



Transforming Portonave's port infrastructure in Brazil

In August 2022, Portonave awarded BESIX and Empresa Construtora Brasil (ECB), part of Mota Engil, the EPC contract to enhance its port infrastructure within the Port of Navegantes, Brazil. The project involves constructing a new quay wall in the same location as the existing structure, whilst maintaining port operations. To achieve this, a two-phase approach has been adopted. Construction commenced in January 2024, following an extensive period of Early Contractor Involvement and thorough preparations.

Located in the city of Navegantes in southern Brazil, Portonave stands as Brazil's first privately owned port terminal. The site is owned by Terminal Investment Limited (TIL), one of the world's largest container terminal operators. The upgrade aims to accommodate larger vessels, and therefore enhance the port's container capacity. While the current infrastructure lets ships of up to 350 metres in length carrying 11,000 six-metre containers dock, the optimisation will accommodate ships of up to 24,000 containers and 400 m length.

Continuous operations and optimised design

To ensure uninterrupted port operations whilst the capacity expansion project was underway, the partners proposed a sequential approach to the client. By dividing construction activities into two distinct phases, each corresponding to one half of the terminal, this approach allows construction activities to proceed seamlessly while maintaining continuous port functionality.

The permanent works at the port commenced in early 2024 with rockfill, which entailed stabilising the walls to allow the demolition of existing structures and construction of the new infrastructure. Subsequently, deep foundation works, with foundations reaching 60 metres in the ground, will begin. To facilitate part of these complex works, BESIX has called in the help of its deep foundations specialist Franki Foundations, which has been playing an instrumental role in providing the necessary equipment and expertise.

Prior to the permanent works, BESIX, ECB, and Portonave adopted an Early Contractor Involvement approach extensively. During this period, they worked collaboratively to identify the most effective technical solutions, hone the design, and develop methods to optimise project cost and estimate prices through an open-book collaboration.

A majority Brazilian workforce

For the execution of the project, BESIX Group committed to a largely Brazilian team. With 90 % of the site staff being Brazilian, Portuguese is the predominant language on-site. Given that some of the expats working on the project do not speak Portuguese, various initiatives, such as Portuguese classes, have been adopted to foster effective communication. These initiatives have proven successful thus far, and language disparities are not perceived as barriers on-site. "We're a strong team, merging effectively. It's definitely something we take pride in," concludes Quentin Michel, BESIX Group's Project Manager at Portonave.

The project for Portonave signifies BESIX Group's inaugural venture into the Brazilian market. This entry was facilitated by the company's intrinsic openness and flexibility, coupled with the collaboration with ECB, providing valuable local insights. Additionally, the Early Contractor Involvement approach was beneficial, as it allowed BESIX Group to learn about the country ahead of time and prepare for the project meticulously.

In 2023, activities in Brazil primarily encompassed site mobilisation and installation, preparing the site for the permanent works, which commenced early 2024. Throughout 2024, efforts will continue to focus on the project's first phase, including demolition of the older infrastructure, and construction of the new quay wall. Final delivery of the project is planned for 2026.



Although our colleagues from Franki Foundations usually don't work outside Europe, their contribution here is most valuable. This collaboration between experts exemplifies the strength of co-creation within BESIX Group.

Quentin Michel, BESIX Project Manager

Project details

Portonave

Location

Navegantes, Brazil

Client

Portonave - a subsidiary of Terminal Investment Limited (TIL Group)

Partner

Empresa Construtora Brasil

Contract type

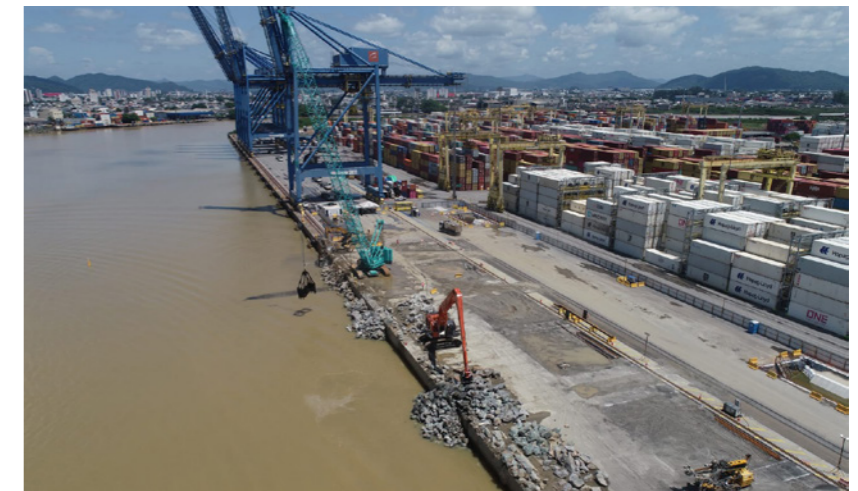
Engineering, Procurement, and Construction (EPC)

Construction period

2023 - 2026

Contract value

€167 million



The Early Contractor Involvement approach enabled us to thoroughly explore all aspects of the project in advance and to refine the project scope with the client, assess resources, address, and mitigate risks, and apply value engineering. Thanks to the ECI approach, we were able to present a strong, competitive solution to the client."

Jean-Baptiste de Ghellinck, General Manager, BESIX International