



## CUSTOMER CASE STUDY

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# AVIC International uses AVEVA solutions for efficient collaboration and world-class delivery

AVIC International Ship Development Company  
Industry - Shipbuilding

## Goals

- Facilitate easier collaboration with a common data depository
- Accurately design systems with detailed 3D modeling and parametric modeling

## Challenges

- Local software was restrictive and lacked 3D design tools
- Collaboration was difficult across their global team

## AVEVA Solution

- AVEVA™ Marine
- AVEVA™ E3D Design

## Results

- Synchronized design data allowed for quicker communication with Finnish partners
- The team was trained on AVEVA systems within just six weeks

**Shanghai, China** – AVIC International Ship Development (China) Company Ltd, headquartered in Shanghai, is part of AVIC International Holding Company, which operates two shipbuilding bases in China AVIC Weihai Shipyard and AVIC Dingheng Shipyard. In 2012, AVIC acquired the Deltamarin Group of Finland, which has over 25 years' experience in providing ship design, offshore engineering and construction support for marine and offshore industries worldwide.

AVIC Ship was established in 2013 to integrate and combine the shipping business and interests of AVIC International. The team brings over 20 years' experience in the design and build of bulk cargo ships, container vessels, multi-purpose vessels, oil tankers, liquefied gas carriers and chemicals vessels. The company offers a comprehensive vessel management service to domestic and international customers, including trading agency services, supply chain management, funding, joint investment project supervision ship leasing and engineering, procurement and construction (EPC) for ports and repair yards as well as shipbuilding.

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**“We concluded that AVEVA’s integrated design solution, based on collaboration between different areas, offered us the most feasible answer.”**

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**Chen Li**

Technology Manager, AVIC International

## **Building competitive edge in global shipbuilding**

When AVIC management took on a new strategic direction in 2016, to become a market leader in innovative ship construction, they adopted AVEVA's integrated design and engineering tools, tailored to the marine industry. With AVEVA's help, AVIC has boosted collaboration across their global team and improved operational efficiency, achieving their ambition to become a specialist in high-value vessel construction.

For many years, AVIC International relied upon local design software developed in China, but although this software proved adequate, it lacked the sophistication of design tools offered by competitors in the shipbuilding sector.

Their old approach was restricting the company's growth in the cost-constrained market. In response, in 2016 the company began an innovative strategic transformation to evolve from traditional commercial ship design to focus on higher-value vessels to build competitive advantage.

AVIC won a construction contract for a new Stena RO-RO, a 3,100m-long vessel, with a passenger capacity of 930. This huge project was a milestone for the Weihai Shipyard, and the team came to understand that using their established locally sourced design technology did not provide the integration, scalability, and innovative tools they needed to deliver efficient design, and it made productive collaboration difficult with their Finnish partners, Deltamarin, who were carrying out the detailed vessel design.

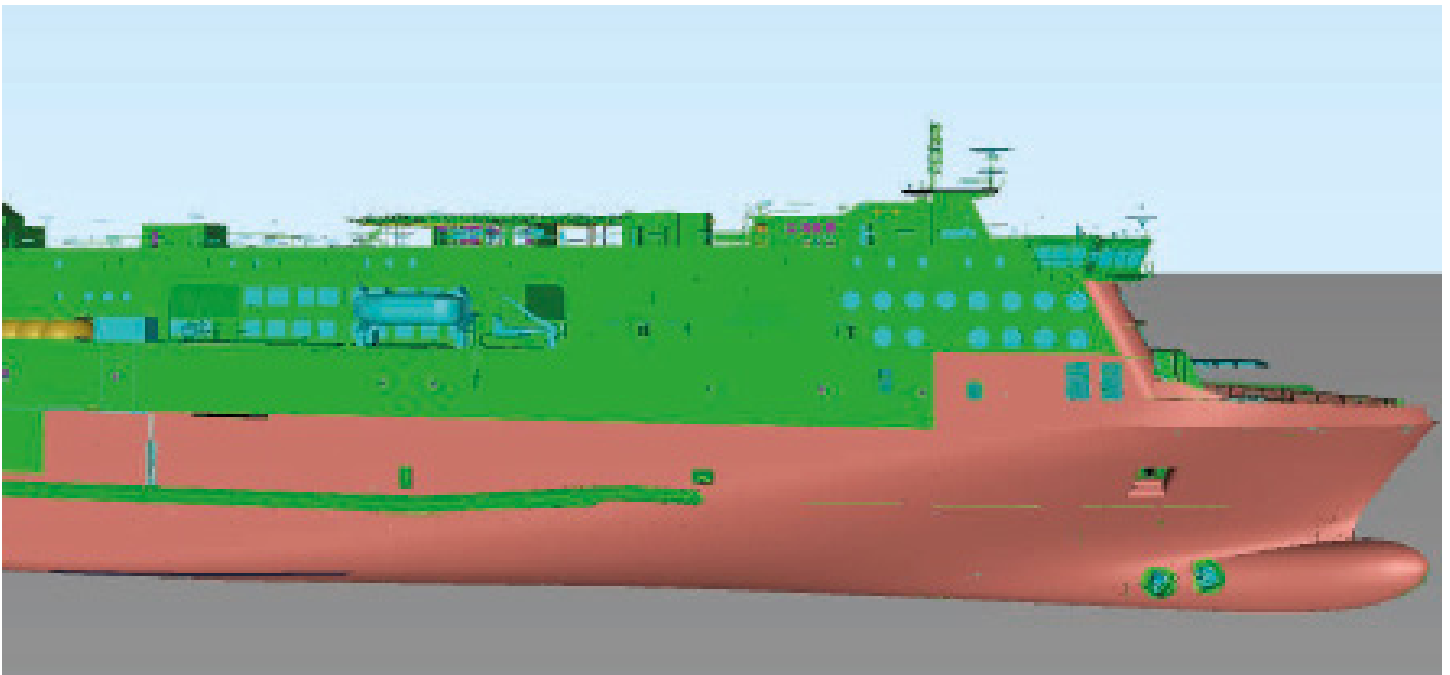
Collaboration and integrated tools were vital to the success of the new design program, as AVIC needed to use the experience and skill of Deltamarin. The team also realized that the project would generate large amounts of data, and it would require 3-D visualization. AVIC's existing locally sourced design systems were unable to handle the frequent design modifications expected with such a complex project. In addition, the project team was working on very tight timescales, and there was a laser focus on both costs and quality, within an extensive, global supply chain.

## An integrated, collaborative shipbuilding software platform

Deltamarin designers were already using AVEVA Marine industry solutions to create their design and engineering drawings. The AVIC team adopted AVEVA technology as well, so the international teams could synchronize the design data at an early stage. The teams were trained in the new systems and were operational within just six weeks. AVIC International then validated the software by test and demonstration in just three months.

As a result, all the teams working on the Ropax project could contribute information to a common data repository, which was shared throughout the design and operational group, no matter where they were in the world.

AVIC International adopted AVEVA Marine industry solutions and AVEVA E3D Design to support the detailed design and marine engineering functions of their vessel. AVIC International could then efficiently carry out the structural design of the hull and produce 3D-layout and detailed drawings of all outfitting. AVIC International also avoided possible clashes with Deltamarin because they shared an integrated data repository. Extensive use of parametric design further improved efficiency and saved design time, enabling the team to deliver the project swiftly and efficiently.



The complete model. Image courtesy of AVIC.