

The urban regeneration of west bay, business district of Doha (state of Qatar)

Abstract

The State of Qatar is facing the construction of an advanced public railway transport system. However, researchers argue that the integration of transit stations in existing urban villages can led to a decline in quality of life and cause a loss of local culture and identity in the built environment. The aim of this research study is to investigate the impact of the transit station of West Bay, business district of Doha, on the quality of life and/or liveability of the inhabitants. The findings will contribute to determine urban design strategies for enhancing quality of life of the district.

Keywords: west bay, Qatar rail, transit-oriented development, liveability and/or quality of life

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Introduction

Doha, capital city of the State of Qatar, is considered one of the fastest-growing cities in the Gulf region (GCC). The rapid development has been caused by the national oil revenues and the government’s plan to host international mega events such as 2022 FIFA World Cup (Figure 1) (Figure 2) (Figure 3) (Figure 4).¹ This has led to the construction of national mega-projects and infrastructure, notably Qatar Rail’s transport system. However, researchers argue that

Doha’s rapid urban transformation has come with side effects, leading (A) to the decline of the city’s quality of life, (B) to the formation of a built environment lacking local culture identity and sense of place.²⁻⁶ Regional studies on the relationships between transit-oriented developments (TODs) and urban-cultural identity are limited. To address this gap, this research study aims at formulating a strategy for the urban regeneration of the Transit Oriented Development (TOD) of West Bay, the business district of Doha.

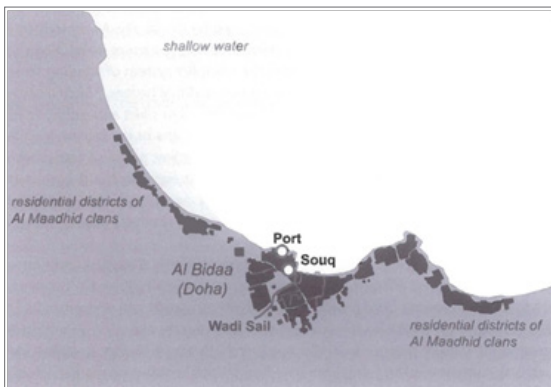


Figure 1 Doha's pre-oil settlements in the 1950s.¹



Figure 2 Doha's settlement areas in the 1970s.¹

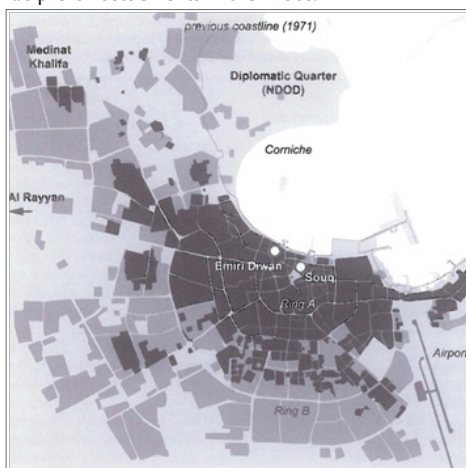


Figure 3 The settlement areas in the 1990s.¹

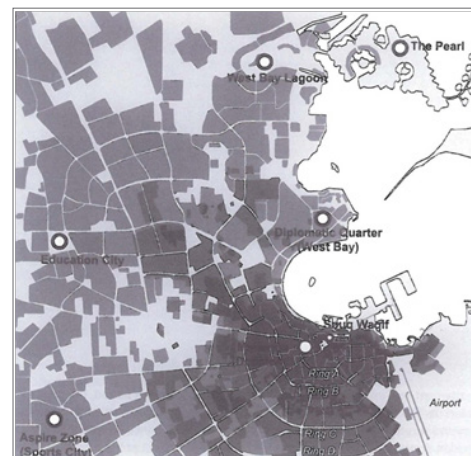


Figure 4 The past ten year's settlement expansion.¹

Background

Urban regeneration: modernization and liveability

In the past decades, worldwide cities have experienced a rapid urban expansion due to the fast population shifts from rural toward urbanized areas. In turn, this has led to the need to establish new urban regeneration planning strategies for the renewal of central downtown districts. Despite regeneration methods varying from location to location, based on each area's features, policy and needs of the inhabitants, the common aim of the process is about to enhance and regenerate the existing urban fabric to fulfil the needs of the users.^{1,7,8} The concept of urban regeneration has evolved over time in order to address environmental aspects, social sustainability, quality of life and preservation of the local identity and culture.⁹⁻¹² The process of integrating a transit station within the existing urban fabric requires a close and comprehensive analysis of the urban regeneration principles and characteristics, leading to addressing both (A) tangible (density, diversity, connectivity, and environmental aspects) and (B) intangible aspects (social sustainability, cultural identity, and sense of place).¹³⁻¹⁵ As envisioned through recent national acts such as Qatar National Strategies 2030 (QNS-2030) and Qatar National Vision 2030 (QNV-2030), the government is considering urban regeneration as one of the sustainable development pillars to be addressed to preserve Qatari local cultural identity. The aim of QNS-2030 and QNV-2030 is to define policies, public awareness and tools for long-term strategies in order to develop a modern built environment that enhances the users' quality of life.¹⁶⁻¹⁸

Urban design: urban form envisioned through culture, space and time

Urban designers conceive and plan built environments that shape people's way of life and contribute to enhance inhabitants' quality of life. Practitioners and designers must move beyond the traditional thinking of a city being merely the sum of its parts: it is no longer sufficient to simply create urban areas. The comprehensive development and/or urban regeneration of cities require a deep understanding of local culture, space and time, which have contributed to shape human settlements and define their meanings. Therefore, it is crucial to understand the meanings of culture, space and time within the urban context.¹⁹⁻²⁴ "Culture" is a complex term that covers a vast range of:

- A. Tangible aspects, such as customs, food, art and languages, and
- B. Intangible qualities that form the economy, politics, ideas and social patterns. An investigation and understanding of culture and its role on people's quality of life allow urban designers to plan spatial environments enhancing quality of life and fostering a sense of place.^{21,25-29}

"Space" in the context of urban design embeds the meaning of functionality. Moreover, the integration of space leads to the creation of wide-ranging systems that consider the types of design input and output in urban context meanings.^{21,30,31} The definition of "time" varies from one field of study to another. Commonly, it refers to a periodic process. The length of time taken to complete an action creates a measurement tool that contributes to define when the action is taken, which formulates people perception of history. The integration of time is significant to urban designers because its concept provides three design keys: history, knowledge and hoped-for outcomes.^{32,33} Finally, the central goal of the urban designer is to explore and identify the relationship between the urban fabric and the social-identity values

of the inhabitants, considering the space and time of the settlement's formation. This, in turn, will allow to design and plan spatial settlements enhancing the quality of life of the inhabitants.

Transit-oriented developments (TODs)

The Transit Oriented Development's concept is based on a strategy aiming at reducing inhabitants' dependence on private vehicles, which will, in turn, contribute to decrease the consumption of energy, to reduce traffic congestion.³⁴⁻³⁷ The process of pursuing TODs includes operation agencies, developers, architects and urban planners. Although in some cases the public is also involved, the onus is ultimately on the local government to develop a responsible regulation and design study for the smart development of urban villages.^{38,39} Governmental strategies for the implementation of TODs must meet specific criteria, as follows:

1. Walkability and connectivity: Transit stations must be sited within dense areas that are pedestrian-friendly. A consideration of the users' comfort is the key to ensuring a high level of station activity.
2. Built form capacity: A set of regulation and design guidelines must be established to regulate the surrounding environment's physical capacity. For example, a high ratio of buildings and a good coverage area will support walkability and address environmental aspects.
3. Planning integration: Significantly, a clear study and pre-planning analysis must be undertaken to choose the most suitable location for the transit station, based on the rail line and users' clustering areas.

West bay, business district of Doha

Located nearby Doha city's coastline, West Bay is the major business district in Qatar. The district is relatively new: its first modern building, the iconic Sheraton Hotel, landmark of the city and a timeless piece of architecture, was constructed in the year 1978 (Figure 5). The Sheraton Hotel was designed by William L. Pereira Associates of Los Angeles who were also responsible for the planning of West Bay area, eastern coast, which is currently developed as the most prominent districts of Doha, also called "The New District of Doha".⁴⁰ Currently, the district hosts two of the major train stations on the Red Line rail route, a coastal railway with a total of 18 stations, West Bay Central Station (WCS) and Doha Exhibition and Convention Centre (DECC) (Figure 6) (Figure 7).⁴¹⁻⁴³



Figure 5 1978's view of West Bay.



Figure 6 Map of West Bay's waterfront.



Figure 7 Sheraton Hotel and Park's aerial view.

While the WCS is located in the lower section of the district, the DECC is located in the upper section. Both stations provide a node that serves the most prestigious establishments utilized for administrative and office use within the district.⁴⁴⁻⁴⁷ According to QNV, QNS and QNM, West Bay's train stations are strategically located in order to shape a sustainable built environment that supports connectivity, enhances walkability and creates high mobility opportunities based on various methods of public transport, such as shuttle buses, cycling, and share vehicles.^{48,49}

The research design

This research study aims to investigate the existing conditions of West Bay against the criteria of TOD in order to define a strategy for regenerating the district and enhance quality of life for all users. This is achieved through

- A. A review of the relevant literature, which highlights the key-factors to be addressed for the formation of TODs, and
- B. A thorough analysis of the data collected from practitioners, users, and stakeholders, whose views and needs indicate the necessary criteria to be addressed in the implementation of the selected TOD.

The overall research design for the collection of data for this research study is structured into the following two stages:

A. Review of the literature on the multi-disciplinary context:

- a. Identification of the key-factors to be addressed for the formation of TODs

B. Exploration of the selected case study of West Bay:

- a. Oral data is collected through the following methods:
 - b. Focus group and semi-structured interviews with urban designers, planners, social scientists and practitioners from the Ministry of Municipality and Environment (MME), Qatar Rail (QR) and Ashghal-Public Works Authority.
- c. Visual data is collected through the following methods:
 - d. Historic maps (the process of formation was deduced based on comparative analysis), cartographic sources (site maps), site visits and observation, architectural drawings and photographs.

Following this procedure, data analysis and discussion is offered in response to the aims of the research study, i.e., the definition of strategies for the urban regeneration of the West Bay's TOD.⁵⁰

Findings

Site Analysis

The district of West Bay covers almost 8 km² and includes two main municipal zones (60, 61) and more than 130 plots of varying sizes. The district has two main surrounding areas: one along the coastline with a total length of 5 km and the other one encompassing Doha city with a total length of 3 km. The site is characterized by shopping malls, residential compounds, hotels and offices, commercial and residential high-rise buildings.

Tangible aspects' analysis

The tangible aspects of the site include current physical characteristics, namely diversity, connectivity, density and public space.

Diversity

The district is considered a Special Development (SD) zone by the Ministry of Municipality and Environment (MME), which has led investors to build an excessive number of high-rise towers (administrative and office functions only), with no consideration given to other services and supporting facilities. The 450m radius around the stations (WCS DECC) is occupied by a large number of towers that are commonly used by governmental authorities such as ministries and municipalities.

Connectivity

West Bay's main connecting streets are Al Corniche St at the south-east side and Majlis Al Taawon and Omar Al Mukhtar St on the north-west side of the district. In addition, secondary roads cut through the district boundary connecting both roads, namely Diplomatic St, Ambassadors St, Conference Centre St, Al Funduq St, and Al Markhiya St. In other words, the main streets of West Bay have contributed to confine and isolate the district, with no dedicated means of connecting pedestrian networks with the surrounding areas.

Density

The density factor is of cardinal relevance to a successful transit station. Based on site observation, West Bay is characterized by three

main types of density:

- a. The built form related to the unbuilt areas;
- b. The vehicle density, which is extremely high because of the district function;
- c. The land use type. Meanwhile, the pedestrian density is very poor and limited because the district has no pedestrian infrastructure and/or network.

Public space

Public space usually refers to the open spaces that serve the inhabitants as venues for social interactions. Their connectivity is very important to a determination of the level of interaction and, consequently, the level of satisfaction. Based on analysis, the district's public areas can be classified into

- a. Roads: although West Bay has a sufficient number of roads to accommodate vehicle movements, pedestrian paths are very limited and poor;
- b. Plazas: the lower section of the district has a clear shortage of open plazas, while the upper section only has Sheraton Park;
- c. Parks: as seen with point 2, the district is suffering from an obvious lack of green areas, the only grassland being found at Sheraton Park.

Intangible aspects' analysis

The intangible aspects are related to inhabitants' human behavior. Therefore, the purpose is to analyze the district based on socio-cultural patterns, human behavior and/or activities.

Social pattern

Social interaction in the district is virtually absent; site observation reveals that the inhabitants can be categorized as (A) employees, who arrive at the district in the morning and leave in the evening, and (B) visitors to Sheraton Park, hotels and the shopping mall, who arrive in small groups when employees leave. There is no clear evidence of interaction between the two-identified groups.

Human behaviours

From the above classification of inhabitants, as employees or visitors, the behavior can be classified into two main types: individuals visiting the district for a specific reason (usually related to work and/or governmental service), who make up the larger part of the inhabitants, and the visitors around shopping malls and hotels.

Cultural aspect

The district has changed and developed significantly in the past few years. The rapid effect of globalization can be clearly seen in the building styles and towers distributed throughout the district, where almost all the buildings lack local-traditional and/or Qatari architectural elements.

Conclusion

Based on the site analysis, a set of recommendations envisioning the urban regeneration of the business district of West Bay can be revealed.

1. The attempts to transform West Bay into Doha's central business district have led directly to invest large funds into the

urban development of the area and the rapid implementation of supporting services/facilities, causing the lack of consideration of inhabitants' intangible aspects such as socio-cultural patterns, human behaviors and/or activities.

2. The current land use pattern, with the district mainly used for offices, has led to a clear shortage of other services that are vital to the inhabitants, such as public open spaces. Therefore, the district should have more variety and diversity in land use, namely around the transit station.
3. The district is characterized by high-rise buildings with one specific type of use, which causes traffic congestion at peak hours. As such, a pressing need exists for new regulations, which must alleviate the high vehicle density and support pedestrians' connectivity to the train stations and within the wider district.
4. Planning public open spaces and/or nodes within the built environment is the key to allow the inhabitants to carry on social activities and, therefore, enhancing the district's livability and/or quality of life. There is a need to design and plan open spaces connected through a continuous pedestrian network, environment-friendly transportation systems, within the station's comfortable-walkable radius.

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Conflict of interest

Author declares that there is no conflict of interest.

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