



SEARES

CASE STUDY

IoT Mooring System Engineering

- An innovative solution
- Real-time monitoring
- Hydroelectric power generation
- Quality assurance

www.zerynth.com





SEE HOW ZERYNTH ENABLED SEARES TO RELEASE AN INNOVATIVE IOT MOORING SYSTEM ENSURING A FAST DEVELOPMENT TIME AND AFFORDABLE COSTS.

<6

Months
Implementation

-10%

Development
time

+12%

Revenue
Increase

7

Designing an IoT implementation process has been efficiently developed with all the mechanical and electronic features we needed. Thus it allows us to develop and test all our components right from the prototype stages so we can obtain the best results.

Z



Giorgio Cucè - Co-founder and CEO, Seares Srl

7 Industry Z

Marine components

7 Asset Z

Professional boat shock absorber

The Challenge

Recently, the maritime industry has been turning more and more to new technologies, connected solutions, and sustainability. To correspond with the global trends in the development of the maritime industry, and keep a leading place on the market, Seares was searching for a technology company that could help them to **evolve their products by adding new and innovative IoT features**.

The mechatronics generation of Seares products has as its goal to provide a definite solution to many technical problems of the traditional mooring systems. Things such as noisiness, the resonance of oscillations, fast mechanical deterioration, zero onboard battery charging, and the need for remote IoT communication.

"It is essential to design products considering their environmental impact. The Seadamp PLUS is a "green" device because it recovers energy from the sea, and is made of recyclable materials, thus, ensuring a low environmental impact" said Giorgio Cucè, Co-Founder and CEO of Seares Srl. This implies that the pollution of the marine ecosystem, which was the result of years and years of intense exploitation, has become one of the most urgent emergencies the company has had to face. It is very important to lead the way with regard to **sustainable and eco-friendly maritime solutions**.



The Solution

The Zerynth team helped Seares release Seadamp Plus, an IoT-enabled anchoring mechatronic damper for floating docks/breakwaters. It is built using the Zerynth Platform. Seadamp Plus is easy to install on existing marine boats without invasive interventions or component replacement. The larger version, Seadamp FX, can be installed inside marine ports to damp bridges and breakwaters and **collect the energy in their electric lines**.

The system is capable of **producing energy from wave** induced motion **and provides real-time information via GSM**. Seadamp Plus includes an analytics tool designed to continually improve the energy performance of the marine system. It allows to extract/analyze data and send them to the cloud, thus, ensuring a complete remote management with high security standards.

Zerynth Platform automatically generates reports, and continually monitors the selected values by comparing them with configurable thresholds. By monitoring the parameters, the algorithm created on the cloud portal allows it **to calculate in real time the actual performance of the system**.



The Results

Increased Efficiency

24/24 hours recharge time of battery

Improved Quality

24/7 real-time monitoring of parameters

Exploit hydropower

100% green energy production

Why did Seares choose Zerynth?

Seares has successfully transformed their product line into IoT by providing customers with a smart solution capable of real-time recording and monitoring marine system. In only 6 months, Zerynth integrated a technology and made Seares able to monitor all the real-time operating parameters remotely, such as the voltage on the batteries, frequency of the motors, the total amount of energy recovered or the rotation.

Zerynth Platform transforms all obtained data into the dashboards and generates customized reports. Moreover, a new generation of Seadamp Plus keeps batteries charged, through a smart energy harvesting system, working whenever the boat is anchored or moored, without having to use highly polluting external energy sources (electric charging stations, etc.). All products are made with materials that have a low impact on the environment.

About Zerynth

Zerynth enables companies to streamline production processes and increase the value of connected industrial products. Through a plug-and-play IoT & AI platform, we connect any industrial machine, allowing for a complete 4.0 transformation quickly, flexibly, and securely.

Founded in 2015, Zerynth has grown steadily. Today it has 40+ team members with deep IoT expertise and industry knowledge with over 150 customers across many industries: from manufacturing to agriculture to energy to logistics. Zerynth is based in Pisa, Italy, but also is active in international projects, and foresees an expansion both in EU and non-EU countries during the next three years.

GET START WITH ZERYNTH

Ready to see what Zerynth can do for your business?

LET'S TALK!

