



Marcelo Xavier,
Subsea 7's Vice-President Brazil

INTEGRATED SCOPES: A NEW APPROACH TO AMPLIFY SUBSEA PERFORMANCE

One of the most significant discoveries in the search for economic solutions in the offshore oil and gas industry is to integrate the scopes of work involved in the construction of subsea production systems (SPS) together with the associated subsea, riser and flowline (SURF) umbilical systems.

In this interview, Marcelo Xavier, vice president of Subsea 7 in Brazil, and Carlos Tadeu, general manager of OneSubsea in Brazil, explain the experience of Subsea Integration Alliance in expanding submarine performance, which is helping customers to develop smarter projects.



What is Subsea Integration Alliance?

Subsea Integration Alliance is a non-incorporated strategic global alliance between Subsea 7 and OneSubsea®, the subsea technologies, production and processing systems division of Schlumberger, bringing together field development planning, project delivery and total lifecycle solutions under an extensive technology and services portfolio. As one team, we amplify subsea performance by helping customers to select, design, deliver and operate the smartest subsea projects. This eliminates costly revisions, avoids delays and reduces risk across the life of field. As Subsea Integration Alliance, we continuously enhance our individual capabilities, products and project delivery within subsea production systems (SPS) and subsea umbilical, riser and flowline (SURF) systems. Together, as Subsea Integration Alliance, we have further expanded our capabilities towards the integrated delivery of projects. At the same time, we have significantly adapted our engagement models – allowing us to interact earlier with customers, and to support them in choosing the system, and product solutions that best match their project needs.

The development of pre-salt fields presents many challenges. How does Subsea Integration Alliance help meet these challenges?

Brazil is an unique market with its ultradeep waters, large accumulations and prolific reservoirs. Although the local subsea market is well established, the dynamic of the subsea sector is changing as many IOCs undertake local developments and look to establish Brazil as a key strategic

area for their long-term growth. In this context, we believe that Subsea Integration Alliance can help operators meet the existing challenges on the pre-salt fields by bringing the extensive and successful local track record of both OneSubsea and Subsea 7, who have been present in Brazil for more than 35 years. Additionally, Subsea Integration Alliance can leverage the innovative technologies being developed by its parent companies, some of which have been designed to overcome these challenges and are already deployed in other existing pre-salt projects.

Equinor has recently awarded Subsea Integration Alliance an exclusive contract for the front-end engineering design (FEED) for the Bacalhau field. How important is this award for the company given the competitiveness of the Brazil market? What were the factors that led to this achievement?

We were delighted when Subsea Integration Alliance was awarded an exclusive contract by Equinor for the Front End Engineering Design (FEED) study for Bacalhau, as it's Brazil's first integrated SPS and SURF project.

The work is required to finalise the technical definition of the proposed development prior to Equinor making final investment decisions (FID) in late 2020. The contract is based on a two-step award. The FEED and pre-investment are starting now, with an option for the execution phase under a lump sum turnkey set-up which includes engineering, procurement, construction and installation for the entire SURF and SPS scope. This award is an extension of our long-es-

tablished local presence in Brazil and exemplifies our ability to maximize asset value through an integrated field development service. The field development will include 19 wells, approximately 130 km of rigid risers and flowlines and 35 km of umbilicals. Subsea Integration Alliance will also be responsible for life-of-field support, representing a fully integrated contract model across the entire field life cycle, from engineering and early engagement to aftermarket services. Project manage-

ment and engineering will take place in Rio de Janeiro with support from Subsea 7's Global Project Centre in UK, France and various OneSubsea® offices. Offshore installation activities are scheduled for 2022 and 2023.

Will new technologies or innovations be used in the design or engineering phase of this project?

A requirement from Equinor was to select proven technology and robust solutions in the market to limit sched-



This award builds on our successful track record of solutions developed for deep water projects in Brazil and demonstrates our capability to maximise asset value through early engagement and an integrated approach, where we took the opportunity to understand and align ourselves around Equinor's drivers for the project. It underlines the breadth and strength of our parents' technology portfolios, quality of onshore and offshore assets and our extensive project management and engineering capabilities in Brazil and worldwide.

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Carlos Tadeu,
OneSubsea's General Manager Brazil

ule risk towards first oil. This is also to reduce complexity in a field with several challenges, like deep water and high pressure. However, as we do with all projects, Subsea Integration Alliance is always looking to leverage the latest in technology development and innovation to unlock the true value of an asset, while seamlessly unifying planning and execution. The award comes on the back of a design competition where we have demonstrated our ability to maximize asset value through our integrated field development service. This involves the use of *Subsea Planner** collaborative field development solution.

What are the solutions that will reduce the time to first oil?

Historically, we've seen that hav-

ing separate FEED, SPS, and SURF contracts can result in longer project durations due to lengthy tendering processes and multiple interfaces during project execution. The contract model chosen by Equinor, where the same contractor executes FEED and provides the integrated SPS and SURF scopes, allows an earlier engagement model that accelerates design inputs to long-lead procurement and can contribute to a shorter project duration. First oil production is planned in the 2023-2024 timeframe.

How will this project impact current presence and capabilities for Subsea Integration Alliance in Brazil?

This project will also help us, and our key partners, to further enhance

* [Mark of Schlumberger]

our capabilities in offering innovative solutions for ultradeep pre-salt fields, by allowing Subsea Integration Alliance to expand the collaborative approach developed with Equinor, to key suppliers through early engagement.

The contract also provides that the company will be responsible for life-of-field support. Does Subsea Integration Alliance have a differentiated approach to improve productivity and performance in this phase?

Subsea Integration Alliance has a strong track record in-country for providing life of field operations. For

Bacalhau Phase 1, new technologies have been addressed during the pre-FEED phase to maximise the digitalisation opportunities during field operations. This will bring added value during the life of field phase and consequently reduce the OPEX component of the total cost of ownership. Additionally, OneSubsea's state-of-the-art facility in Taubaté, São Paulo state, will be used by Subsea Integration Alliance to provide aftermarket support during life of field operations during Bacalhau Phase 1. Similarly, Subsea 7's life of field business unit, iTech 7, will also support life of field operations. 🌍



Bacalhau Phase 1 is a great milestone for Subsea Integration Alliance, and specially for us in Brazil. The team was fully engaged in getting the best integrated solution for Equinor. We are looking forward to performing a seamless execution of the integrated SPS and SURF contract, meeting our client expectations in terms of safety, performance, quality and on time delivery, always focusing on sustainability stewardship.

Carlos Tadeu,
OneSubsea's General Manager Brazil