



# SHIPSPACE

— Virtual Reality Tools for Shipbuilding —

## SHIPSPACE, VIRTUAL REALITY TOOLS FOR SHIPBUILDING

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**INCORPORATE YOUR DESIGNS** ShipSpace opens your 3D and CAD models directly, so your designs can be effortlessly viewed in VR. Seamless integration with your existing design and engineering workflows means that you can work within existing project schedules. ShipSpace removes the technical challenges and allows you to benefit from the potential of Virtual Reality for your business.

### EXPERIENCE DESIGN TRUE TO LIFE

See your design as it would appear in the real world, with ShipSpace's true-scale and accurate perspective graphics. Use your intuition and depth perception, which are not possible using old-fashioned caves and domes. The advanced system design and smooth, fast graphics provides incredible immersion while being easy and comfortable to use.

**UNDERSTAND THE DESIGN** With ShipSpace and its super-power user functions, you can review your design from any angle or perspective.

The Magic Carpet locomotion system allows you to quickly access all parts of the ship, from walking along a corridor to peering into a cramped service space up in the deck head.

This three dimensional tool allows you to peer around and underneath equipment in order to understand potential servicing issues, use Magic Measure to confirm space requirements and with Layer Control and X-Ray Vision you can see behind and through structures and objects. Without a doubt ShipSpace will assist you in knowing every detail of your ship.

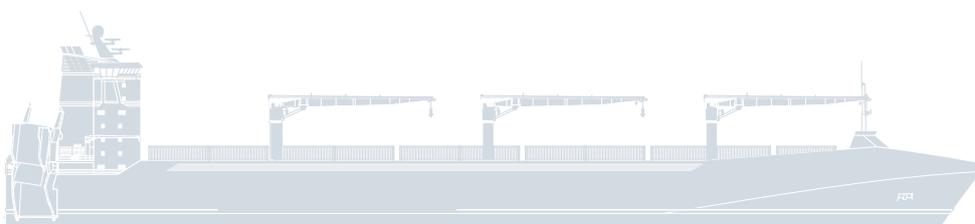
**COLLABORATE** ShipSpace allows users, based in different locations, to meet 'on-site' and discuss issues productively. By enabling users to experience the design in an immersive and interactive VR environment, collaboration is made easier, and the team's understanding of limitations and objectives are strengthened.



**RESOLVE & INNOVATE** ShipSpace is a proven tool for designers, engineers, customers and other stakeholders to share ideas, discuss issues and develop designs. Problems can be identified earlier and resolved, avoiding costly rework. ShipSpace also encourages innovation by allowing trials and demonstrations of ideas in the virtual environment.

**SALES & CONCEPT** ShipSpace revolutionises the customer experience. Owners can fully engage in the design process, from conception all the way through and productively help their new ship to evolve. Domain experts can test and advise on specific work spaces to ensure the design is right from the beginning.

Using ShipSpace, artistic concept models can be opened from your existing 3D modeling tools transporting you into a fully interactive and riveting virtual reality world.





## ShipSpace

*ShipSpace opens your 3D and CAD models directly, so your designs can be effortlessly viewed in VR ▲*

This promotes comprehension of the concept and the ability to talk effectively about design issues, leading to more satisfied customers.

ShipSpace offers unrivaled capability to utilize your existing 3D ship models, enhancing productivity.

Seamless dynamic optimization by the Stirling Engine real-time graphics system eliminates the need to reduce model complexity or employ additional labour-intensive optimizations. No details are lost in the translation.

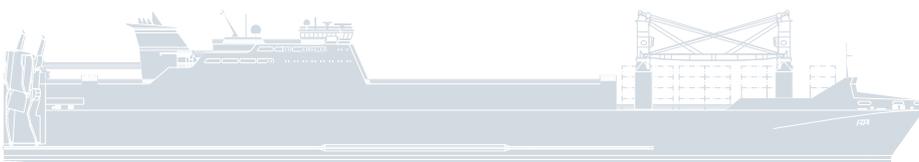
**DESIGN & ENGINEERING** ShipSpace enables unparalleled ease of communication and global collaboration for design teams. ShipSpace translate the fine details of CAD/BIM into a true prototype that anyone can fully understand.

The VR tool enhances the human collaboration from the early stage to the final design. Holding meetings in

ShipSpace allows people across the world to understand the design and communicate naturally with each other.

The VR tool enables natural collaboration across the entire project, and because of that design mistakes can be avoided. Teams will be able to address issues more frequently, reducing the need to travel, and leading to quicker resolution of problems.

During the detailed engineering phase, naval architects and engineers can use ShipSpace to better understand the structure and spaces of a new vessel. ShipSpace works with existing design tools and directly visualizes the CAD model. From arrangement of human and technical spaces, to routing of pipes, ductwork and cables, ShipSpace accurately reflects the design as it evolves. Integration with the PLM system enables material and equipment specifications to be accessed from within the virtual environment. ShipSpace has an environmental benefit because it ensures a smooth and cost effective production.



ShipSpace is a groundbreaking Virtual Reality (VR) toolset that will help you design and build superior ships on time and on budget. Using the powerful Stirling Engine real-time graphics system, ShipSpace brings your 3D concepts or CAD models to life with amazing clarity and solidity, regardless of size or complexity.

ShipSpace is a believable, immersive and engaging interactive tool that allows you to easily comprehend and collaborate on complex projects. It is an instrumental means to democratize all project information and truly leverage the benefits of digital-twinning.

ShipSpace is simple to use, and CAD knowledge is not needed. When design problems arise, Production and Engineering are able to resolve issues with ShipSpace before costly rework is required. No site visit is required. ShipSpace allows virtual access to any part of the vessel without issues of confined spaces or needing ladders or platforms. With ShipSpace measuring and drawing tools, you can resolve problems efficiently, that would typically consume valuable time going back and forth between the design office and shop floor.

Planners can use ShipSpace to simulate the entire shipyard, including cranes, transporters, scaffolding, building structures and other infrastructure to comprehensively plan access, installation routes and lay-down areas.

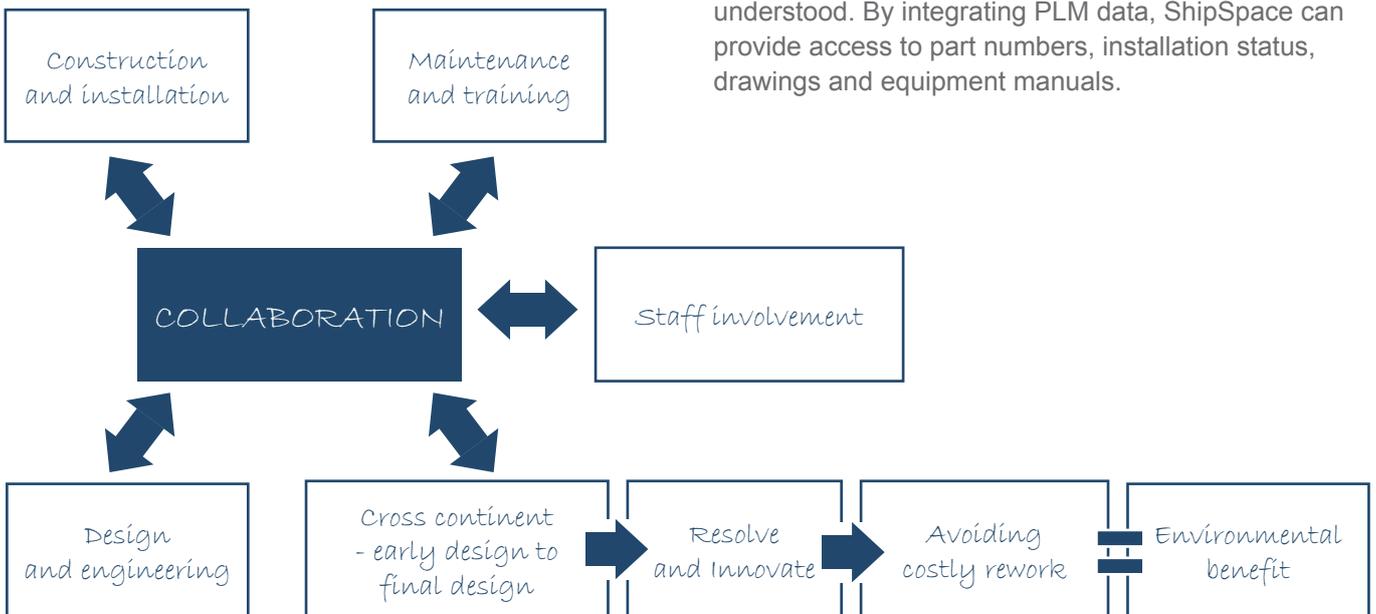
**MAINTENANCE & TRAINING** Ships are nearly always unique and complex constructions that can be easily misunderstood by new crew members, specialists and contractors when it comes to access and maintenance requirements.

### CONSTRUCTION & INSTALLATION

As the project enters the production phase, ShipSpace continues to be an invaluable tool, giving production the power of hindsight in the present. Trade supervisors can better understand requirements, manage resources and coordinate their jobs with other trades to ensure a smooth production process week by week.

An advantage to utilizing ShipSpace is workers will become familiar with the working environment beforehand and throughout, making for quicker learning and safer execution of the job.

Access for heavy and bulky components can be planned accurately. Biometric mannequins enable access to parts and use of required tooling to be better understood. By integrating PLM data, ShipSpace can provide access to part numbers, installation status, drawings and equipment manuals.





## Excellence

Award winning ship design recognised by leading industry bodies.



## Experience

Over 750 vessels built and more than 350 conversions successfully completed.



## Technology

Developing and using best-of-breed technology to design better ships.



## Solutions

Comprehensive experience covering design, contracting, construction, delivery and through-life services.



## Guidance

Independent advice covering contract negotiations, planning, cost-evaluation and review of drawings and specifications.



## Dedication

Our consultancy services ensure support throughout the entire lifetime of a vessel.

*"We began to work with KNUD E. HANSEN, when we needed an HVAC specialist for the Queen Elizabeth Class. They performed very well for us and we've gone on to work with them on other projects as a result. In particular, KNUD E. HANSEN showed themselves to be incredibly flexible, willing to mobilise as many people as we needed, wherever we needed them to be. I attribute this adaptability to the close-knit, trusting relationships between personnel. The culture at KNUD E. HANSEN ensures total efficiency."*

SHANKAR RASHIA, AERIUS

*"KNUD E. HANSEN showed themselves to be very professional and totally dedicated to our project. Our cooperation could not have been better. We started out with one A4 page of specifications and, from this, KNUD E. HANSEN quickly developed the entire yacht."*

PER BLINKENBERG-THRANE, 24 M EXPLORER TYPE MOTOR YACHTS

*"KNUD E. HANSEN designed a total of 18 ships for my family's company. We spent countless days discussing our dreams, aspirations and passions. The relationships we developed became so personal that design decisions became automatic. The creativity and talent in KNUD E. HANSEN is boundless. KNUD E. HANSEN provided us with precision, accuracy and consistent quality. We knew we had a reliable design to work on. And, of course, the personal attention was outstanding – we felt we were one big family."*

ALEX PANAGOPOLOUS



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