



The Trimonoran – A Game Changer

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You would have noticed multihull vessels such as catamaran, trimarans flying in coastal waters and would have heard of pentamaran. But do you have any interpretation of TRIMONORAN? **Jelle Bilkert** of **AnwigemA B.V.** is introducing a whole new concept in boat design for recreational and professional sailing.

Jelle Bilkert wants to spring up with a design for AnwigemA B.V. Which is safe, economical, and enticing without compromising on the luxury and space. It was a tremendous job and needs courage in this era of shipbuilding. Moreover, funding a completely cutting-edge hull concept including the research is another challenge for AnwigemA B.V yet Jelle Bilkert accepted the challenging project of Trieadrieame. With all his experience Bilkert came to a culmination that tri-hull would be safer, more stable and more economical. He sketched the outlines with experience and talked to experts and funded the research.

The innovative Trimonoran comprises three slim hulls providing larger deck surface, capacious interior and wings minimizing resistance, making the boat agile, producing more stability compared to conventional monohulls.

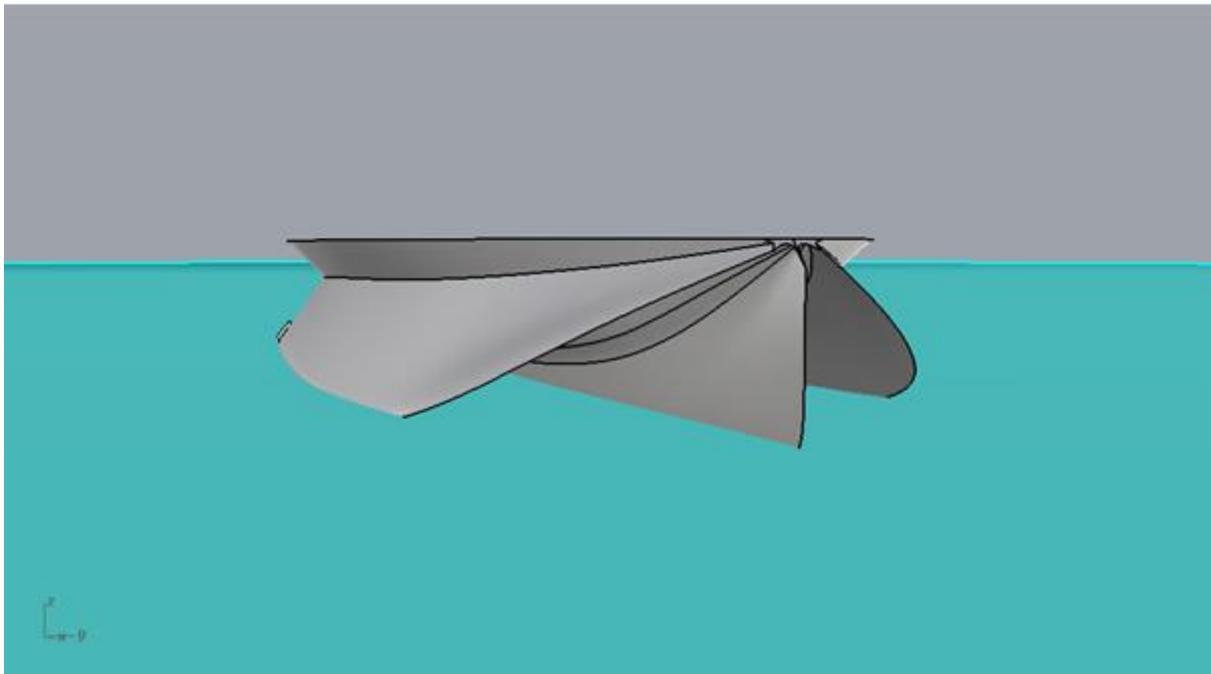


Figure 1: **Simple sketch of Trimonoran**

Credits: [AnwigemA B.V](#)

The Dutch Ministry of Economic Affairs and the Foundation Coordination Maritime Research saw the potential and benefits of this innovative design and encouraged the idea by granting subsidies for research and development. Later a 1:5 scale models were made and tested in the deep-water towing tank of MARIN, the world-renowned Maritime Research Institute in the Netherlands. The test results were promising. The concept resulted in a comfortable hull for great stability, less water resistance indicating the operational efficiency, little draft and large deck space.

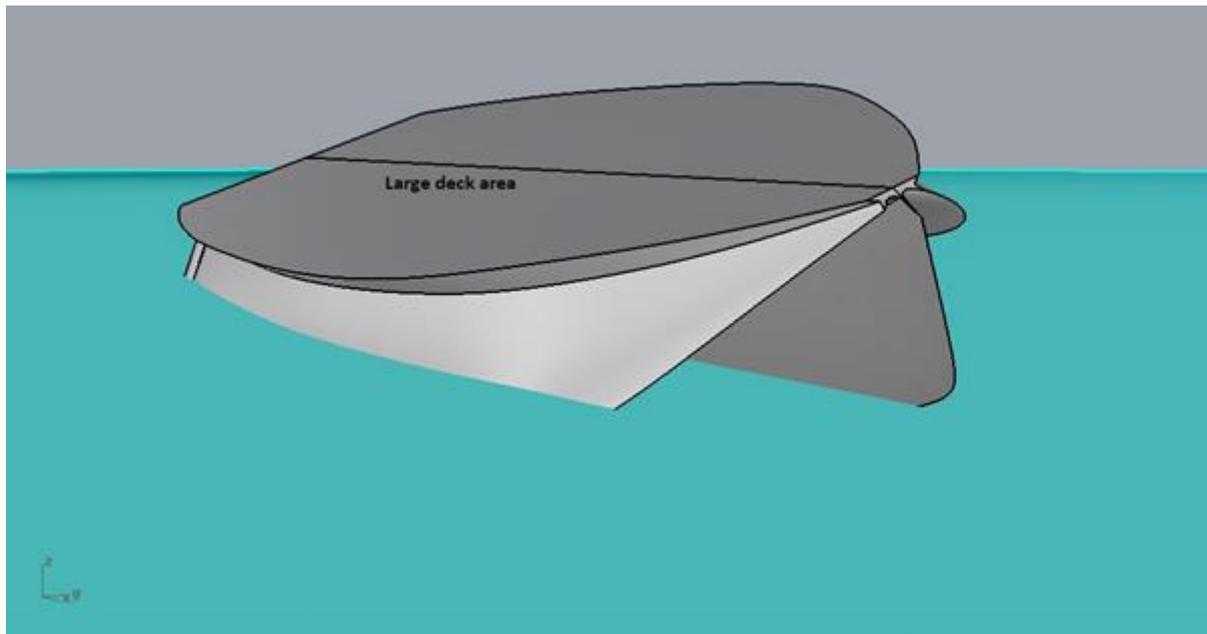


Figure 2: **Trimonoran with large deck space**

Credits: [AnwigemA B.V](#)

Since 2010, Naval Architect Van Oossanen from the Netherlands worked on the same design to develop and optimize it using the art of Computational Fluid Dynamics Simulations.



Figure 3: **Before and after of Optimisation using CFD** Credits: [AnwigemA B.V](#)

These computer simulations show a decrease of more than 30% fuel consumption for motorboats. Both resistance and speed are compared with an existing motor and sailing yacht. The slim tri-hull has less resistance both in sailing and motor yacht mode. This model is significantly faster than the traditional mono-hull under similar conditions and can easily reach a speed of twenty knots depending on engine power or sail area. The combination of lower fuel costs, larger living space, more safety due to stability proves the economic value and commercial attractiveness of the design.

The specific design of the hull provides high stability even with high angles of inclination. Finally, Van Oossanen presented a final report containing conclusions which meant a green signal for the Bilkert and AnwigemA B.V's dream of tri-hull and thus gave birth to the sustainable game-changing boat design. Now it is AnwigemA B.B's mission to promote the

Trimonoran, it obtained the international model protection and NL patent for the tri-hull i.e. the Trimonoran.

Some of the unique advantages of Trimonoran:

- 1- A speed gain of up to 30% when used in motor yachts.
- 2- Fuel-saving ensures long-range.
- 3- As the fuel requirement is less, space and weight can be saved by providing small fuel tanks.
- 4- 50% speed gain in case of sailing yachts.
- 5- Large deck and hull space can be used for recreational activities in case pleasure crafts.
- 6- Seaworthy design.
- 7- Realisation of the detailed design is relatively simple to understand and build.
- 8- High stability for safe and comfortable sailing, the hull will show positive stability even at large heel angle of 90 degrees.
- 9- Relatively less drag and thus less water resistance than traditional monohulls.



Figure 4: **Complete
Trimonoran**

Credits: [AnwigemA B.V](#)

With certain modification, the same design can be used for commercial applications, Military applications, merchant ships, passenger ferries, superyachts, offshore crew transfer vessels, workboats and pilot boats. In the contemporary era and in future there is a great demand for efficient, safe, comfort, economically attractive, and sustainable boat designs. If you got interested in this unique design or want a Trimonoran visit www.anwigema.nl for more details.

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