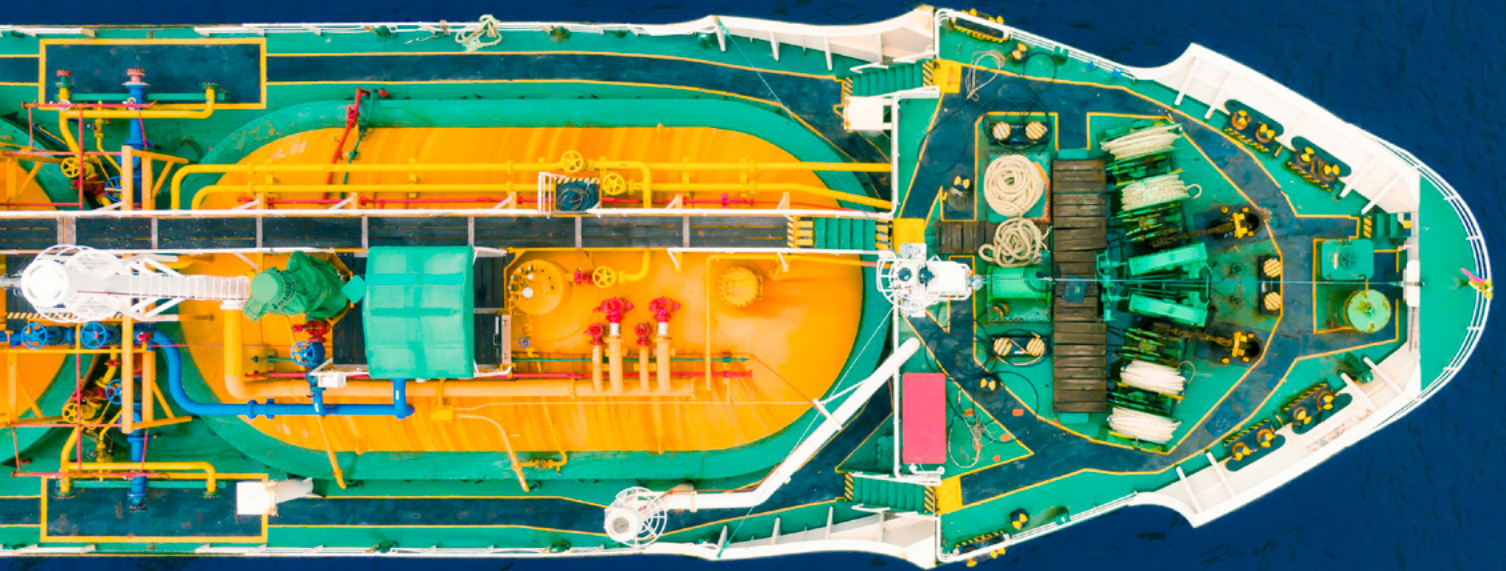


# MARINE & OFFSHORE

## DESIGNED FOR SEA DESIGN, OPTIMIZE, VALIDATE AND CERTIFY YOUR MARINE AND OFFSHORE ASSETS



### HOW CAN YOU RETHINK YOUR DESIGN PROCESS TO DRIVE EFFICIENCY?

In a highly competitive Marine & Offshore environment, how fast and efficiently shipyards can deliver a differentiating design that satisfies demanding customer requirements accounting for new market needs and complies with regulations and certification rules is critical. It requires integration across engineering disciplines and a globally distributed ecosystem.

**Designed For Sea** is an Industry Solution Experience that enables shipyards to define, simulate, optimize, validate, and certify a ship or platform design. It helps to engineer and develop the integrated design for all shipbuilding disciplines including structure, fluid and electrical systems to ensure marine product design excellence. With the ability to experiment with alternative scenarios at an early stage using advanced, real-time 3D simulation, Designed For Sea helps reduce costly, time-consuming rework.

Based on the **3DEXPERIENCE®** platform, the solution uniquely connects the dots between owners' evolving requirements, regulations, multi-disciplinary engineering teams and suppliers with full traceability.

## REDUCE DESIGN HOURS

Intense competition and scarcity of a skilled workforce creates enormous pressure on shipyards to improve their efficiency in order for them to remain viable and relevant. Increasing commonality and reuse across projects can help shorten the design cycle and significantly reduce costs. **Designed For Sea** provides a single collaborative environment to efficiently capture, reuse, and adapt proven designs, in-house expertise, and past experience. Knowledge is capitalized and made available anytime, from anywhere to globally-dispersed multidisciplinary teams. With **Designed For Sea**, engineers benefit from embedded design rules, a modular approach, and the ability to capture design intent in basic design to automatically generate the detail design, thereby improving efficiency and decreasing design cycle time. With **Designed For Sea**, engineering teams can test design options in real time using advanced 3D simulation to ensure the best design alternative is selected early in the process.

## DECREASE COSTLY, TIME-CONSUMING REWORK DURING MANUFACTURING PHASE

Historically, ship design has been developed with little anticipation as to how it would be manufactured, typically causing delays and very costly rework. Aware of the significant time and cost savings, shipyards have been adopting design for manufacturing. Based on the **3DEXPERIENCE** platform, **Designed For Sea** provides digital continuity from design to manufacturing.

It promotes integration and seamless propagation of changes between design and manufacturing. In addition, the ability to embed manufacturability rules within the design helps ensure designs are fit for manufacturing throughout the process. This streamlines production by mitigating downstream errors and last-minute reworks that can cause significant delays and additional costs. With **Designed For Sea**, cross-discipline interference checking, structural and systems analysis, weight analysis, penetration management, early space reservation and material take-off can be performed to detect potential problems early in the process and thereby ensure design integrity and product quality.

## IMPROVE DELIVERY TIMES

Delivering on time and on budget is critical for survival. With programs totaling in the millions and laden with last-minute changes, shipyards need to better anticipate to reduce rework and a way to easily propagate changes to meet their contractual commitments. **Designed For Sea** accelerates and facilitates product delivery thanks to embedded design rules that automate the design process and reduce rework

while improving quality. Engineers can analyze the impact of changes throughout the design thanks to digital continuity, thereby reducing downstream errors as well as costly and time-consuming redesign work that can delay production start-up.

## ENSURE COMPLIANCE WITH CUSTOMER REQUIREMENTS

As they strive to satisfy owners' demand for higher value and a brand new experience, shipyards around the world have to strike a complex balance between the many characteristics that make up the DNA of increasingly bigger and sophisticated ships and platforms. In parallel, they must also ensure compliance with a rising number of environmental and safety regulations. It is fundamental for them to successfully track customer requirements and regulations while efficiently managing the associated complexity and risk. It is also critical to manage the requirement change process properly. Shipyards not only need to ensure that designs meet initial requirements, but also that they account for new ones that frequently emerge after design is already under way.

**Designed For Sea** is a proven solution for ship and platform design that promotes a system engineering approach and integration across all engineering disciplines. It provides design and engineering teams with a robust integrated requirement management environment with full traceability. This includes the ability to integrate requirement information into the design process and trace progression from the requirement to the functional, logical and physical designs. This allows shipbuilders to easily monitor adherence to customer requirements and compliance to classification rules throughout the design process for faster and more effective design validation and certification.

### KEY BENEFITS

- Reduce design cycle time through modularity, automated detail design, and embedded design rules
- Mitigate downstream errors and rework through digital continuity, cross-discipline integration, and embedded manufacturing rules
- Deliver on time and on budget through templates, embedded design rules, and efficient change management
- Manage compliance to customer requirements and classification standards efficiently through integrated requirement management system

## Our 3DEXPERIENCE® platform powers our brand applications, serving 11 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the 3DEXPERIENCE® Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes' collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 250,000 customers of all sizes in all industries in more than 140 countries. For more information, visit [www.3ds.com](http://www.3ds.com).

