the vandalisms, this can be done with the collaborations between the authority in the area. Moreover, the team will also need to find a solution to ensure that the repaired properties won't be affected again with this damage. The team had also considering giving a severe punishment for the perpetrator to ensure that they will not do the same thing again."*

(b) Less Participation by the Public

DBKL also facing problems to attract communities to participate in public engagement exercise. According to one of the officer, currently DBKL are engaging schools within the proximity of the area. He added, *"Besides that, we have also invited the social media influencer to spread the important of keeping our river clean and to safeguard the ecosystem, we invites our local artist Maya Karin. We believe she is the most suitable influencer because she has involved in many programmes that are mainly about the importance of preserving our natural habitat in the city."*

(c) Financial Issues

According to officer of AECOM Malaysia Berhad, one of the leading urban design firms has admitted that one of the biggest threats of implementing the RoL are the financial issues. He reiterates that, “The firm only received a total of RM4 million by the government to bring forward the project into success, where RM3 million and RM1 million are allocated for cleaning works and river beautification by the Department of Irrigation and Drainage (DID) and Kuala Lumpur City Hall (DBKL) respectively.” Unfortunately, any further clarification on the financial issues are not been disclosed by the firm.

(d) Technical and Coordination Issues

Meanwhile, the officer from the DID has pointed out that the technology barriers has being a great challenges for the department. Comparatively, advance technology in Malaysia has not yet parallel to other developed nations such as Japan, South Korea and Germany. Therefore, more technological engagement with other developed countries needs to be undertaken for technical training purposes. He stated that, “Although, we have run a new system called the ‘Interceptor’, it is only man for the river cleaning”.

In addition, the officer of DBKL discovered that issues between stakeholders of the project have apparently affected the coordination in implementing the project. He added that, “Multiple agencies coordination and public engagement have resolved many unclear circumstances that arise at the initial stage of the project. DBKL has play it's role to engaged the landlord over the issues such as limited parking lots for the users”. Several stakeholders and public engagement sessions has been conducted to gained ideas on the design and planning of the project, which requires an extensive solution from multiple parties.

4.3 Survey Findings

In order to strengthen the data and information obtain from this study, researcher has distributed questionnaires to the public via an electronic survey that has been posted on the internet. There are all together 45 respondents participated in the survey.

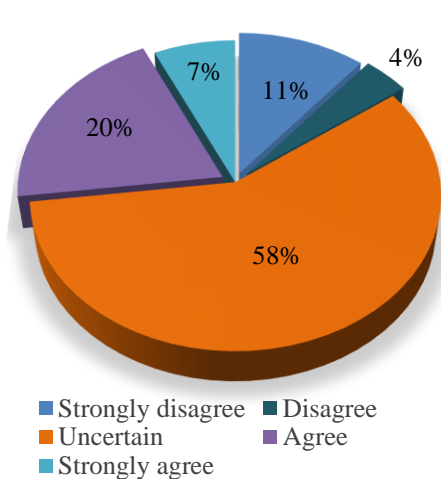


Figure 3: Community Benefited on RoL Project

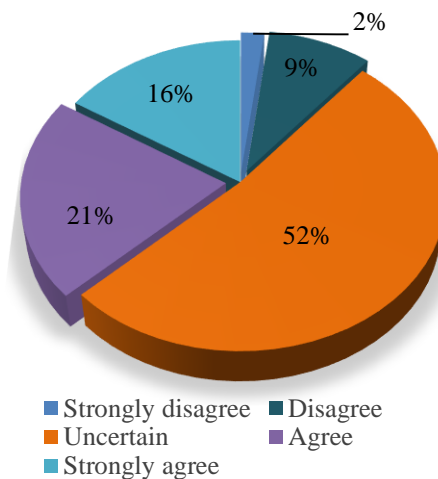


Figure 4: Communities’ Perceptions towards RoL Development

The respondents were asked whether they have benefited from the development of RoL. Based on Figure 3, it was found that out of 45 respondents, 26 respondents (58%) answered uncertain with the benefits gain from RoL project. Other 9 respondents (20%) agree, 5 respondents (11%) strongly

disagree, 3 respondents (7%) strongly agree and 2 respondents (4%) answered that they disagree that they gain benefits. On the other hand, respondents were asked on their perceptions towards RoL development. Figure 4 shows with the total number of 45 respondents, majority of 23 respondents (52%) answered uncertain and 9 respondents (21%) answered that they agree with the development. While, 7 respondents (16%) strongly agree, 4 respondents (9%) disagree and 1 respondent (2%) strongly disagree that the waterfront redevelopment is relevant to them.

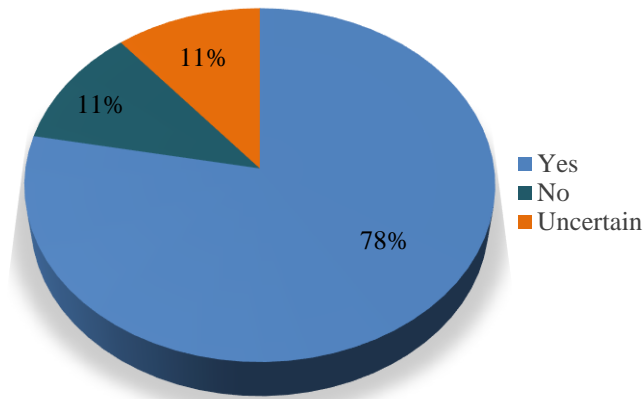


Figure 5: Communities' Awareness on the Importance of River Conservation

On the other hand, the respondents were asked whether they aware on the river conservation programme held in the Kuala Lumpur City. Based on Figure 5, out of 45 respondents 35 respondents (78%) are aware the importance of river conservation. Only 5 respondents (11%) answered that they uncertain with the importance of river conservation while another 5 respondents (11%) answered that they do not aware the importance of river conservation.

4.4 Success Factors of the River of Life Project

The result of this research has also identified the success factors of RoL project that have been in the context of waterfront development. RoL project are important for Kuala Lumpur in may ways, as it highlights the rebirth of the city and raises awareness of the importance of the conservation of Gombak and Klang Rivers to the urban ecosystem.

(a) Urban Regeneration Concept

The immediate impact can be seen at Precinct 7 of the project, where pride and ownership have returned to the immediate urban context, raising both social standing and unlocking economic value to a once overlooked downtown area. Tourism has risen, and with further work, pedestrian connectivity will spur growth and development in the vicinity. According to DBKL officer, the RoL project will not only focus on the regeneration work that will be done to river but also the surrounding. Urban regeneration is an essential to ensure that the RoL project will succeed, when the surrounding area activities can be increased this will have to add the value of the area. He added *“One of the ways in increasing the number of people of the area is by improving the public transportation services of the city; we are currently working on a plan to greatly improve the transportation services.”*

This will reduce the congestion by reducing the number of vehicles that can enter an area. Furthermore, this will not only improve the traffic but also will reduce the noise and smoke pollution in the area. Moreover, by preserving the river and keeping the river as clean as possible, the wildlife will return to the area that can lead to a better habitat. Various urban regeneration and pedestrian initiatives were undertaken as part of the project. These include historical restoration of the Masjid Jamek, Lebuhr Pasar and Makhamah Persekutuan vicinities, closure of several vehicular roads to

become fully pedestrianized spaces such as plazas and pocket parks, improving pedestrian network and amenities such as street furniture, improved crossings and sidewalks, landscaping initiatives including pedestrian shading and native species revegetation and links from historical and cultural destinations to the river bank. Through a mixed series of tested and experimental urban regeneration projects, the council has successfully created engaging and efficient spaces for residents and visitors while improving the aesthetics of the city.

(b) Information and Communication Technology Integration

The severely polluted Klang River is set to get a new lease of life with the help of Rotterdam-based non-profit Ocean Cleanup. Ocean Cleanup's gigantic "vacuum machine", the Interceptor has been docked in the Klang stretch of the river since August 2019. The "big cleanup" is part of the Selangor Maritime Gateway (SMG) initiative to resuscitate the state's polluted rivers.

The Interceptor has enhanced the state's efforts of clearing Klang River of garbage. Besides Malaysia, the Interceptor has also been deployed in Jakarta, Indonesia. The machine on Klang River was the first full-fledged Interceptor and the one in Jakarta is a prototype. According to Ocean Cleanup's models and measurements, the Klang River was one of the heaviest emitting rivers in term of plastics. DID officer has pointed out that, *"The Interceptor had initially suctioned in 1,200 kg to 1,500 kg of garbage daily which has now reduced to 800 kg to 900 kg daily. The reduction in quantity indicated that the garbage in the Klang River had lessened."* New river water treatment plants and sewerage plants have been constructed and installed by local authorities and the DID - which manages the cleaning and water treatment processes - while smaller plants have been consolidated.

(c) Best Practice for Waterfront Development

According to AECOM Malaysia Berhad officer, he mentioned, *"Indicators applied in Singapore's Clark Quay is also being apply in River of Life (ROL) project. This is because it is one of the four waterfront districts in Asia that nominated as the World's 10 Best Waterfront Districts."* A polluted and smelly river is dangerous to human being. No one will want to be near it. Townships in the past were built around rivers, as that was how life began. It provided water supply and was an important form of transportation. Citing Singapore's Clarke Quay as an example, he said life kick-started there after the riverside was cleaned up. Hotels and restaurants started building up around it and there are city tours on the river using water taxis that is also became a major tourist destination. However, he look forward for the authorities to maintain the cleanliness of the river and monitor waste disposal into the river by surrounding projects.

(d) Good Public Service and Integrated Facilities

Indirectly the public passages within RoL project areas have provided better information on the RoL project. The public can learn detail of the project such as the objective and the progress. The DBKL's officer pointed out that *"In order to give comfort to people that will be using the passage, it will be equip with a roof to protect from the weather and this is very useful especially at a location where there are many visitors such as at Masjid Jamek where during Friday prayers the area will be compacts with Muslim worshippers that are performing Friday prayers."* Other than that, the consultant have also provides many facilities that will can attract the public to come and visit the river. Other than just attracting the interest of visitors, the team also focuses on getting the interest of outside investor by developing the area such as renovating the surrounding area to be more eyes pleasing, planning strategic housing strategies and build more shop to gain more activities to the area that will eventually attract more investors. The various urban components, through hard scape, street furniture, signage and lighting works, have been unified, while still being distinctive to stress on the importance of immediate context through cultural and arts installations.

5. Discussion and Conclusion

Overall, the concept of urban regeneration is yet to be fully implemented in River of Life (ROL) project as its plans for a waterfront redevelopment are due by 2020. As such, AECOM's leading developers can still improve, update and upgrade any problems or issues, deficiencies in the planning process that could aid the development of River of Life (ROL) project as a waterfront redevelopment example in Malaysia. The role of Kuala Lumpur City Hall (DBKL) in responding to the challenge on waterfront redevelopment initiatives at Klang River has led to urban regeneration planning in Kuala Lumpur. The initiative is to support the government's aspirations for economic upgrades in the south of the country while contributing to the creation of a sustainable technological and economic ecosystem.

AECOM Malaysia has sought to consult and consult with consultants from outside countries such as Indonesia for professional consultations on waterfront regeneration concepts. In addition, AECOM Malaysia also ensures that all actions and initiatives of this waterfront redevelopment planning work smoothly and effectively. The role of other outsiders also has a positive impact on the development of waterfront redevelopment and meets the needs of the waterfront redevelopment itself. Researcher have discovered the impacts of River of Life (RoL) project that implies the development planning of river beautification and determine the challenges and factors that contributed to the success of the project. A clear understanding of the urban regeneration principle and concept can be used to benchmark others upcoming waterfront development in Malaysia or abroad.

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