

SeaBoatBuilder + Virtual Twin

Design. Simulate. Deliver.

What is SeaBoatBuilder?

SeaBoatBuilder is an industry solution from Dassault Systèmes built on the 3DEXPERIENCE platform, enabling marine companies to design, engineer, and manufacture vessels in one unified digital environment.

A single platform where designers, engineers, and manufacturers collaborate in real-time

What is a Virtual Twin?

A Virtual Twin is more than a digital model — it's a living, evolving simulation of a real vessel.

- Mirrors the physical boat in a virtual environment
- Simulates behaviour, performance, and lifecycle
- Evolves with real-world data

Enables full lifecycle visibility from design
→ build → operation

"From Concept to Sea — Digitally First"
"Build Smarter Boats with Virtual Twin"
"Where Innovation Meets the Ocean"

Key Benefits for Boat Builders



Accelerate Innovation

- Design, test, and optimize boats before physical build
- Reduce development time and costly rework



Enhance Collaboration

- All stakeholders work on one real-time 3D model
- Break silo's across design, engineering, and production



Improve Quality & Precision

- Detect issues early through simulation
- Build vessels right the first time



Drive Sustainability

- Test materials and configurations digitally
- Reduce waste and environmental impact



Transform Customer Experience

- Immersive virtual reality boat exploration
- Customize features before purchase

Smart Boat Development

- Virtual prototyping of hull, propulsion, and systems
- Performance simulation (speed, stability, durability)
- Real-time monitoring and predictive maintenance
- Digital continuity from concept to delivery



3DEXPERIENCE®

Powered by 3DEXPERIENCE Platform

An integrated digital ecosystem enabling:

- 3D Design (CATIA)
- Simulation (SIMULIA)
- Manufacturing (DELMIA)
- Lifecycle Management (ENOVIA)

Return on Investment (ROI): Why Virtual Twin Pays Off

- **Faster Time-To-Market**
 - Reduce design cycles by 20–50%
 - Launch new boat models ahead of competitors
 - Shorten prototyping phases with virtual validation
- **Cost Reduction**
 - Cut physical prototype costs by up to 30%
 - Minimize rework and late-stage design changes
 - Reduce material waste through simulation
- **Improved Operational Efficiency**
 - Streamline workflows across design, engineering, and production
 - Reduce manual errors with a single source of truth
 - Optimize manufacturing processes before execution
- **Risk Mitigation**
 - Identify performance and structural issues early
 - Simulate real-world conditions (waves, loads, stress)
 - Avoid costly failures after launch

- **Data-Driven Decisions**

- Real-time insights from the Virtual Twin
- Predict maintenance needs before breakdowns
- Optimize lifecycle performance and resale value

