

## Royal Huisman's design system based on Rhino

RhinoCentre Business case: Implementation of Rhino

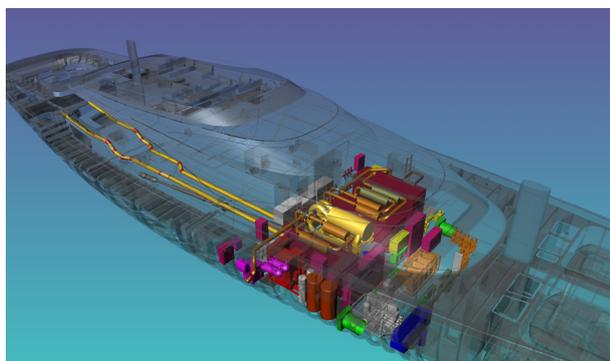
Kick off project: Twizzle 57,5 meter sailing yacht

Goal: 3d concept model to improve the design, engineering and manufacturing process



### Centralized 3D environment

In 2006 Royal Huisman concluded that they needed a centralized 3D environment to design their super yachts, to maintain their world leading market position. When designing the Ethereal yacht, they found out that in early stages of design, engineering software is not fast and flexible enough for this purpose as object positions and their size and shape often change. Another aspect is that engineering software is expensive and requires powerful hardware and specialists.



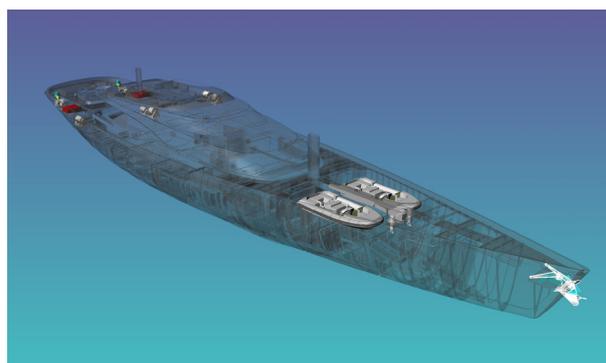
*engine room fully integrated*

### The solution

All pieces came together when CAD Manager Lambertus Oosterveen saw both Tobias Nagel's work with Rhino and Gerard Petersen's work at his Kenau project at the Rhino User Meeting organized by RhinoCentre and Rinus Roelofs. Lambertus Oosterveen immediately understood that Rhino was the way to go. As Royal Huisman's designer Martin Groen already used Rhino for parts of preliminary design, they only had to expand the use of Rhino downstream the process. Lambertus Oosterveen set up the architecture for an integrated design system together with Tobias Nagel. With the crucial support of Huisman's technical director Erik van Hulst, the system came alive, and immediately productive, at several departments during the Twizzle design, yard number 386.

### Integrated cooperation

With Rhino's 'worksession' feature people from several departments are able to work together on one Rhino concept model containing exterior, interior, structure and technical installations. The Rhino design system is not static but a flexible and dynamic environment which is constantly in development due to specific project related design demands. For example, people can decide during the design process that an animation of a detail is necessary to check certain technical constraints and see the impact on the overall design. Furthermore, several people maintain a 'best practice' document for themselves and as a guide for new people who start working with the design system. This document is constantly evolving, as new developments in Rhino and the process change the way people work together.



*impact of deck equipment and tenders*

### Expertise brought into practice

As modelers with the proper skills were not immediately available at Royal Huisman, Tobias Nagel modeled most parts of the Twizzle 3d concept model himself. Gerard Petersen was hired as well, to assist in modeling and to give his feedback on the design system. Their experiences on the job improved the design system even further. Petersen also witnessed that the Royal Huisman organization was still using many AutoCAD drawings as input

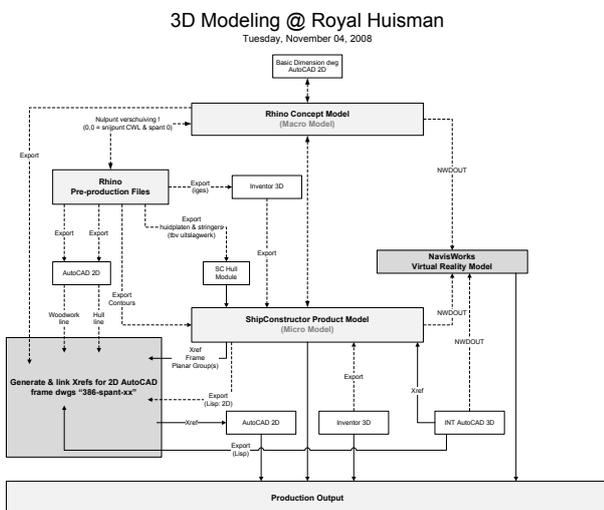
for the 3d model and for design reviews. In a management report to Erik van Hulst, Gerard Petersen advised to centralize the 3d concept model in the process to save many hours of AutoCAD drawing. To minimize 2d drawings even further, Gerard Petersen developed a real time 2d presentation method for design reviews based on the up to date 3d concept model. This presentation concept is now under further development by McNeel to become a productive tool.



client takes virtual tour

### Proven system

The developed design system already proved its benefits during implementation. All yachts at Royal Huisman are now designed with Rhino's design system and more and more people are trained to become productive in a virtual environment to work together creating even better designs. The impact of the design system on the organization and design and manufacturing process is increasing with new applications. Even external architects are showing an increasing interest in using Rhino's capabilities to realize their designs at Royal Huisman.



### Benefits of an integrated design system

- ✓ Create one environment for design data and better space management to create a better overall and detailed yacht design;
- ✓ Take decisions earlier with fewer people involved which saves lots of resources during engineering and production;
- ✓ Optimize co-operation with architects and between departments;
- ✓ Be more flexible with design changes;
- ✓ Ability to show the client a virtual feasible product at an early stage which is a unique selling point and improves the understanding and commitment to all people involved.



Twizzle: from Rhino to reality

### RhinoCentre can serve you too

- ✓ Create and set up a design system for your process;
- ✓ Develop your organization towards a 3d environment and exploit all opportunities in design engineering and manufacturing;
- ✓ Train your 3d modelers the specific skills to get the job done;
- ✓ Give you advice for purchasing suitable software with proper hardware advice;
- ✓ Assist you on the job, for example with modeling or scripting, to get the system alive and immediately productive;

Call RhinoCentre at +31(0)23 5405142 or mail to [info@rhinocentre.nl](mailto:info@rhinocentre.nl)

### Links:

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Royal Huisman's view at space optimization  
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