

Research Paper

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## The Pilot project: Beirut and its port

Ali Chahrour

<sup>1</sup>Order of Engineers and Architects (OEA) – Beirut, Lebanon<sup>2</sup>Université Catholique de Louvain – Brussels, Belgium

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### Abstract

Located in the heart of the city, the port of Beirut has always been designed to be open to the city. The port-city relationship has evolved over the years, going from a Phoenician village with a small coastal shipping port, to a strategic port for the Ottoman city founded in Beirut. After the capitalist movement, the port was privatized and disconnected from the city, working as a private entity under the supervision of the government and obstructing the city's access to the sea. After the explosion of the port of Beirut in August 2020, the question of recovering the port-city relationship is once again discussed as part of a global vision for the reconstruction of the port. The pilot project consists of recovering the port-city relationship through an urban regeneration approach. The work will include intervening in the territory of the port area and studying the problems presented by this area and the different interfaces between the port and the city. The ambition is to propose a strategy that can ensure a connection between the port and the city, through an urban design proposal, and lead to the creation of a new image of the waterfront of the port area.

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### Keywords

*Port-city relationship, The port of Beirut, Port area, Interfaces, Connection, Waterfront ;*

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### 1. Introduction

Beirut, the capital of Lebanon, is a dynamic Mediterranean city known for its rich historical, cultural, and economic heritage. Strategically located at the crossroads between East and West, Beirut has served as a hub for commerce and exchange for millennia. Its development has long been intertwined with that of its port, which has played a pivotal role in shaping the city's morphology, identity, and economic function. From its origins as a small Phoenician settlement with a modest harbor, Beirut evolved into a modern urban center, with the port continuously expanding to accommodate the city's changing needs and regional importance. Throughout history, successive civilizations—Phoenician, Roman, Ottoman, and French, among others—have left their imprint on the spatial and functional organization of the port and its adjacent urban areas.

This close relationship between the city and its port fostered a mutual process of growth, where trade, migration, and infrastructure development contributed to Beirut's transformation into a key node in the Mediterranean. The port was historically designed to integrate with the city: transport systems, free zones, and logistical services linked the harbor to residential and commercial districts, facilitating the flow of goods and people. However, in recent decades, this relationship has deteriorated. Today, the port is physically and functionally disconnected from the urban fabric, isolated behind concrete barriers (Figure 1).

The devastating explosion at the Port of Beirut in August 2020 not only exposed the fragility of the port's infrastructure but also reopened the debate about its future role (DUBEISSY, SADEK, DACCACHE, 2022). In the aftermath, urban planners, architects, and policymakers have proposed various initiatives for its reconstruction, many of which highlight the need to reintegrate the port into the city and reconsider its urban role (Figure. 2). This context gives rise to a central research question: How can the lost relationship between Beirut and its port be reestablished through an urban regeneration approach that integrates economic function with civic and spatial integration?



Figure 1: Beirut Port, 2022. (Source: dreamstime.com)

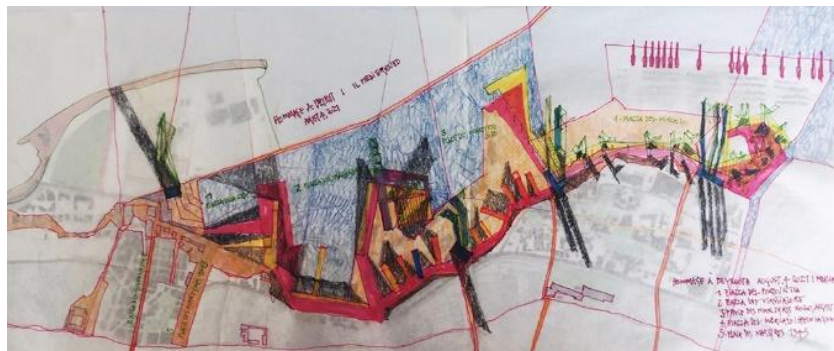


Figure 2: Proposal for the reconstruction of the port by the Order of Architects. (Source: britishcouncil.org.lb)

## 2. General overview of the city and the port

The Port of Beirut has played a foundational role in shaping the development and identity of Lebanon's capital. Strategically located on the eastern Mediterranean, its naturally sheltered harbor has long attracted settlement and trade. From antiquity to the present day, the port has been both a witness to and a driver of Beirut's urban transformations. Beirut's origins are rooted in maritime tradition (VERDEIL, FAOUR, HAMZE 2019). The site, once a modest Canaanite settlement known as *Biruta*, evolved into a key Phoenician city-state. As a node in the expansive Phoenician trade network, *Biruta*'s bay became an active port, anchoring its position within the ancient Mediterranean world.

Roman colonization in 14 BCE marked a significant urban shift, as the city was restructured under the name *Colonia Julia Augusta Felix Berytus*. The Roman grid plan—with its central axes, the *cardo maximus* and *decumanus*—reflected imperial urban order (BLACKWELL 1971) (Figure 3). Centuries later, under intermittent Ottoman rule from the 16th to the 19th centuries, the city experienced both neglect and revival. After cycles of destruction and stagnation, it was only by the mid-19th century—particularly from 1867 onward—that the port began to modernize. The construction of the first quay in 1887, later known as the “Ottoman Quay” (Figure 4), signaled a shift toward infrastructural investment and maritime expansion.

Following the collapse of the Ottoman Empire, Beirut entered the French Mandate period (1920–1943). This era marked accelerated urbanization and an expanding port infrastructure. The city began to stretch further toward the sea, establishing new relationships between land and water, city and port (Arnaud,2013) (Figures 5, Figure 6).

By the 1960s, Beirut was at the height of its prosperity. Political stability, infrastructural development (including the construction of grain silos), and modernization policies under President Fouad Chehab catalyzed the port’s territorial and economic expansion (MANSOUR, 2021). Yet this expansion came at a cost. The port gradually withdrew from the urban fabric, becoming an increasingly enclosed industrial zone. The construction of the Charles Helou Viaduct in 1968 exacerbated this disconnection. What was once a space of exchange and accessibility became physically and symbolically estranged from the city it had shaped. The viaduct, now a prominent urban barrier, severed historical pedestrian and visual access between the port and Beirut’s central districts. (Figure 7, Figure 8)

The outbreak of the Lebanese Civil War in 1975 brought this period of growth to an abrupt end. Fifteen years of conflict devastated the city, obliterating its downtown core and crippling port infrastructure. The rail system ceased operations entirely, and the port—once the city’s pulse—fell silent (LAUGENIE, 1956).

In the post-war years, the SOLIDERE reconstruction project sought to revitalize the city center. However, rather than reintegrating the port into the urban landscape, the project further marginalized it. The redevelopment occupied the First Basin—the only part of the port still open to the city—and reinforced a vision of the port as a closed, mono-functional economic enclave. The waterfront became a backdrop for speculative urbanism, not a space of public engagement. (Figure. 9)

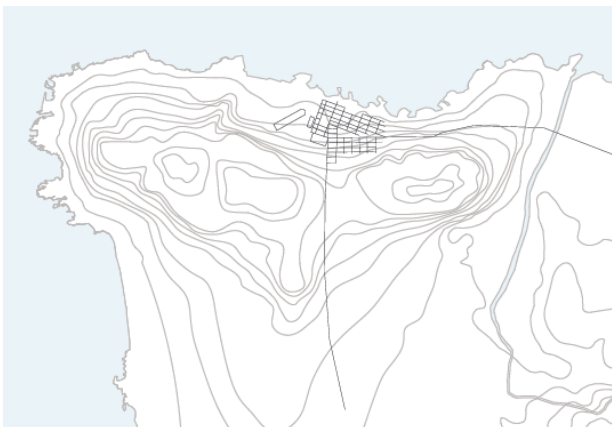


Figure 3: Berytus plan (Source: persee.fr)



Figure 4: The port following the works of 1886 (Source: Author)

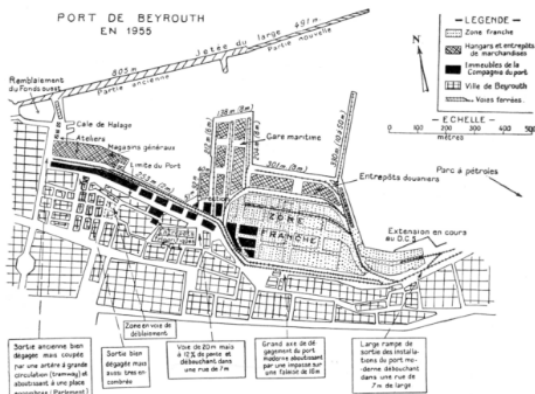


Figure 5: Overview of the port and immediate clearances.(Source: persee.fr)



Figure 6: Beirut - port 1967 (Source: plus961 blo)

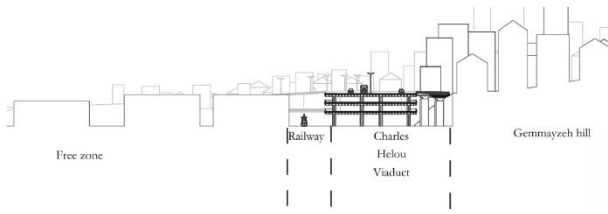


Figure 7: Section showing Viaduct Charles Helou in the 60's  
Source: Author



Figure 8: Viaduct Charles Helou Source: mascontext.com



Figure 9: SOLIDERE plan 1992 (Source: m2.co.nz)



Figure 10 The port silos 2021. (Source: books.openedition.org )

The 2020 explosion at the Port of Beirut was not only a humanitarian catastrophe but also a violent revelation of the fragility, opacity, and dysfunction embedded in Lebanon's urban governance. (Figure. 10)

The destruction of port infrastructure, including the silos, reignited critical discourse around reconstruction, memory, and the city-port relationship ( Beirut Urban Lab 2020). In the aftermath, a flurry of speculative proposals emerged—academic, governmental, and institutional. Yet many of these visions, detached from local needs and historical continuity, were utopian in nature. They often ignored the socio-cultural complexity of the port and its surrounding neighborhoods. While some called for full-scale urban regeneration, they failed to acknowledge the symbolic and material significance of the port within Beirut's collective memory.

On March 13, 2024, the Lebanese state officially adopted a reconstruction plan led by a French consortium (National News Agency, 2024). The project entails the rehabilitation of damaged docks, restructuring of the internal road network, and the renovation of the passenger terminal—excluding the container terminal, the First Basin, and the blast zone (SALLON, 2024) (Figure 11).

However, this approach remains deeply disappointing. It reaffirms the port's status as a fenced-off logistics zone, disregarding the need for a renewed city-port dialogue and failing to address the broader urban and social context.

Yet the port, occupying nearly 1.2 km<sup>2</sup> of prime waterfront, remains inaccessible. Districts such as Gemmayzeh, Mar Mikhael, Rmeil, and Karantina are spatially and functionally severed from the sea. The only remaining public edge—the Corniche—bears the weight of a city starved for open space.

Beirut suffers from a chronic lack of green and public areas. Post-1950s urban growth prioritized concrete expansion over civic life. Existing green spaces are largely privatized, poorly maintained, or entirely inaccessible.

Nowadays, cities are working to become more resilient, encouraging sustainable urban projects. A study of European capitals found Paris at the very low end of green cover, with only about 9.5% of city land dedicated to public green

space— significantly below the European average of ~30%, while Paris hosts over 421 municipal parks and gardens, covering more than 3,000 hectares and featuring over 250,000 trees.

The Corniche remains the city's most vibrant public space—a narrow margin of breathing room in an overbuilt environment. (Figure 12)

Transport infrastructure further compounds the city's fragmentation. Since the civil war, rail services have ceased, and public transportation has become informal, chaotic, and inefficient. The Charles Helou bus station, once a vital node, has declined into disuse. Meanwhile, the port's internal road network remains restricted, serving only its logistical functions.

The silos, partially demolished in 2022, remain a site of contention. While political actors debate their fate— demolition versus preservation—many citizens and institutions, including the Order of Engineers and Architects, have called for their transformation into a public memorial. As physical witnesses to the blast, the silos have acquired a symbolic gravitas that transcends their industrial function.

The First Basin, historically the most porous interface between the city and the port, is now occupied by the Lebanese Navy. Once a continuation of the Ottoman Quay and the maritime corniche, it has become another fenced zone, closed off from public life. (Figure 13)

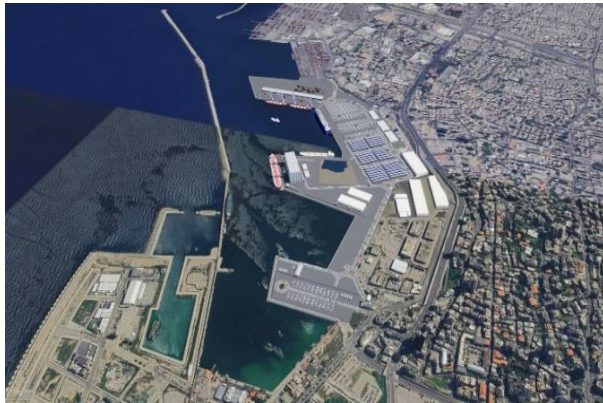


Figure 11: The French reconstruction project. (Source: worldcargonews.com)



Figure 12: Beirut's maritime corniche (Source: 365daysoflebanon.com)



Figure 13 The first basin 2019 (Source: shutterstock.com)



Figure 14: The piazza of Beirut from the pilot project (Source: Author)

### **3. The Pilot Project.**

The pilot project was developed as part of a master's thesis in urban planning at the Catholic University of Louvain in Brussels, Belgium. This work is the result of a structured methodological process carried out in several stages. The research started in March 2023 with an initial study entitled "*The Port of Beirut, the Lost Heart*", which provided a foundational understanding of the port's historical development and its relationship with the city of Beirut. Building upon this preliminary investigation, and on bibliographic resources from the library of the Catholic University of Louvain in Brussels as well as various online sources, a series of maps was produced to illustrate the different historical phases of the city and its port. In a subsequent phase, an on-site visit was undertaken to gain a comprehensive understanding of the urban context surrounding the port area. This fieldwork included multiple explorations of the site, the production of hand-drawn sketches based on landscape observations, and a series of interviews conducted with key stakeholders. These included representatives from the port administration, the Lebanese Army, the Ministry of Transport and Public Works in Lebanon, and residents of the port-adjacent neighborhoods. The insights gathered through these interviews were instrumental in shaping the project's conceptual framework and deepening the understanding of the current socio-spatial dynamics.

Given that the port's reconstruction will follow the plan proposed by the French authorities, the Pilot project seeks to respond to existing urban and infrastructural challenges by developing an intervention that addresses the city's needs while accommodating the operational realities of the port.

The proposed strategy is structured around three main axes:

#### **3.1. Intervention at Urban-Port Interfaces.**

The first strategy involves targeted interventions at critical urban-port interfaces, particularly in the Gemmayzeh district and along the Charles Helou Viaduct. These areas have been identified as potential connectors between the city and the port. The proposal entails the transformation of these interfaces into accessible public spaces that respond to the spatial and social needs of the adjacent dense urban fabric. Additionally, the Charles Helou Viaduct will be reconfigured to incorporate new urban functions, as identified by municipal demands, thereby enhancing its role as a transitional space between the city and the port.

#### **3.2. Activation of the Port Entrance and Adjacent Spaces.**

The second strategy focuses on leveraging the zones located at the entrance of the port. This includes a proposed intervention on the quay currently occupied by the military, aimed at creating a new access point linking the port, the Charles Helou Viaduct, and the central business district. This phase envisions the conversion of abandoned or underutilized spaces into public squares, thereby laying the groundwork for an interconnected spatial network. One of the key nodes within this network is the proposed "Port Square," situated in front of the main port entrance. This space will serve as a key junction, connecting the port with both the Charles Helou Viaduct and the maritime corniche extending from Beirut Square.

Beirut Square, positioned on the historic quay of the Old Port, is currently characterized by partial military occupation and neglected green areas. The project proposes the transformation of this space into a public park through which the maritime corniche will pass. The remaining portion, currently under military control, will be redeveloped into a multifunctional public square capable of accommodating urban events and extending the corniche. (Figure.14) This intervention aims to reestablish the connection between the city center and the waterfront through Beirut Square.

#### **3.3. Internal Port Connectivity and Maritime Transport Integration.**

The third strategy entails interventions within the port itself to enable pedestrian continuity and functional integration between the newly established public spaces and the existing passenger terminal. This will be achieved by repurposing segments of the port's internal road network not included in the French redevelopment plan. The long-term vision is to integrate the port into the city's daily life and mobility systems. Accordingly, the passenger terminal will no longer serve solely as a departure point for international cruise travel, but will also facilitate domestic maritime transport.

The pilot project introduces a coastal transportation system, a network of taxi boats that will connect multiple Lebanese coastal cities, enabling daily intercity commuting by sea. The section of the port through which the maritime corniche passes is designated in the French plan as an investment zone for international companies, rather than a logistical or storage area. (Figure.15) Consequently, security concerns previously a barrier to port-city integration are significantly mitigated in this context. The corniche is thus conceptualized as a connective spine traversing the port area and linking future commercial developments within these currently vacant plots.

Through the integration of the aforementioned strategies, the project establishes a comprehensive framework aimed at reconnecting the port with the broader urban context. This is achieved via the development of a continuous maritime corniche, the creation of interconnected public squares, and the rehabilitation of key infrastructural elements such as the Charles Helou Viaduct. (Figure.16) The intervention also facilitates the re-opening of the city center to the sea, a connection historically severed by the Solidere embankment. The reestablished linkage between Beirut Square, the Port Square, and the maritime corniche redefines the port as an accessible and active urban interface. Yet, these urban strategies could surely face obstacles from the governmental power taking over the decision of the future of the area.



Figure 15: The corniche inside the port.  
(Source: Author)

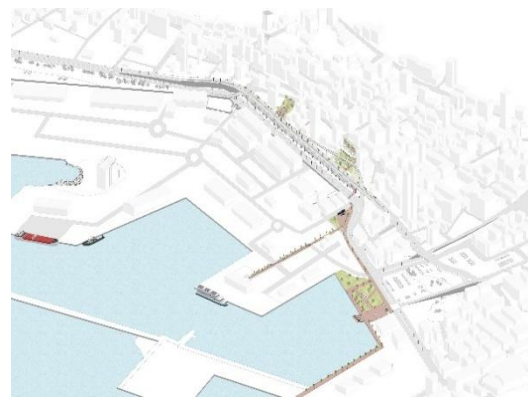


Figure 16: The new waterfront from the pilot project (Source: Author)

#### 4. Conclusion

“Connect the city and its port”, “Enter the port”, “recover the city-port lost relationship.” All these titles define the general intention of this project, which will aim to use potential spaces identified in the urban analysis as project levers, through which we will create the connection between the city and its port. The project will have as ambition to offer city dwellers, and especially residents of the city center area, new public spaces, as well as dynamic accessibility to the port. In other words, the project must respond to the different problems studied, such as the lack of public spaces, transportation, and the daily needs of city dwellers, in considering the French port reconstruction project.

This project established a network of connections with the ultimate goal of integrating the port with the broader urban fabric through its maritime façade, newly created public squares, and the rehabilitated viaduct. It also aims to reorient the city center toward the sea, thereby revitalizing the city’s urban heritage through a renewed relationship with the port.

“How to get the relationship back lost between the port and the city” remains a question with multiple dimensions. This ambitious project should be a starting point for a new way of living in the city, while encouraging the construction of public spaces and imposing new means of transportation that reduce congestion and pollution, so that the city can jump to another level. It will be the first stone of a future global planning vision of the urban territory of all cities in Lebanon. This lets us see this project as the “Pilot Project”, while hoping that it will be followed by other projects which will serve the city.

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## Ethics Approval

The author took full ethics approval from UCLouvain Research Ethics Committee (CER UCLouvain)

## Conflict of interest

The author declares that there is no competing interest

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