

# Siddhartha Yachts charts winning course with CATIA V5



“Virtual 3D models enable us to recognise mistakes in the design phase and not during production, when changes are much more expensive.”– Bruno Hamata, Chief Engineer, Siddhartha Sailing Yachts.

## Overview

### ■ The Challenge

*Every Siddhartha yacht is unique, so designing in 2D significantly raised the potential for costly errors to remain undetected until late in the construction phase.*

### ■ The Solution

*CATIA V5 allows Siddhartha to prototype every new design in highly detailed 3D, managing complexity and allowing conflicts to be identified and eliminated early.*

### ■ The Benefit

*Opportunities for innovation and creativity have multiplied without increasing risks, because all designs can be fully tested in 3D before being built.*

## Yacht builder races ahead with CATIA V5

Siddhartha Yachts has a tradition of sailing against the prevailing winds. Although it is located in landlocked Austria, it is a renowned designer of some of the finest luxury sailboats in the world. Although the yacht industry as a whole is moving to higher levels of standardisation, each of Siddhartha’s designs remains a unique, one-of-a-kind masterpiece.

And although its competitors continue to rely on 2D systems because they are cheap, Siddhartha has invested in 3D CATIA V5 because it delivers a superior product by managing complexity and increasing the opportunity for innovation.

“The entire industry is now focused on cost reduction, but it is a false economy,” says Bruno Hamata, Siddhartha’s chief engineer.

“My cost to design a boat in 3D may be more than someone who is using 2D because I have invested in new technology. But the client’s total cost when the boat is finished will be higher with 2D and the quality will be lower because of the many errors that will not be discovered until very late in the process.”

The reason, Hamata says, is that sophisticated yachts are highly complex systems with multiple interactive variables, many of which are difficult to predict from the outset of a project. Designing such a yacht sequentially, system by system, as 2D requires, does not accommodate complexity and fails to manage the interrelationships between systems.

## Better designs, higher quality

In contrast, CATIA manages all systems simultaneously by understanding and accommodating the interrelationships and by clearly communicating design intent and design changes. This maximises flexibility during the critical design stage while improving control through increased visibility. This, in turn, reduces risk by ensuring that the design will work in actual practice.



The result, Hamata says, is the freedom to try many ideas in a short time, fostering creativity and innovation.

At a recent boat show in Monte Carlo, Siddhartha won the New Design Concept award, sponsored by Boat International magazine and Camper & Nicholson, in the 30-metre sail yacht category for a design created in CATIA V5. The design is an adaptation of a plan for a 29.3-metre boat originally created for Siddhartha in 2D by an independent naval architect.

#### **SIDDHARTHA SAILING YACHTS**

“There were so many mistakes we could not use it,” Hamata remembers. “So we took his design work and put it into CATIA and re-designed everything. We knew that everything would work because we could see it in 3D. Then when we adapted it for the 30-metre design, we just made an adjustment here and an adjustment there and CATIA did the rest.”

Because CATIA's 3D capabilities make it possible to design yachts in ways that optimise the construction process as well, Siddhartha plans to expand its offerings to include construction services and engineering. “The economic advantage of CATIA is spread across the complete process, from design to construction to maintenance,” Hamata said.

“By expanding our offering, we can capture more of the benefits for Siddhartha, and start to develop more interesting innovations.”

#### **Differentiation through innovation**

Hamata appreciates that CATIA allows Siddhartha to deliver high-quality, error-free designs that simultaneously balance performance, styling and architectural considerations. But he also appreciates the contribution CATIA makes to his company's quest for continuous improvement.

“When you have multiple generations of a design, you can build each new innovation on the previous one,” Hamata said. “It gives you a kind of compound interest effect. We see manufacturing companies in many industries that can charge substantial premiums over the competition because their products are more innovative and of higher quality. That is Siddhartha's strategy.”

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