HOW LEADING EUROPEAN SCHOOLS ENABLE LEARNING THROUGH SIMULATION
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Simulation is a highly effective teaching method that allows maritime students to put their knowledge to the test in a safe and controlled environment. By replicating real-life scenarios, simulators provide students with hands-on experience that is essential for building the skills and confidence necessary to navigate a real ship.

The use of simulation has long been recognized as an important tool in industries, like aviation, medicine and military, where the costs of a mistake are high. At the same time, in the maritime industry, simulation is a relatively new trend, with the Netherlands pioneering the way forward.

In 2007, VSTEP developed NAUTIS, a state-of-the-art simulator designed to enable effective learning through simulation. Since then, NAUTIS has been successfully implemented in markets around the world.
As a leading provider of maritime education and training services in the Dutch market, VSTEP has seen firsthand the benefits of incorporating simulation into the curriculum. Some of the most prominent advantages are:

1. **Accessibility**
   An increasing number of maritime schools are now turning to simulation-based learning because they can offer an additive benefit to the traditional instruction. Simulators can be fired up immediately, regardless of weather conditions and technical ship conditions. So, this can make it easier to plan training and stick to this plan.

2. **Risk mitigation**
   Simulation helps to mitigate errors and maintain a culture of safety, especially in maritime industry where people are expected to strictly follow set standards. There can also be simulated examples or scenarios of rare or unusual cases that would be dangerous to train for in real life. Due to the realism of scenarios, injuries and damage to equipment can be prevented if students get to train on a simulator before sailing on a real vessel.

3. **Debriefing**
   The simulated environment allows re-learning as often as required to correct mistakes, allowing the trainee to perfect steps and fine-tune skills to optimize outcomes. With a simulator, it is possible to re-play a scenario where students have made a mistake. An instructor can share thorough feedback to give students an opportunity to polish the procedure or their skills.

4. **Cost benefits**
   The cost of simulation training might be high initially, although at VSTEP, we can offer our clients different contract options. Simulator can serve as a worthwhile investment for the long term. It has indeed turned out to be a very flexible and durable form of maritime education and training. Our customers shared that simulation training can save them up to 20% on training expenses.

5. **Sustainability**
   Training on a real ship harms the environment. For example, if ships collide, oil can spread in the water, and it will affect marine life. Simulation helps reduce the effects. Simulators don’t require fuel and emit less CO2 into the environment, which makes this method more environmentally friendly.

Simulation is an invaluable tool for maritime education and training, and we are proud to be at the forefront of this exciting trend. We look forward to continuing to explore new and innovative ways to leverage the power of simulation to enhance learning outcomes for our customers.
STC GROUP
NAUTIS simulators saved 30 hours per week in real vessel training

School profile

STC provides education in the shipping, logistics, transport and process industries as well as courses for professionals. It is a large school with seven locations in The Netherlands and its own innovation center. They can supply their students with breakthrough technologies and cutting-edge trends in the maritime field. For example, as STC mentioned on their website: “We foresee that virtual reality will play a significant role in the near future when it comes to training and expertise around the world.” They practice what they preach so NAUTIS simulators have been added to their training and development arsenal.
In 2021, VSTEP won a public tender with STC Group to provide them with four CESNI compliant NAUTIS inland vessel handling simulators, one instructor station and a two-year maintenance and support contract.

STC Group purchased NAUTIS to train commercial and vocational students for inland navigation. STC Group firmly believes in learning by doing approach, and their students are now massively benefiting from this by training on NAUTIS simulators.

How does a maritime simulator add value?

STC Group is leveraging the power of NAUTIS simulation technology to enhance the quality and effectiveness of their maritime education and training programs. With NAUTIS, they are able to conduct up to 30 hours of simulation-based training per week, covering both commercial and vocational students.

The simulator allows them to run a range of exercises each day, including briefing and debriefing sessions, helping students to gain hands-on experience and refine their skills. In addition, STC is now using the NAUTIS simulator to conduct exams, ensuring that students are well-prepared and equipped to succeed in the maritime industry. By adopting the latest in simulation-based training, STC is leading the way in delivering high-quality, cost-effective education that prepares students for a successful career at sea.

Why VSTEP?

One of the reasons STC Group chose VSTEP is that VSTEP could match the customer’s requirements more closely. VSTEP offered an extensive library of vessels that helps STC Group diversify their scenarios and enable thorough learning by simulation for their students.

VSTEP’s advanced visuals allow for high realism of the river, ships and other objects. This level of accuracy enhances the overall effectiveness of training because it allows students to experience scenarios that closely resemble real-world situations. Using the debriefing station, the students now can zoom in on challenges they faced during training in a risk-free way.

Joep Bonten, Senior Project Manager Simulators at STC Group:

“VSTEP for us is a trusted partner that replies rather quickly to any questions or comments that we have. VSTEP provides us with an answer or solution whether it’s here in Rotterdam or remotely.”

If you have any questions, our customer, Joep Bonten, would be happy to provide you with firsthand insights. Please reach out to him at j.l.g.bonten@stc-r.nl.
Maritieme Academie Harlingen
NAUTIS Simulator helps create equal conditions for students during exams

School profile

Maritime Academie Harlingen is one of the most renowned inland navigation training schools in Europe. The school offers a comprehensive range of maritime education and training programs. With a focus on providing hands-on, practical learning experiences, the academy prepares students for successful careers in the global shipping industry. The school has state-of-the-art simulation facilities, including a full-mission bridge simulator, allowing students to gain practical experience in a safe and controlled environment. With a commitment to excellence in education and a focus on real-world training, Maritieme Academie Harlingen is a leading institution in the maritime education field.
Simulator type

In 2015, Maritime Academie Harlingen purchased a vessel handling plus NAUTIS simulator and three vessel handling simulators. Maritime Academie Harlingen purchased the simulators to teach students topics such as navigation, ship handling, safety procedures and relevant regulations and laws. The school benefits immensely from various scenarios and weather conditions, which equips their students well for their future career.

How does a maritime simulator add value?

By utilizing simulation technology, Maritime Academie Harlingen’s instructors and evaluators can eliminate uncertainties and create consistent, controlled scenarios for students. Simulators enable the repetition of situations, providing a way to compare and evaluate individuals in the same context. This controlled environment is especially helpful when considering the many unpredictable factors in real-life situations, such as weather, technical issues and traffic. With simulators, these factors can be fully controlled and utilized to train and assess skills.

The value of simulation is also evident in its high utilization rate at one facility. At Maritime Academie Harlingen’s location, the simulator is fully booked for eight hours a day, five days a week, for 30 out of 40 weeks each year. This level of usage speaks to the effectiveness of simulation training and its ability to save time and resources that would otherwise be needed to train on real vessels. By investing in simulation technology, the maritime industry can improve training efficiency and ultimately enhance safety and performance outcomes.

Why VSTEP?

VSTEP’s NAUTIS simulator offers an incredibly immersive experience that enhances learning outcomes by providing a true-to-life experience. It is specifically designed to provide visual realism, which is crucial for inland skippers who rely on their surroundings to navigate. With its adaptability to specific needs and minimal limitations, NAUTIS simulators set themselves apart from competitors. As a result, users often forget that they are in a simulator, which is essential for effective training. Based on its capabilities, it’s no surprise that NAUTIS simulators are a popular choice for maritime schools and training facilities worldwide.

Pieter Zandhuis, Project Officer & Simulation expert

“What sets NAUTIS simulators apart is the product philosophy - they are designed to be adaptable to the specific needs of the user. VSTEP’s approach is to offer maximum options and minimal limitations, and this is evident in the high quality of the products they produce.”

If you have any questions, our customer, Pieter Zandhuis, would be happy to provide you with firsthand insights. Please reach out to him at p.zandhuis@maritiemeacademieharlingen.nl.
Vonk Maritime School
NAUTIS simulator bridging theory and practice in maritime training

School profile

Vonk Maritime School is a Dutch vocational education and training institute that specializes in maritime education. The school offers various courses and programs related to the maritime industry, including deck officer training, engineering officer training, maritime operations and maritime logistics. The school provides both theoretical and practical education and training to prepare students for a career in the maritime industry. The school has a strong focus on innovation and uses modern teaching methods, including simulation training with NAUTIS simulators, to provide students with a realistic and immersive learning experience. Vonk Maritime School is committed to producing competent and skilled professionals who can contribute to the development of the maritime industry.
Simulator type

In 2015, Vonk Maritime School purchased three Class B console simulators and three Class C desktop simulators. In 2020, VSTEP upgraded the simulators to NAUTIS 3. They purchased NAUTIS to substitute their other simulator and make the training more effective. Vonk Maritime School is now able to train students on a wide range of tasks and scenarios, including ship handling, navigation, communication and emergency response. Instructors can create various simulated environments to mimic real-life situations, allowing students to gain practical experience in a safe and controlled setting.

How does a maritime simulator add value?

Vonk Maritime School integrates navigation theoretical lessons with NAUTIS simulator training. Their approach is to put theory into practice, which they find essential for learning outcomes. The school specifically focuses on radar training, active training and basic navigation. Their navy section uses NAUTIS to train officers, crew members behind the wheel and spotters. By doing so, Vonk Maritime School provides a comprehensive navigational training skillset.

The NAUTIS simulator offers an immersive experience that is almost indistinguishable from a real ship. With high-quality graphics and realistic impressions, Vonk Maritime School's students can navigate through virtual waters with ease. This simulation offers a level of detail that provides a life-like experience for a fraction of the cost of actual sea training. It allows users to practice in a controlled environment where mistakes can be made without fear of endangering anyone. Currently, Vonk Maritime School is dedicating 20 hours per week to NAUTIS training, making it an integral part of their curriculum.

Why VSTEP?

NAUTIS Simulator offers an incredible value for its price, providing users with a realistic and safe training environment that can prepare them for a career in the maritime industry. NAUTIS simulator can incorporate a range of environmental factors that influence the ship's behavior. Factors such as weather, sea state, currents and winds can all be simulated to provide an accurate representation of the real-world conditions. The software can also model the behavior of other vessels in the area, including their size, speed and direction. Its versatility allows it to be used in a wide range of applications. This enabled Vonk Maritime School to integrate NAUTIS Simulator into their curriculum, providing their students with a valuable tool for success.

Roelof Balsma, Instructor at Vonk

“What I like about VSTEP is how customizable NAUTIS simulator is. I can easily set-up the scenarios and alter them on the go. This adds to the ease of use of the simulator, which is crucial for an instructor during the lesson.”

If you have any questions, our customer, Roelof Balsma, would be happy to provide you with firsthand insights. Please reach out to him at roelof.balsma@vonknh.nl.
VSTEP creates innovative simulation software for professional organizations worldwide. We are a team of 60 explorers who are always up for challenges. We are not constrained by standards and are flexible in our approach to fulfilling the mission: enable learning by simulation. We are all dedicated to the same vision: ensure that at least one-third of the maritime industry has obtained their skills through our simulation technology. Hence, we strive to make a great contribution to creating a more sustainable world. We invest in continuous R&D of our software and work passionately as a team to get there.
About NAUTIS
NAUTIS is a software solution developed by VSTEP in 2008. With NAUTIS, we enable learning by simulation by assisting organizations in (re-)training their maritime students for real-life adversities in safe but true-to-life conditions.

Watch this video to learn more about NAUTIS.

If you have any questions, reach out to us on info@vstepsimulation.com!