Visualize your offshore project... onshore

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Simulation Center
The importance of mitigating offshore challenges

Offshore developments bring challenges unlike any other type of construction projects. Harsh environments combined with remote locations. Project equipment that pushes the boundaries of size and weight. And unpredictable weather patterns that can endanger safety, disrupt progress and affect the predictability of first oil. To mitigate these factors, our customers have always worked with us during the engineering phase to carefully plan project details before the work starts. Now, thanks to our revolutionary new Simulation Center, we can run through the project first in a virtual world, which brings significant advantages.

Simulation Center: a real-time offshore environment onshore

Heerema is committed to creating innovations that achieve the highest possible operational performance, predictability, quality, and safety. Our Simulation Center achieves this and more – it is a real-time virtual offshore environment in which we integrate our customers’ proposed project activities into a realistic 3D world of operations. From crane and vessel controls to realistic weather and sea swell patterns, the Simulation Center provides an authentic visualization and a genuine ‘feel’ for all aspects of the planned operation.
Ground-breaking advantages for overall project continuity

The Simulation Center is a great way to address everybody’s concerns from the start, creating early alignment between stakeholders. We can explore, test and challenge critical offshore installations before going offshore, which brings ground-breaking advantages. It freezes designs earlier, accelerates engineering and onshore fabrication, and ensures the on-time delivery of installation components, as well as all required hardware, equipment and manuals. It can explore innovative ideas for existing and future projects, and it can examine all critical operations in detail to check for trouble spots, which will minimize or even eliminate offshore surprises. All of which leads to robust, safe and predictable projects with lower overall customer project costs.

Conduct a dry-run of the operation to optimize performance

The Simulation Center is designed to adapt a variety of 3D models – such as jackets and topsides – to our customers’ real component characteristics. We can then use these models to run realistic scenarios, including single, repetitive and dual crane lifts as well as the execution of float-over operations. It is also highly suitable for HAZIDS, closeouts and incident investigations. Our engineering department will develop 3D drawings for the project, programming in equipment characteristics to recreate the components’ natural behaviour and uploading them into the Simulation Center system. Then we will invite the offshore crew to actually perform a dry-run of the planned operation in cooperation with the customer, our project team and all other relevant people involved. This allows them experience the operation and to train together for the actual project while anticipating any technical problems, failure modes or environmental issues that could occur.
The benefits of the Simulation Center

We created the Simulation Center to address real-world issues affecting our customers’ projects. This new, experience-based and powerful visualization tool provides significant benefits:

- Optimizes operational efficiency and interfaces to lower overall project costs
- Enhances execution predictability and timing
- Minimizes unexpected issues
- Runs through failure cases to create mitigating actions
- Provides training for more complex projects
- Tests new and innovative concepts

Would you like to find out more about our Simulation Center? Please contact us …we would be happy to discuss how our Simulation Center makes your project a success.

www.heerema.com