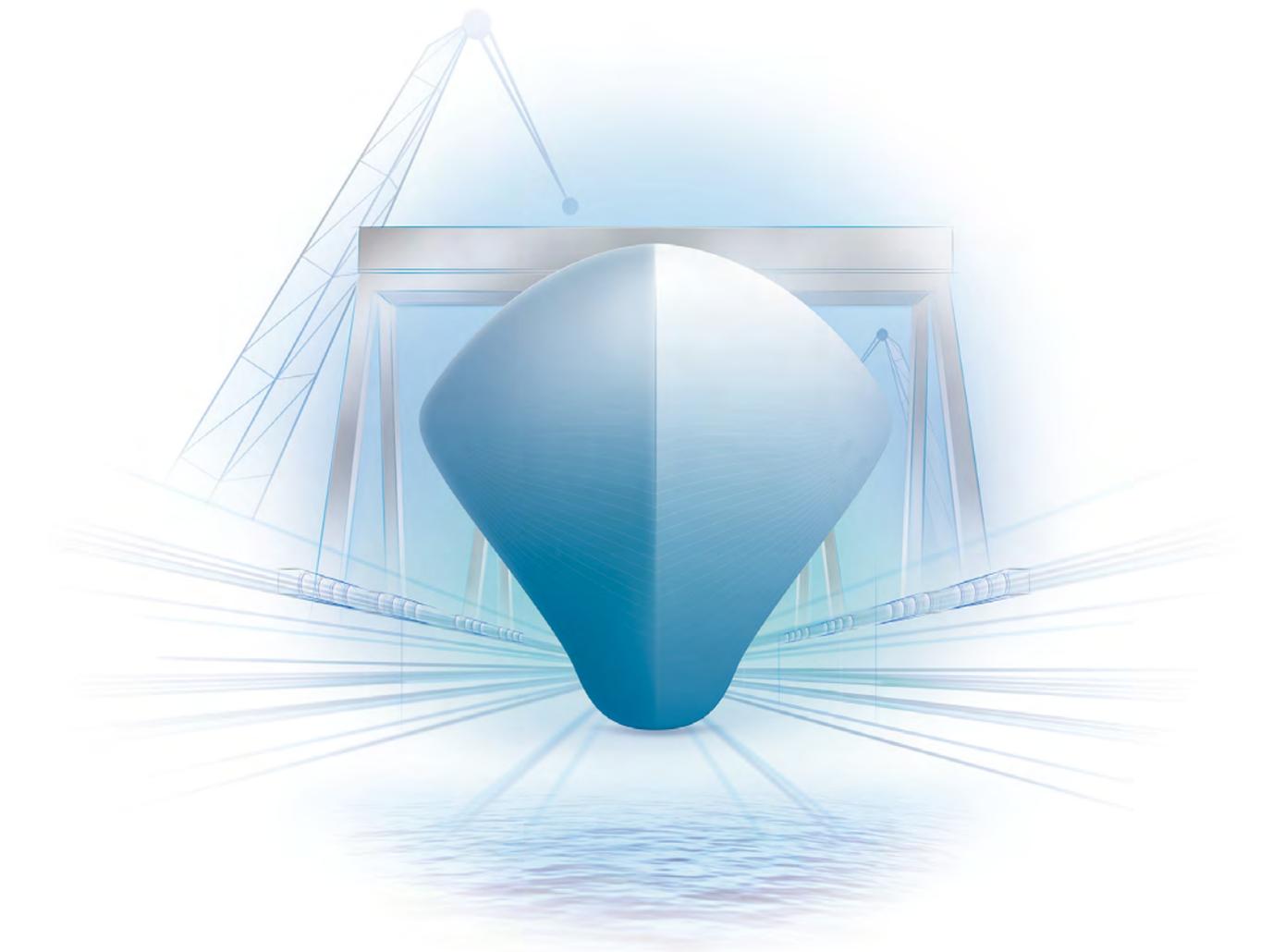




3DEXPERIENCE®

MARINE & OFFSHORE **OPTIMIZED PRODUCTION FOR SEA**

Efficiently plan your marine project manufacturing



**HOW CAN
YOU OPTIMIZE
PRODUCTION
PLANNING FOR
ONTIME, ON-
BUDGET DELIVERY
OF QUALITY SHIPS
AND PLATFORMS?**

As today's ships and platforms become larger and more sophisticated, shipbuilders need to improve their manufacturing efficiency to remain competitive. It starts with manufacturing planning.

Optimized Production For Sea is an industry solution experience based on the **3DEXPERIENCE®** platform that enables shipyards to efficiently develop production plans in order to optimize ship production activities and thereby reduce their total cost of manufacturing and ultimately win more orders. With **Optimized Production For Sea**, shipbuilders can perform manufacturing assembly definition, discipline-specific work preparation, process planning, 3D simulation and validation of manufacturing plans as well as generate interactive 3D work instructions.

AVOID DELAYS AND PENALTIES

Delivering on time and on budget is of paramount importance to shipyards' competitiveness. With fixed delivery contracts, failing to meet their commitments expose shipbuilders to penalties that can end up consuming their margins. One solution is to be able to begin manufacturing planning earlier in the design cycle and to validate the process plan before execution starts.

Taking advantage of the digital continuity between design and manufacturing offered by the **3DEXPERIENCE** platform, **Optimized Production For Sea** enables manufacturing data to be directly and automatically generated from the engineering design. As a result, manufacturing planning can begin earlier in the ship design cycle, helping to avoid the delays and costly penalties that late delivery can cause. Design changes can quickly be identified and easily propagated to manufacturing. Planners can automatically generate the structure and outfitting work preparation using manufacturing embedded rules resulting in substantial improvements to productivity and efficiency. Moreover, the ability to capture and reuse manufacturing know-how as well as to leverage experience from previous projects helps increase productivity and shorten the production cycle.

ENHANCE MANUFACTURING EFFICIENCY

With owners demanding more quality and value from their ships and offshore platforms, shipyards have to ensure flawless manufacturing if they are to satisfy their clients' requirements. Efficiently orchestrating their global supply chain to leverage extended ecosystem skills and knowledge helps avoid bottlenecks and improve production quality. They also need to comply with increasingly stringent regulations and certification rules.

Optimized Production For Sea provides seamless integration between engineering and manufacturing information, which helps shipyards ensure manufacturing correctly adheres to design specifications which reduces errors and rework.

Since process plans can be complex, the ability to simulate and validate every step before execution begins is absolutely critical to ensure ships and platforms are built right the first time. With **Optimized Production For Sea**, production engineers can simulate and optimize all aspects of the production plan, including the assembly sequence, the required operations, and the resources needed to perform each operation. 3D simulation can also be used to identify interferences and perform ergonomic studies to ensure feasibility as well as improve workers' operational performance and safety.

REDUCE LABOR AND PROCUREMENT COSTS

In a highly competitive and cost-conscious industry where ship owners are demanding not only lower prices but an overall reduction of their total cost of ownership, shipyards need to increase their productivity to satisfy their demands. They must optimize their operations and reduce labor as well as procurement

costs and scrap to stay afloat. Successfully balancing their resources and capitalizing on past projects are some of the ways this can be done.

The ability to capture knowledge and embed production rules significantly reduces costs. These rules not only reduce the cost related to the time spent by the production planner, they also ensure efficient downstream processes which further reduce costs. **Optimized Production For Sea** also delivers dedicated features that help optimize the use of a shipyard's human and machine resources.

Process engineers can also automatically generate clear and comprehensive 3D work instructions to describe a job, how to do it, and the safest installation approach directly from the process plan. This improves workers' understanding, which mitigates errors and costly rework.

WIN MORE ORDERS

Winning new business and securing repeat orders in the highly competitive Marine and Offshore industry is critical for survival. Shipbuilders need to make profound changes to remain competitive. This can be done through digitization, automation, collaboration, and implementation of a lean manufacturing approach.

Based on the **3DEXPERIENCE** platform, **Optimized Production For Sea** provides the extended ecosystem with a single access to up-to-date engineering information including requirements, production data, project schedules, and quality certification procedures, anytime and from anywhere, with proper intellectual property protection. Collaborating with multi-disciplinary partners improves product quality while dedicated planning tools and dashboards help keep projects on track, cementing a shipyard's good reputation.

KEY BENEFITS

- Reduce scrap and procurement costs through associativity and automation
- Mitigate rework through early 3D simulation
- Shorten production cycle with rule-driven automation of assembly planning
- Optimize material usage and reduce scrap through interface with nesting machines
- Accelerate worker safety and efficiency with 3D work instructions
- Reduce labor costs through automation of manufacturing processes

Our 3DEXPERIENCE® platform powers our brand applications, serving 12 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 210,000 customers of all sizes in all industries in more than 140 countries. For more information, visit www.3ds.com.

