



In-depth Integration

The need for an integrated approach to development planning is no more acute than in the deepwater arena where the interaction between the subsea and riser solution, coupled with the connection to a host facility, is key to realising a field's economic potential.



Deepwater developments are often at the outer envelope of technology and solutions required to solve some of the difficult issues require 'joined up thinking' since invariably there are no previous analogues to apply. This can create difficulties in many areas and can lead to an overburden of concepts to assess. Increasing the maturity of options to a level sufficient to allow screening is essential. Our integrated approach provides a vehicle to assist and accelerate this process.

Standalone skills such as flow assurance, subsea system engineering, riser design, subsea equipment selection and process system design all have a major role to play in the development of the deepwater field, but it is their interfaces that make the difference. In deepwater scenarios, the application of the Xodus integrated solution for development planning comes into its own. Within the Xodus Group portfolio of services, all those required for a successful deepwater project are available to our clients.

Flow Assurance

As is often the case within the oil and gas development planning arena, it is flow assurance that represents the common technology throughout the different disciplines. This is even more so when optimising the subsea flowlines and equipment based on design and operating parameters is a major CAPEX driver, as is the ability to flow a riser system through several thousand meters of water throughout the life of a field. Using proprietary and industry standard technology, Xodus provides the multiphase flow and flow assurance analysis essential to develop deepwater subsea fields.

Riser Systems

The development of the riser system to deliver the technical and commercial needs of the project is vital when defining a deepwater subsea delivery system. It is important that the necessary level of expertise is applied at the right time to enable procurement, installation and interface issues to be addressed in a timely

way. Xodus brings the required knowledge and experience at all stage of a project to allow each of these aspects of the development plan to be evaluated individually and together.

The Installation Challenge

One of the greatest challenges in any deepwater project is ensuring that the development concepts are demonstrably installable, but at the same time commercially competitive. Xodus Group knowledge of the global installation contractors, their current operating vessels and their planned new-build vessels, ensures a competitive installation tender is possible.

Likewise, the suitability of the various proprietary diverless tie-in/intervention systems must be well understood so they can be flexibly accommodated as the development concept evolves. Xodus knowledge in these areas has been gained through working in all the deepwater provinces – Australia, Europe, West Africa, Gulf of Mexico and South America – and with all available systems.

Integrated Thinking

Within the Xodus integrated model, the required specialists are all part of the same team and often working together in the same location. Crucial project interfaces can be managed seamlessly, for instance when the flow assurance engineer is receiving constant feedback on the implications of their work on the overall project CAPEX, alternate approaches or areas of optimisation can be identified in an extremely timely way. In the absence of contractual interfaces this process can lead to major project cost and schedule benefits.