

EXECUTIVE SUMMARY

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This study has been part of connected research by four expert firms: Hamburg Port Consulting (HPC), Colliers International, Fraunhofer IMW (IMW) and Roland Berger (RB). It contains mostly content developed solely by HPC, Colliers and Fraunhofer, and in some clearly referenced areas, content jointly developed with RB, and builds on these to develop conceptual solutions to the challenges currently faced.

The study considers the current situation in the Beirut Port, and then builds on the RB related study findings, as well as reviewing regional competitors and competitive options.

Hence, the objectives of this study are to develop tangible options recommended for the successful redevelopment of the port precinct into the future. This study entails a brief assessment of the status quo and analysis of the consequences of the explosion on the port and the Lebanese economy, before focusing on a path forward. Looking ahead, the economic potential of the Port of Beirut is presented up to 2030, providing insights into the regional ambition that the country's main seaport could develop and achieve. This study develops strategic options for the port on several levels, answering immediate needs while presenting a future role of the port, potential expansion plans based on an integration of new governance model and integration into the city. This serves as the goal to make the Port of Beirut a transparent and efficient economic hub for Lebanon, offering long-term opportunities that can benefit the country on a national level.

THE CURRENT ROLE OF THE PORT OF BEIRUT

The Port of Beirut is the main gateway for the external trade of Lebanon and acts mainly as a seaport for local demand. The overall trade volumes consist of approximately 90% imports and 10% exports, indicating a significant trade imbalance. About 6 to 8 m tons of merchandise are handled at the port per year and mainly consist of container cargo, general cargo and dry bulk (excluding transit and transshipment volumes). In addition, about 0.5 m TEU of transshipments are handled at the port per year, showing a growing trend. The Port of Beirut, as a port catering for local demand, is a mirror of the Lebanese economy. It has a strong dependency on domestic circumstances and trade volumes are largely driven by imports based on domestic demand and consumption.

As such, the current economic crisis has had a large effect on the activities at the Port of Beirut. The economy faced a continued downturn with an up to 25% contraction in real GDP (Oxford Economics, 2020), the currency inflation sharpened and private consumption levels fell by 14% (World Bank, 2020). As a result, there was less demand for imports as demonstrated by the development of total volumes of traded goods from 2015 to 2019. This situation was further exacerbated by the consequences of the Covid-19 pandemic in 2020.

DAMAGE ASSESSMENT

The Port of Beirut was able to receive the first vessels again within 14 days of the explosion, and for this massive credit must be given to the resilience and fortitude of all involved in the functioning of the port. Indeed, despite the massive damage to the port and landside infrastructure, as well as the wrecks in the port, it has managed to maintain operations throughout, while a cleanup has moved ahead swiftly to staunch leaks of oil into the port waters, as well as consolidate various scraps into areas of similar scrap to minimize the impact.

Damage to the container terminal was fortunately minimized and the explosion focused mostly on the destruction of the workshops and surrounds, meaning that the terminal was able to be up and running almost immediately again, with the majority of gantry cranes functioning as before, safely and efficiently.

Containers on the western region of the container terminal were partially affected, with approximately 180 damaged to a point preventing delivery or at least further inspection.

Some 1,250 vehicles being stored in port were severely damaged and had to be written off, but have been piled together awaiting scrapping, while other scrap totals around 30,000 mts of steel scrap and 50,000 mts of concrete and asbestos scrap. The former will likely be exported to scrap merchants for recycling while the latter will be treated and should be used in construction to fill areas of damage specifically in basin 3.

Quay 9, the site of the explosion, has a large crater, with the entire quay wall as well as the entire bulk discharging infrastructure based on it, completely destroyed. The Silos on the quayside are also destroyed and still require tearing down and removal. The point quay itself needs to be further investigated including geotechnical and underwater surveys to ascertain the integrity of the structure, however the utilities should be assumed to require full replacement.

In addition, the Orient Queen passenger vessel remains rolled over alongside the quay 11, while 4 other floating wrecks remain at the bulk terminal, with one sunken wreck along the breakwater opposite the terminal.

The overall salvage still to be taken, including rubble removal, is estimated to be between USD 50-100 m – excluding any further surveys or rebuilding.

On the landside, apart from the quay damage, there has been significant damage, if not total destruction of all storage capabilities of the port. This represents both the most urgent challenge to the working of the port as well as the largest opportunity to replace antiquated and dangerous storage facilities with modern structures and practices. At present, all non-containerized cargo can be discharged and delivered on a direct delivery basis only, meaning that nothing is stored in the port, a loss of revenue as well as

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a slowing of the port's performance leading also to a reduction in volumes and thus further loss in revenue. Interim storage should be established as fast as possible, however not in such a way that the tendency then becomes for it to become long term. Storage policies of the port must also be considered.

BLUEPRINT FOR RECONSTRUCTION

Basic Requirements - Transparency and accountability

Any reconstruction efforts at the Port of Beirut must, as a prerequisite include a revised and transparent governance structure in line with international norms, in order to regain the trust and support of not only the people of Lebanon, but of the international community as well.

The current port management is carried out by a „Temporary Committee for Management and Investment of the Port of Beirut“ which has been in place since 1990, without clear reporting lines or accountability. Because of this it does

URBAN DEVELOPMENT

The reconstruction of the port outlines an extension of the port to the east. This opens the opportunity for an urban development reuse by converting and removing open spaces using at least the first two basins of the port.

Three options in determination of plot size have been examined where Option 2 with a total site area of around 1.2 km², providing a building area of rd. 3.5 Mio. sqm GFA including rd. 0.5 Mio. sqm GFA of public facilities buildings, represented the best potential layout. This option balances port expansion with income that could be attained from the development of a waterfront, while still allowing for further development in the very long-term future, into an amended option. It optimizes the layout of the current port, focusing on improving storage abilities in proximity to the container terminal, and opens the way for further growth into the bay at a later stage if required.

Accordingly, a master layout plan has been detailed for Option 2. The architectural concept reflects a balanced synthesis of the best of three cultures:

- An International Real Estate Expertise for robust revenues from the privately funded Development.
- European Urbanistic Fundamentals for Diverse and Lively Neighbourhoods.
- Local Architecture Principles for Acceptance and a consistent City Structure.

not undergo the supervision of a public institution and is not linked to a specific legal framework, nor is it subject to either the Audit Bureau or the supervision of the Central Inspection Unit.

The container terminal is managed by a separate entity, the Beirut Container Terminal Consortium (BCTC). Since the official contract ran out in January 2020, the BCTC is also now active in a temporary role, with lack of clarity of when the new tender will be run, or who is eligible to take part.

The World Bank and Roland Berger reports, both indicate a recommendation for a clear Landlord model of structure with tiered structure of National governance, ports management and port operational levels, to ensure national and regional competitiveness and operations efficiency. In addition, it also allows for private sector participation in rebuilding the port to secure international funding.

It aims for a fair mix of High-Level Architecture and Social Housing for local families, provides public Buildings for Education, Culture, Health and Sports, accessible Parks and City Beaches. Public Transport and Green Energy can be a starting point for a sustainable Beirut.

The area can provide homes for rd. 35,000 inhabitants and a rd. 40,000 workplaces. Total Building Investment will be rd. 7 bn USD generating a profit up to 2.5 bn USD over an estimated development and marketing time of around 15 years. Associated with the urban development of a new harbor city and the direct profits by marketing the developed areas is the great opportunity to generate the funds necessary for the reconstruction of the port facilities and, in addition, to be able to provide significant impetus for the reconstruction of the city and the political stabilization of Lebanon.

Indirect Benefits of the urban development

Large-scale investment projects produce considerable direct, indirect, and secondary economic effects that are reflected in increased added value, higher employment rates and income as well as in the generation of additional earnings for public authorities through taxes and social security contributions. For the Beirut Waterfront, this indirect profitability including earnings from development and based on the assumptions made, could sum up to approx. USD 30 bn in the base case over a period of 25 years. Hence, the project has significant positive effects that by far exceed the initial costs for the public as well as the results from a project-specific feasibility study.

In addition, qualitative effects play a major role and provide further significant benefits for the civil society of Beirut and Lebanon. Its impacts can enhance political and socio-economic stability by reducing unemployment and discontent in society and by offering long-term perspectives to the people. Further integrating effects can result from social measures that shall be financed through the indirect profitability gains, like strengthening low-income families, and combining working and living areas.

The Beirut Waterfront project can play an important role for the attractiveness of Beirut and Lebanon in becoming a gate to the Middle East for international companies as well as attracting tourists, business travelers and investors from all around the world. By becoming a lighthouse project, the image of the country might fundamentally change from a region of instability to one of economic prosperity.

Environmental and ecological sustainability criteria can be met through e.g. building structure and materials, nature of the utility infrastructure and share of green recreational areas which have positive effects on microclimate and biodiversity. The new district might even become an initial point for a public transport system.

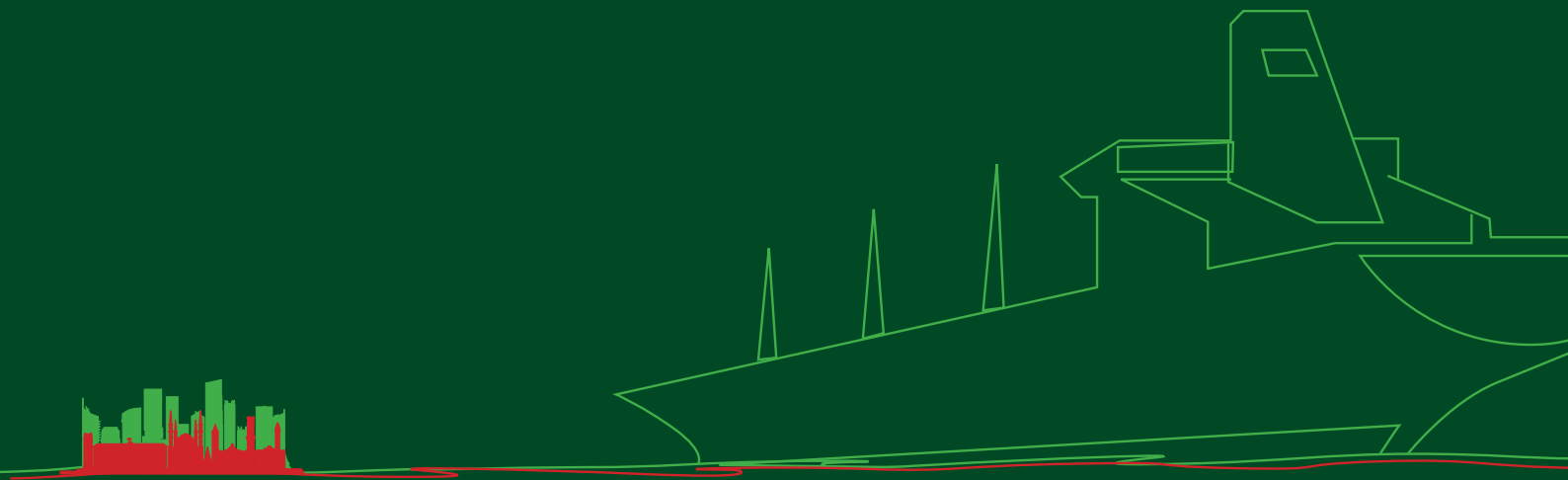
A PATH FORWARD

Crises present opportunities, while this study began as a high level overview to understand and present options to redevelop the port precinct of Beirut, right size it and provide a viable blueprint for the port moving forward, it quickly became apparent that there is a unique opportunity here for a port facility to pivot its own development into a national cornerstone, with the potential to refocus and develop the precinct for the benefit not only of business, but of the people of a Lebanon as a whole. What has come out is a clear proposed concept for a self-funding development able to create transparency, employment and boost the city and national economy while providing more integration of the Lebanese people and linking the city into the developing Mediterranean tourist industry.

Moving forward the concept, if accepted by all, requires further studies and detailing, however underlying all of this is the need for a clear new governance structure aligned with international norms, with the mandate to undertake the long-term wholesale developments the concept requires.

The concept, as any, requires support and further development from all levels of the Lebanese society, however initial feedback has across the board been very positive and we look forward to developing this further in the interests of all stakeholders.





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